

**CITY OF LOS ANGELES**  
**IRP Steering Group Workshop No. 7**  
**September 25, 2003**

**MEETING MINUTES**

**Attendees: See Attached**

**OPENING REMARKS/WELCOME**

Attendees were welcomed. Representatives from the City Council offices who were attending the workshop were recognized:

- Julie Lee, Councilmember Parks' office (District 8)
- Maria Perez, Councilmember Perry's office (District 9)
- Lupe Vela, Councilmember Reyes' office (District 1)
- Others will be joining the workshop later in the morning

Representatives from other City Departments who are new to the IRP process (as requested by the Steering Group) were recognized:

- Al Garcia, Principle Inspector, Department of Building & Safety
- Paul Wong, Sr. Structural Engineer, Department of Building & Safety
- Ferdy Chan, Civil Engineer, Bureau of Street Services

It was announced that the Director of the Bureau of Sanitation, Judy Wilson, recently retired, but that she will still be involved in the IRP. Jim Langley is the Interim Director. Also announced was that the Biosolids Environmental Management Systems (EMS) audit, which some of the Steering Group members were involved, was certified as an environmentally safe system on September 8 by an independent auditor. The City of Los Angeles was only the second agency in the country that has received this certification by the American Metropolitan Sewage Agency Water Environment Federation. Another major accomplishment for the Bureau of Sanitation is that one of the largest public works projects, the East Central Interceptor Sewer- a \$280 million project in south Los Angeles designed to address the sewer overflows that occurred in the El Niño period, is nearing the completion of the tunneling, and the tunneling breakthrough will occur in the next couple of days. Other infrastructure issues, Mayor Hahn established a task force to review the gap between all of the City's infrastructure needs and the funds available to meet the needs. Infrastructure funding needs is starting to be recognized as a problem. An example is Proposition 53 which addresses infrastructure funding (October 7 State election).

In stressing the importance of managing urban runoff effectively, it was reported that the Orange County Business Council conducted a study that found that a drought would have a similar effect on the local business community as a huge earthquake or hurricane. The study estimated that if the water supply were decrease by 5%, the economic losses would range from \$11 billion to \$35 billion per year, proving that water is critical to our economy. It was announced that this workshop (No. 7) would continue with the discussion about runoff options and that the next workshop on November 5, 2003, will introduce the integrated alternatives (previously planned to be presented in this workshop).

### **Advisory Group Session 3**

It was reported that we recently completed the 7 meetings conducted in the 3<sup>rd</sup> Advisory Group Session and that the participation at the meetings increases from previous sessions due to article in the Daily News and other efforts, like Steering Group members helping to spread the word.

### **RUNOFF MANAGEMENT DRIVERS**

It was reported that 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 Guiding Principles are:

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

There is a time line for complying with the TMDLs which may force the City to use more immediate structural type of runoff management options than some of the more desirable neighborhood solutions. Stakeholders in the IRP can help to lobby the regulators, City and other relevant parties to ease the TMDL compliance guidelines to allow some of the local/neighborhood runoff management options that will be presented in this workshop.

### **RUNOFF OPTIONS-LOCAL/NEIGHBORHOOD SOLUTIONS: WET WEATHER**

In the last workshop (Workshop No. 6) there was a lot of discussion about the runoff management strategy of managing the runoff from ½ inch or less of rain to comply with the regulations. Managing the runoff from a ½ inch of rain is not the standard or the target, but for this exercise we will assume that the City will manage the runoff from the first ½ inch of rain per event. The City of Los Angeles covers 463 square miles. A ½ inch of rain over the 463 square miles in the City will produce 4 billion gallons of water of which 1.7 billion gallons will runoff. Also at the last workshop (No.6) the phase source control was used to categorize the local/neighborhood runoff management options. In this workshop, we use the term Local/Neighborhood Solutions, instead of Source Control Options. This workshop will cover extensive options to manage runoff on-site for the following:

- Single family residential
- Multi-family residential

- Commercial
- Government
- School

### **Local/Neighborhood Solutions: Single Family Residential – Current Practice**

For a typical single family resident, there is say 2,000 square foot of roof on the garage and the house, and a lot of the rain that falls on the roof falls to the ground where it is absorbed in the soil. What is not absorbed in the soil, will runoff to the street.

### **Local/Neighborhood Solutions: Single Family Residential – Cistern**

With the use of cisterns in single-family residents, we estimate that we can capture 15% of the total 1.7 billion gallons of runoff that occurs in a ½ inch rain event. The water in the cisterns can be used to irrigate the lawn during dry periods.

### **Local/Neighborhood Solutions: Single Family Residential – Infiltration**

If we capture the runoff from the driveway (estimated 500 square feet) through the use of a French drain, grass-crete, diversion to a grassy swale, or other methods, it will reduce the runoff by 1%.

### **Local/Neighborhood Solutions: Single Family Residential – (Hall House Example)**

TreePeople is a non-profit, community based organization that has been working for 30 years to improve the quality of life in the City but has been frustrated by the disintegration of the agencies that manage our ecosystem. TreePeople conducted a 10 year research project which brought together 100 of best engineers, architects, and landscape architects in North America for four days to design retrofits of existing homes in Los Angeles to meet the following goals without radical lifestyle change:

- Capture all the rain for a 100 year storm
- Clean the rainwater to meet regulatory needs
- Prevent floods
- Reduce the need to import water into the City by 50%

The retrofit designs that were suggested for the typical single family home were built at the home of Ms. Hall who volunteered to have her house in south Los Angeles used as the example site. A video clip was played that showed a news story reporting the results of a staged event that replicated a 1,000 year storm at the Hall house (example site for the runoff management retrofit designs).

The Hall house example demonstrates that local neighborhood solutions can replace the traditional massive, end of pipe, structural options and possibly save money.

### **Local/Neighborhood Solutions: Single Family Residential – Benefits and Challenges**

The benefits and challenges of implementing some of the runoff management solutions for the single-family residents were reported as follows:

#### **Benefits**

- Reduced volume and velocity of runoff

- Reduced potable water use
- Improved water quality of runoff
- Increased overall economic benefits

### **Challenges**

- Percolation depends on soil conditions
- Requires public participation
- Requires regular maintenance

### **City of Los Angeles Soil Permeability for Infiltration**

A graph was presented that showed the high, moderate, and low permeability areas of the City.

### **Local/Neighborhood Solutions: Multi-Family Residential – Current Practice**

A graphical slide was used to show the current wet weather runoff from multi-family residents: rainwater from the roof and parking lot flows to the street and is taken off-site.

### **Local/Neighborhood Solutions: Multi-Family Residential – Cisterns**

With the use of cisterns to capture the runoff from the roof of multi-family residents, we estimate that we can capture 5% of the total 1.7 billion gallons of runoff that occurs in a ½ inch rain event. The water in the cisterns can be used to irrigate the lawn during dry days.

### **Local/Neighborhood Solutions: Multi-Family Residential – Infiltration**

If we infiltrate the rainwater from the parking area of the multi-family residents, it will reduce the runoff by 1%. There are 100,000 multi-family residential properties in the City of Los Angeles.

### **Local/Neighborhood Solutions: Commercial – Current Practice**

A graphical slide was used to show the current wet weather runoff from commercial properties: rainwater from the roof and parking lot flows to the street and is taken off-site.

### **Local/Neighborhood Solutions: Commercial – Cisterns**

With the use of cisterns to capture the runoff from the roof of commercial properties, we estimate that we can capture 5% of the total 1.7 billion gallons of runoff that occurs in a ½ inch rain event. The water in the cisterns can be used for irrigation during dry days.

### **Local/Neighborhood Solutions: Commercial – Infiltration**

If we infiltrate the rainwater from the parking area of the commercial properties with the use of porous pavement, it will reduce the runoff by 1%.

### **Local/Neighborhood Solutions: Schools – Current Practice**

A graphical slide was used to show the current wet weather runoff from schools: rainwater from the roof, playground and parking lot flows to the street and is taken off-site.

### **Local/Neighborhood Solutions: Schools – Cisterns and Infiltration**

With the use of cisterns to capture the runoff from the roof of schools and the use of infiltration trenches to capture the runoff from the parking lot and playgrounds, we estimate that we can

capture 3% of the total 1.7 billion gallons of runoff that occurs in a ½ inch rain event. The water in the cisterns can be used for irrigation during dry days.

#### **Local/Neighborhood Solutions: Schools Example Site**

Before and after photos were shown for a Los Angeles Unified School that was retrofitted with some of the runoff management solutions. Proposition BB allocated \$180 million to replace the asphalt at some of the schools. TreePeople retrofitted one school to demonstrate that spending that much money to replace asphalt is wasteful, as it would not reduce the amount of polluted runoff water. At the demonstration site, the paved playground was removed and a huge water cleaning and infiltration system was installed and covered with lawn and trees. All of the runoff from the school campus is routed to the lawn where it infiltrates into the ground.

#### **Local/Neighborhood Solutions: Government – Current Practice**

A graphical slide was used to show the current wet weather runoff from publicly owned building: rainwater from the roof and parking lot flows to the street and is taken off-site.

#### **Local/Neighborhood Solutions: Government – Cisterns and Infiltration**

With the use of cisterns to capture the runoff from the roof of government buildings and the use of infiltration trenches to capture the runoff from the parking lot, we estimate that we can capture 2% of the total 1.7 billion gallons of runoff that occurs in a ½ inch rain event. The water in the cisterns can be used for irrigation during dry days.

#### **Local/Neighborhood Solutions: Neighborhood Recharge (Publicly Owned Property)**

It was reported that publicly owned parks, vacant alleys, and other publicly owned vacant lots could be used for neighborhood groundwater recharge with the use of an underground cistern and treatment process where the neighborhood runoff would be directed to the site. Above ground there could be a multi-benefit like a recreational area.

#### **Local/Neighborhood Solutions: Neighborhood Recharge (Urban Vacant Properties)**

The City could partner with private property owners of vacant lots to do the same neighborhood groundwater recharge projects with the use of an underground cistern and treatment process where the neighborhood runoff would be directed to the site, and have a multi-benefit above ground.

#### **Local/Neighborhood Solutions: Additional Options**

Some of the other local/neighborhood solutions mentioned were:

- Increasing vegetation and tree planting
- Mulching on-site – Steve Fortune of the City’s Solids Resources Engineering and Construction Division reported on the 3 City’s programs to encourage the use of mulch & composting
  - Grass-cycling, leaving the lawn trimmings on the lawn
  - Subsidies for backyard composting bins
  - Mulching of collected yard trimmings-4 sites where mulch is given away (free)
- Berming front yards
- Eliminating street curb and gutters
  - An example from Seattle was shown

The Tree People Model Demo of the Sun Valley Watershed showed how using the runoff management solutions could prevent the flooding problem in Sun Valley. The following solutions were modeled to determine how many and how they can mixed to capture or prevent enough runoff to eliminate the flooding in Sun Valley.

- Residential dry well
- Cisterns
- Infiltrators
- Retention basins
- Retention grading
- Porous pavement
- Infiltration pits
- Pavement removal
- Mulching
- Small and large trees

### **RUNOFF OPTIONS-LOCAL/NEIGHBORHOOD SOLUTIONS: DRY WEATHER**

Dry weather runoff is the result of over irrigation, washing sidewalks, cars and other sources.

#### **Dry Weather Runoff Management**

- Takes advantage of wet weather components
- Opportunity for multiple benefits such as water conservation
- There are 58 million gallons per day of dry weather runoff in the City of Los Angeles

#### **Dry Weather Management Options**

- Education – promote conservation and reduce external water use
  - Reduce washing of driveways and sidewalks
  - Reduce washing of cars in driveways
- Smart irrigation
  - Potentially reduce dry weather runoff by 11 million gallons per day within the City of Los Angeles
- Constructed wetlands
- Diversion to wastewater
- Treatment and beneficial use

### **CURRENT EVENTS IN THE NEWS**

It was announced that the next workshop will be held on Wednesday, November 5, 2003 from 9:30 a.m. to 12:30 p.m. The integrated alternatives will be presented and the performance scores will be distributed.

#### **ATTACHMENTS**

- Attachment A - Feedback Report - All major questions and concerns voiced during the workshop are addressed in the Feedback Report.
- Attachment B – Steering Group Attendance list
- Attachment C – Staff Attendance list