

# **LARWMP SUMMARY OF RESULTS**

**2017**

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## **Why is the City involved?**

- Required in DCT and LAG NPDES Permits
- Plan: Due by December 31, 2007
  - Developed by various stakeholder groups
  - Patterned on a similar plan for the San Gabriel River
  - Monitoring plan submitted to RWQCB on December 21, 2007

## **What did the City do prior to LARWMP?**

- Most monitoring restricted to areas near POTW discharges
- Most of watershed not monitored
- Not adequate to assess environmental condition of watershed
- LARWMP monitors the entire watershed; a more regional approach

## **How is the program funded?**

- Funding for program provided by CLA, City of Burbank, and LA County Dept. Public Works
- Costs is offset through reductions in existing monitoring near discharges
- Costs to the City of LA
  - ~\$200,000 annual payment to Council for Watershed Health
  - In-Kind field and Laboratory Services of ~\$140,000

## **Coordination and goals of LARWMP**

- Stakeholders selected Council for Watershed Health to manage & coordinate program
- LARWMP is a question-driven program with five key questions:
  - What are the conditions of streams in the watershed?
  - Are conditions at areas of unique interest getting better or worse?
  - Are receiving waters near discharges meeting water quality objectives?
  - Is it safe to swim?
  - Are locally caught fish safe to eat?

## Implementation

- Monitoring started in 2008
- Annual Reports are produced
- New indicators added in 2015 to include invasive species counts, assessment of flow regimes, assessment of hydromodification and channel engineering, and bioanalytic screens for contaminants of emerging concern (CECs)
- In 2015, also included an additional four (4) revisit sites to be revisited annually for 5 years (these 4 sites would change every year); this allows for assessment of changes in watershed condition over time
- State of Watershed Reports to be produced every 5 years
  - First State of the River Report 2012
  - Next State of Watershed report due in 2017

## • Results

- **What are the conditions of streams in the watershed?**
  - Lack of stream flow was an issue for 2013-2014 monitoring; many streams and swim sites went dry during these years
  - Strong relationship between physical habitat and biological community: upper more natural regions of the watershed are in better environmental condition based on CSCI (California Stream Condition Index) scores.
  - Degraded water quality conditions (metals, nutrients, & benthic organisms) are more prevalent in urban and effluent dominated regions
  - Toxicity was present at several natural sites (upper watershed) — cause being investigated
- **Are conditions at areas of unique interest getting better or worse?**
  - High value sites include confluence points, riparian areas, major tributaries, and the LA River estuary.
  - Aquatic invertebrate communities at concrete-lined confluence sites continue to score in the 'poor' and very poor' range for all years compared to 'reference site' conditions in southern California
  - Physical and riparian habitat condition scores followed a similar pattern at targeted sites to highlight correlation between the condition of biological communities and physical habitat quality
  - Nutrient levels are elevated in major tributaries, e.g., Arroyo Seco, Compton Creek, and Tujunga Creek.
  - Fecal bacterial levels are high at sentinel sites (confluence of major urban tributaries of the LA River).
  - Sediment quality in the LA River estuary is highly variable ("clearly impacted" to "unimpacted").

- **Are receiving waters near discharges meeting water quality objectives?**
  - Yes, POTW effluent often has less fecal bacteria, dissolved metals, and suspended solids than the LA River, so the effluent has a net-positive impact on water quality
  - Effluents from these facilities tend to contain higher concentrations of nutrients (e.g., ammonia and nitrate) and disinfection by-products, i.e., trihalomethanes, than ambient waters.
  - Some elevated fecal indicator bacteria levels below discharge location in Burbank detected in 2014
  - In instances when water quality standards were exceeded, they almost exclusively occurred above discharge locations.
  
- **Is it safe to swim?**
  - Patterns of bacterial contamination (*E. coli*) at popular swim sites remain consistent with past years, with bacterial levels elevated on weekends and holidays when visitation is highest
  - Hermit Falls, Eaton Canyon & Sturtevant Falls are frequently used swim sites in Angeles National Forest.
  - Highest *E. coli* concentrations consistently observed at Hansen Dam Reservoir in the San Fernando Valley.
  - Bacterial source identification via molecular methods is being considered.
  
- **Are locally caught fish safe to eat?**
  - Common carp and largemouth bass from Debs Lake (Montecito Heights, formerly east Los Angeles) and Reseda Lake are safe to eat.
  - Serving size and frequency of consumption are dependent upon the fish species and site based on mercury and PCB contaminant levels.
  - DDT and selenium do not seem to be a concern at any site.
  
- **Next Steps**
  - In the process Preparing for 2017 State of the Watershed Report
  - Continuing to analyze data to determine causes of impairment to biological communities; some of the difference in biology may be a result of drought and flow regimes, not impairment due to water quality; this will be addressed in 2017 report.
  - Bacterial source identification via molecular methods is being considered. The Southern California Coastal Water Research Project in Costa Mesa has been asked to prepare a Scope of Work for this project.