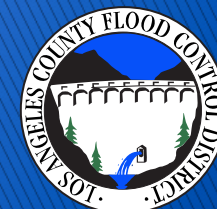


Integrated Planning for Stormwater Reuse in an MS4 Permit

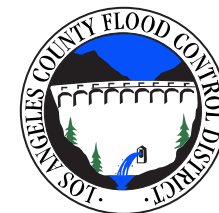
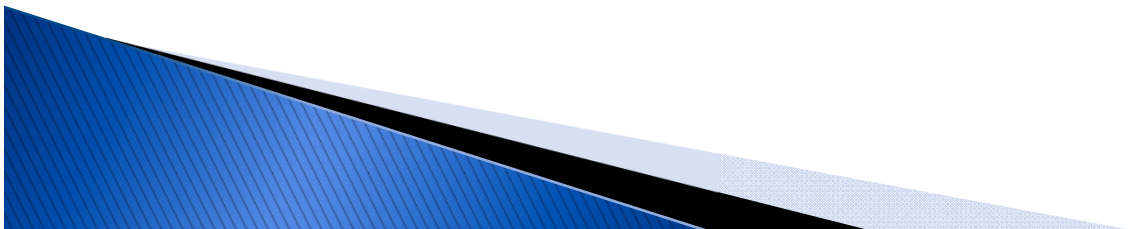
Southern California Water Dialogue
Gary Hildebrand, PE
April 24, 2013

County of Los Angeles and Los Angeles County
Flood Control District



Los Angeles County Municipal Stormwater NPDES Permit



- ▶ Issued in November 2012 by the Los Angeles Regional Water Quality Control Board
- ▶ Issued to the County of LA, LACFCD, and 84 cities within the County
- ▶ Regulates urban and stormwater runoff from municipalities



County of Los Angeles Map

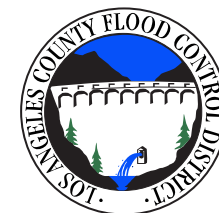
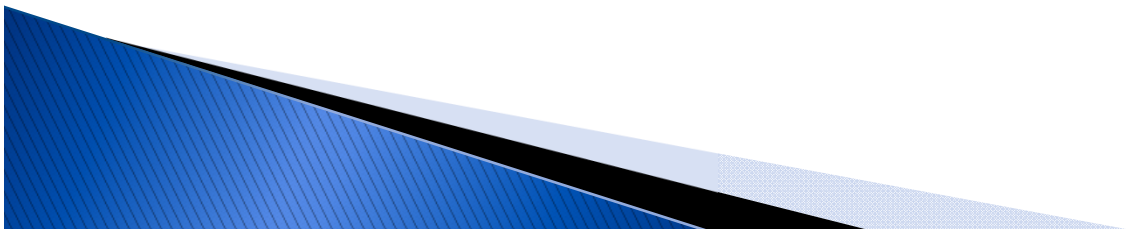


EXPLANATION

-  major channel
-  watershed boundary

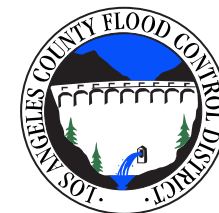
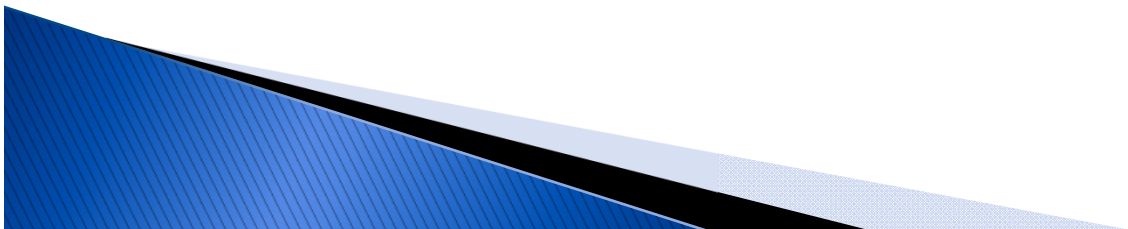
Stormwater as a resource

- ▶ Permit re-issuance was an opportunity to treat stormwater as a resource instead of as waste
- ▶ New provisions for Low Impact Development
- ▶ Enhanced Watershed Management Program (EWMP): incentives for integrated planning, emphasizing stormwater capture/reuse and groundwater recharge



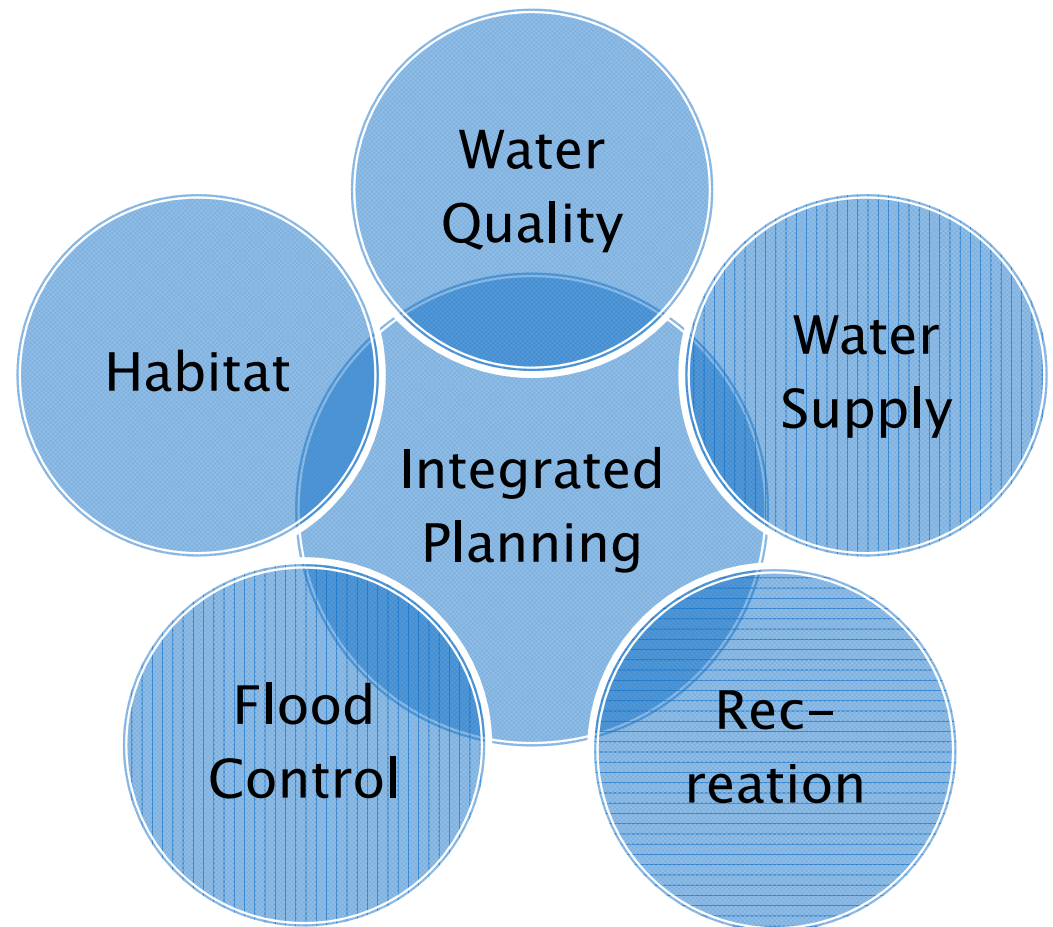
Low Impact Development

- ▶ Applicable to certain new development and re-development projects
- ▶ Preferred action: on-site storm runoff retention (infiltration, bioretention, rainfall harvesting)
- ▶ Alternative actions if (1) on-site retention is infeasible or (2) replenishing groundwater regionally:
 - On-site biofiltration
 - Off-site infiltration + on-site treatment
 - Retrofit of existing development + on-site treatment

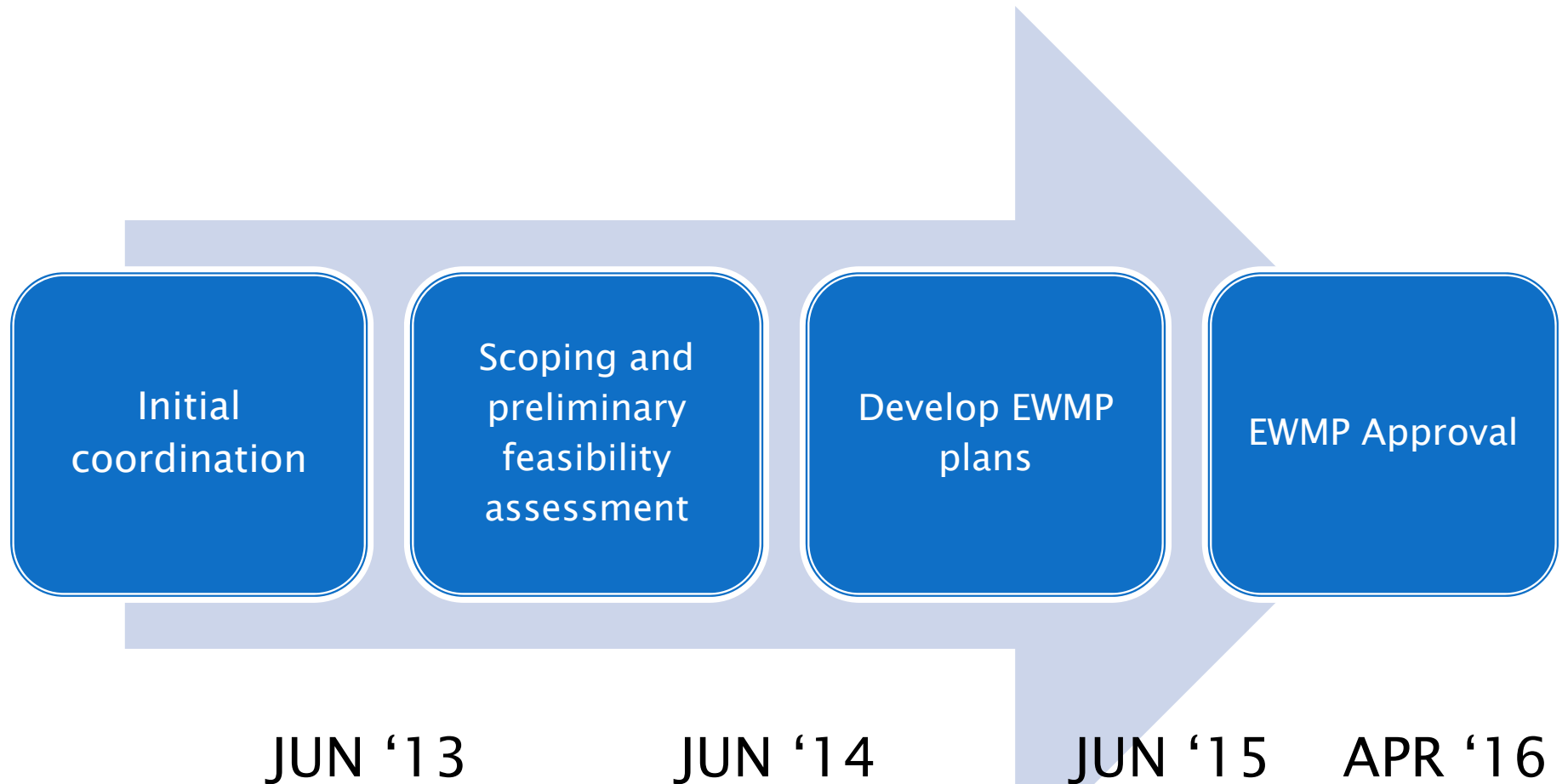


EWMP integrated planning

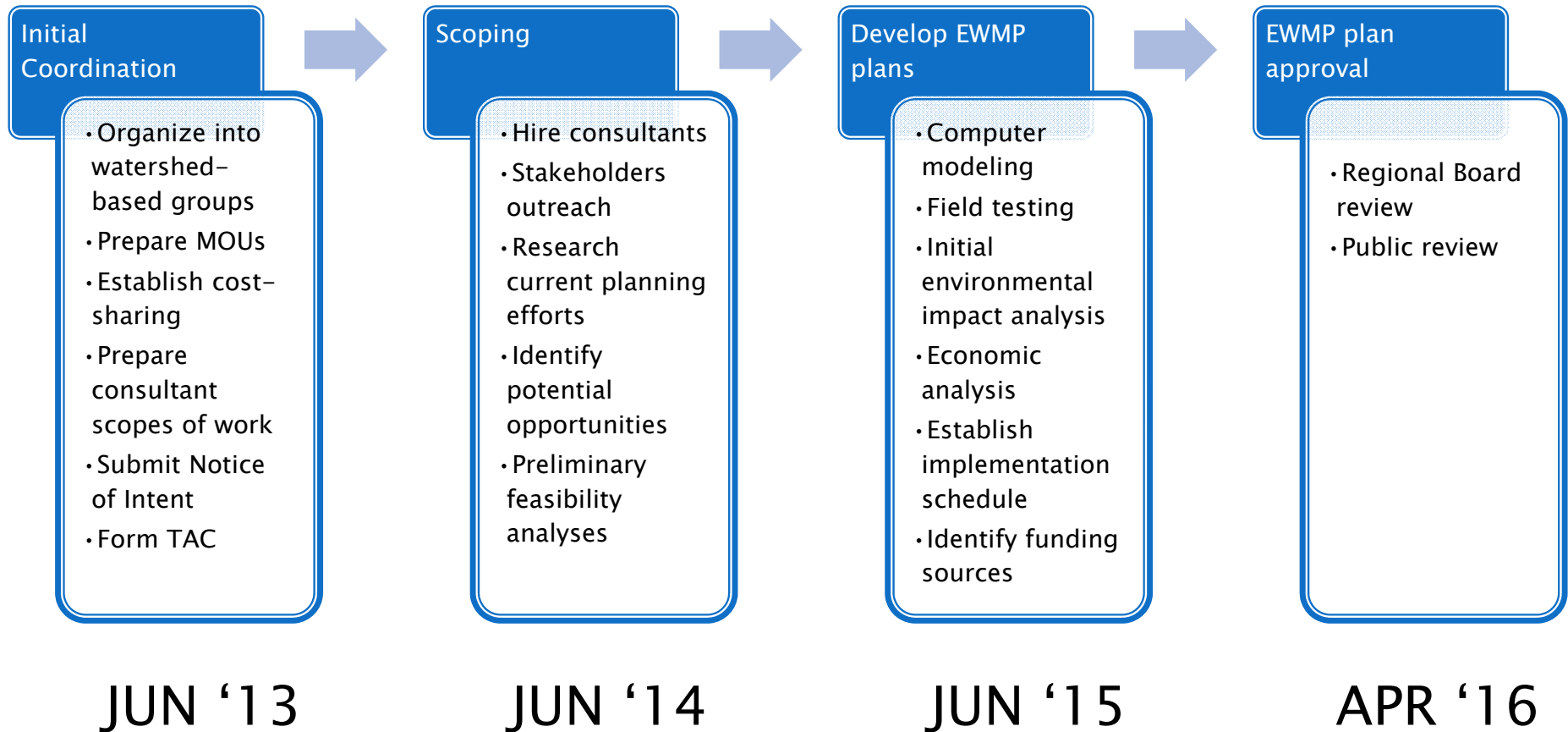
- ▶ Retrofitting existing development
- ▶ Multiple benefits
- ▶ Diverse stakeholders
- ▶ Leverage funding
- ▶ Sustainability



EWMP process overview

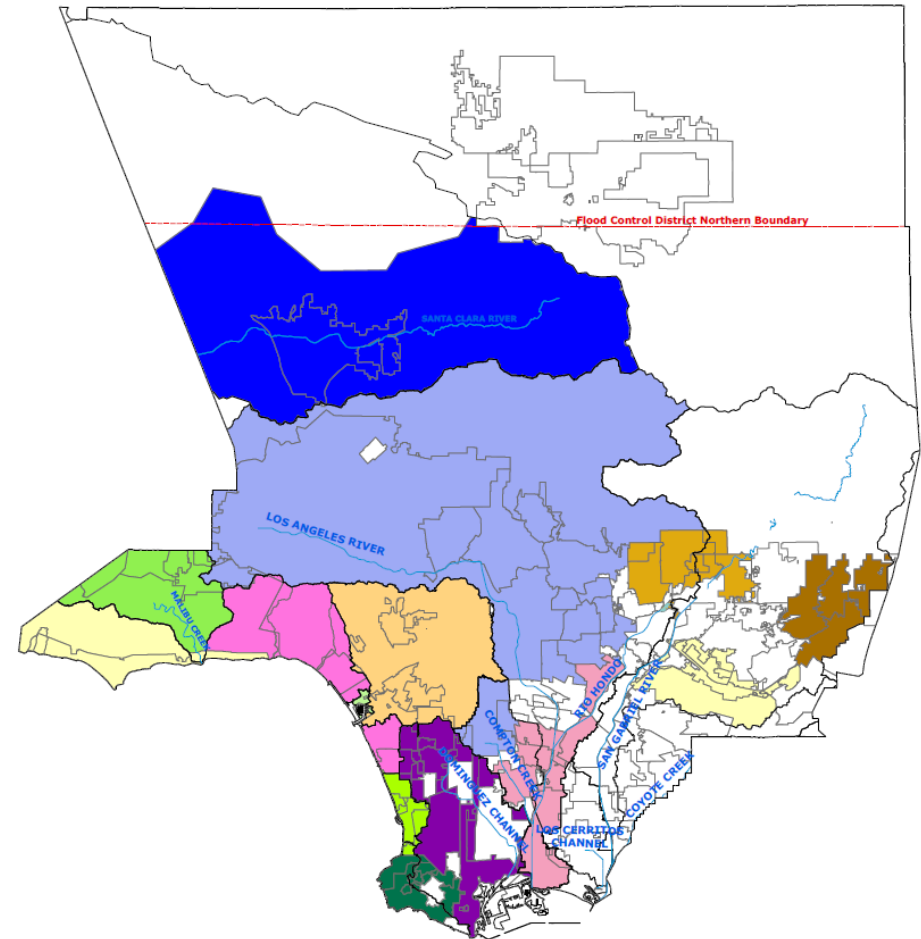


EWMP process detail



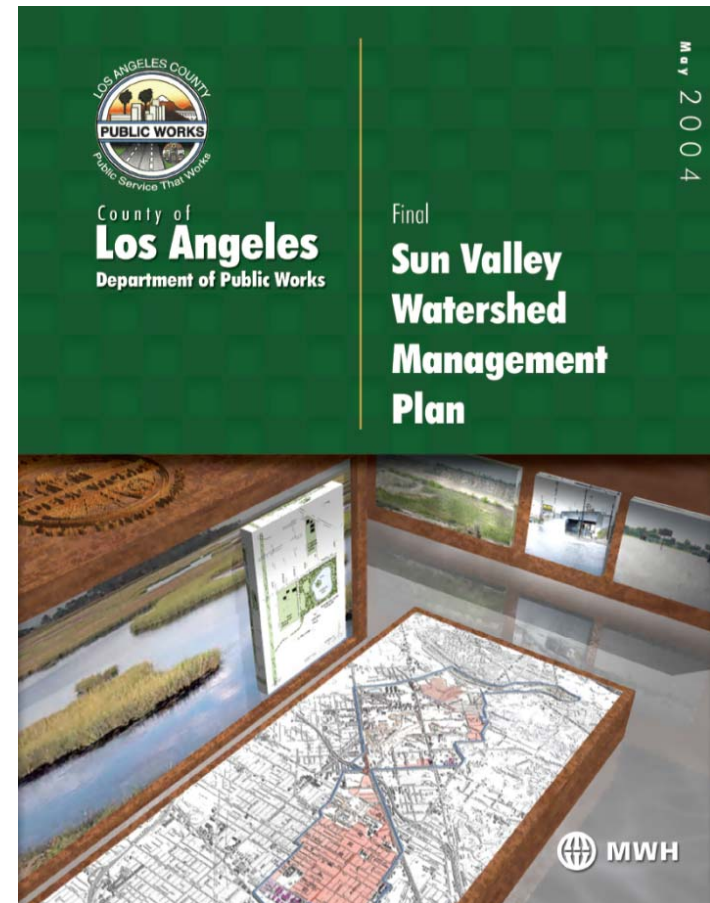
EWMP planning status

- ▶ Majority of permittees intend to pursue integrated planning
- ▶ Tentatively 15 EWMP groups throughout LA County
- ▶ Technical Advisory Committee to be formed:
 - Regional Board and USEPA
 - MS4 permittees
 - Environmental organizations
 - Water agencies
 - Others



Example: Sun Valley Watershed Management Plan

- ▶ Extensive stakeholder process
- ▶ Identified 18 projects
- ▶ 3-year plan development process





Community Involvement

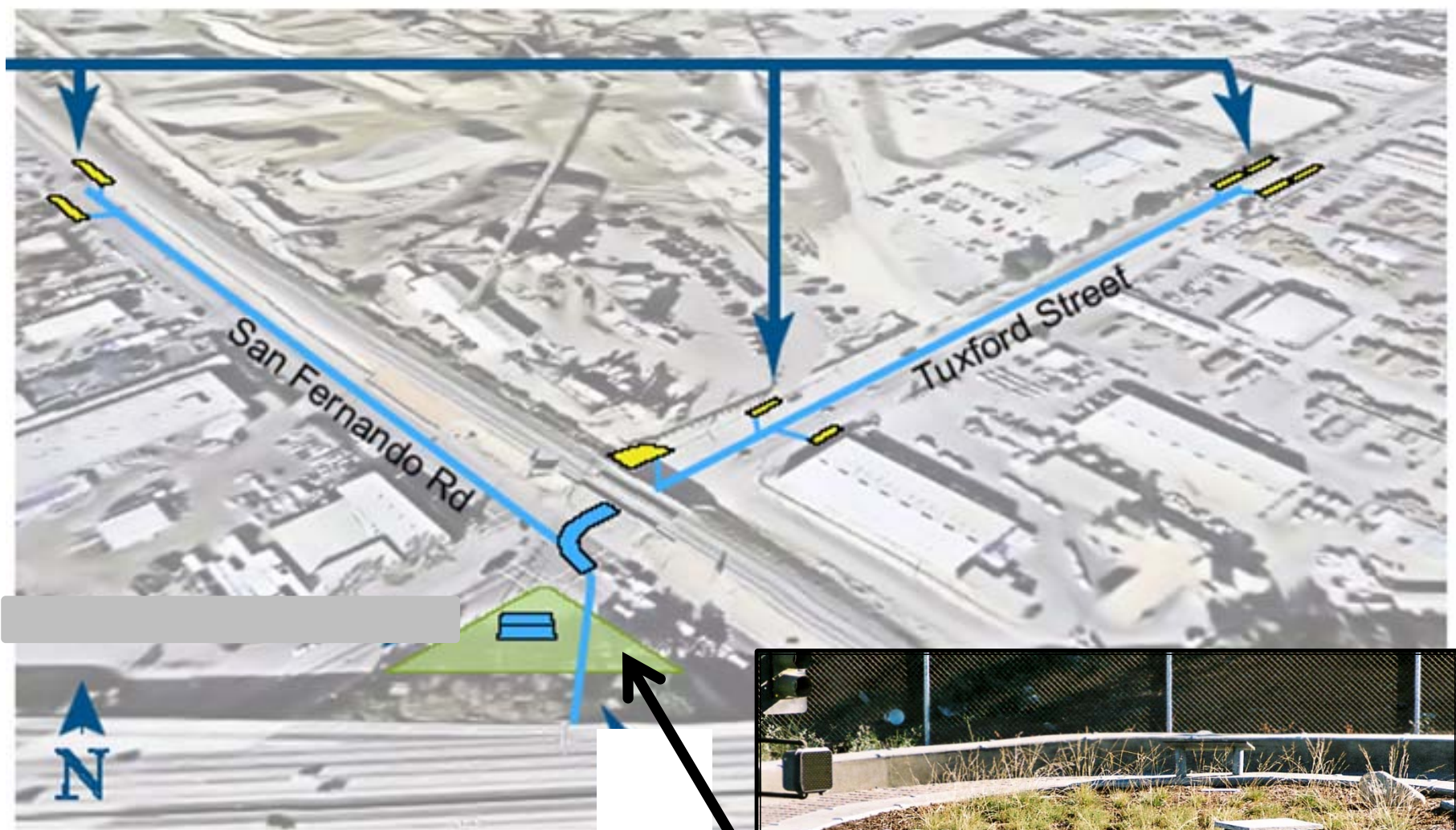


Elmer Avenue Retrofit

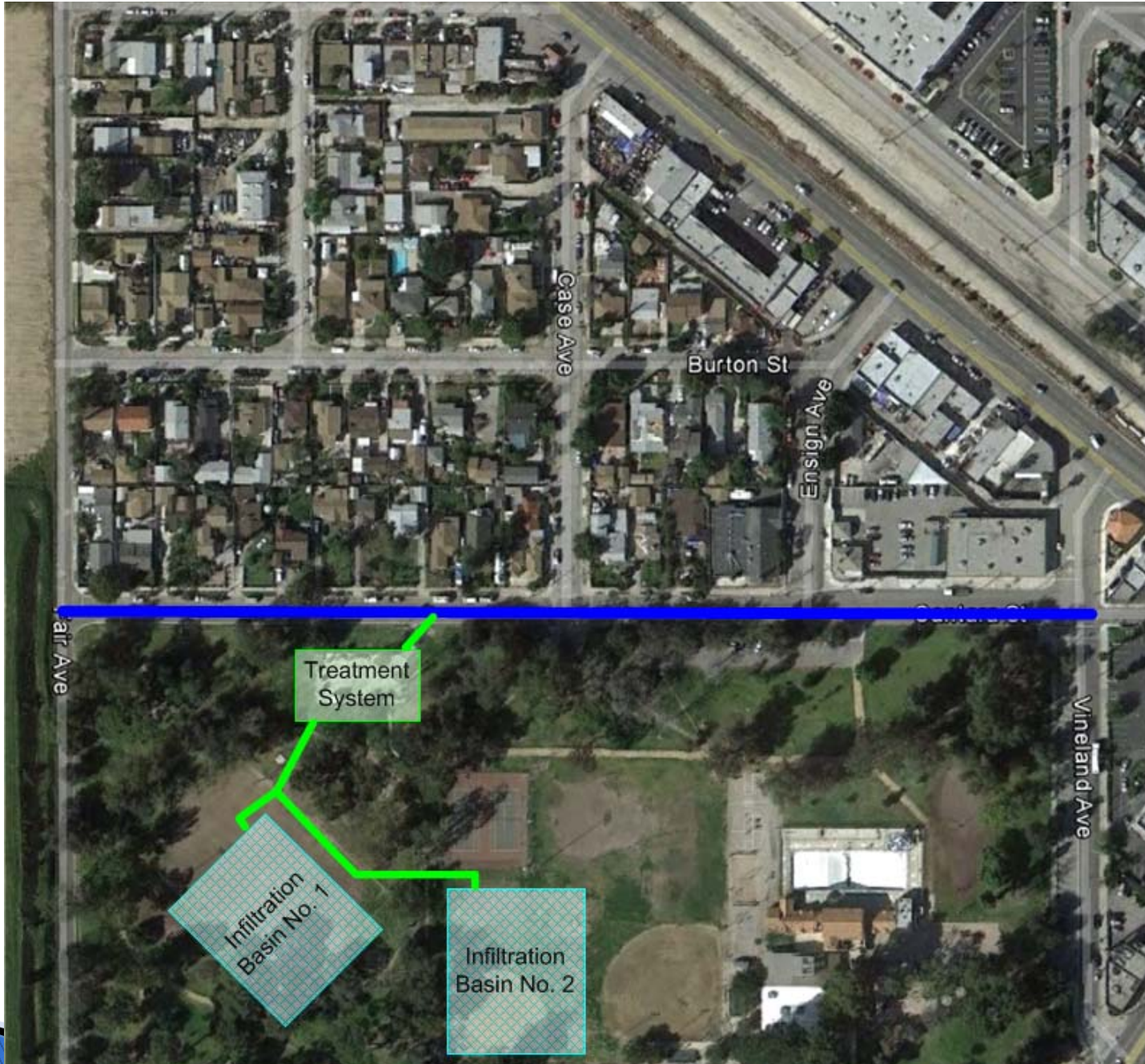


Tuxford Green

Sun Valley Park Drain and Infiltration System

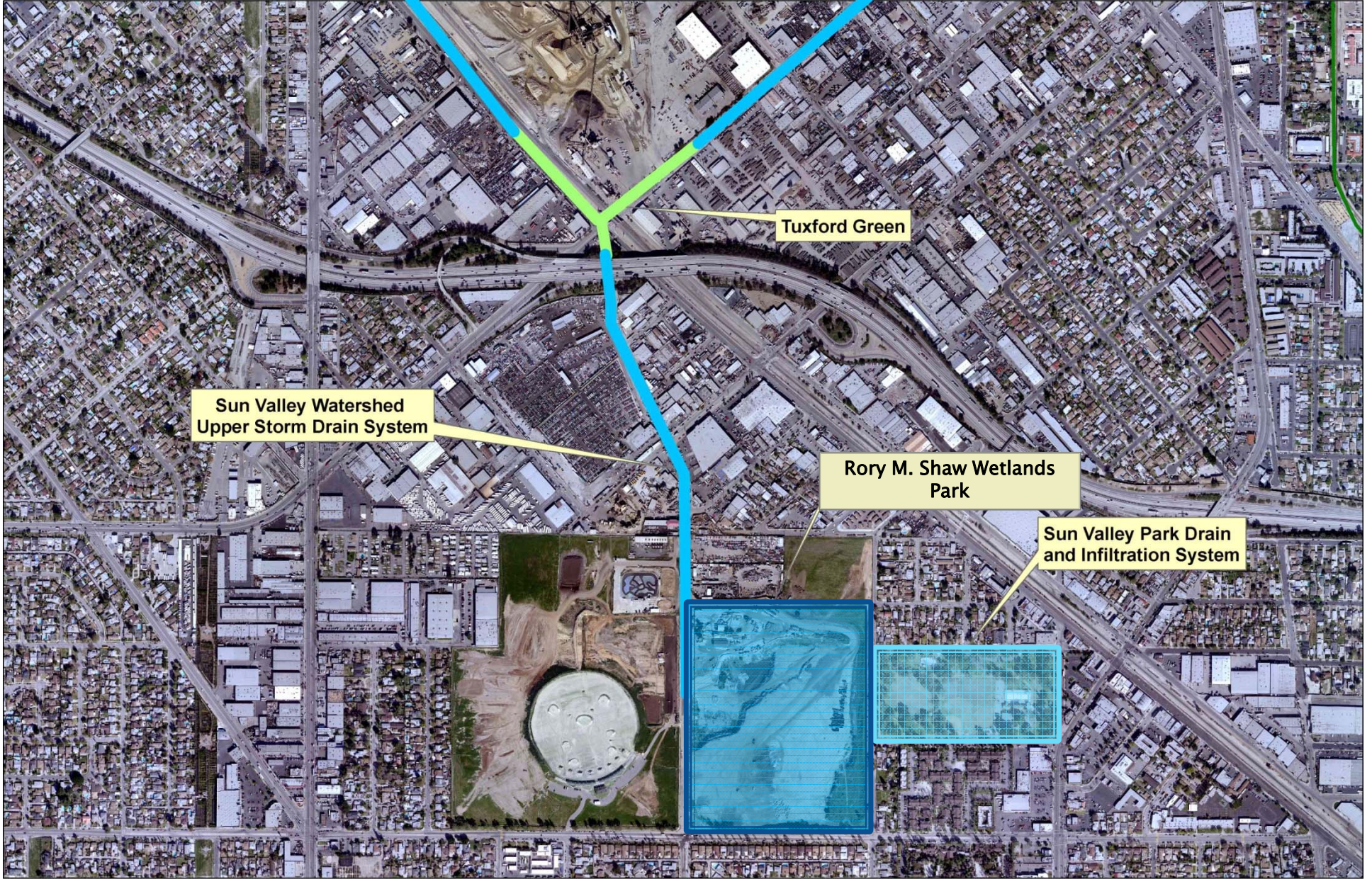


Tuxford Green



Sun Valley Park Drain and Infiltration System





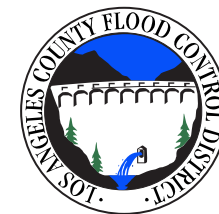


Groundwater recharge
(Sun Valley Park)

Water infiltrated:
590 AF/yr.

Rory M. Shaw Wetlands Park

Rory M. Shaw Wetlands Park





Dominguez Gap Wetlands



Tujunga Wash Greenway and Streambed Restoration

Final thoughts

- ▶ New MS4 Permit is an opportunity to manage stormwater as a resource
- ▶ Incentivize collaboration among permittees
- ▶ Partnerships



Thank you.

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