

Recharge Basins
(Symbolized by Recharged Water Type)

- Storm, Imported and Recycled Water
- Storm and Imported Water
- Storm Water
- Incidental Stormwater Only
- Jurupa - RP3 Pipeline

Recycled Water Facilities

- Water Treatment Plant

Pipelines (Symbolized by Status)

- Existing
- Planned
- In Construction
- In Design

Imported Water Facilities

- Service Connection/Turnout
- Imported Water Pipeline

Drainage Areas

- San Antonio Creek System
- West Cucamonga Creek System
- Cucamonga and Deer Creek Systems
- Lower Cucamonga Creek System
- Day Creek System
- San Sevaine and Etiwanda Creek Systems



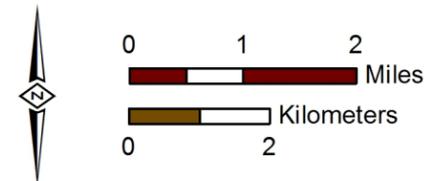
OBMP Management Zones



Produced by:

 23692 Birtcher Drive
 Lake Forest, CA 92630
 949.420.3030
 www.wildermuthenvironmental.com

Author: MJC
 Date: 10/22/2012
 Name: Drainage_Area_Basins



2012 Recharge Masterplan Update

Location of Recharge Basins and Supplemental Water Conveyance Facilities

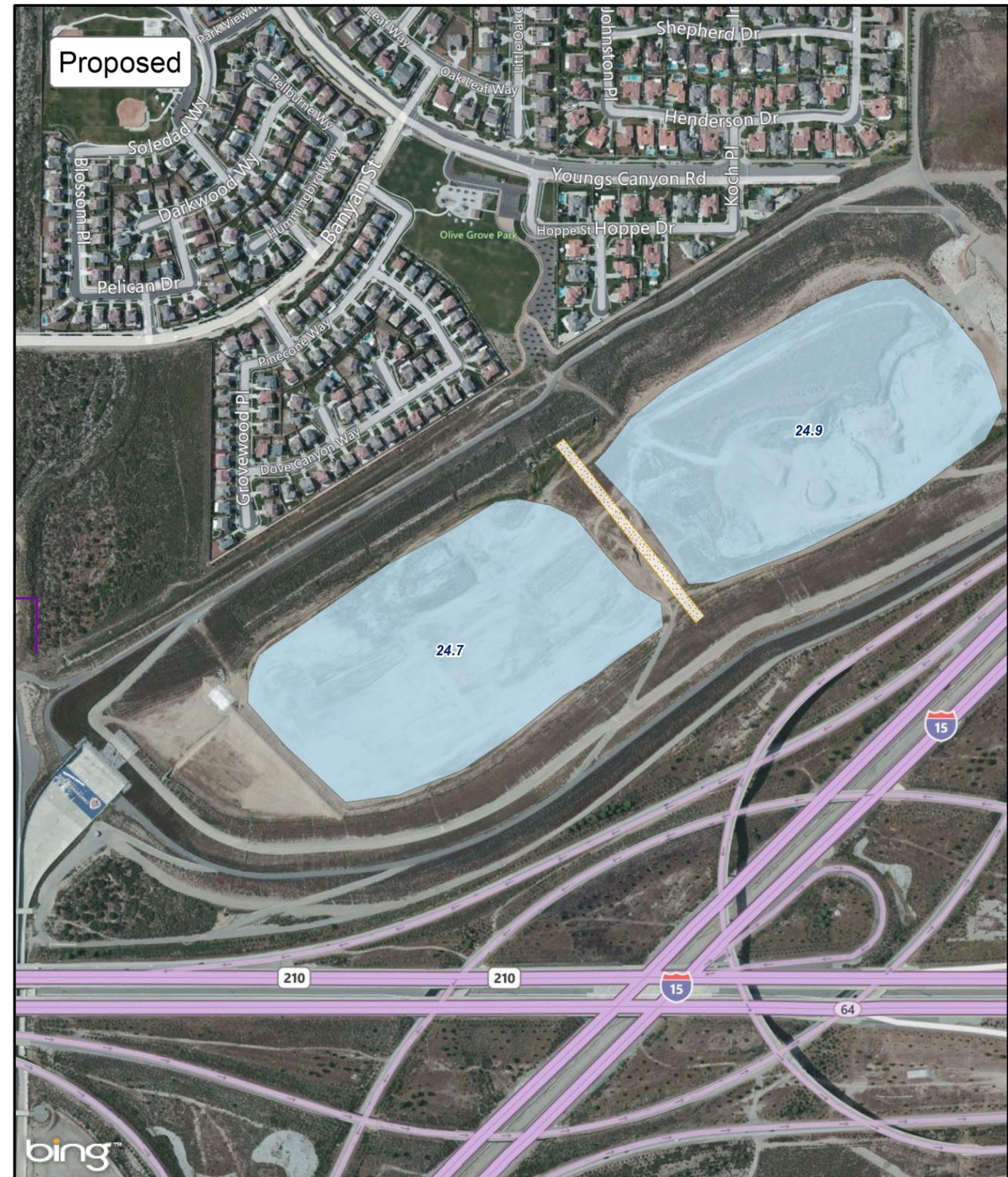
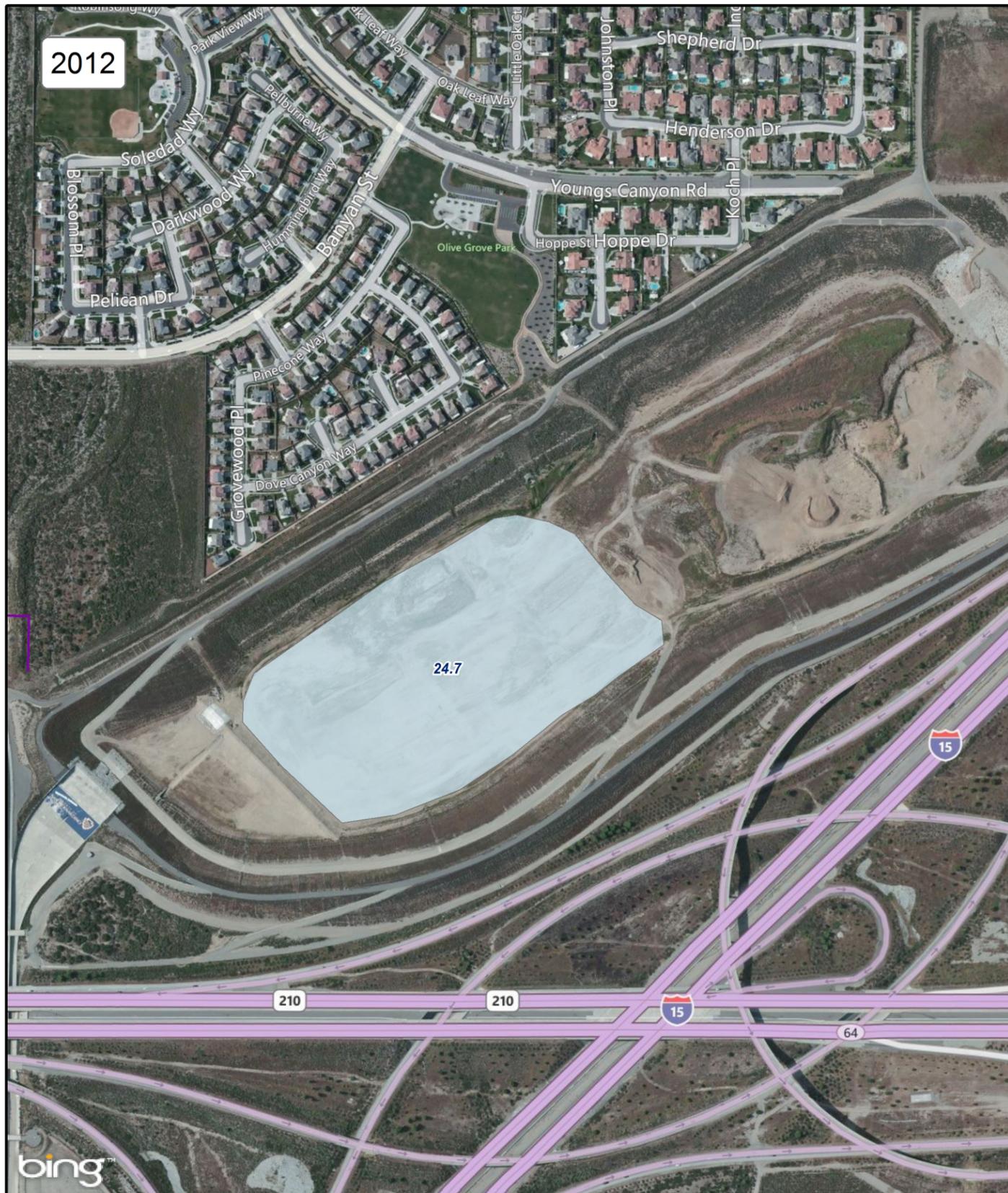
San Sevaine Basins No. 5

Historical Context of San Sevaine Basins

- The San Sevaine Basins, as they exist today, were constructed in the late 1990s and early 2000s and were funded in part by the Bureau of Reclamation
- Basins 1 through 4 are primarily debris basins and Basin 5 is used for stormwater regulation
- Basins 1 through 4 can be used at any time for the recharge of storm and imported water
- Basin 5 can be used for the recharge of:
 - stormwater whenever stormwater is present but is limited to a designated conservation area (~25 acres) after a storm event; and
 - supplemental water when storms are not occurring or projected not to occur and is limited to a designated conservation area

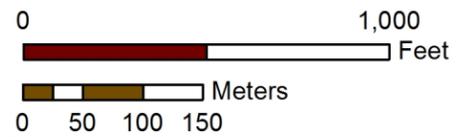
Recharge Improvement Concepts

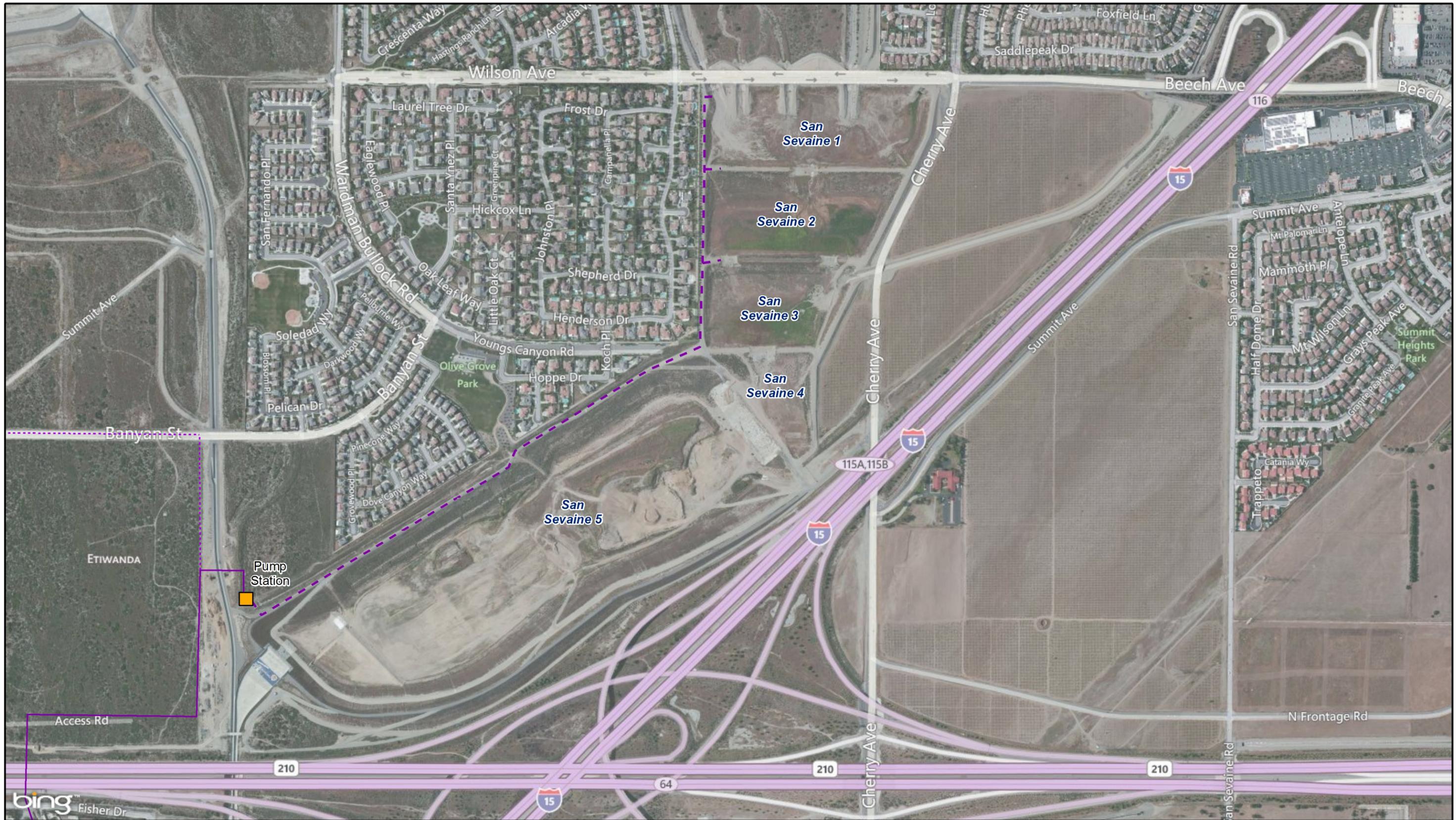
- Construct internal berms in Basin 5 to double conservation storage and area available for infiltration
- Extend recycled water supply pipeline from Basin 5 to the upstream part of Basin 5 and then to Basins 1 through 4. This will enable recycled water recharge in all of the San Sevaine Basins (~6,500 linear feet of new pipeline and a new pump station)
- These improvements will increase the recharge capacity for all water sources and increase the recycled water supply to the Basins
- Potential hurdles to implementation:
 - Funding
 - Institutional arrangements



Produced by:
WILDERMUTH
 ENVIRONMENTAL INC.
 23692 Birtcher Drive
 Lake Forest, CA 92630
 949.420.3030
 www.wildermuthenvironmental.com

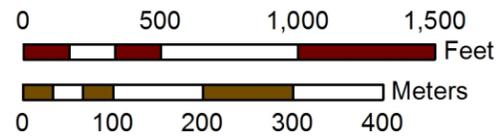
Author: MJC
 Date: 10/22/2012
 Name: San Sevine





Produced by:
WILDERMUTH
 ENVIRONMENTAL INC.
 23692 Birtcher Drive
 Lake Forest, CA 92630
 949.420.3030
 www.wildermuthenvironmental.com

Author: MJC
 Date: 10/22/2012
 Name: San Sevaine_RW_Extension



Extension of the Recycled Water Pipeline
 to all of the San Sevaine Basins

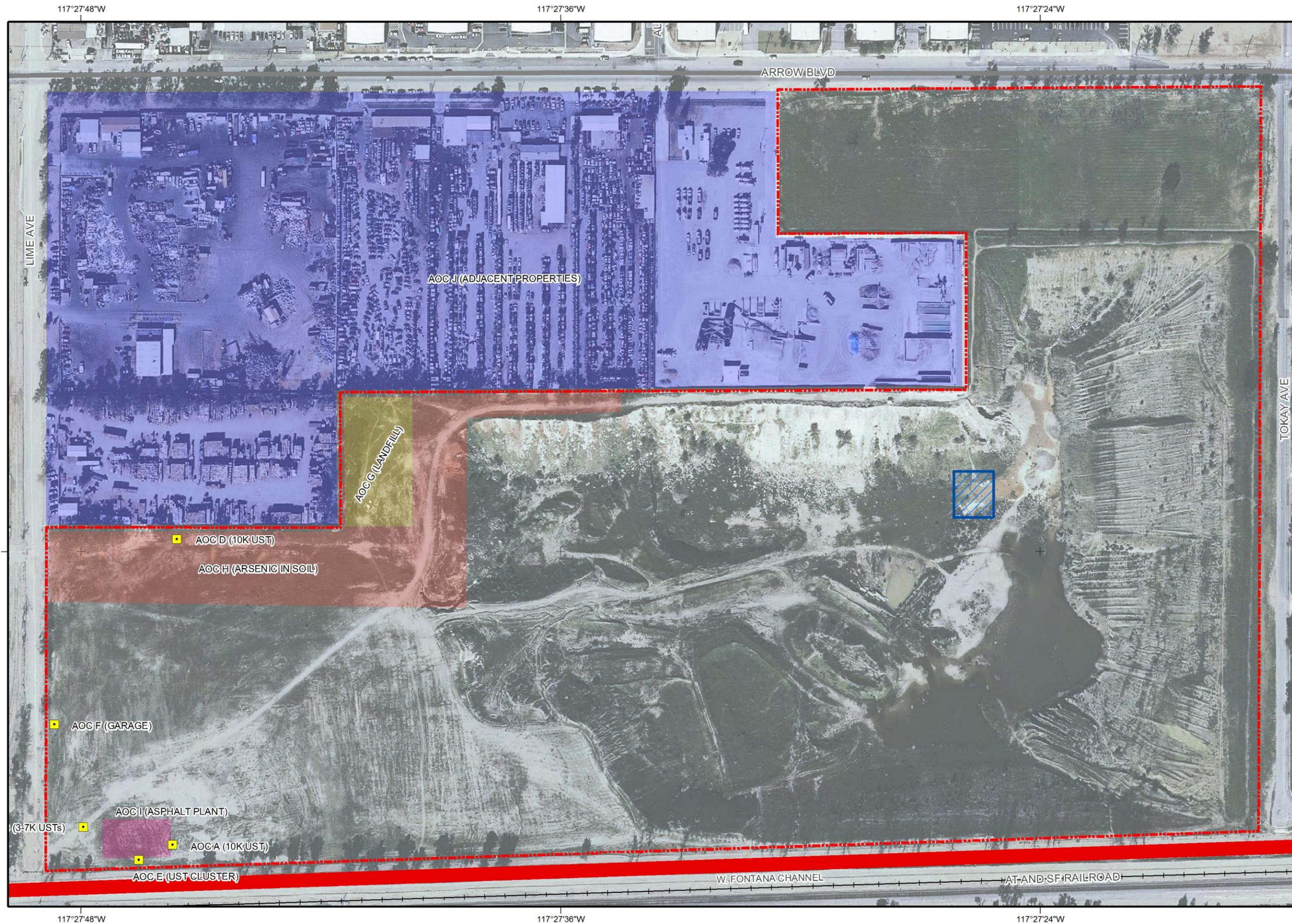
Vulcan Pit Project

Historical Context of Vulcan Pit

- The Vulcan Pit started as a sand and gravel operation in the 1940s and ceased operations in the 1990s; asphalt production occurred on site
- Flood control and recharge projects have been proposed for the pit since the early 2000s
- Presently the City of Fontana is planning a large stormwater retention basin at the pit site that will have the potential for substantial stormwater storage and recharge
- Currently the only stormwater recharge that occurs in the pit is from a small storm drain from the adjacent concrete batch plant on the north site of the pit.

Recharge Improvement Concepts

- The City plans to excavate the pit and construct an embankment around the southern part of the pit to enable the complete storage of back to back 100-year storms with the recovery of regulatory storage through infiltration
- New stormwater storage capacity is about 2,100 acre-ft. This will be largest stormwater conservation project in the Chino Basin
- The inclusion of this new stormwater regulatory storage in the San Sevaine watershed will decrease the stormwater regulatory storage required at the Jurupa Basin; this means that the City's project creates conservation storage at the Jurupa Basin enabling Watermaster and IEUA to increase stormwater diversion and recharge at the Jurupa, RP3 and Declez Basins
- Other Improvements in the watershed tributary to the pit will increase the drainage area to about 4,500 acres (more than double the drainage area assumed in the 2010 RMPU)
- The City estimates that the average annual recharge from its project will be about 2,000 acre-ft/yr although this has not been verified
- Imported and recycled waters could be recharged provided that new conveyance facilities are constructed
- Potential hurdles to implementation:
 - Funding
 - Institutional arrangements



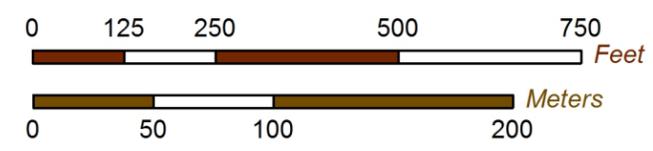
Main Features

-  Property Boundary
-  Area of Concern (AOC) (Point Source)
-  AOC (Non-Point Source)
-  AOC Landfill
-  AOC (Arsenic in Soil)
-  AOC (Asphalt Plant)
-  AOC (Adjacent Properties)
-  Maintenance Area



Produced by:
WILDERMUTH
 ENVIRONMENTAL INC.
 23692 Birtcher Drive
 Lake Forest, CA 92630
 949.420.3030
 www.wild-environment.com

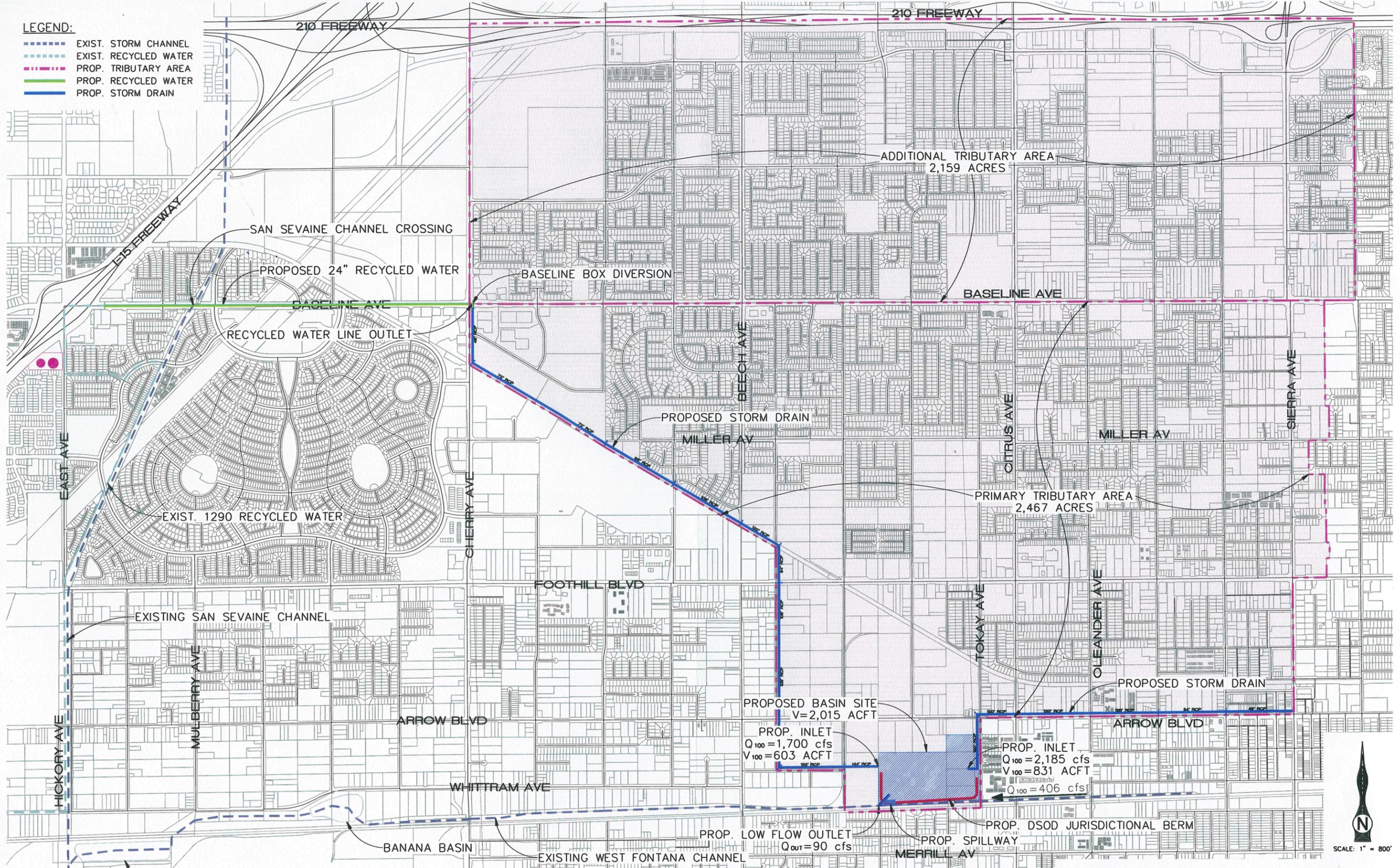
Author: WEL
 Date: 20060207
 File: 20060207_SITE_ASSESSMENTS.MXD



007-003
078

Vulcan Basin
 Site Assessment Locations

- LEGEND:**
- EXIST. STORM CHANNEL
 - EXIST. RECYCLED WATER
 - PROP. TRIBUTARY AREA
 - PROP. RECYCLED WATER
 - PROP. STORM DRAIN



PROPOSED BASIN SITE
 $V=2,015$ ACFT
 PROP. INLET
 $Q_{100}=1,700$ cfs
 $V_{100}=603$ ACFT

PROP. INLET
 $Q_{100}=2,185$ cfs
 $V_{100}=831$ ACFT
 $Q_{100}=406$ cfs

PROP. LOW FLOW OUTLET
 $Q_{OUT}=90$ cfs

PROP. DSOD JURISDICTIONAL BERM



S:\CADD\101-56 Vulcan Basin\Exhibits\Vulcan Basin Feasibility Study_09-05-12.dwg

TKE ENGINEERING, INC.
 2305 CHICAGO AVENUE
 RIVERSIDE, CA 92507
 (951) 680-0440
 FAX: (951) 680-0490

CITY OF FONTANA
 VULCAN BASIN
 FEASIBILITY STUDY
 SEPTEMBER 5, 2012

Wineville Basin Project

Historical Context of Wineville Basin

- The Wineville Basin is an integral part of the Day Creek Project and was sized to mitigate increases in the 100-yr peak discharge to Riverside County due to development in San Bernardino County
- Projected average annual recharge at the Wineville Basin is about:
 - 200 to 300 acre-ft/yr under current conditions
 - 2,600 to 3,500 acre-ft/yr if improved per the 2010 RMPU
- Watermaster and the IEUA are planning to conduct proof of concept investigations at the Wineville Basin to determine if recharge improvements are feasible
- Similar proof of concept investigations may be considered at the Riverside and Jurupa Basins

Recharge Improvement Concepts

- Conduct proof-of-concept investigation
- Conduct design investigations if the proof-of-concept investigation results appear promising
- Imported and recycled waters could be recharged provided that new conveyance facilities are constructed for recycled water
- Potential hurdles to implementation:
 - Funding
 - Habitat mitigation
 - Institutional arrangements



Produced by:
WILDERMUTH
 ENVIRONMENTAL INC.
 23692 Birtcher Drive
 Lake Forest, CA 92630
 949.420.3030
 www.wildermuthenvironmental.com

Author: MJC
 Date: 10/22/2012
 Name: Wineville

