



Pasadena Water and Power

Altadena Coalition of Neighborhood Associations

March 29, 2016



7:45 PM – 8:05 PM Arroyo Seco Canyon Project
Pasadena Non-Potable Project, Flint Michigan Issue,
Devil's Gate to Eaton Canyon Pipeline

PRESENTER

- Bradley R. Boman, Engineering Manager City of Pasadena

PANEL

- > Lisa Yamashita-Lopez, General Manager, Rubio Canon Land and Water Association
- > Nina Jazmadarian, General Manager, Foothill Municipal Water District
- > Robert Hayward, General Manager, Lincoln Avenue Water Company
- > Melvin L. Matthews, General Manager, Kinneloa Irrigation District





Presentation Flow

Pasadena Water and Power

- Arroyo Seco Canyon Project
- Pasadena Non-Potable Project
- Flint Michigan Issue
- Devil's Gate to Eaton Canyon Pipeline

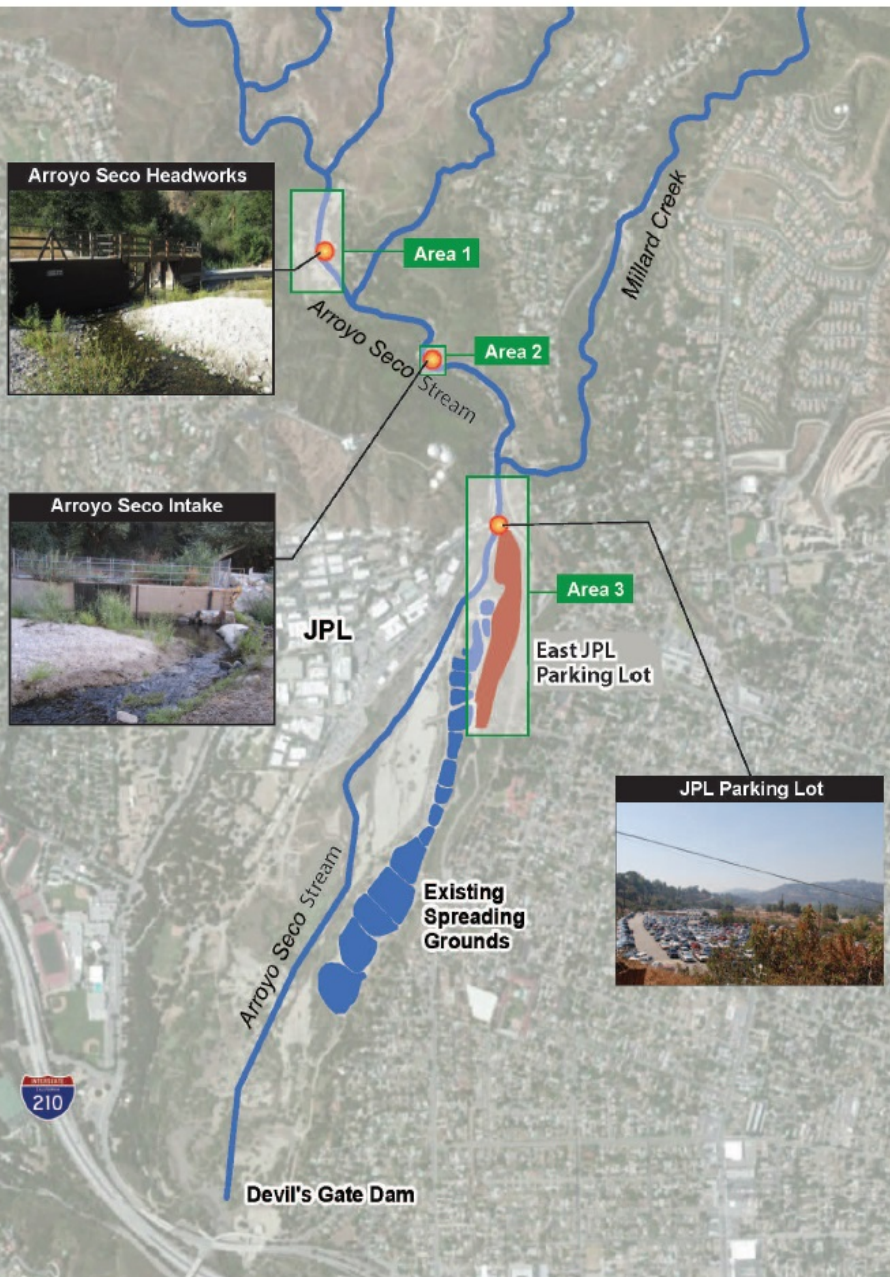


Background

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Project Addresses 3 Areas in the Arroyo Seco:

- Area 1 – Arroyo Seco Headworks
- Area 2 – Arroyo Seco Intake
- Area 3 – Former JPL Parking Lot & Spreading Basins





Remove Wooden Structure and a Portion of the Concrete Weir

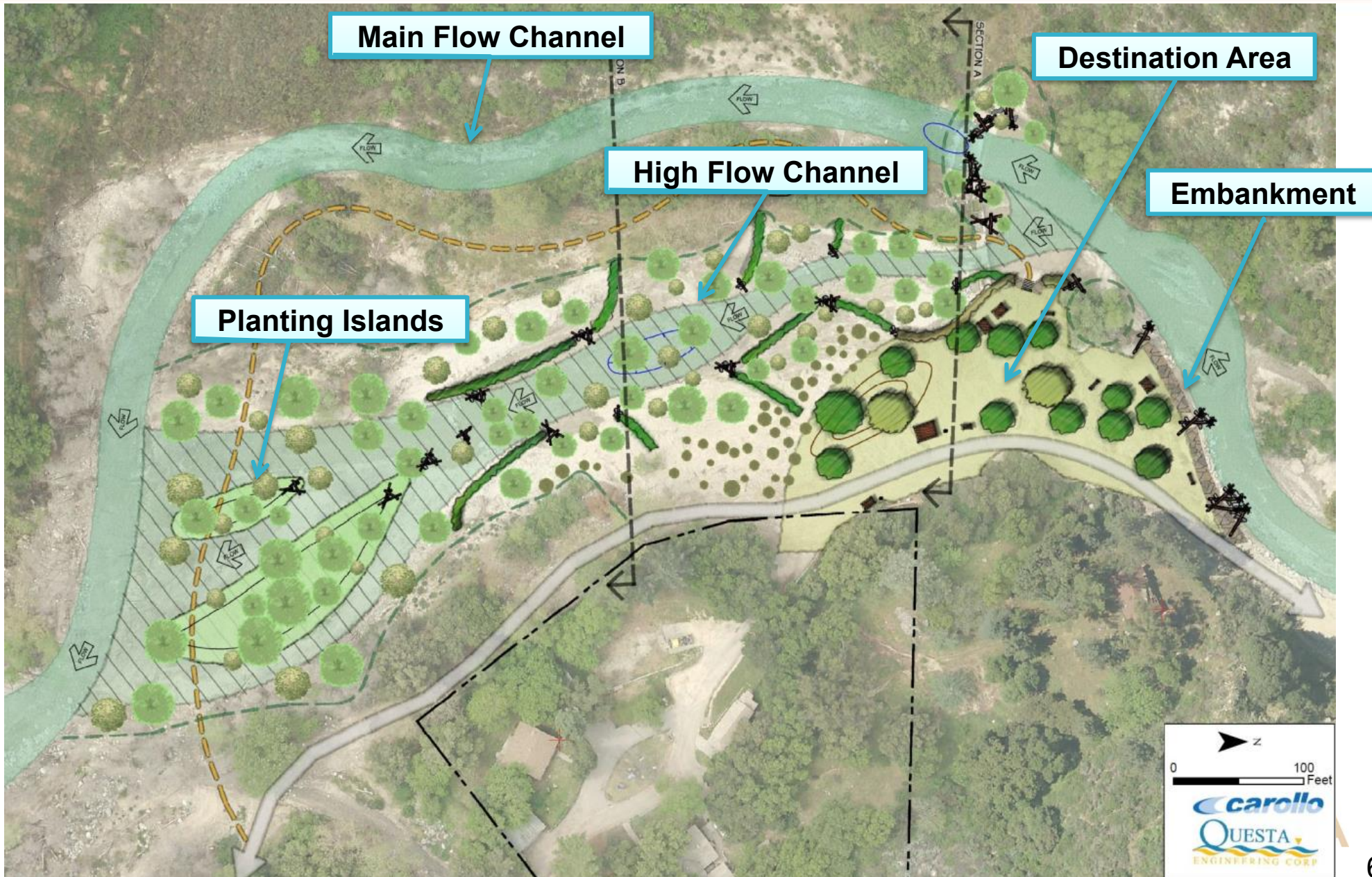
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Rendering of the Stream Restoration

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Area 1 Habitat & Streambed Restoration (3 to 5 Year Visual)

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Area 1 Habitat & Streambed Restoration

(3 to 5 Year Visual)

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Area 2: Arroyo Seco Intake Structure

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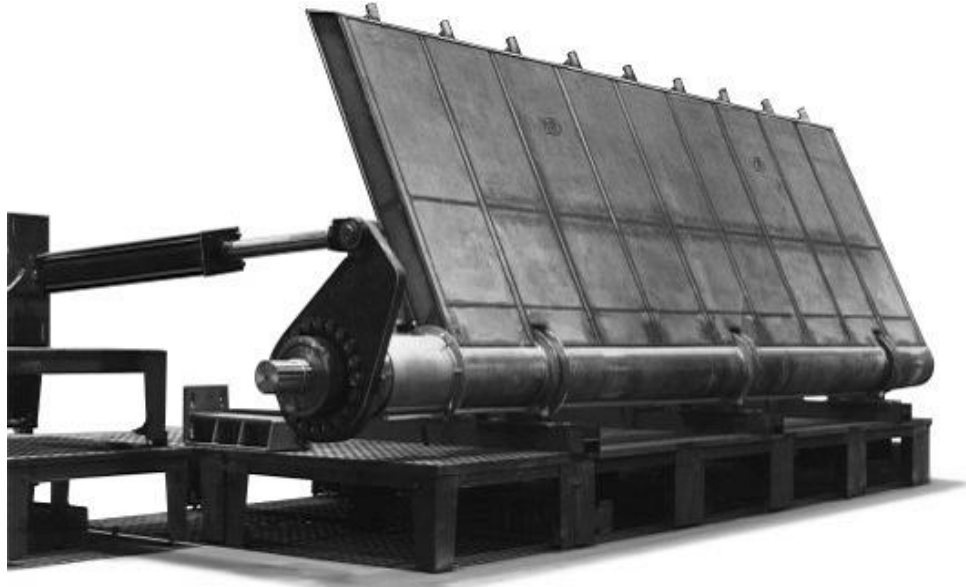




Upgrade Diversion Dam

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Weir Gate



Obermeyer Spillway Gate



- **Improves Reliability & Operates Over a Wide Range of Flow Rates**
- **Lowers Gate During Large Storm Events to Minimize Sediment Buildup**
- **Enhances Aquatic Protection**

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Area 2 Intake & Weir Replacement

(3 to 5 Year Visual)

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Area 2 Intake & Weir Replacement

(3 to 5 Year Visual)

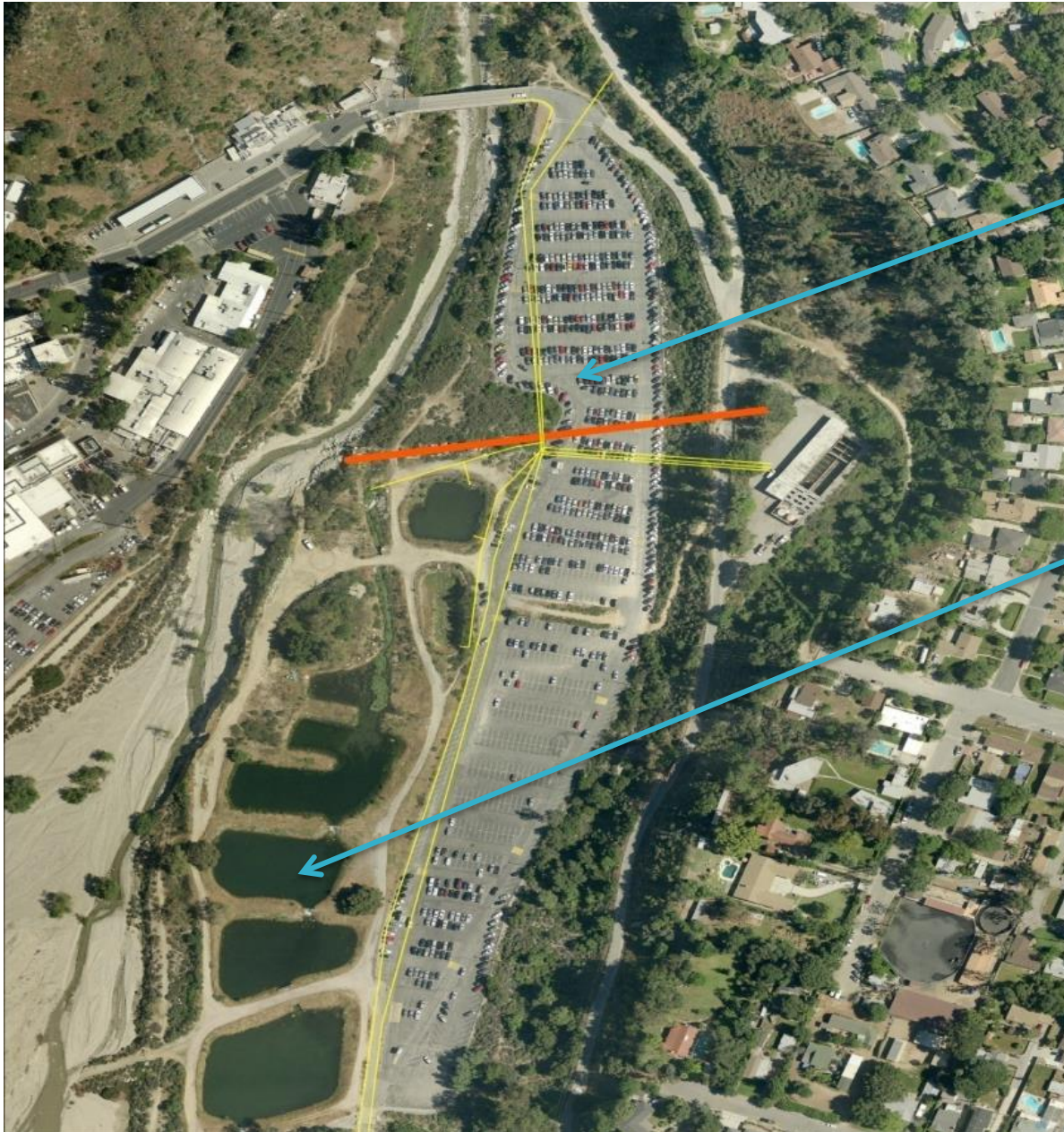
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Area 3 – Former JPL Parking Lot & Spreading Basins

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JPL Parking Lot

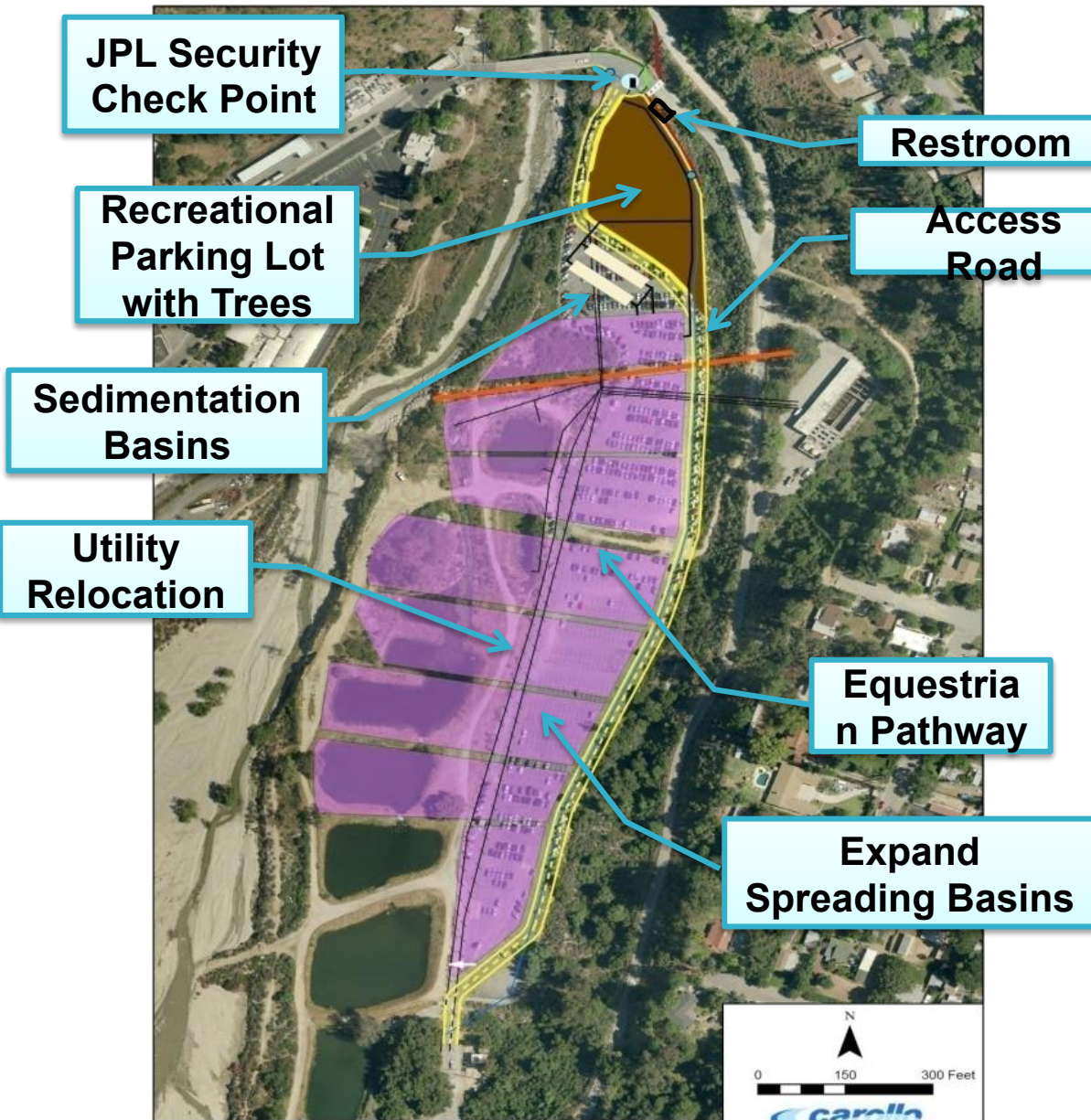
Spreading Basins

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Area 3 – New Facilities

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- Expand Spreading Basins
- Sedimentation Basins
- Recreational Parking Lot
- Access Road
- Utility Relocation
- JPL Security Checkpoint & Turn Around
- Public Restroom
- Equestrian Pathway



Area 3 Recreational Parking Lot

(3 to 5 Year Visual)

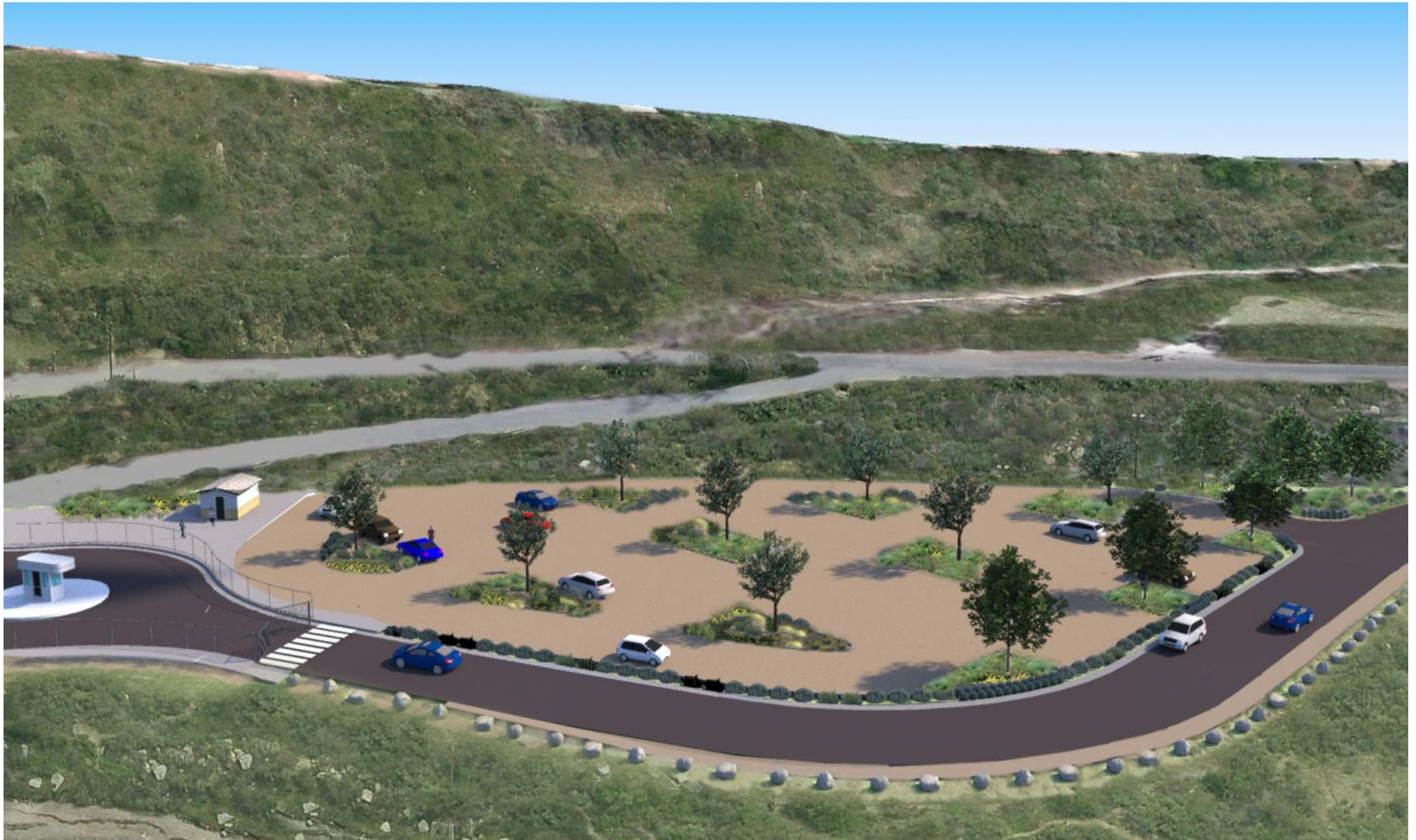
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Area 3 Public Restroom & Recreational Parking Lot (3 to 5 Year Visual)

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Arroyo Seco Canyon Project

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- Joint Partnership between PWP and Arroyo Seco Foundation
- Total Project Cost is about \$11 Million
- Partially Funded by State Proposition 84 (\$3.3 M)



Local Recharge Benefits

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Annual Surface Water Recharge (Acre Feet per Year)	
Existing	2,200
Additional	1,000
Total	3,200

- Additional Pumping Credit ~ 600 AF/Year
- Additional Benefit to the Aquifer ~ 400 AF/Year

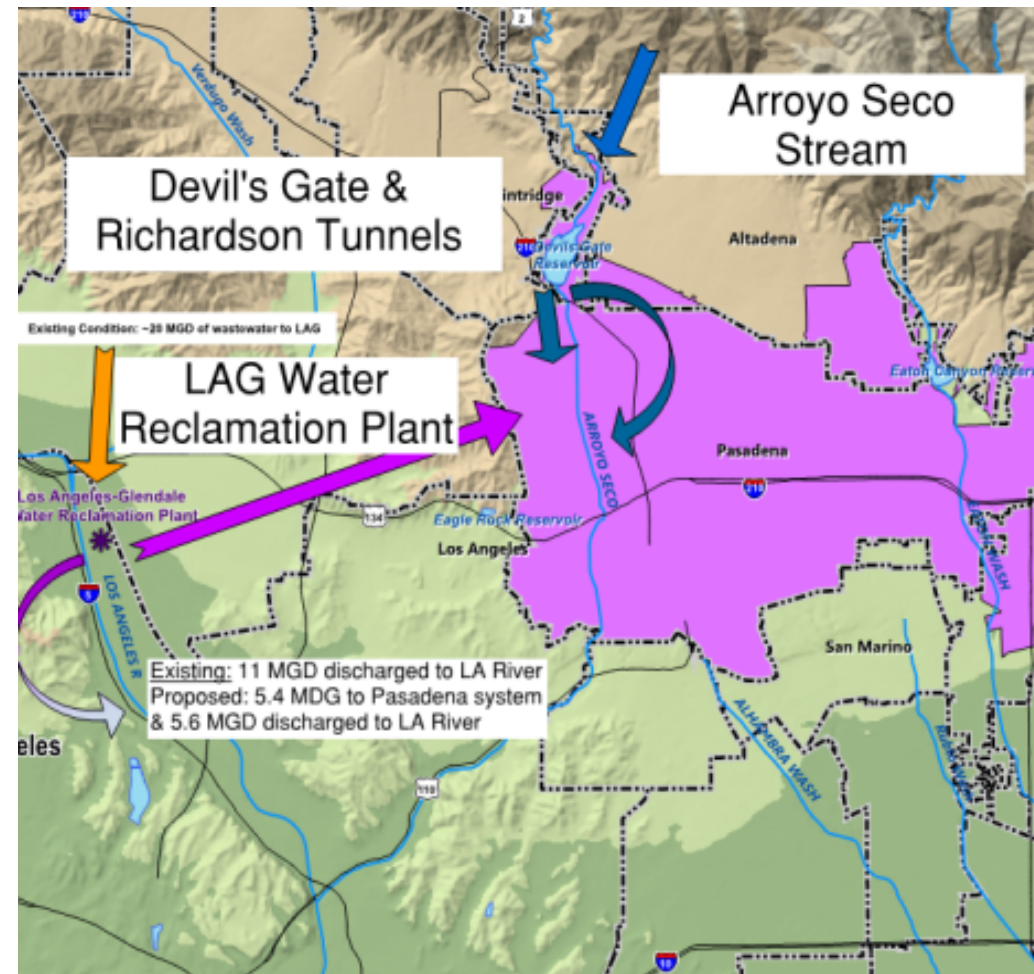


Pasadena Non-Potable Water Project

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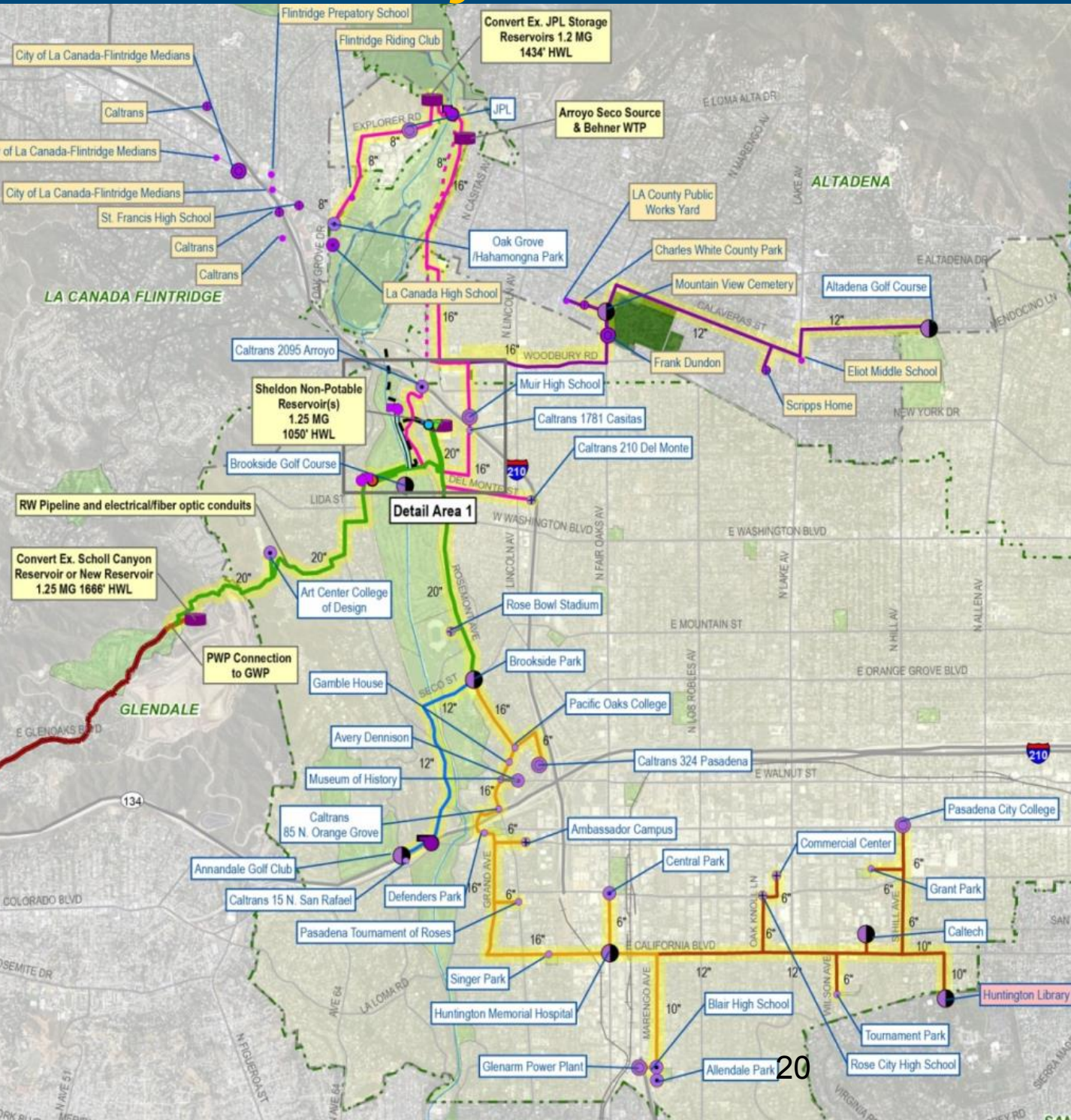
Build-out in 6 phases

- \$50 Million
- 20 years to build
- 3 water sources
- 3,000 AFY
- 10% of demand
- 51 customers



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Overall Project



Detail Area 1

Phase 1 analyzed in detail in EIR

Phases 2 to 6 analyzed at regional level in EIR

- Require additional environmental studies and public review

Implemented over 20 years

Components

- Pipelines - 22 miles
- Reservoirs - 6
- Pump stations - 2
- Pressure reducing station - 2
- Upgrades to Glendale pumping system

Supply: 3,000 AFY

Estimated Cost: \$50M

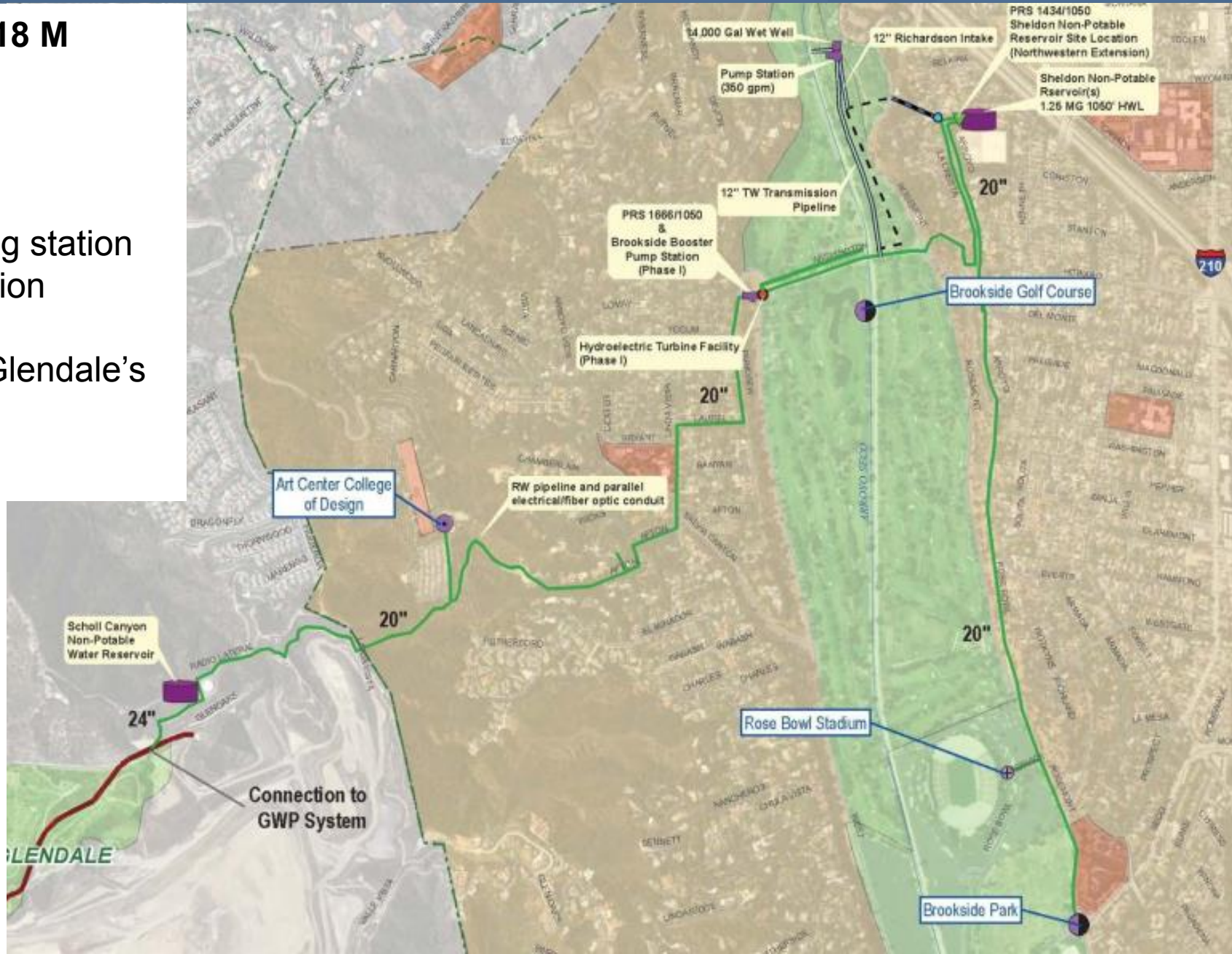


Proposed Phase 1 Project

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Phase 1 – \$15 - \$18 M
700 AFY

- 4 customers
- 5 miles of pipe
- 2 reservoirs
- 1 pressure reducing station
- 1 tunnel pump station
- 1 micro-turbine
- Improvements to Glendale's pump system



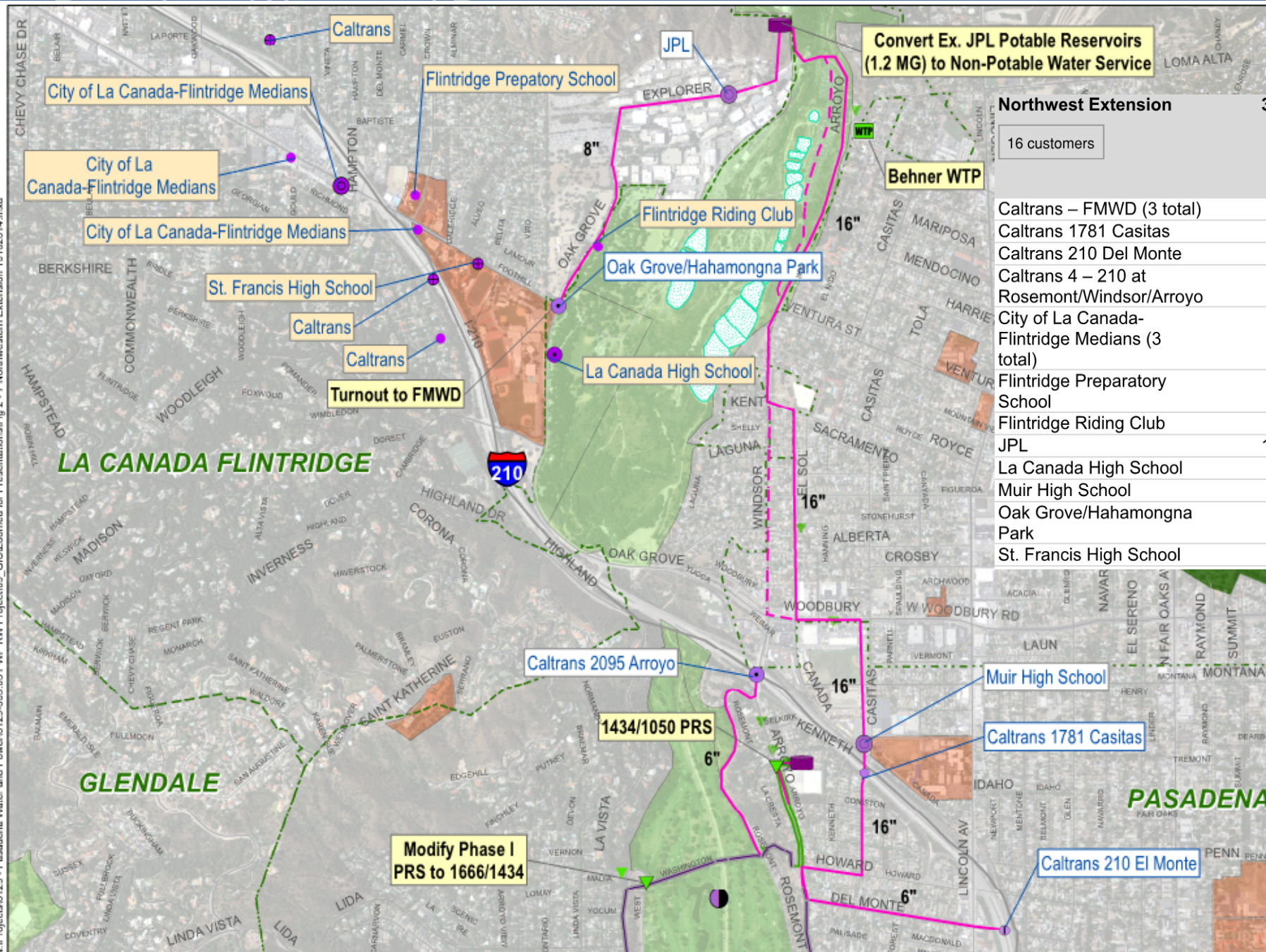


Phase 5 – Northwestern Extension

**Pasadena Non-Potable Water Project
Figure 2-7**

Northwestern Extension
128 AFY mixed use
7 AFY dust control
256 AFY irrigation

Northwest Extension	391	128 AFY mixed use 7 AFY dust control 256 AFY irrigation
16 customers		
Caltrans – FMWD (3 total)	39	Irrigation
Caltrans 1781 Casitas	10	Irrigation
Caltrans 210 Del Monte	12	Irrigation
Caltrans 4 – 210 at Rosemont/Windsor/Arroyo	29	Irrigation
City of La Canada-Flintridge Medians (3 total)	1	Irrigation
Flintridge Preparatory School	7	Irrigation
Flintridge Riding Club	7	Dust Control
JPL	128	Mixed Use
La Canada High School	46	Irrigation
Muir High School	73	Irrigation
Oak Grove/Hahamongna Park	27	Irrigation
St. Francis High School	11	Irrigation



PAS PWP Customers
FMWD FMWD Customers

Note:
FMWD - Foothill Municipal Water District
HWL - High Water Level
JPL - Jet Propulsion Laboratory
PRS - Pressure Reducing Station
RW - Recycled Water
TW - Tunnel Water
WTP - Water Treatment Plant

0 500 1,000 2,000
Feet





Phase 6 – Northeastern Extension

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Project Schedule

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- Summer 2016 – complete the final design
- Fall 2016 – obtain funding and permits
- 2017 – 2018 – construct Phase 1



Flint Michigan Water Problems

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- April 2014, Flint changed water source from City of Detroit water to Flint River
- Flint River water is more corrosive than Detroit water
- Detroit added phosphate corrosion inhibitors
- Flint River water had no corrosion inhibitors





Flint Michigan Water Problems

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- Flint has a large number of Lead water service lines
- Increase of Lead levels in children
- October 2015, Flint reconnect to Detroit's water

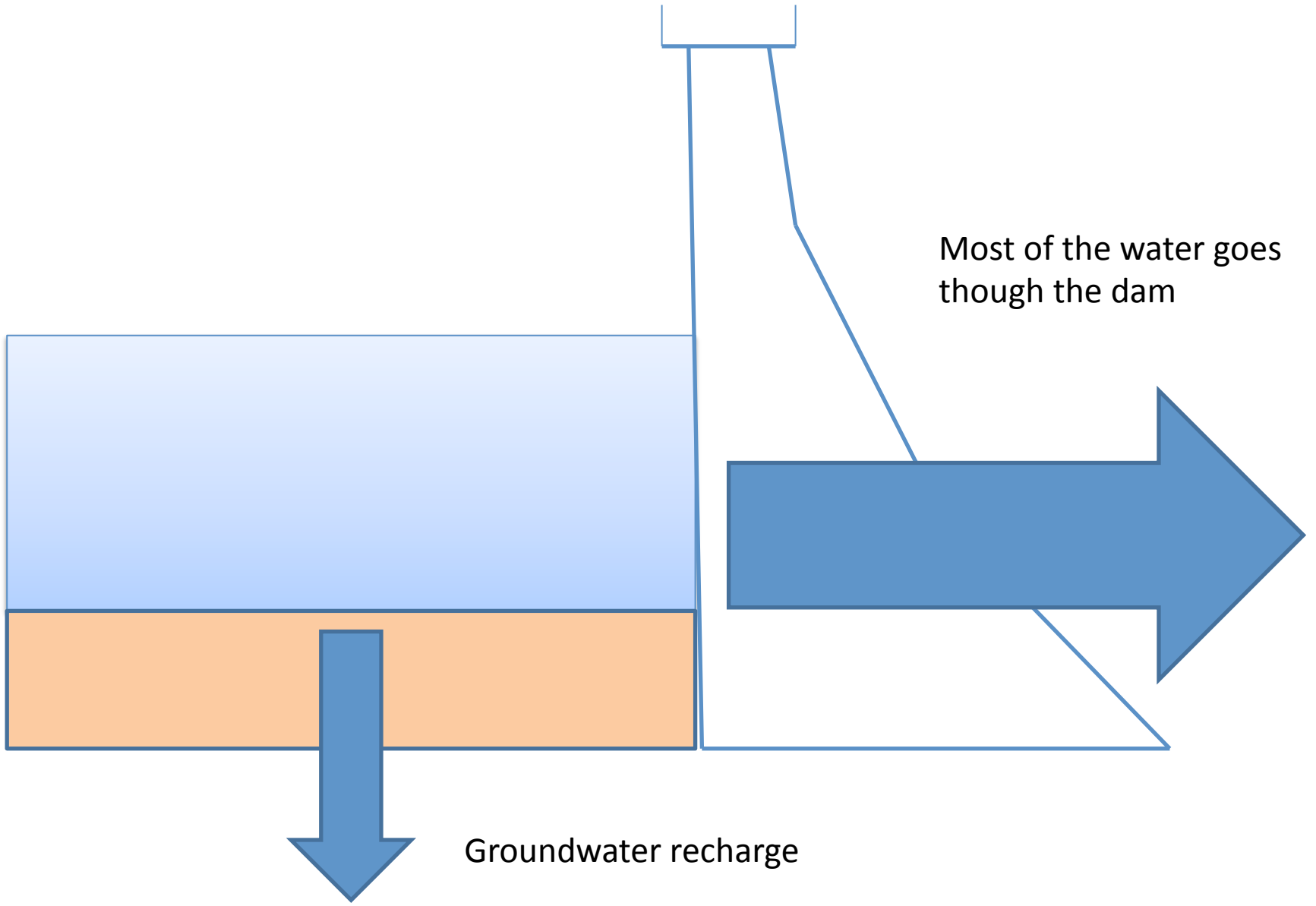




Altadena's Water

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- Non-Corrosive water supplies
- Hard water naturally coats the inside of pipes
- No Lead detected in water system water
- Homes built before 1920 may have Lead pipes
- Solder containing Lead was used until 1986
- Don't use the flush for your tap for drinking

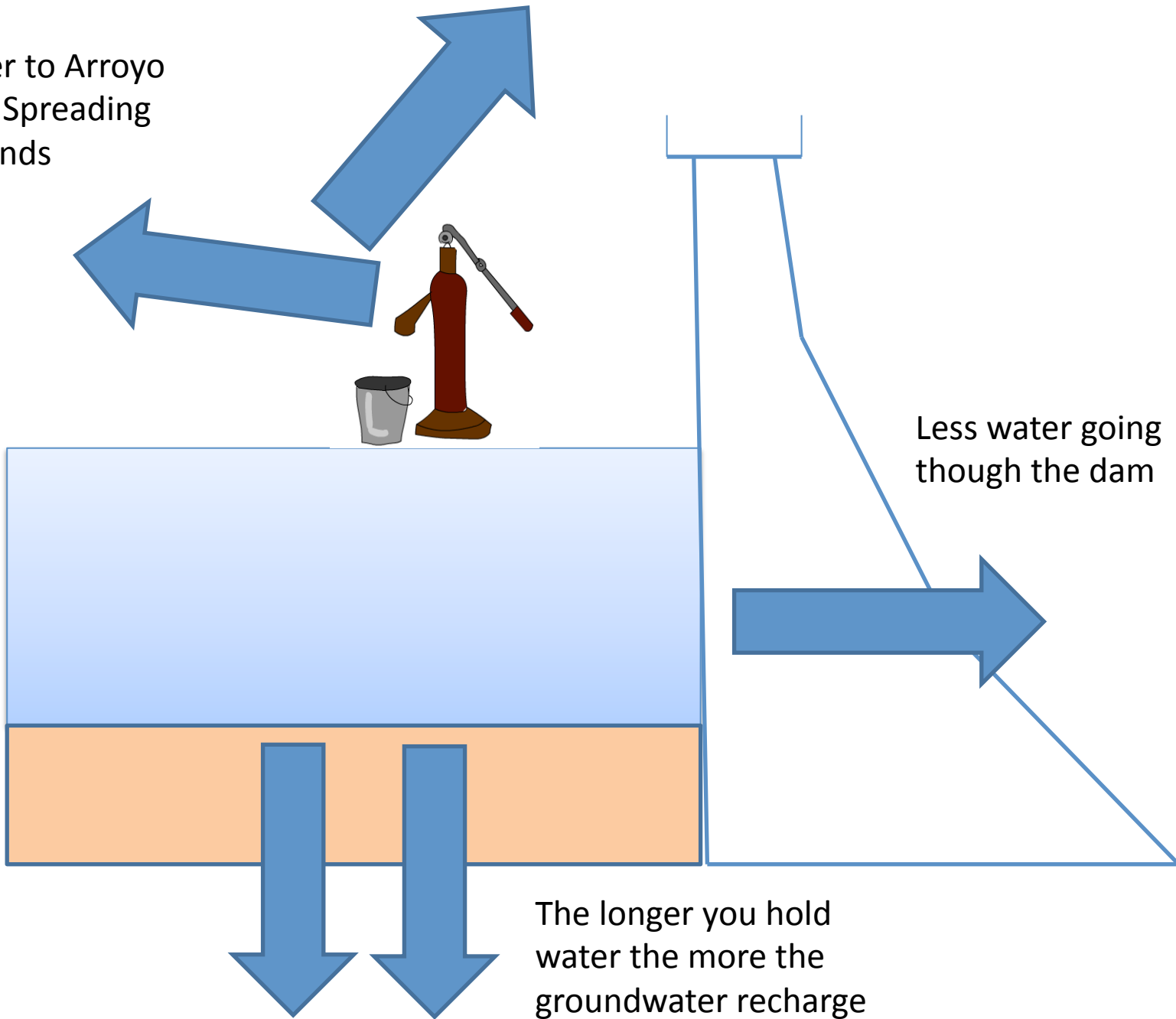


Most of the water goes though the dam

Groundwater recharge

Water to Eaton Canyon
Spreading Grounds

Water to Arroyo
Seco Spreading
Grounds



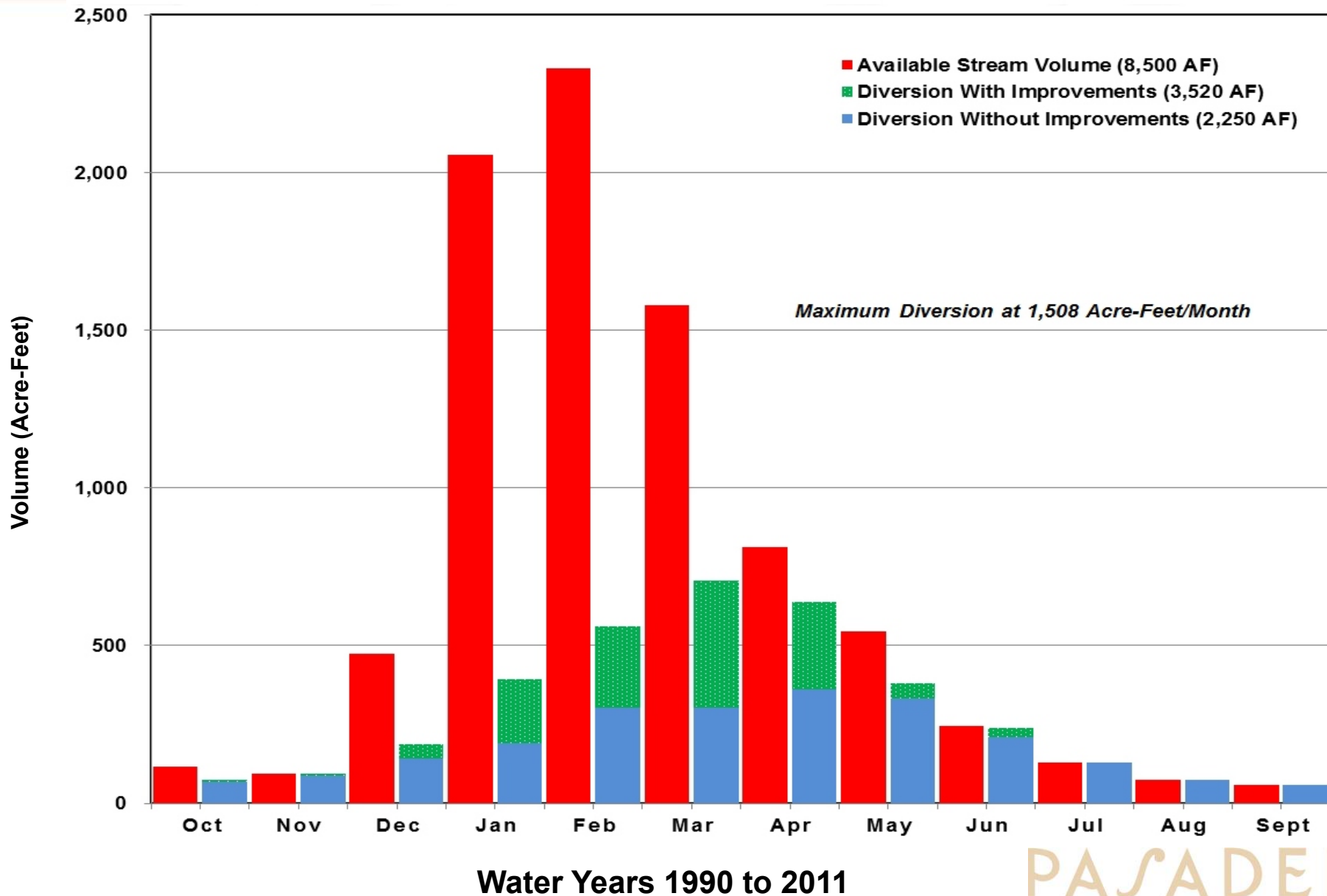
Less water going
through the dam

The longer you hold
water the more the
groundwater recharge



Average Year Stream Volume and Diversion

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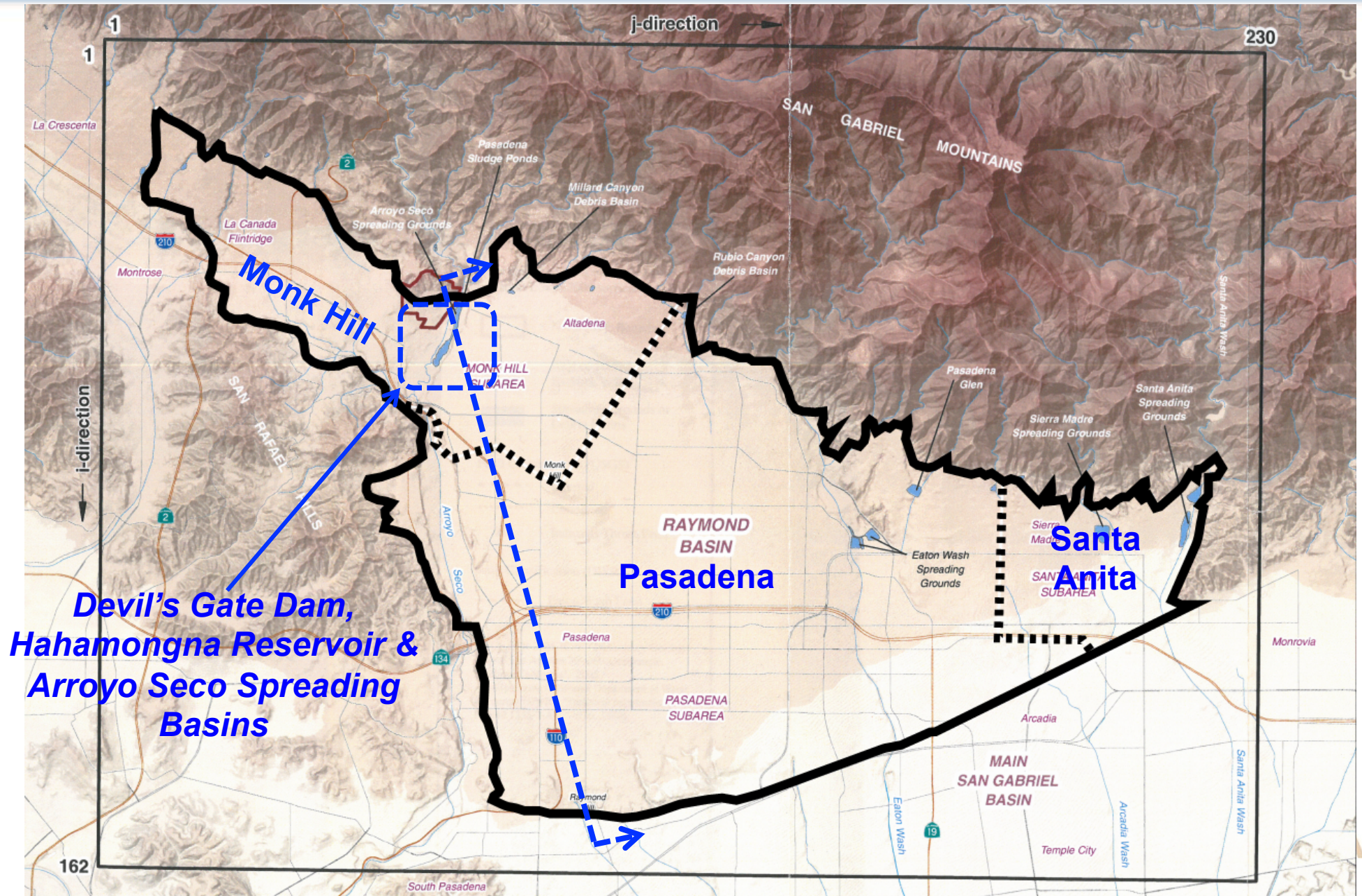


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Raymond Basin Aquifer

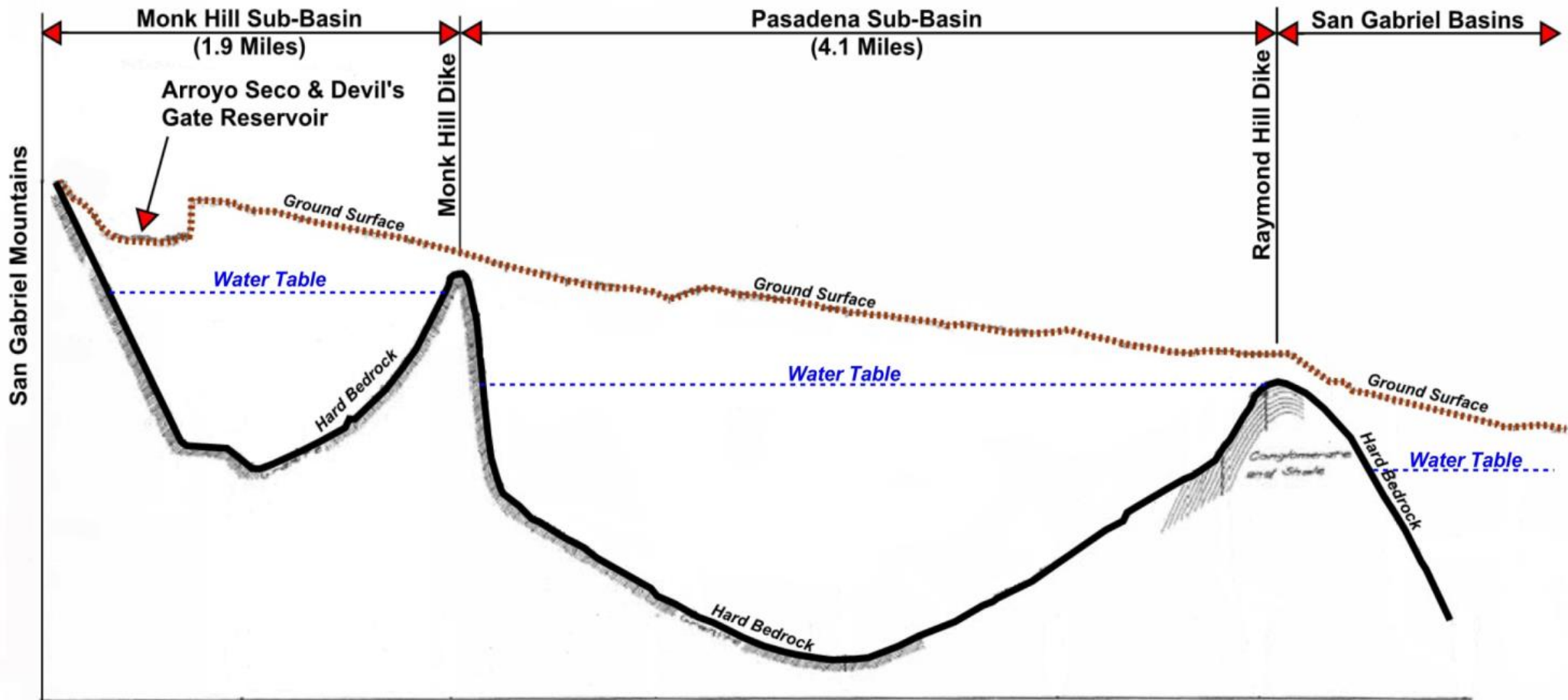
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Monk Hill & Pasadena Sub-Basins Cross Sectional View

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Thank you!
Questions?



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**Please be sure you
Signed in**

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Schedule for ACONA Meetings 2016

(Mark your Calendar now!)

- **May 24, 2016**
 - > Altadena Community Center
 - West of the Sheriff's Station