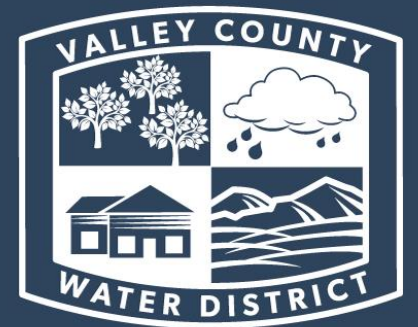




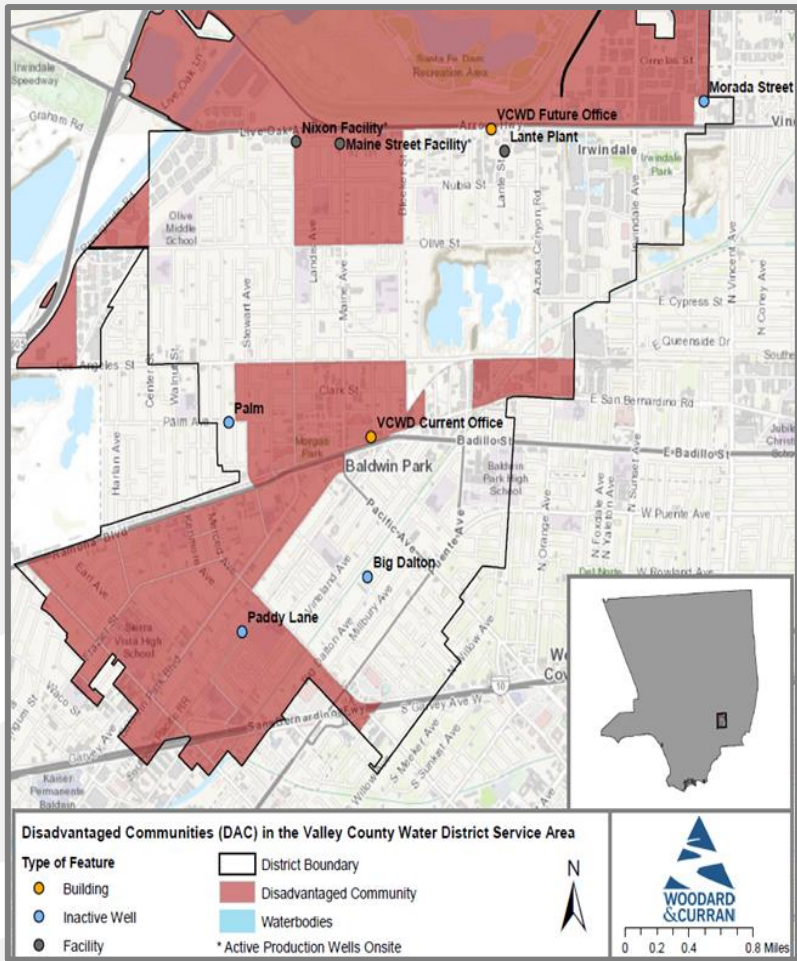
Advanced Meter Infrastructure (CII)

ADAPTING TO A HOTTER, DRIER FUTURE

Jose Martinez
JMartinez@vcwd.org | (626) 338-7301

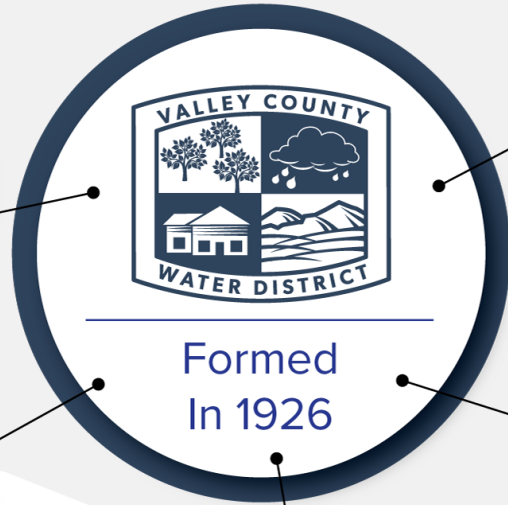


DISTRICT INFORMATION



68,773
Population

100%
Ground-
Water



Formed
In 1926

2 Billion+
Gallons of
Water
Delivered
Annually

9.4
Square
Miles

Providing
Service to
Baldwin Park,
Irwindale,
Azusa, and
West Covina

CURRENT CII METER CONDITIONS

- 1,263 CII Water Meters
- Recent Audit Indicated a High Percentage of Meter Inaccuracy
- Top 25 Accounts are CII Customers
- Meter Age 15 to 30+ Years
- Currently No Capability to Detect Leaks
- Difficulty in Testing Meters



CRITICAL NEEDS OF THE IRWM REGION

Improve Water Supply

- Increased water conservation, non-revenue water reduction and avoidance of purchasing imported replenishment water.

Climate Change

- Reduce green house gas emissions by 5,116 lbs CO₂ eliminating the need for staff to drive to each commercial service connection in order to obtain meter reads.



PROJECT DESCRIPTION

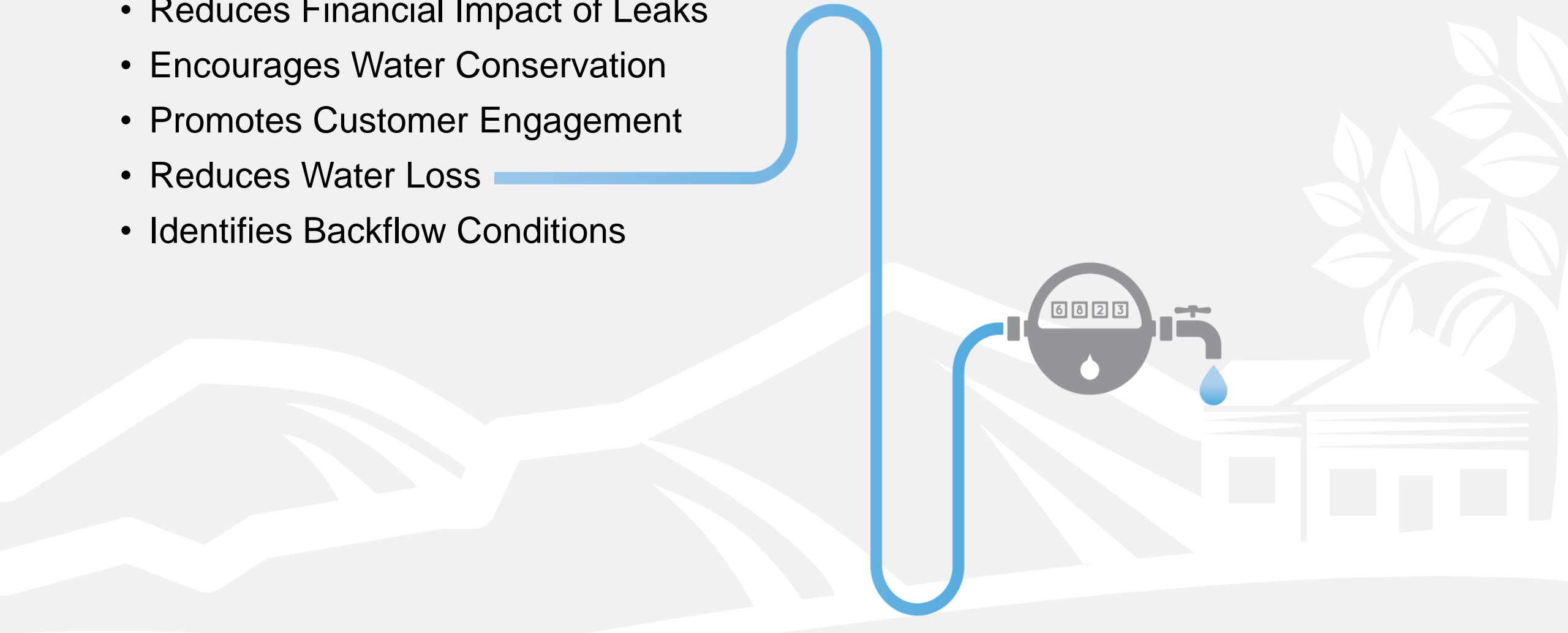
- Replace Selected CII Meters with Advanced Water Meters
- Will Protect and Promote Efficient Use of Limited Water Supplies
- Categorically Exempt (CE) from CEQA
- CII Meters will be Installed Within 18 Months
- 20+ Years of Expected Useful Life
- Project Start as Soon as Agreement Finalized



SHOVEL READY

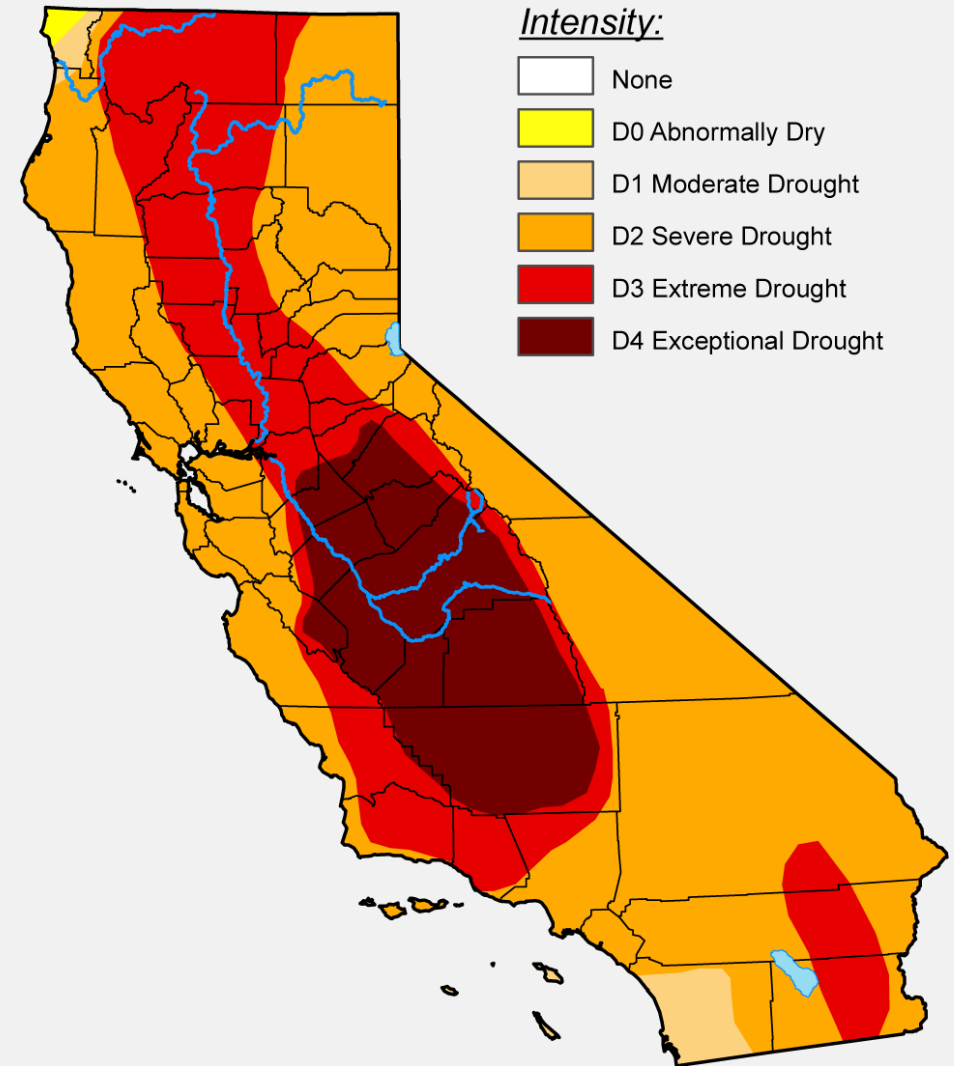
PROJECT BENEFITS TO THE COMMUNITY

- Reduces Financial Impact of Leaks
- Encourages Water Conservation
- Promotes Customer Engagement
- Reduces Water Loss
- Identifies Backflow Conditions



STATEWIDE PRIORITIES FOR CALIFORNIA'S WATER

- Drought Preparedness and Climate Resilience
 - *Adapting to a Hotter, Drier Future*
 - *Developing Water Supplies*
 - *Expand Water Storage*
 - *Reduce Demand Supply*
 - *Improve Forecasting and Data Management*



PHYSICAL AND QUANTITATIVE BENEFITS

- Water Conservation by Reducing Water Loss (Saving 200 AF/Year)
- Reduction in Fuel-Related Carbon Emissions (5,116 lbs CO₂)
- Potential Nitrate and Perchlorate Water Quality Impacts Avoided by Alleviating the Burden on Groundwater Pumping

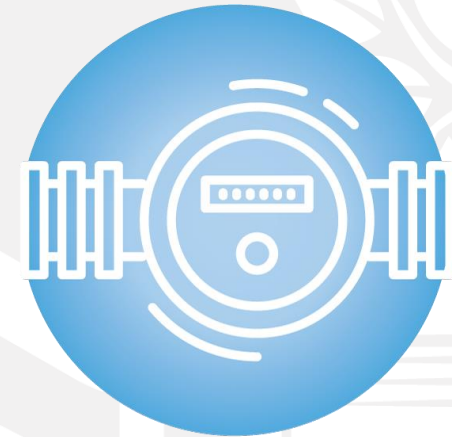


REDUCTION
OF CO₂

REDUCING THE
NEED FOR 2
DISTRICT VEHICLES
TO READ METERS

REDUCE
WATER DEMAND

SMART WATER METERS



IMPROVES DATA
COLLECTION &
RESOURCE
MANAGEMENT

ESTIMATED BUDGET

Category	Cost Share: Non-State Fund Source	Requested Grant Amount	Other Cost Share (Including Other State Sources)	Total Cost
Project Administration	\$ 20,000	\$ 0		\$ 20,000
Land Purchase/ Easement	N/A	N/A		N/A
Planning/Design/ Engineering/Environmental Documentation	\$ 5,000	\$ 0		\$ 5,000
Construction/ Implementation	\$ 741,500	\$ 766,500		\$ 1,508,000
GRAND TOTAL	\$ 766,500	\$ 766,500		\$ 1,533,000
Minimum Grant Amount Needed		\$ 766,500		

Funded through the District's CIP Budget. Project construction and administration costs were calculated based on estimated employee time to administer the project and labor to install. Materials costs are based on contractor's estimate.

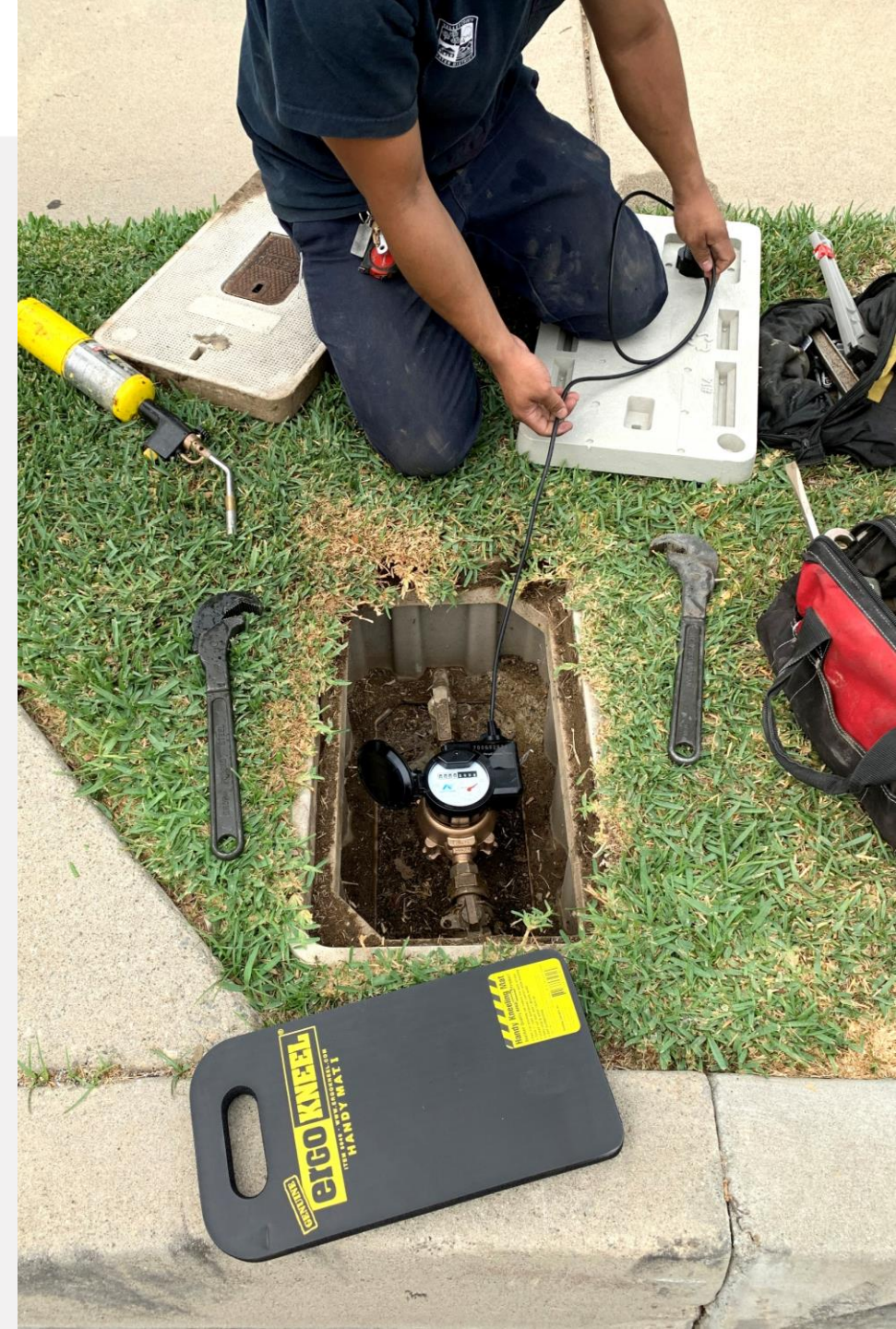
PROJECT SCHEDULE

Budget Categories	Start Date	End Date
A. Project Administration	January 2023	December 2024
B. Land Purchase/Easement	N/A	N/A
C. Planning / Design / Engineering / Environmental Documentation	June 2022	November 2022
D. Construction/Implementation	March 2023	September 2024



OVERCOMING EXPECTED CHALLENGES

- CEQA Exempt
- District is 70% Complete with Residential AMI Installation (Ahead of Schedule)
- Supply and Staffing Challenges (COVID)
- Continuous Coordination with Supply Vendor
- Implemented COVID Policies to Reduce Exposures
- Experiencing Benefits of AMI Installations



Questions

Jose Martinez, General Manager
JMartinez@vcwd.org | 626) 338-7301

Los Angeles County Flood Control District

Los Angeles County Rubber Dams Replacement Project

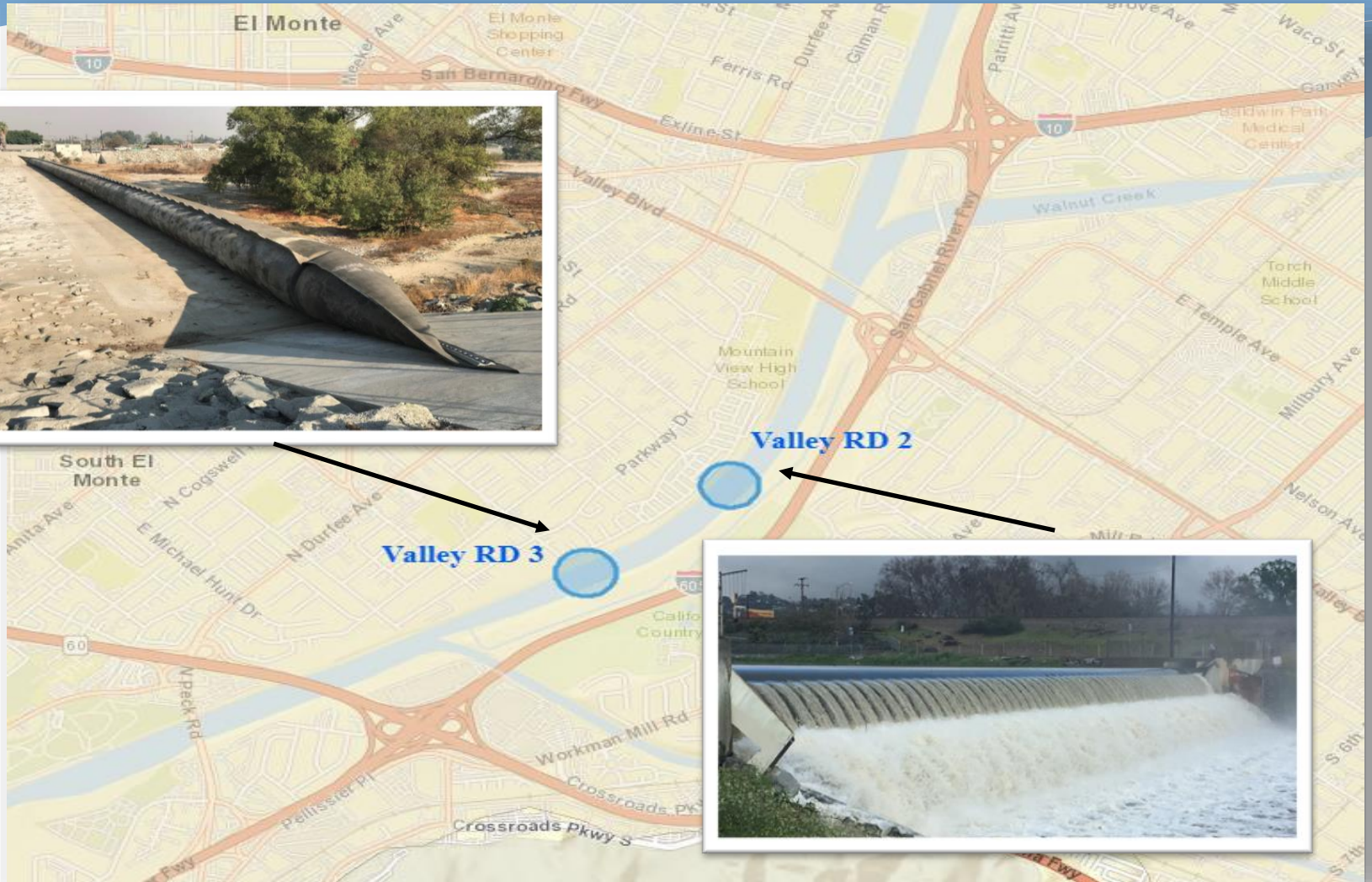
Sarkis Zargaryan, P.E.

Civil Engineer

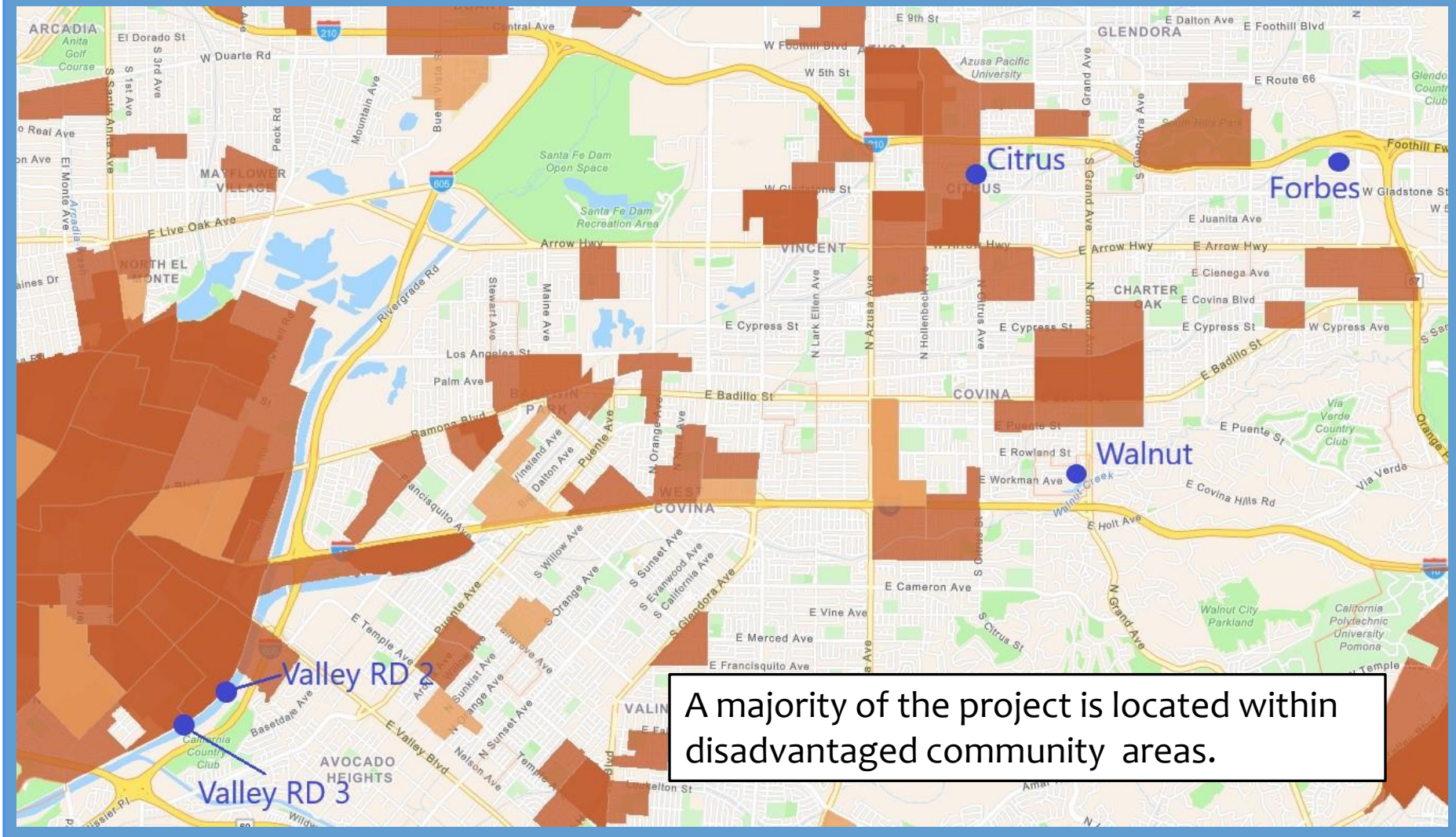
Project Location: Cities of Glendora and Covina



Project Location: City of El Monte



Project Location: Disadvantaged Communities



A majority of the project is located within disadvantaged community areas.

Project Description

- * The Los Angeles County Rubber Dam Replacement Project (Project) looks to reconstruct a number of innovative rubber dams (RDs) to provide flood control and stormwater capture within multiple jurisdictions of the the San Gabriel and Rio Hondo Watersheds. This helps with regional drinking water sustainability.
- * The project includes the replacement of five rubber dams across Los Angeles County by December 31, 2024. These RDs have reached the end of their useful life, have been repaired numerous times, and need to be replaced.
- * Three RDs that will be replaced as part of the project are located within channels and used to divert water to existing spreading grounds (SGs). The RD at Citrus SG will divert water from Big Dalton Wash into the Citrus SG. The RD at Forbes SG will divert water from San Dimas Wash into the Forbes SG. The RD at Walnut Spreading Basin will divert water from Walnut Creek into Walnut Spreading Basin.
- * Two RDs will be installed in the San Gabriel River. These larger rubber dams, known as Valley RDs 2 and 3, are primarily used to capture and later release stormwater downstream to percolate in the San Gabriel River.
- * On average, each year these five RDs are expected to divert a combined 3,500 AF of stormwater to existing SGs for groundwater recharge.

Project Benefits

GLAC Critical Needs	Response
Water Supply	Estimated to capture and percolate of 3,500 acre-feet per year into the Main San Gabriel and Central Groundwater Basins.
Water Demand	Reduce the region's dependence on imported water supply by 3,500 acre-feet per year.
Greenhouse Gas Emission Reduction	Avoid greenhouse gas emissions of 3,353 metric tons of CO ₂ equivalents per year.
Energy Conservation	Conserve 9,261,000 kWh of energy per year.
Climate Change	Infiltration into the Basin from storm water capture will increase local water supply and reduce the region's dependence on imported water supply.

CEQA & Permit Status

- The project is categorically exempt and the CEQA process is expected to be completed with minimal to no impact to the construction schedule.
- A Notice of Exemption will be filed for the rubber dam replacements.

Project Budget

Budget Category	Grant Request	Cost Share	Other Cost	Totals
A. Project Administration	\$37,500	\$37,500	0	\$75,000
B. Land Purchase/ Easement	0	0	0	0
C. Planning/Design Engineering/ Environmental Documentation	\$12,500	\$12,500	0	\$25,000
D. Construction/ Implementation	\$2,850,000	\$2,850,000	0	\$5,700,000
Totals	\$2,900,000	\$2,900,000	0	\$5,800,000
Minimum Grant Amount Needed:	\$2,900,000			

Project Schedule

Budget Categories	Start Date	End Date
A. Project Administration	11/1/2021	12/31/2024
B. Land Purchase/Easement	N/A	N/A
C. Planning/Design/Engineering/Environmental Documentation	11/1/2021	4/1/2022
D. Construction/Implementation	9/16/2022	12/31/2024

Expected Challenges/Delays

- * Rubber dam bladders are typically shipped from overseas to local ports and have a 2–3 month lead time on manufacture and shipping. Having performed 9 projects of similar scope since 2014, we have accounted for these shipping delays in the project schedule.

Questions

For more information,
contact:

William Saunders, P.E.

Civil Engineer

wsaunder@pw.lacounty.gov

Office: (626) 458-6117

Cell: (626) 688-5091

Sarkis Zargaryan, P.E.

Associate Civil Engineer

szargaryan@pw.lacounty.gov

Office: (626) 458-6165

Cell: (626) 238-3375

AMIGOS DE LOS RIOS

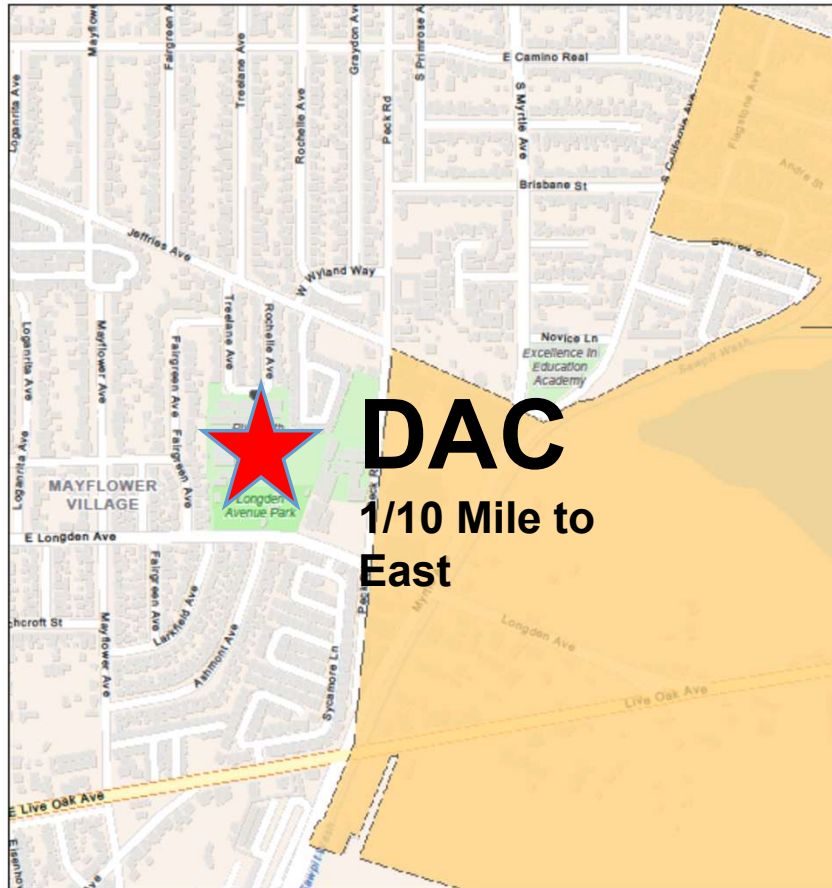
Plymouth Neighborhood Stormwater Capture Project

Claire Robinson

President Amigos de los Rios

Project Location

Plymouth Elementary School



DAC
1/10 Mile to East

12/14/2019, 4:26:05 PM

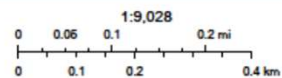
California Counties

Disadvantaged Communities - Places 2016

Data Not Available

Severely Disadvantaged Communities (MHI < \$38,270)

Disadvantaged Communities (\$38,270 >MHI< \$51,026)

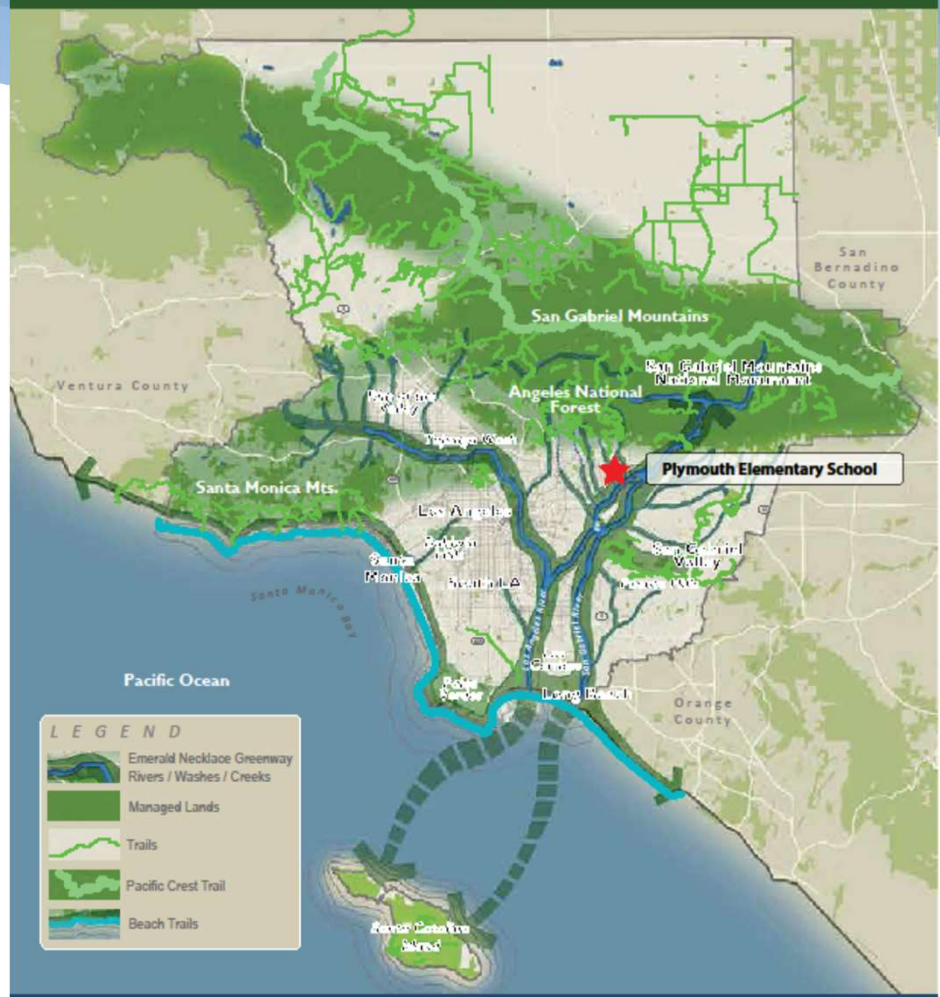


U.S. Census Bureau. Contact: gis@water.ca.gov, U.S. Bureau of Reclamation, California Department of Conservation, California Department of Fish and Game, California Department of Forestry and Fire Protection, National Oceanic and Atmospheric Administration, Sources: Esri, HERE,

Web Application for ArcGIS

Earl Community Maps Contributors, County of Los Angeles, Earl, HERE, Garmin, INCREMENT P, METYNASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA | U.S.

Plymouth School Neighborhood Stormwater Capture Demonstration Project



Project Location

Monrovia Unified School District within Emerald Necklace



MONROVIA
UNIFIED SCHOOL DISTRICT

Project Description

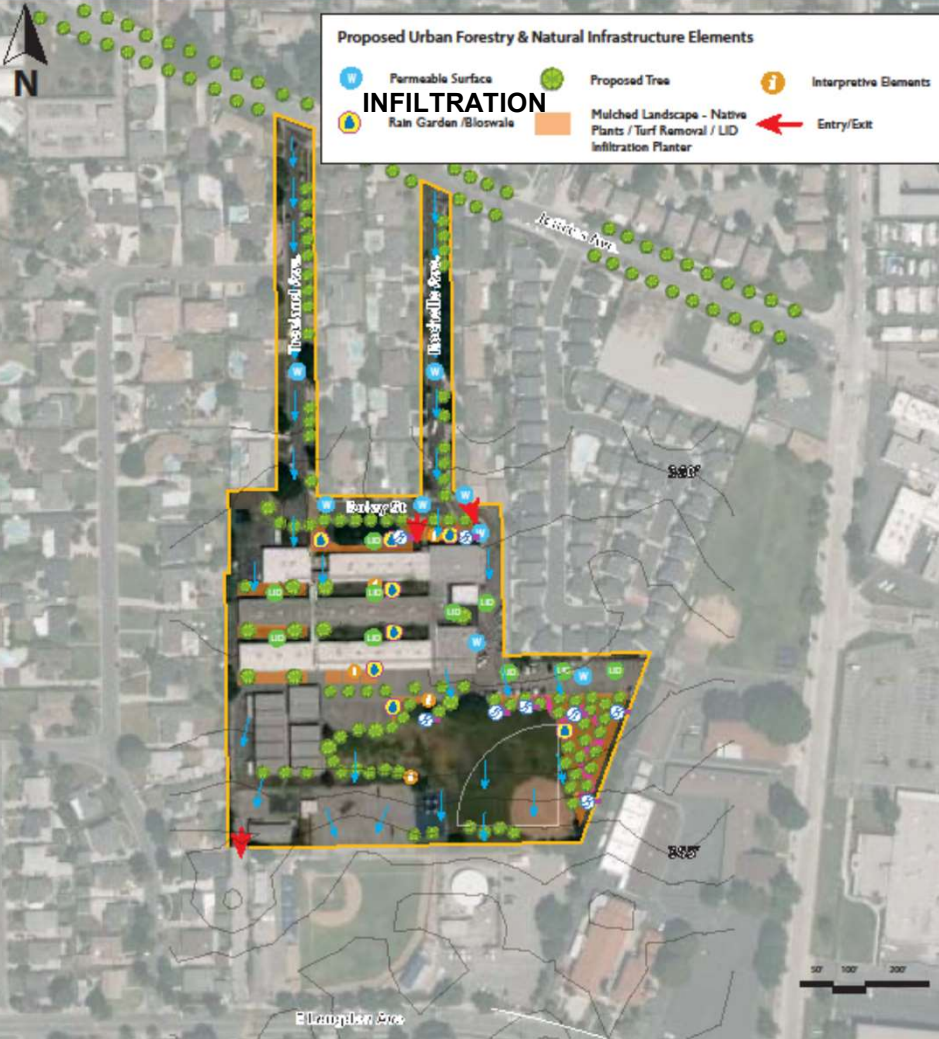
- * OPTI DATABASE 2020
- * Natural Infrastructure integrated into School Campus and surrounding community to manage stormwater /address flooding – provide multiple benefits to school community
- * Estimated Phase 2 completion December 2023 / Phase 1 complete as of August 2022
- * Jurisdictions: Monrovia Unified School District/City of Monrovia/County Public Works

Project Details

Plymouth Elementary School



MONROVIA
UNIFIED SCHOOL DISTRICT



Plymouth School Neighborhood Stormwater Capture Demonstration Project Project Benefits

- **Reduce Water Demand**
- **Improve Water Quality**
- **Improve Flood Management**
- **Practice Resources Stewardship**
- **0.11 within a DAC Multiple Community Benefits – Heat Island Reduction/ Urban Forest /Habitat Protection/ COVID Safe Outdoor Learning Spaces**
- **3.1 acre-feet stormwater capture capacity of project**
- **12.4 acres of area that will benefit from improved stormwater drainage**



AMIGOS DE LOS RIOS

EMERALD
NECKLACE

Plymouth School Parking Lot



Plymouth School Field



CEQA & Permit Status

CEQA/Permit Document (List all per EIF)	Start Date	End Date
CEQA Monrovia/Permit	2021	2022
CEQA Monrovia Unified School District/ Permission	2019	2022
County Public Works	2022	2022

Project Budget

Budget Category	Grant Request	Cost Share	Other Cost	Totals
A. Project Administration		140,000		
B. Land Purchase/ Easement	NA			
C. Planning/Design Engineering/ Environmental Documentation		300,000		
D. Construction/ Implementation	200,000	740,000		
Totals	200,00	1,180,000		1,380,000
Minimum Grant Amount Needed:	200,000			

Project Schedule

Budget Categories	Start Date	End Date
A. Project Administration	Nov 2018	Dec 2023
B. Land Purchase/Easement	NA	
C. Planning/Design/Engineering/Environmental Documentation	Nov 2018	Aug 2022
D. Construction/Implementation	April 2019	Dec 2022

Expected Challenges/Delays

- * Challenges and/or delays with
 - * Acquiring Permits in timely manner from County Public Works to meet construction schedule
 - * Supply Chain Challenges/ Rising Fuel Costs/ Escalating Construction Costs
 - * Adhering to Construction Schedule = limited to major construction during summer period while students are off campus

Questions

- * Claire Robinson, President,
- * Claire @amigosdelosrios.org
- * 626 676 5027

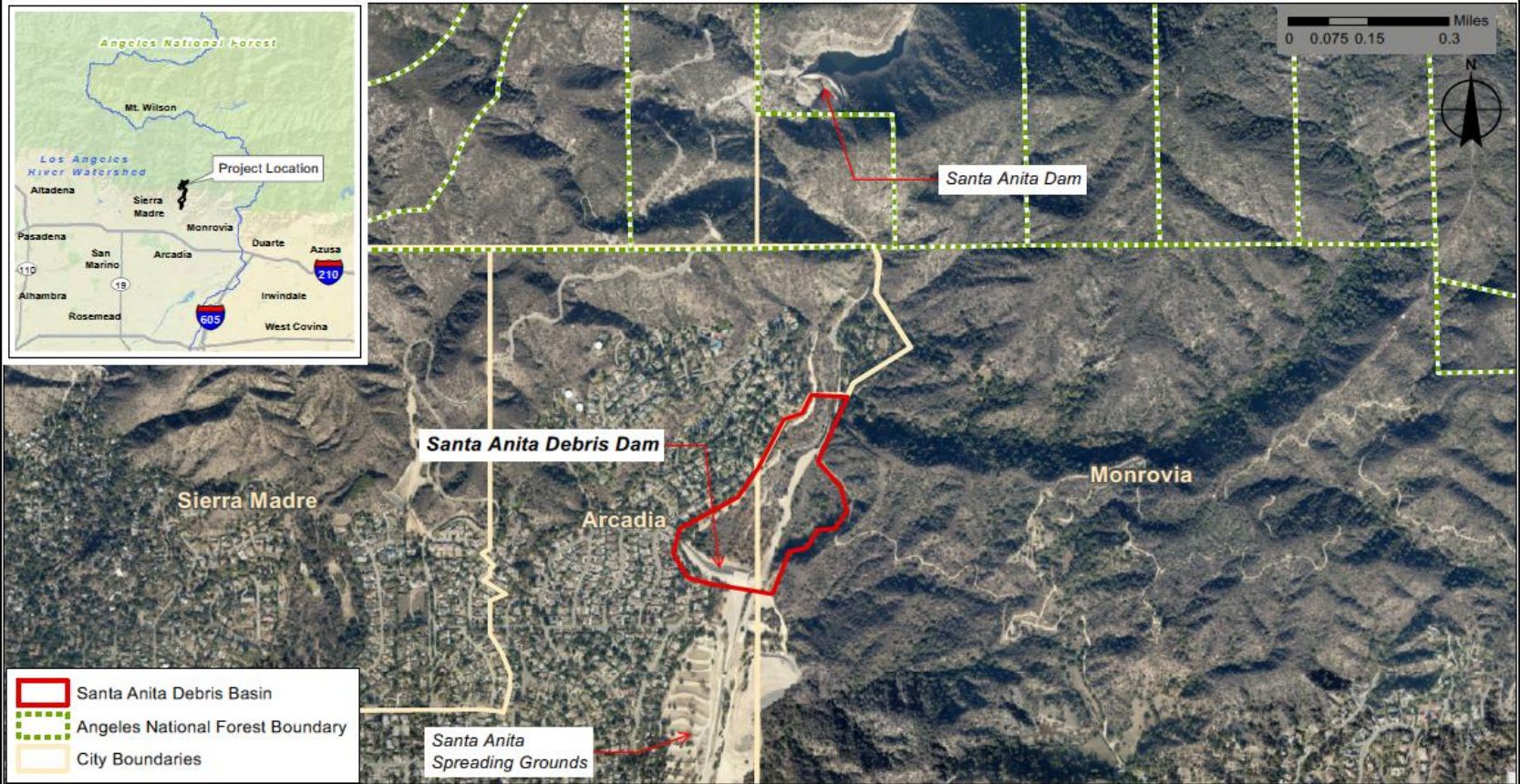
Los Angeles County Public Works

Santa Anita Debris Dam Seismic Strengthening Project

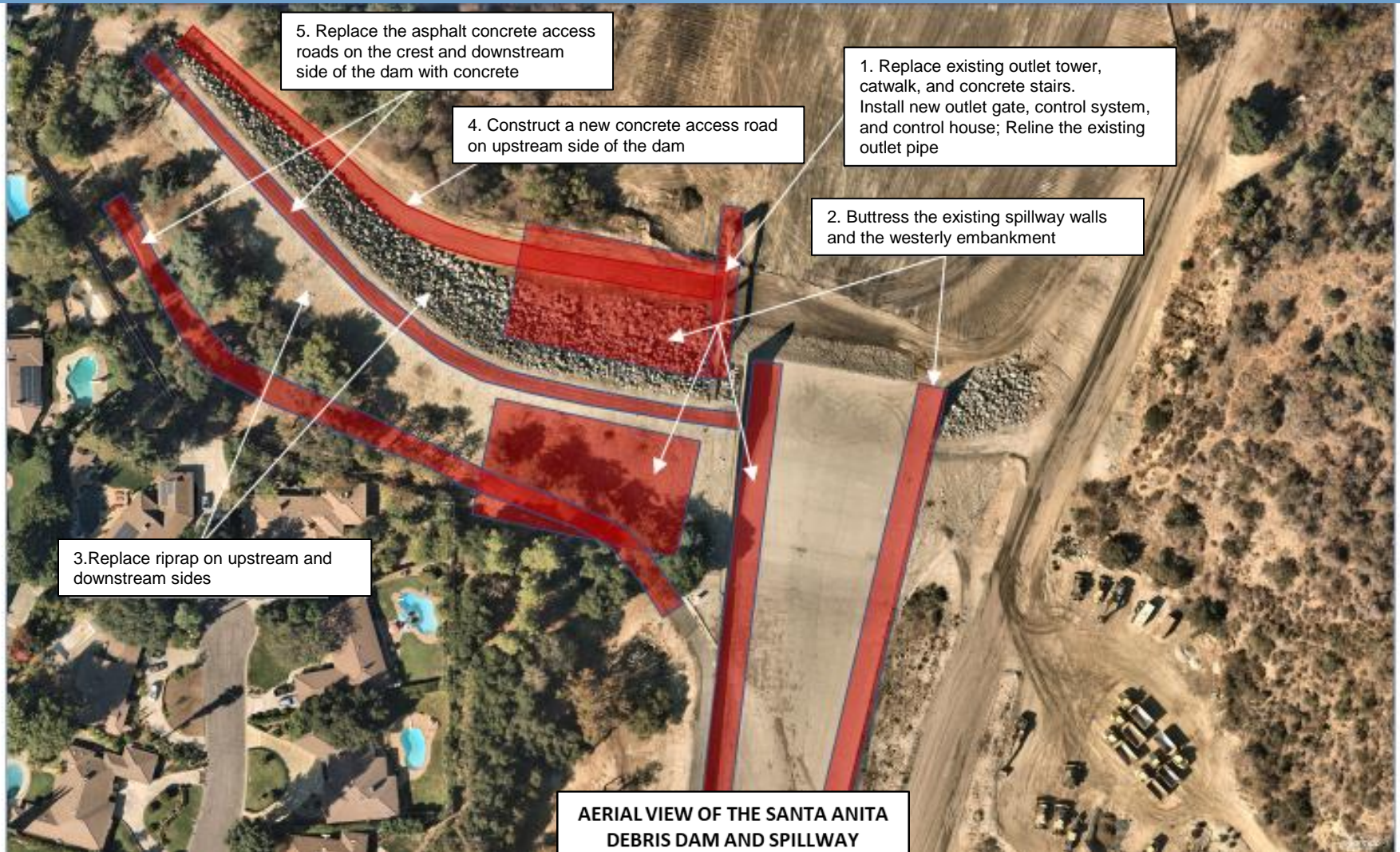
Siya Araumi, PE

Project Location

REGIONAL LOCATION AND LOCAL VICINITY



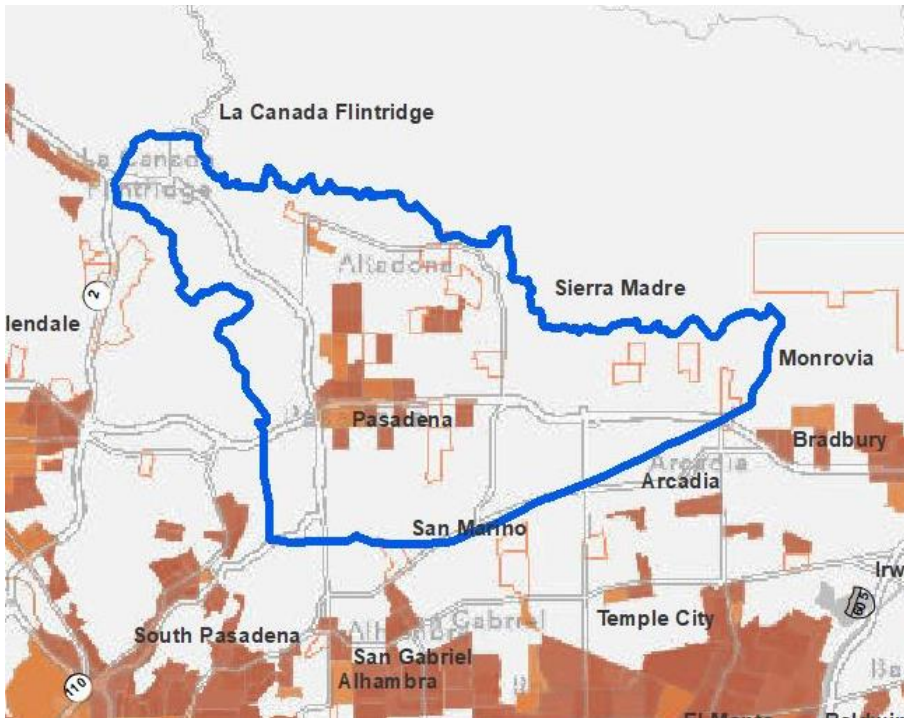
Project Description



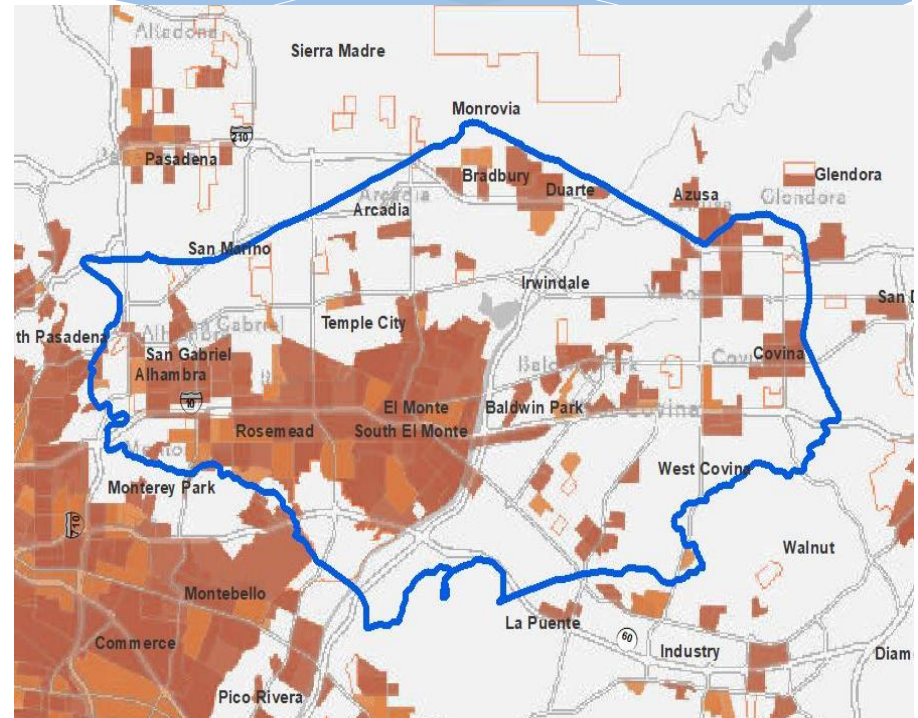
Project Benefits

GLAC Critical Needs	Response
Water Supply	<ul style="list-style-type: none">• Restore 119 acre-feet of capacity to capture and store stormwater for groundwater recharge.• Increase water supply to Raymond Basin and Main San Gabriel Basin.
Reduce Flood Risk	<ul style="list-style-type: none">• Increase protection for downstream flood prone areas through improved stormwater drainage.
Climate Change	<ul style="list-style-type: none">• Reduce the region's dependence on imported water supply.• Reduce risk of flooding resulting from more intense storms due to climate change.

Project Benefits



Map of Raymond Basin with DACs



Map of Main San Gabriel Basin with DACs

Spreading Grounds



CEQA & Permit Status

CEQA/Permit Document (List all per EIF)	Start Date	End Date
CEQA	May 2012	Approval obtained (No expiration)
CEQA Addendum	June 2021	Pending
CDFW/LSAA (No. 1600-2016-0097-R5)	May 2018	April 2023
RWQCB 401	June 2022	Pending
USACE 404	May 2022	Pending 401
USACE 408	April 2020	Approval obtained (Expires 2 years after award of contract)

Project Budget

Budget Category	Grant Request	Cost Share	Other Cost	Totals
A. Project Administration	\$0	\$0	\$0	\$0
B. Land Purchase/ Easement	NA	NA	NA	NA
C. Planning/Design Engineering/ Environmental Documentation	\$0	\$0	\$1,200,000	\$1,200,000
D. Construction/ Implementation	\$2,000,000	\$2,000,000	\$8,800,000	\$12,800,000
Totals	\$2,000,000	\$2,000,000	\$10,000,000	\$14,000,000
Minimum Grant Amount Needed:	\$2,000,000			

Project Schedule

Budget Categories	Start Date	End Date
A. Project Administration	09/05/2011	10/15/2025
B. Land Purchase/Easement	NA	NA
C. Planning/Design/Engineering/Environmental Documentation	09/05/2011	10/15/2025
D. Construction/Implementation	4/16/2024	10/15/2025

Expected Challenges/Delays

- Nearby emergency project impacts
 - May delay start of project
- Supply chain issues

Questions

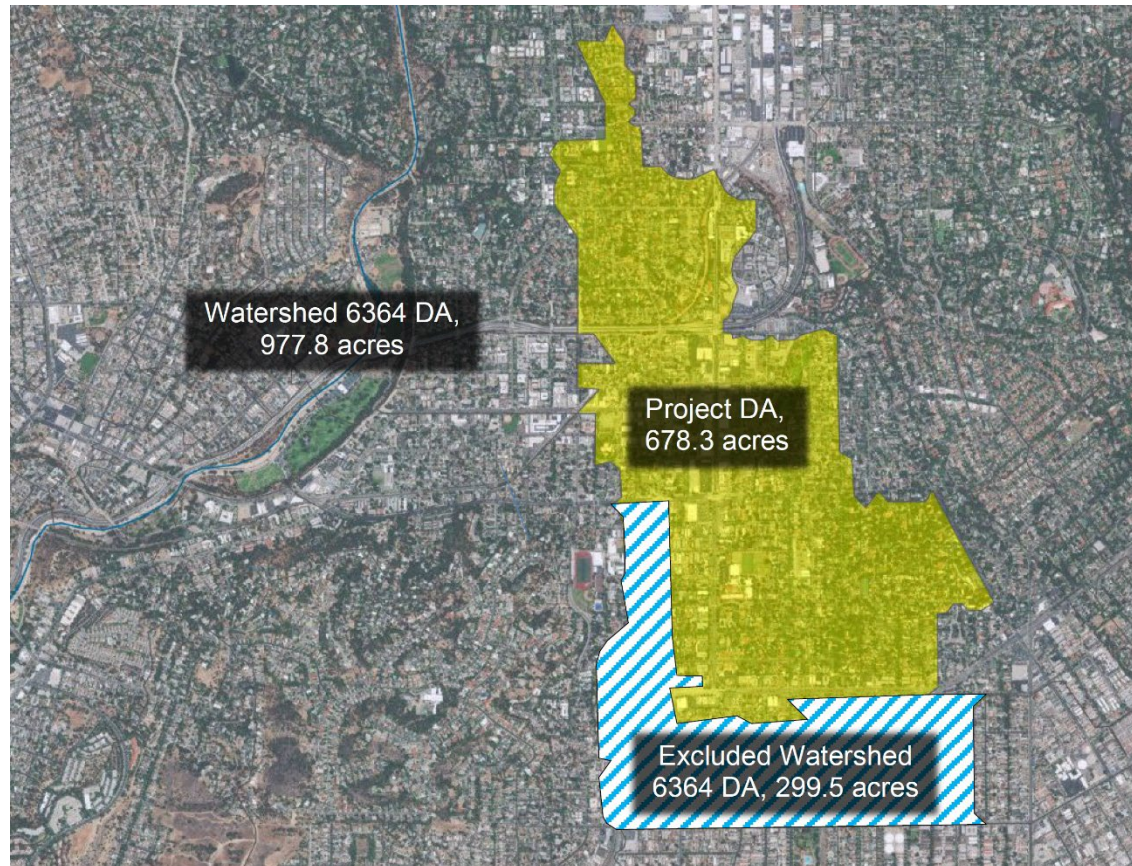
Siya Araumi, PE

saraumi@dpw.lacounty.gov

(626) 458-6111

Upper San Gabriel and Rio Hondo Watershed

City of S. Pasadena – Huntington Dr. Regional Green Street Project



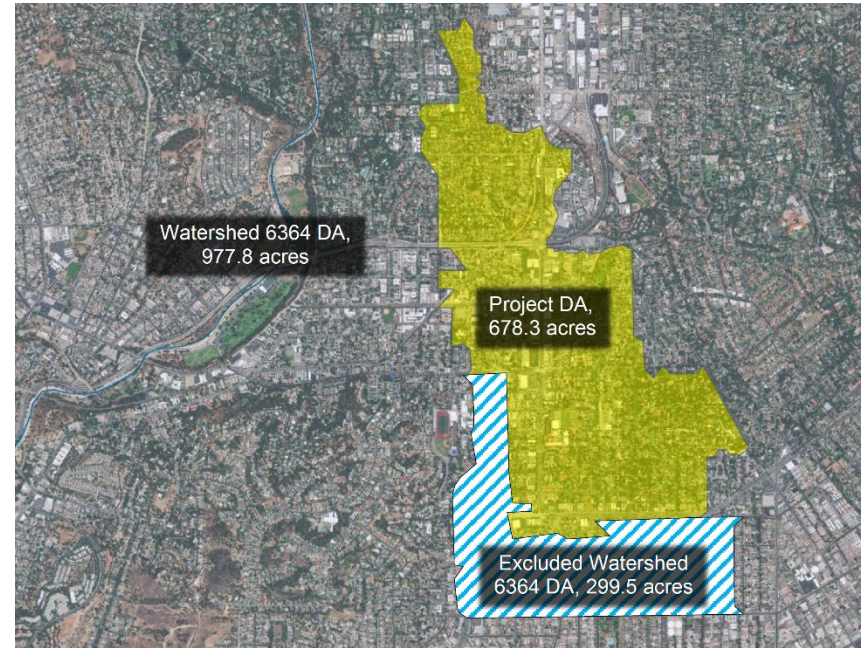
IRWM Sub-Regional Steering Committee

November 16, 2022

Shahriar Eftekhazadeh, PhD, PE

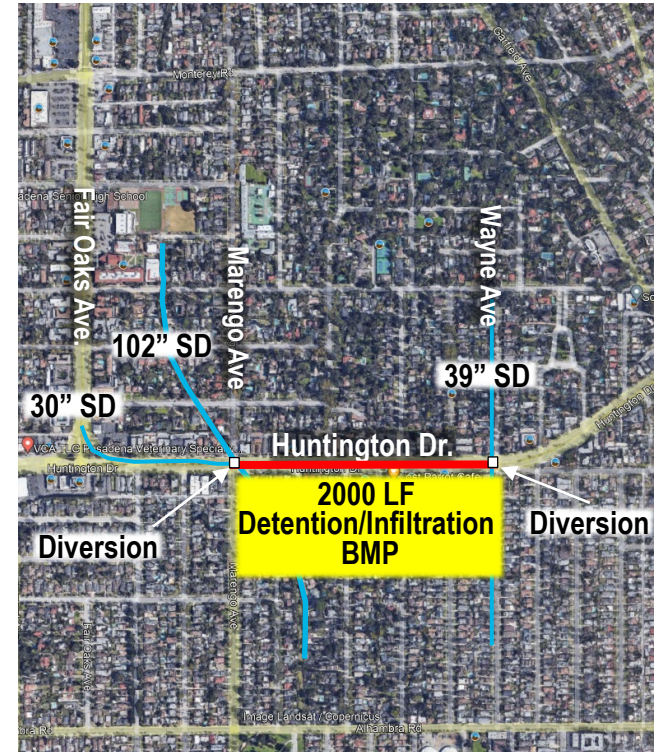
Agenda

1. Proposed Project
2. Project Benefits
3. Costs and Schedule

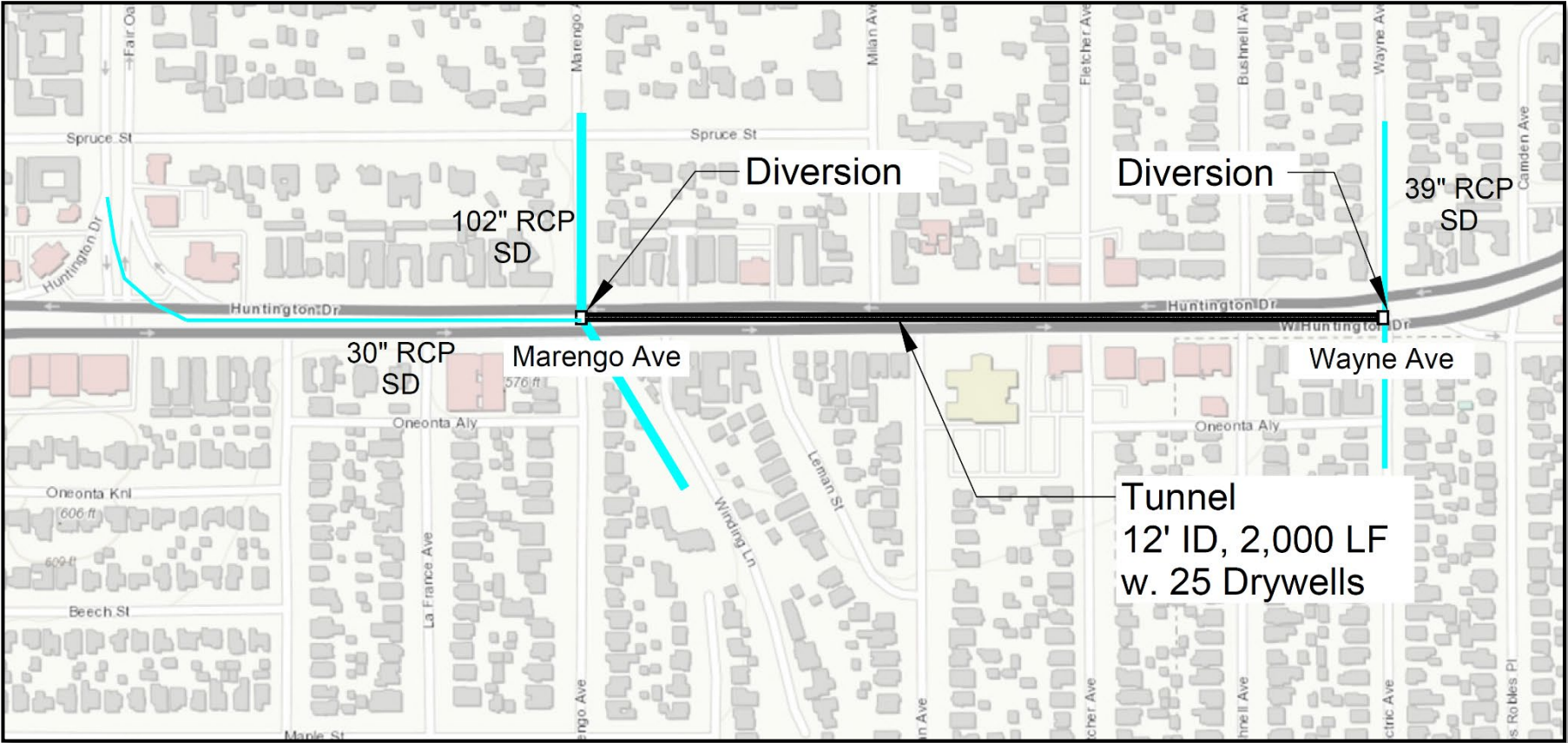


Proposed Project

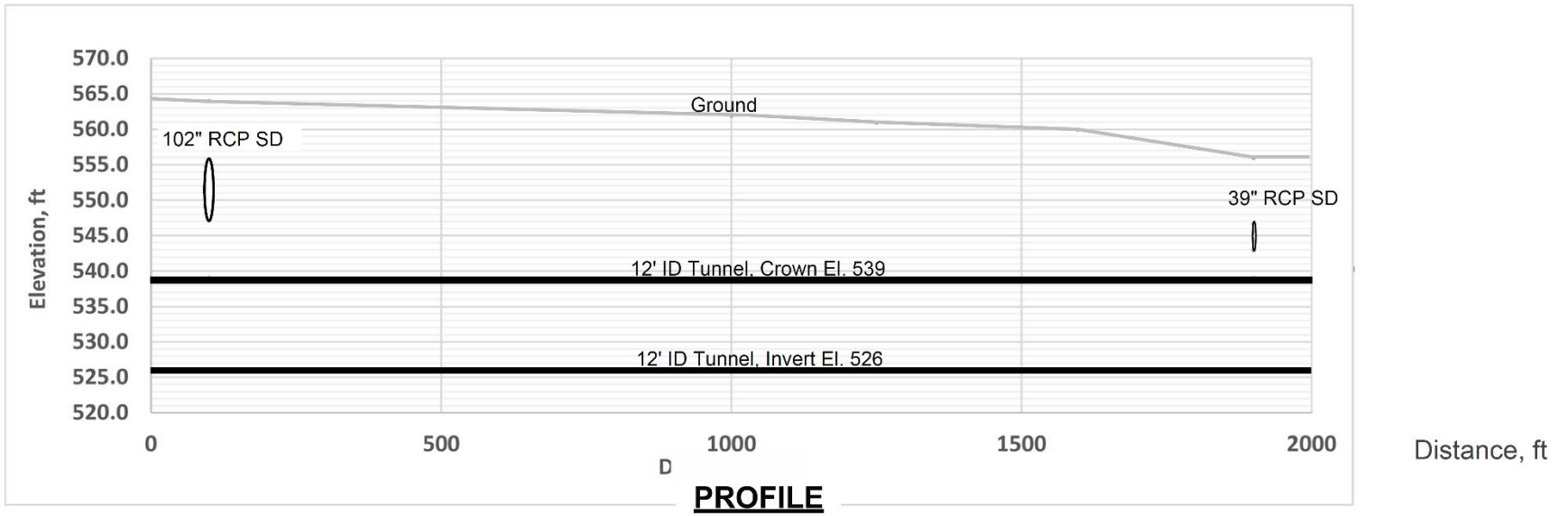
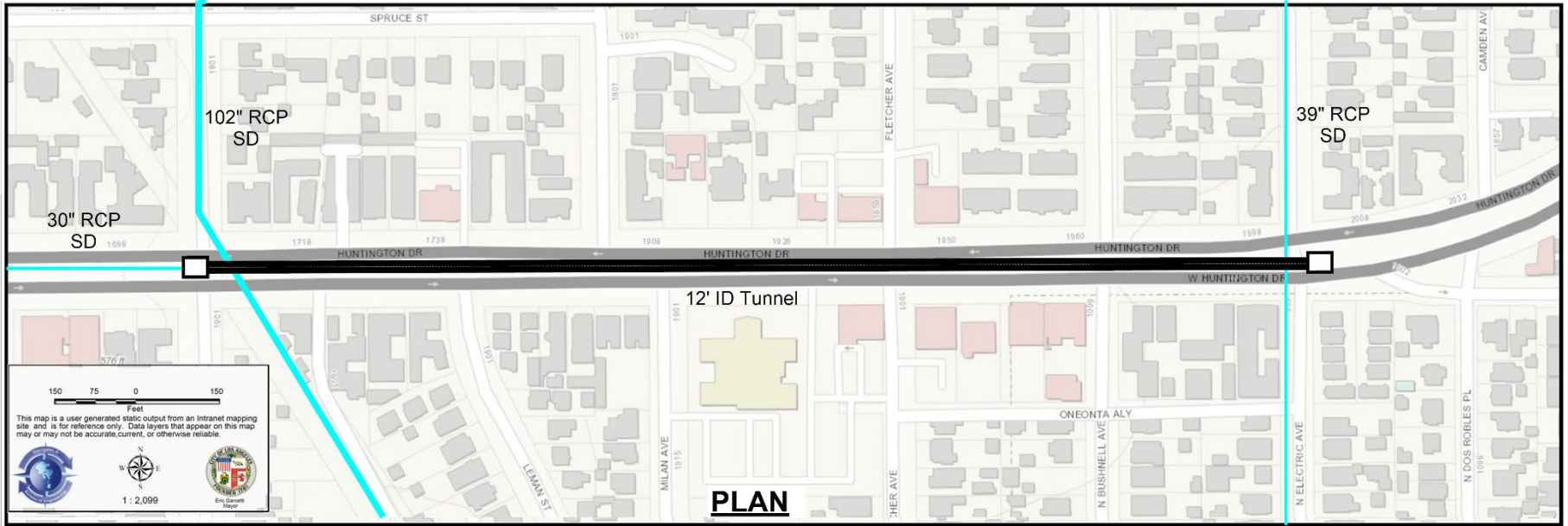
- Two stormwater diversion facilities on County storm drains
- 2000 LF linear Detention/Retention/Infiltration BMP to store water locally for landscape irrigation and to replenish the Central Basin Aquifer w. stormwater
- Huntington Dr. “Green Streets” landscaping with parkway bioswales & enhancements
- Dense landscaping and numerous trees in parkways for carbon sequestration
- Solar pumps and controls for irrigation of landscaped parkways and trees using stored stormwater



Intercepted Storm Drains



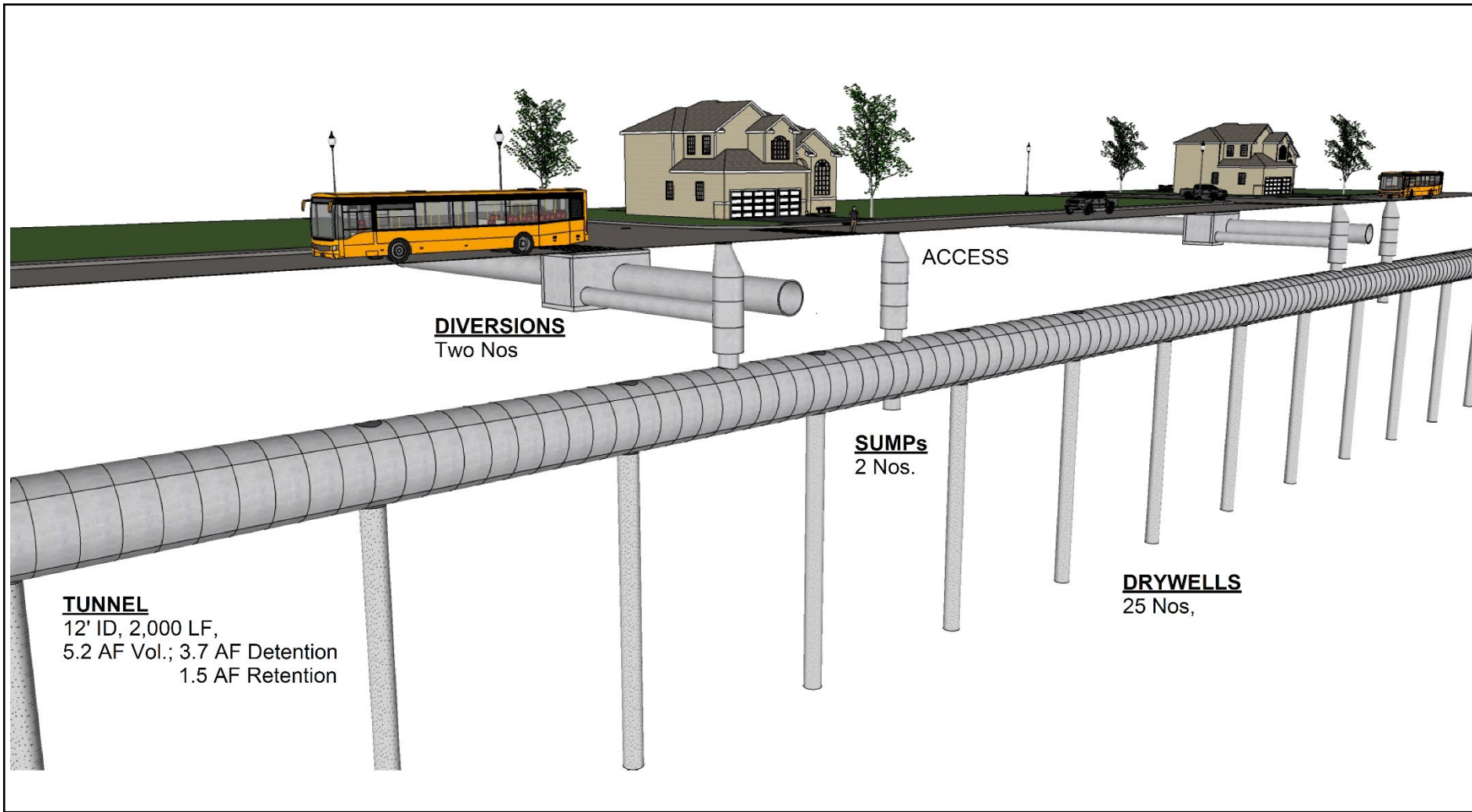
Intercepted Storm Drains



Tunnel Alternative



Tunnel Alternative

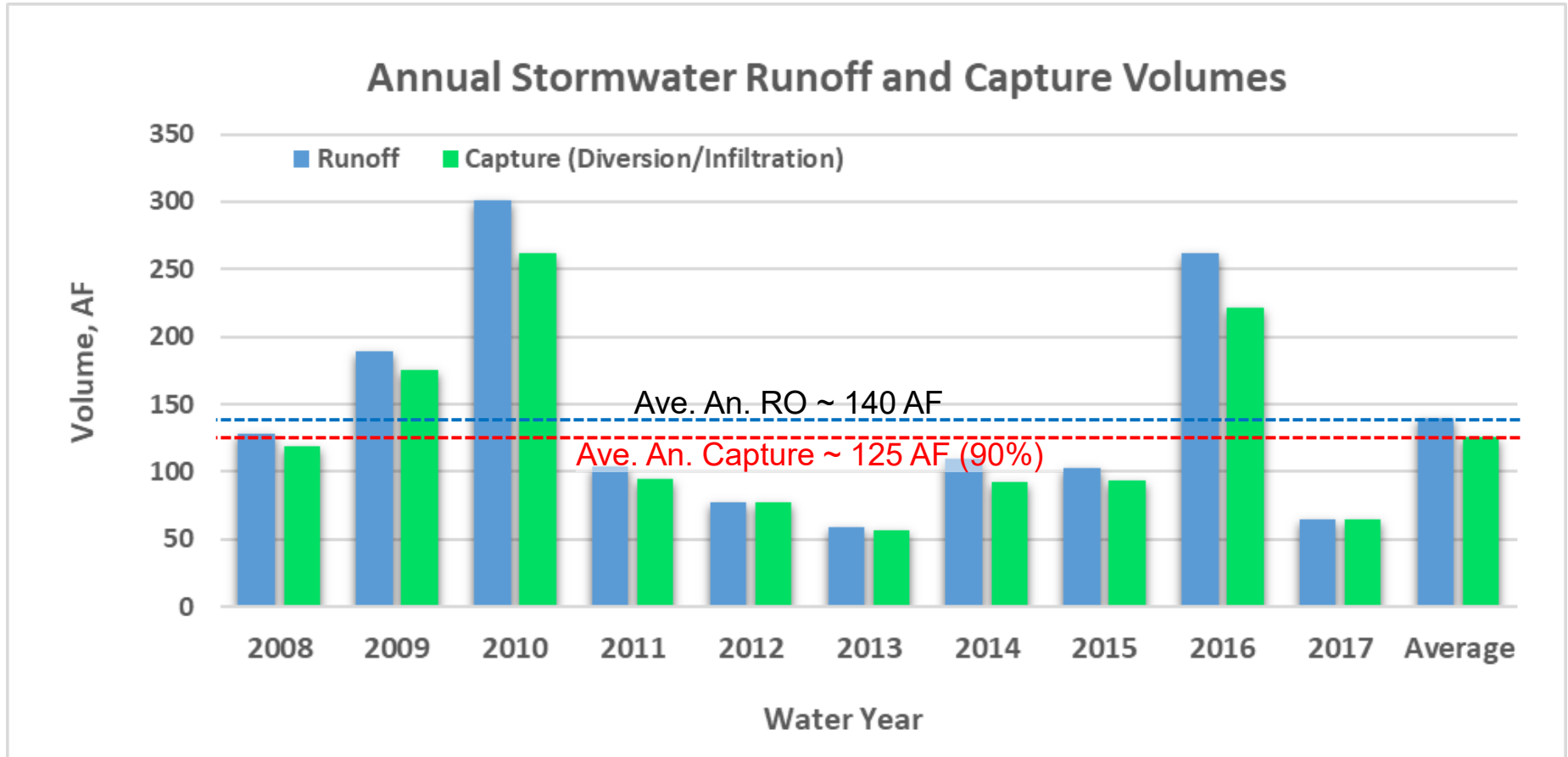


Green Streets & Community Enhancement Elements

- 22,000 SF Parkway Bioswales & Landscaping
- 120 Trees
- Irrigation System, Solar Power
- Green Streets Elements
- Community Space Improvements



Long Term Performance



Preliminary Project Cost Estimate

Project Life-Cycle Cost

Construction Cost	Discount Rate	No. of Years	Annualized Const. Cost (\$)	Annual O&M Costs	Total Annualized Cost	Life-Cycle Costs
\$11,986,000	3.75%	50	\$ 534,267	\$50,550	\$ 584,817	\$13,120,064

Q&A