WATEREUSE ORANGE COUNTY

THANK YOU FOR JOINING US

WateReuse Orange County Chapter Meeting

WILL BEGIN SHORTLY

Agenda

- **Call to order** – 12:00 PM
- **Welcome:** Jason Dadakis, Chapter President
- **Announcement: Call for Nominations & Volunteers:** Jason Dadakis
- **Legislative and Regulatory Matters:** Christine Compton, IRWD
- **Presentations**
  - **Alternative Disinfection Approaches for OCWD's Green Acres Project**
    - Ben Smith P.E., Principal Engineer, Orange County Water District
    - John Kenny P.E., Process and Water Quality Expert, Trussell Technologies
  - **Overview of the City of Escondido's Membrane Filtration Reverse Osmosis (MFRO)**
    - John Bekmanis P.E., Senior Project Manager, Black & Veatch
- **Standing Items**
  - Regulatory Updates: DDW/OCHCA
  - State Section Update: Joone Lopez, MNWD
  - Potential Funding for Projects
- **Conferences/Webcasts**
- **Roundtable** (using "Raise Hand" feature to be called on)
- **Nominations & Volunteers reminder**
- **Adjournment**

Q&A

Have a question?

Select the “Raise Hand Zoom” button or
select *9 on your telephone.

We will get to your questions after each presenter.

ORANGE COUNTY WATER DISTRICT

OC WateReuse
October 21, 2021

Alternative Disinfection Approaches for OCWD's Green Acres Project

Benjamin T. Smith, P.E.
OCWD
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John Kenny, P.E.
Trussell Technologies
johnk@trusselltech.com

GAP Background Info

Primary Purposes:

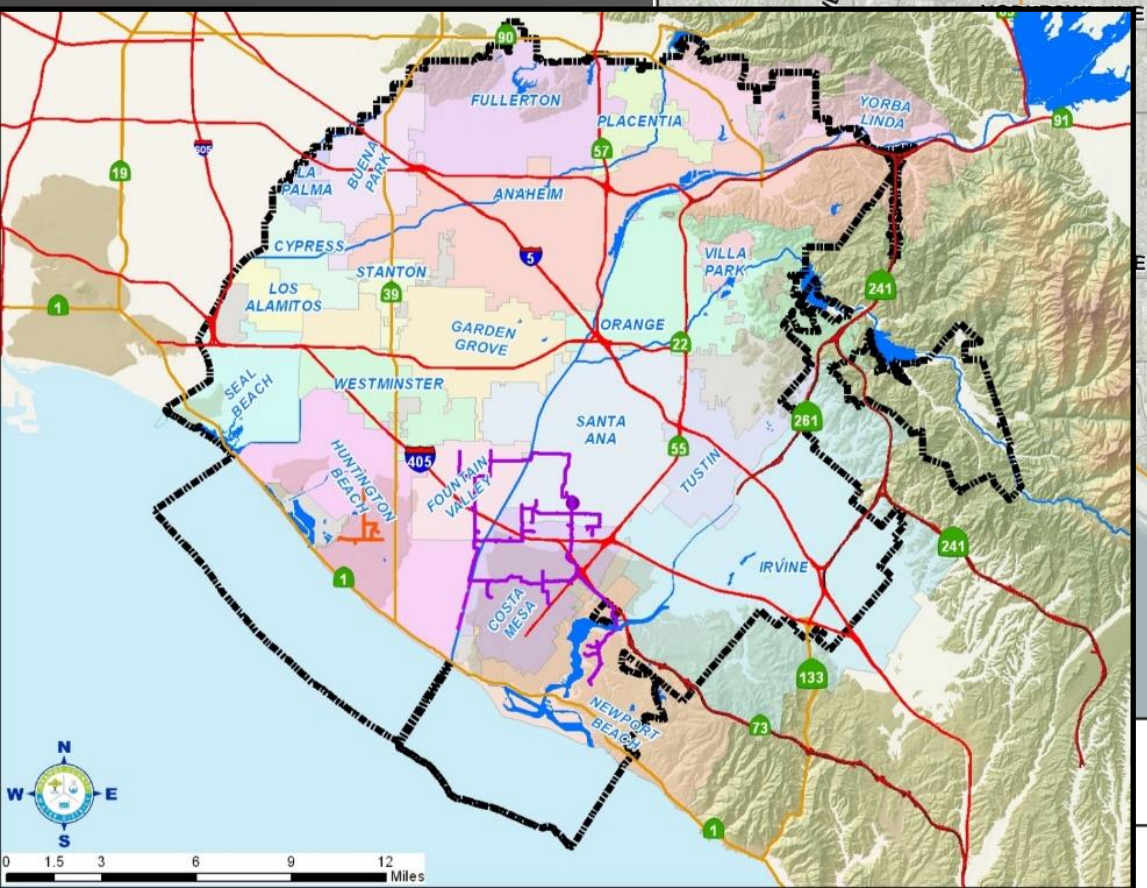
- Provides non-potable substitute water supply to reduce potable demands
- Reduces coastal groundwater pumping, i.e. seawater intrusion gradient

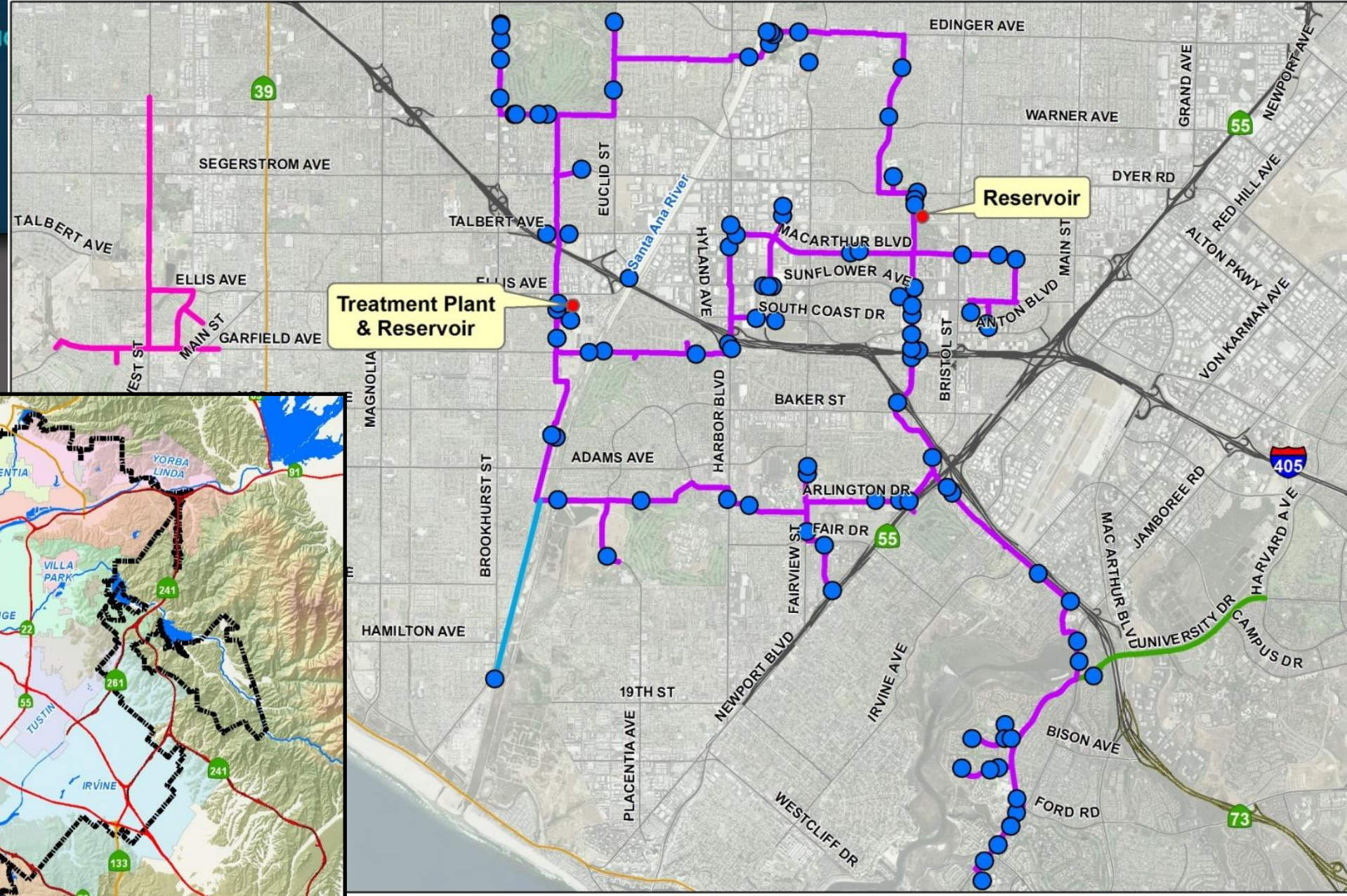
Overview:

- First year of operation: 1991
- 37 miles of distribution pipeline
- 97 active meters
- ~4,000 acre-feet per year
- Types of Use:
  - 1 dual-plumbed building
  - ~80% Irrigation
  - ~20% Industrial / Wastewater Treatment
- End-users in 4 Retail Agencies:
  - Mesa Water District
  - City of Santa Ana
  - City of Fountain Valley
  - City of Newport Beach
  - City of Huntington Beach currently not participating

ORANGE COUNTY WATER DISTRI

Location





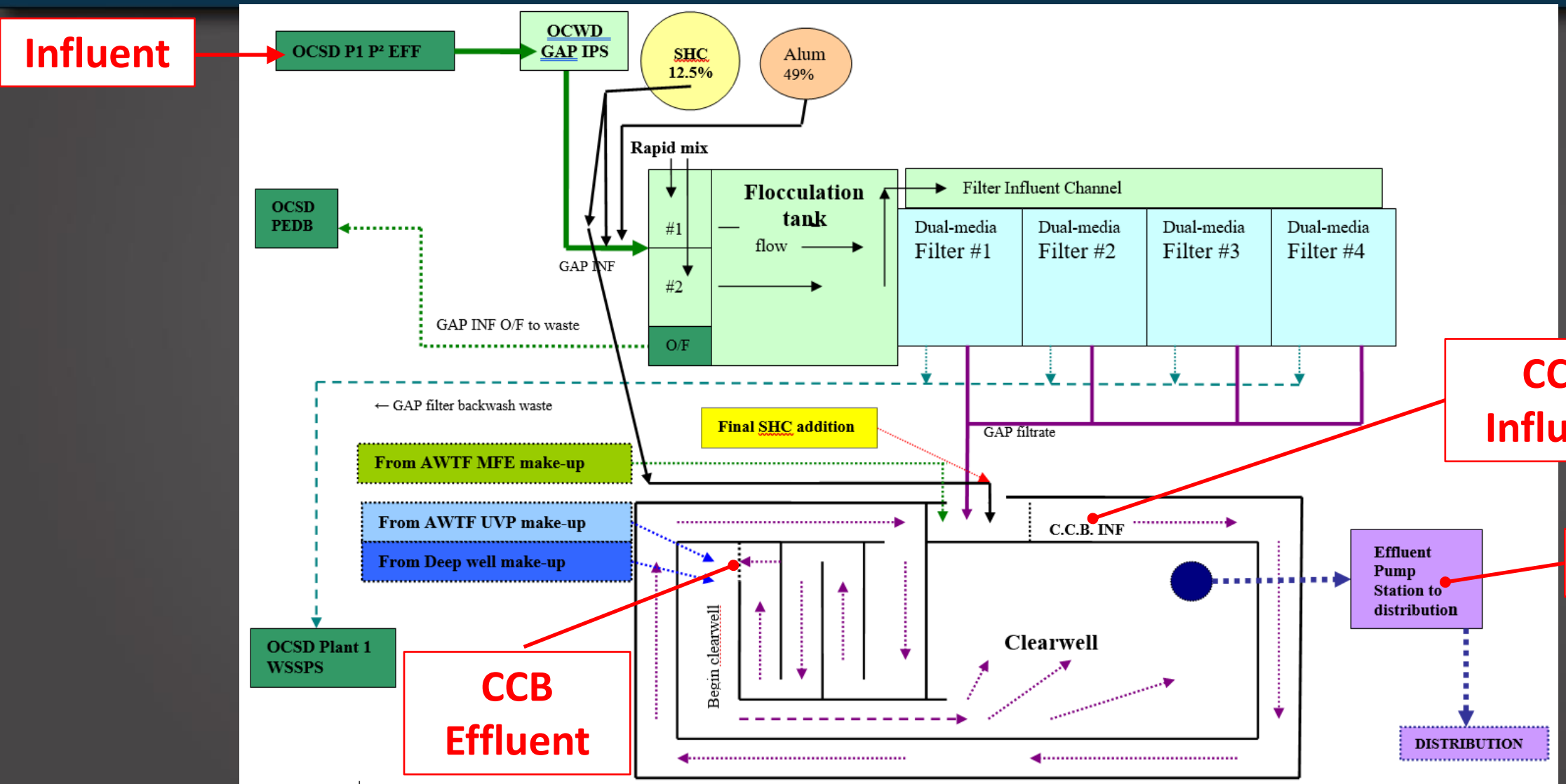
GAP Treatment Plant

Treatment Plant Designed for:
Average 7.5 MGD
Peak 9.5 MGD

Source: OC San Plant 1 Activated Sludge Secondary Effluent

Treatment: Coagulant, Flocculation, Sand & Anthracite Filter, Chlorine Disinfection

Treatment Plant Schematic



Free Chlorine Disinfection

- GAP influent: nitrified effluents (low NH_3)
- Cl_2 + nitrified eff (low NH_3) = free chlorine
- Free chlorine 5 log virus CT: 3 mg-min/L
- Title-22 regulatory CT: 450 mg-min/L
- Free chlorine 5 log virus time: 4 min, T_{10}
- Title-22 regulatory time: 90 min, modal

Title-22 Regulations

- Alternatives: allows for free chlorine
- Free chlorine demonstration testing: LACSD, East County, Brentwood, and San Jose
- Free chlorine approach accepted by DDW

Chloramine Disinfection

- Sufficient NH_3 + Cl_2 = chloramines
- Advantage: chloramines have less demand
- Advantage: breakpoint not required
- Disadvantage: 450 mg-min/L CT, 90 min modal

Influent Water Quality

Source	Ammonia (mgN/L)	Nitrite (mgN/L)	Free Cl_2 demand ($mgCl_2/L$)	Chloramine demand ($mgCl_2/L$)
AS1	0.3	0.03	2.4	0.2
AS2	0.8	0.03	6.2	0.2
MFE	1.7	0.3	14	1.5

Chlorine Dose and Decay

Source	Dose ($mgCl_2/L$)	CCB Inf ($mgCl_2/L$)	CCB Eff ($mgCl_2/L$)	HPEP ($mgCl_2/L$)
AS1/2	26	11	7	5
MFE	35	12	8	4

Free Chlorine Disinfection

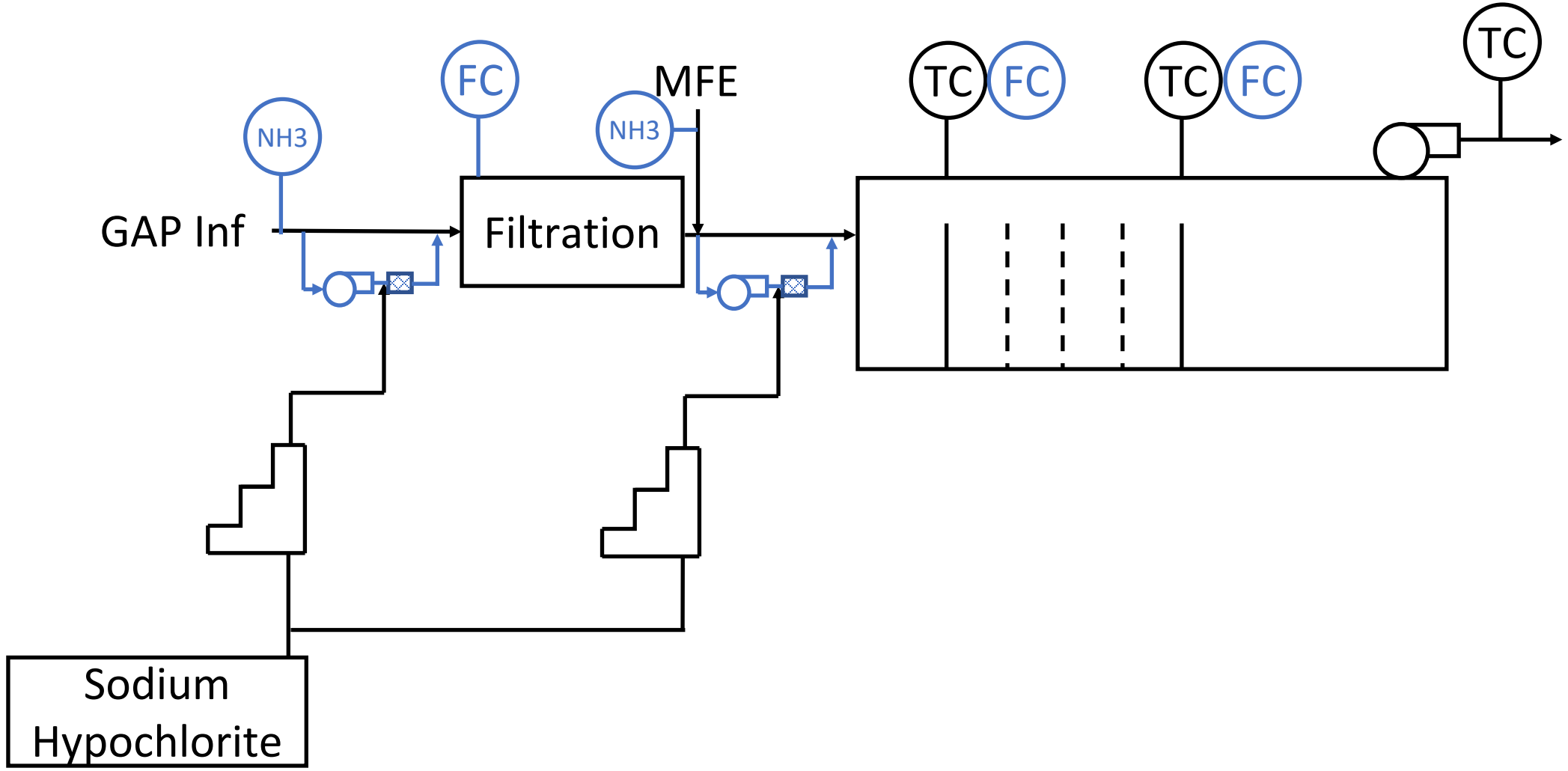
- Previously required disinfection studies
- Now DDW approves CT as f(pH, temp, turb)
- GAP CT: 25 mg-min/L
- T_{10}: 4 minutes, minimum
- No-test approvals: San Mateo, IEUA, Western

Free Chlorine Disinfection

Challenges:

- Must control for ammonia bleedthrough
- Free chlorine worse for coliform disinfection
- HPEP residual potentially controls CT

Free Chlorine Disinfection



Chloramine Disinfection

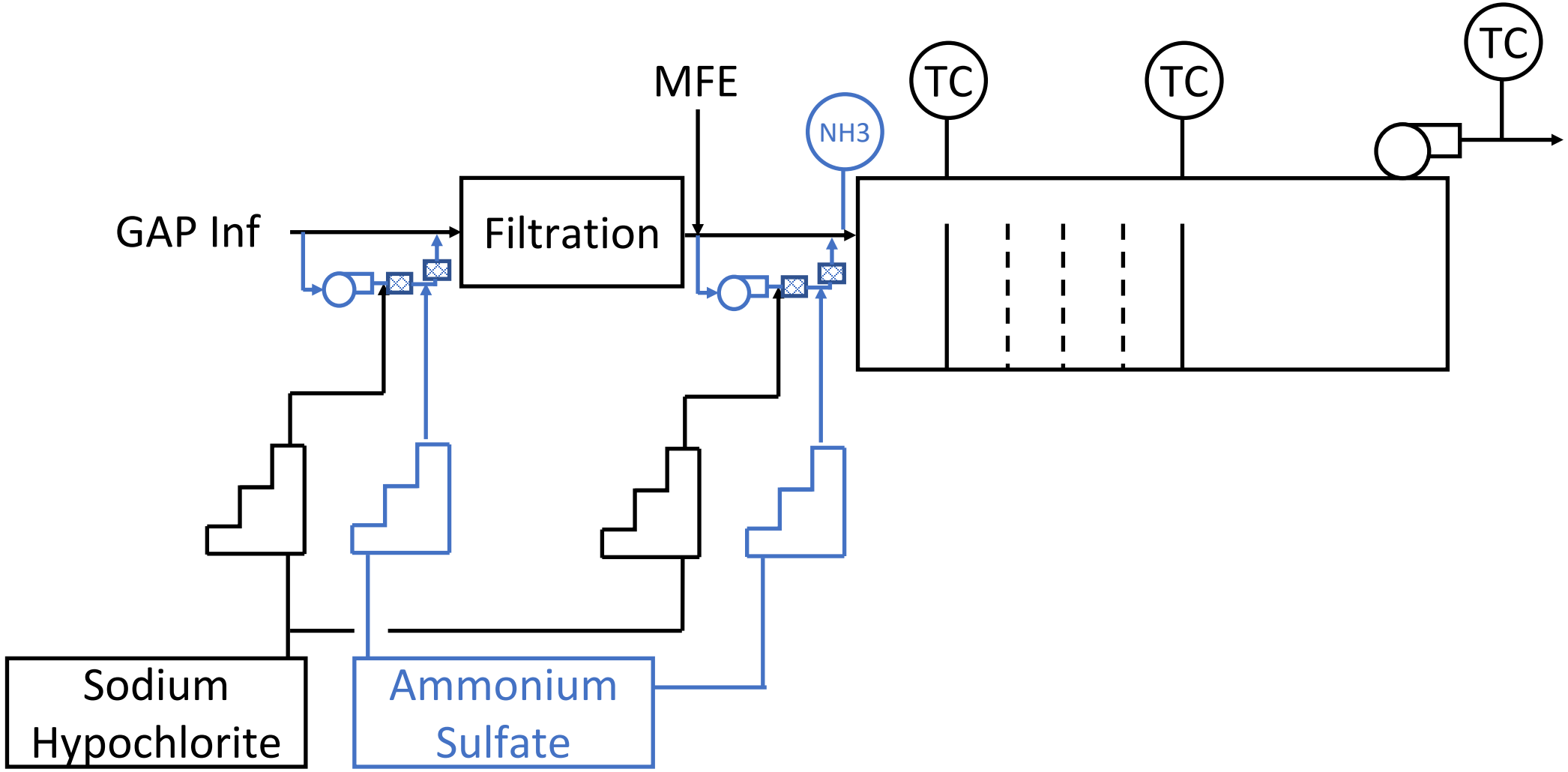
Advantages:

- Lower hypochlorite dose (less demand/decay)
- Examples: LACSD, San Jose, Paso Robles, Calistoga, Carmel, EBMUD, Santa Barbara

Disadvantages:

- Potential user incompatibility (cooling towers)
- New chemical on-site required

Chloramine Disinfection



Costs

Chemical cost savings per year:

- Free chlorine: $16k
- Chloramines (AS1/AS2): $42k
- Chloramines (MFE): $100k

Construction & engineering costs:

- Free chlorine: $470k
- Chloramines: $590k

Potential Next Steps

Free chlorine:

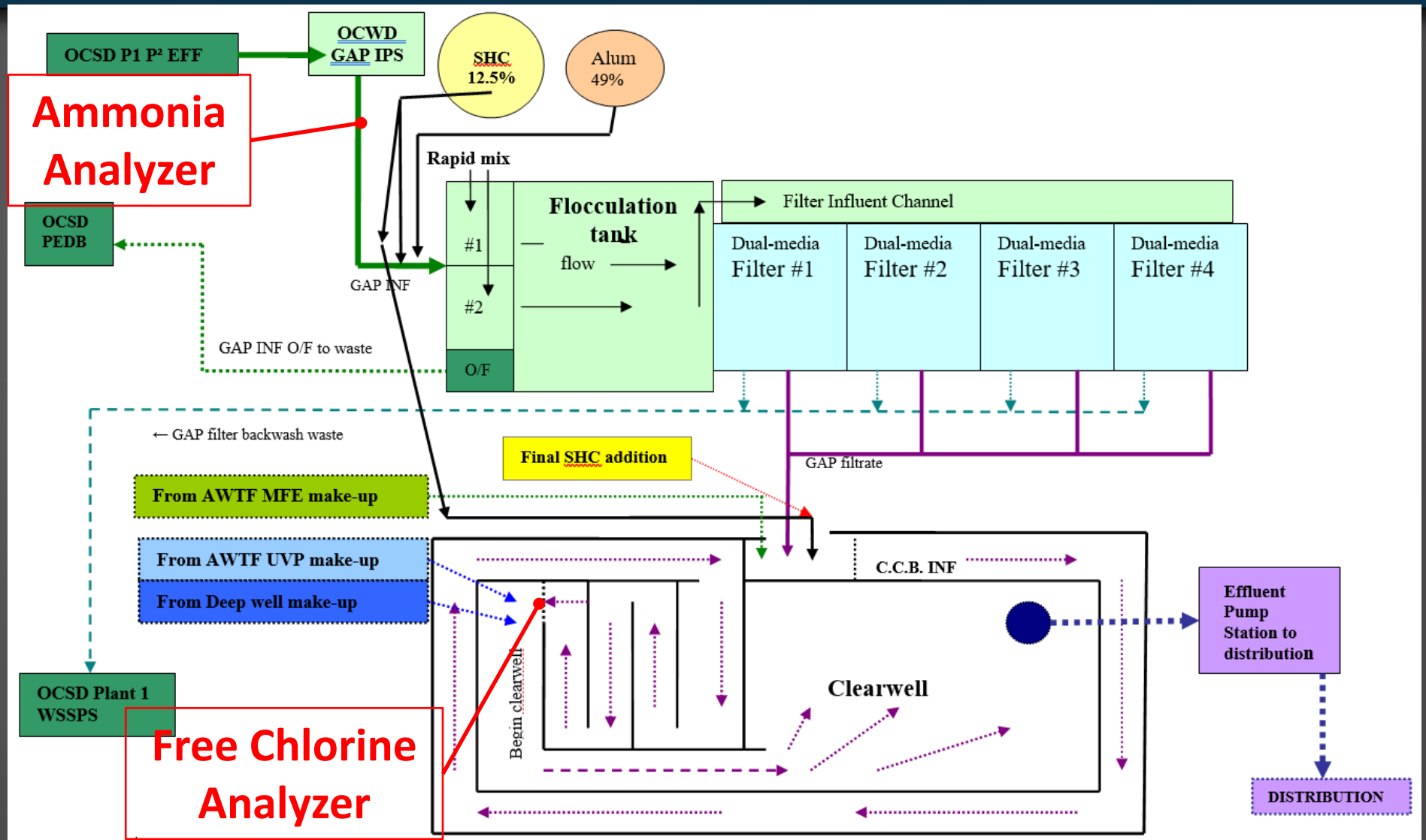
- Pursue DDW approval
- Coliform sampling
- HPEP residual target

Chloramines:

- Discuss change with users
- Preliminary design
- Chloramine demand study

Analyzer Locations & Data

New analyzers added in mid-2021



Next Steps

1. Collect at least a year of analyzer data
2. Re-consider options of low CT and chloramination
3. Implement revised disinfection strategy

ORANGE COUNTY WATER DISTRICT

End of Presentation

Benjamin T. Smith, P.E.
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Trussell Technologies
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Q&A

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City of Escondido

Membrane Filtration Reverse Osmosis Facility (MFRO) for Agriculture

John Bekmanis, P.E.

Senior Project Manager – Black & Veatch

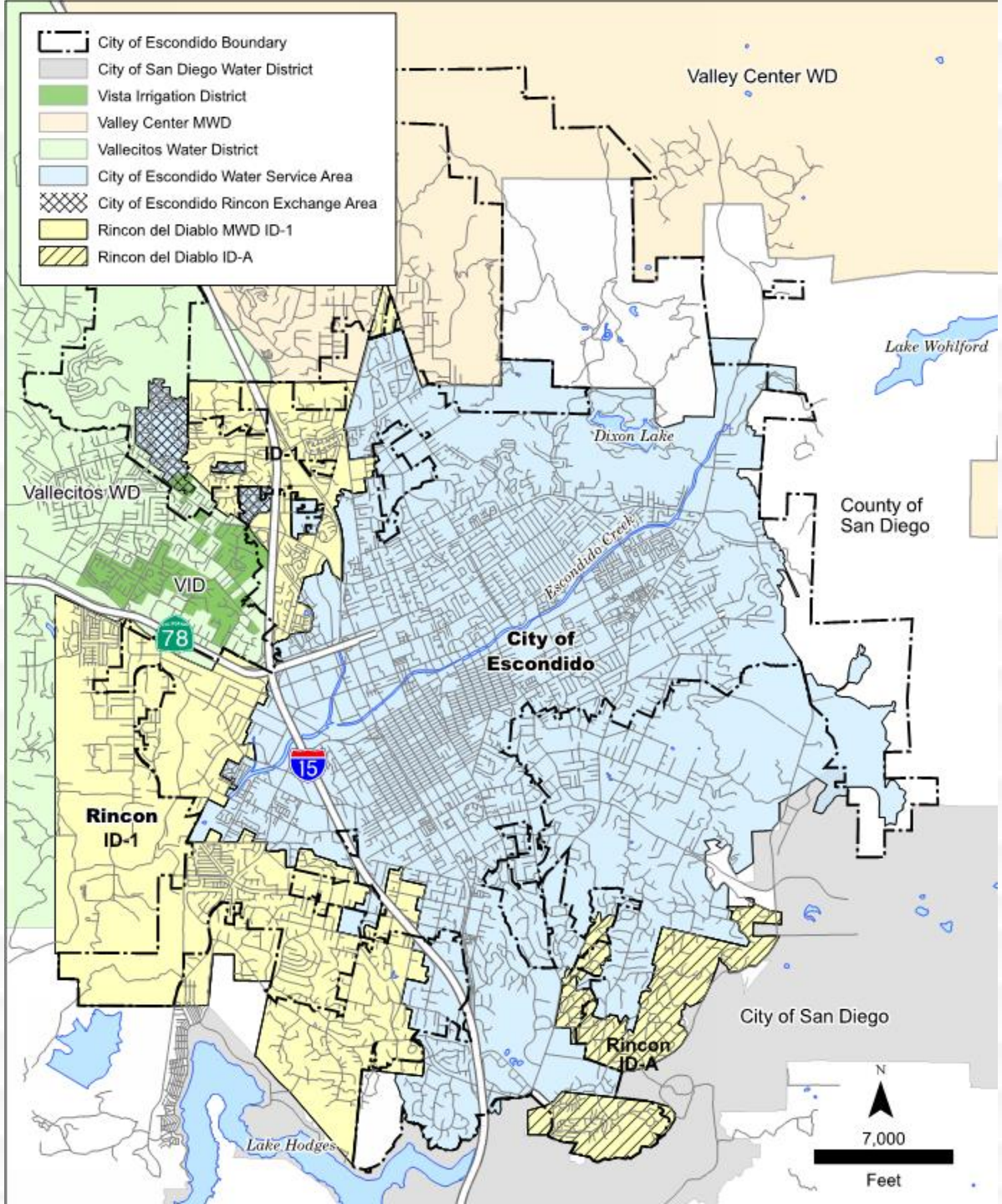
ESCONDIDO City of Choice

BLACK & VEATCH

Agenda

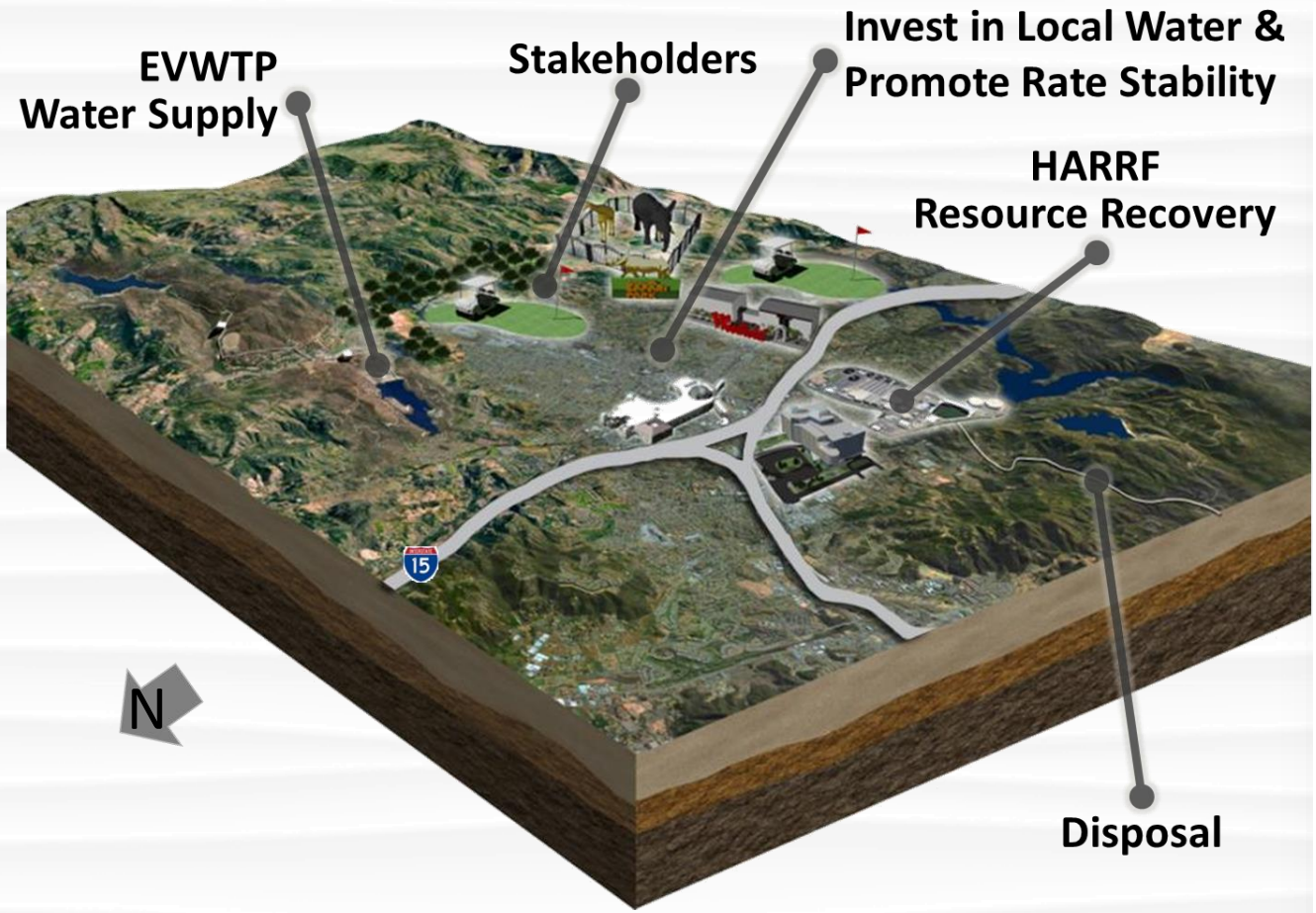
- Overview of Escondido / Program History
- Outfall Challenge
- Location, Location, Location
- MFRO Project Details
- Construction Progress
- Owners Agent – Lessons Learned
- Acknowledgements / Questions

City of Escondido / Program History



City of Escondido: Public Utilities

- Water: ~26,000 customers served from Escondido-Vista WTP
- Wastewater: ~142,000 people through Hale Avenue Resource Recover Facility (HARRF)
- Recycled water: HARRF designed to produce up to 9 mgd of Title 22 water

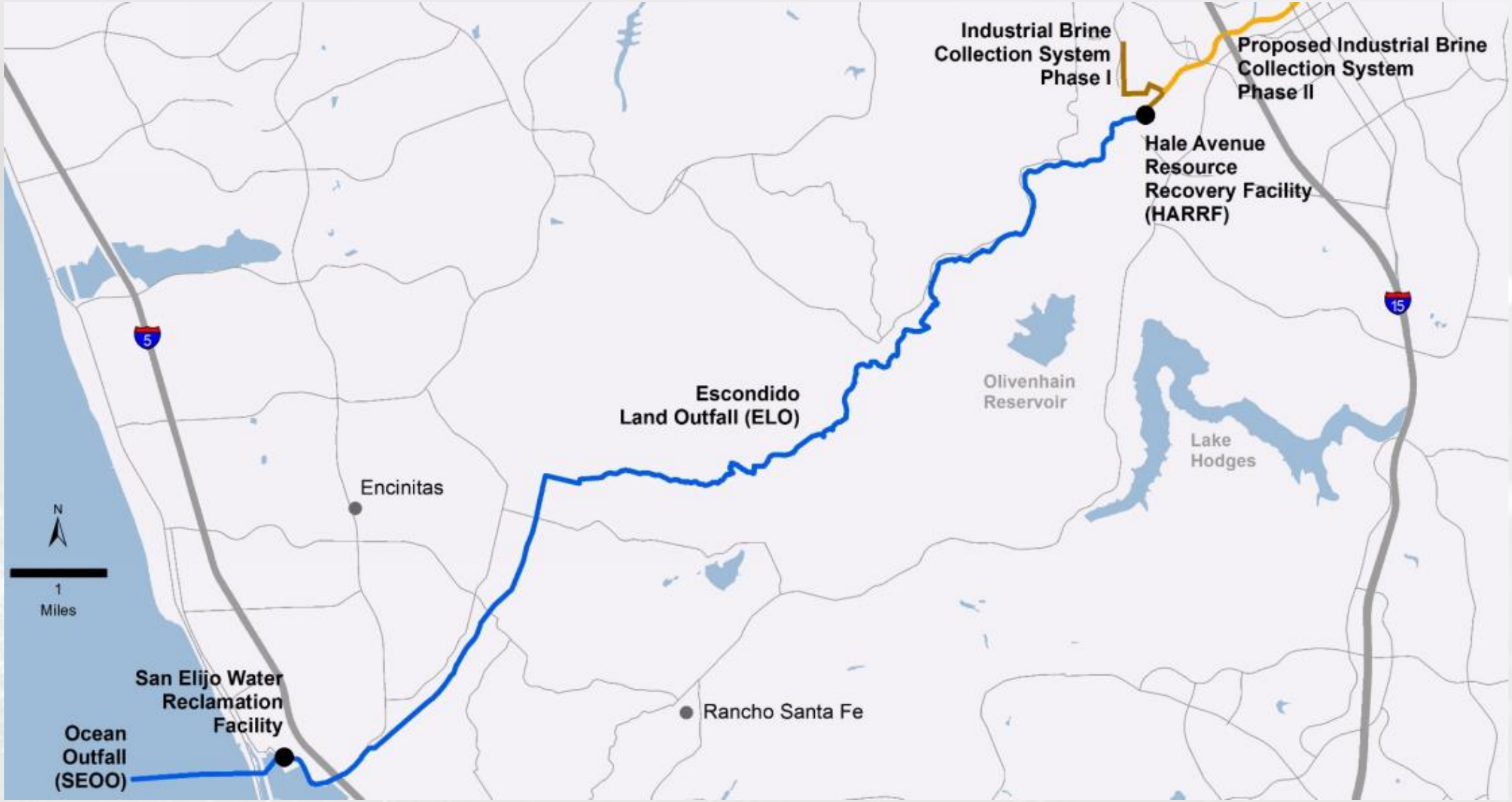


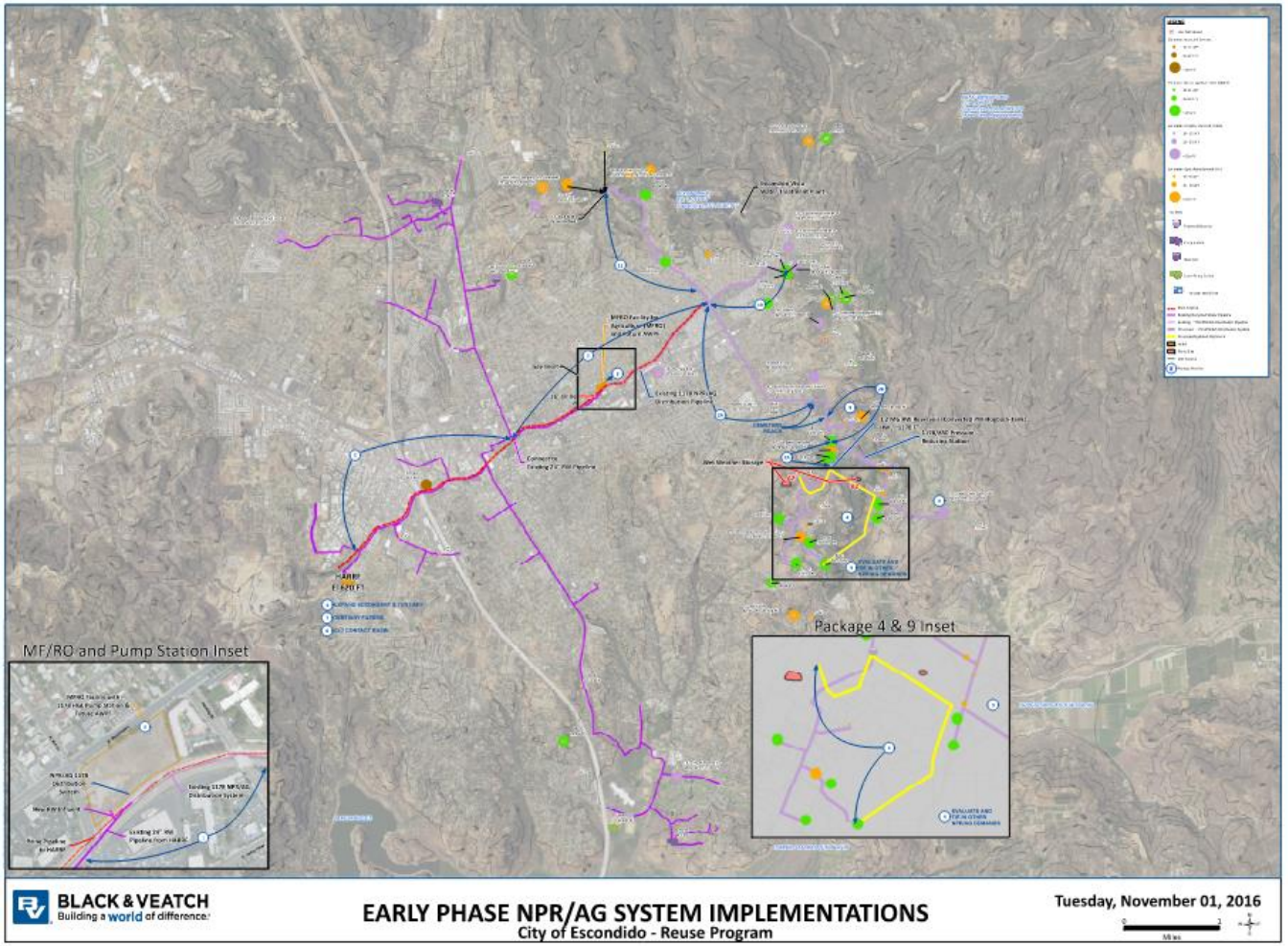
Program History

- 2012 Black & Veatch selected as Program Manager for Potable Reuse Program
- Feasibility Study
  - ✓ Non-Potable and Agricultural Reuse
  - ✓ Potable Reuse

Outfall Challenges

Offsetting the Ocean Outfall



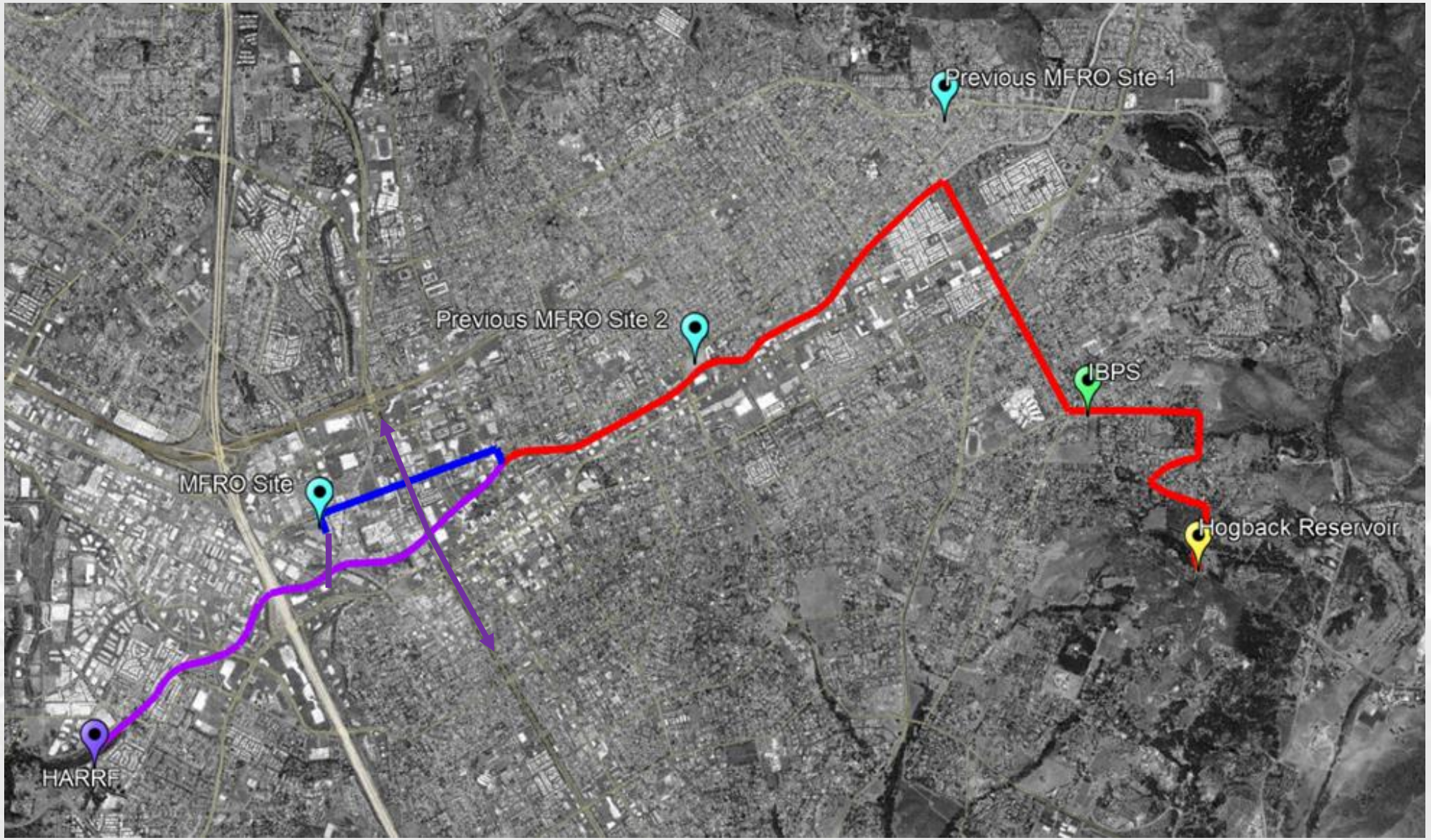


A Concept is Born

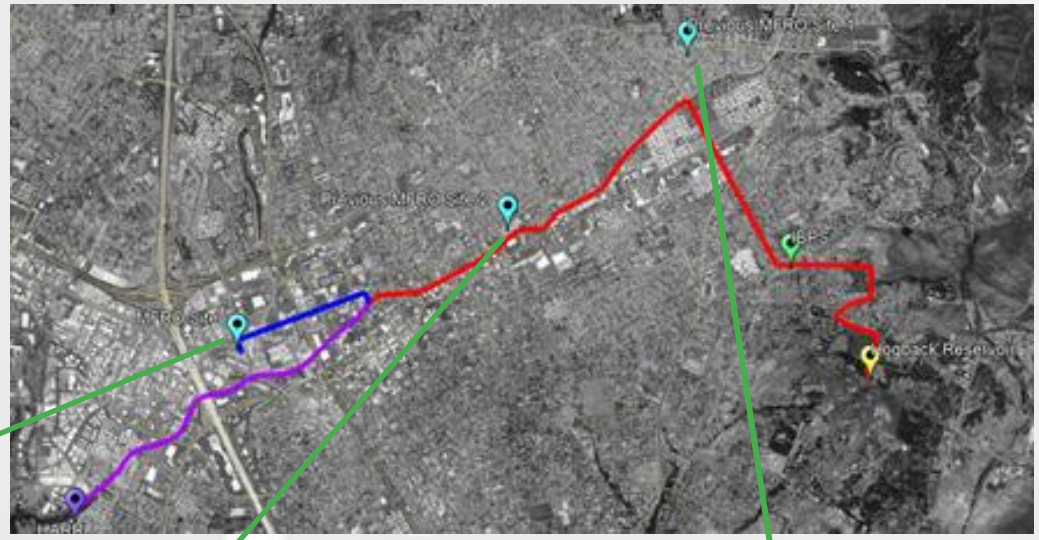
- Deliver treated water for Ag use
- Reduced chloride for avocados
- Contracted water rate structure
- 1.2 MG repurposed hilltop reservoir
- Ability to supplement with raw or potable water

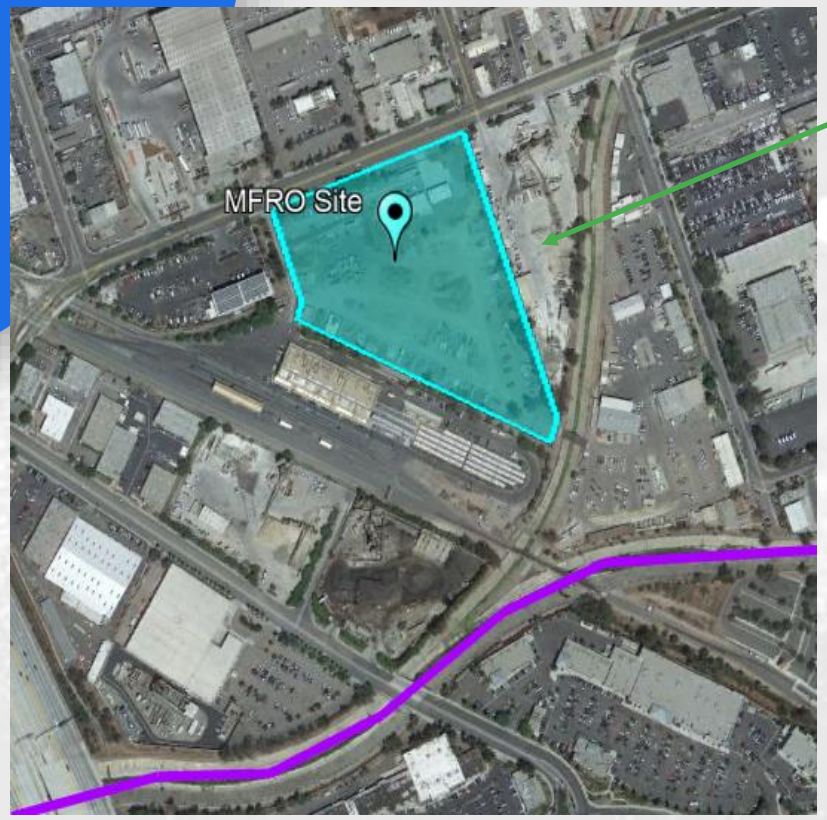
Location, Location, Location

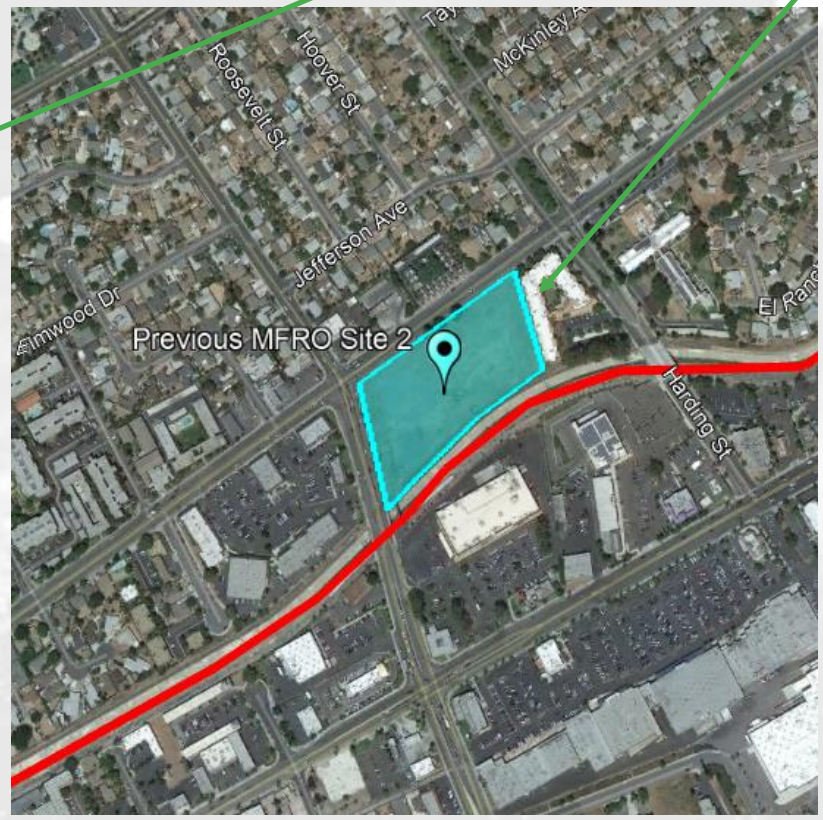
Project Geography

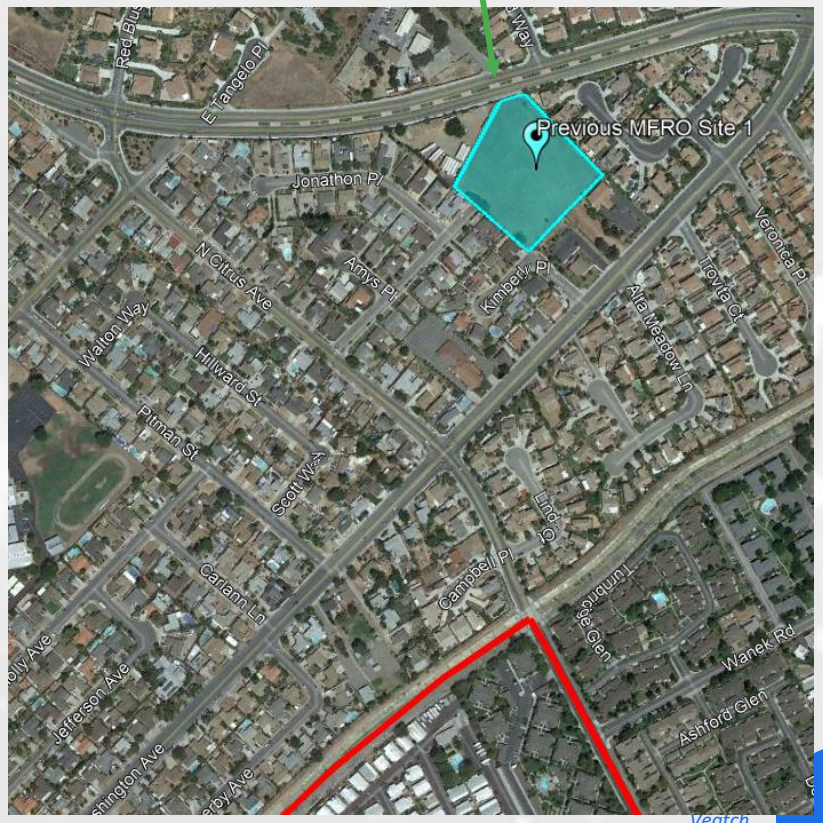


Location, Location, Location



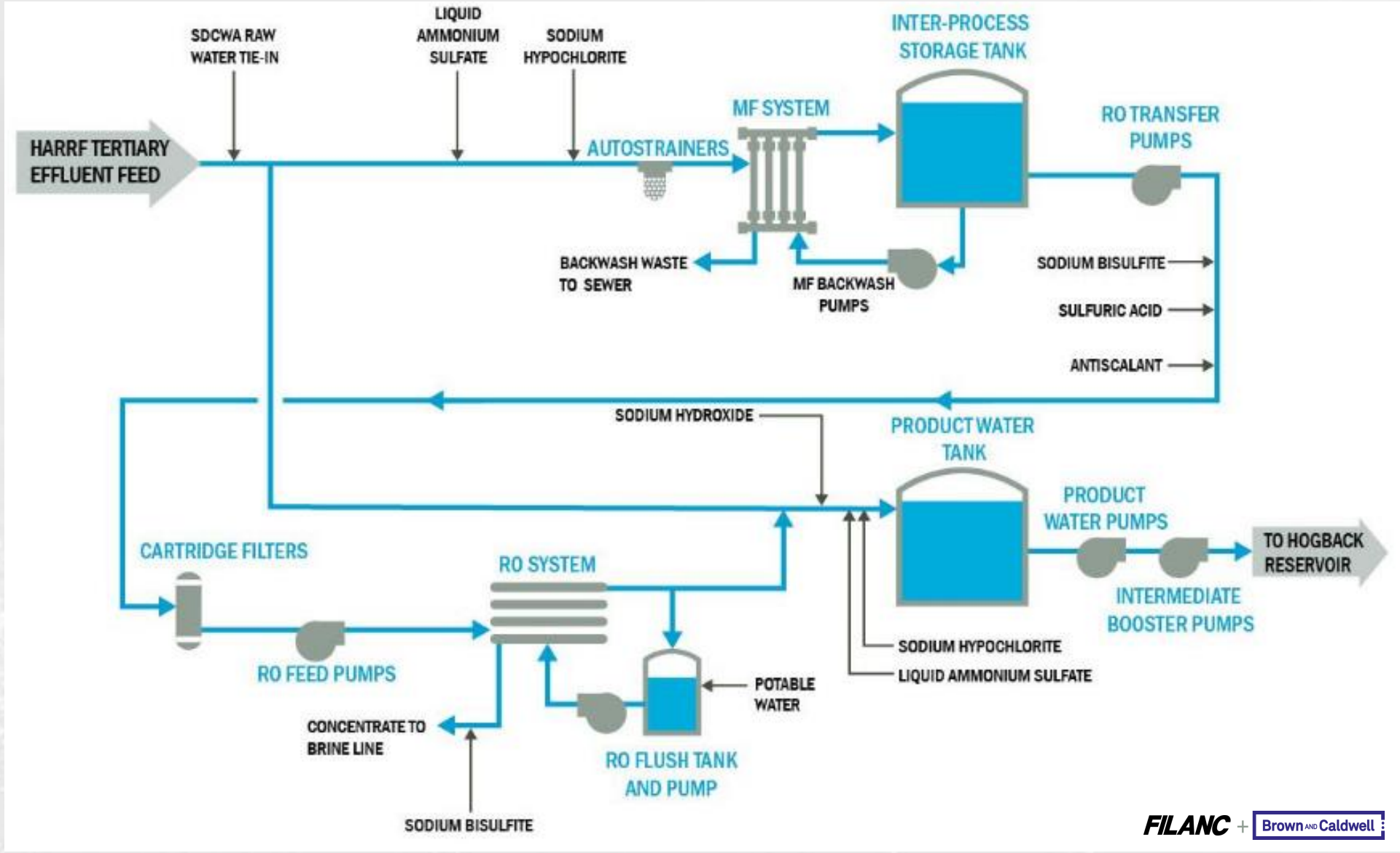




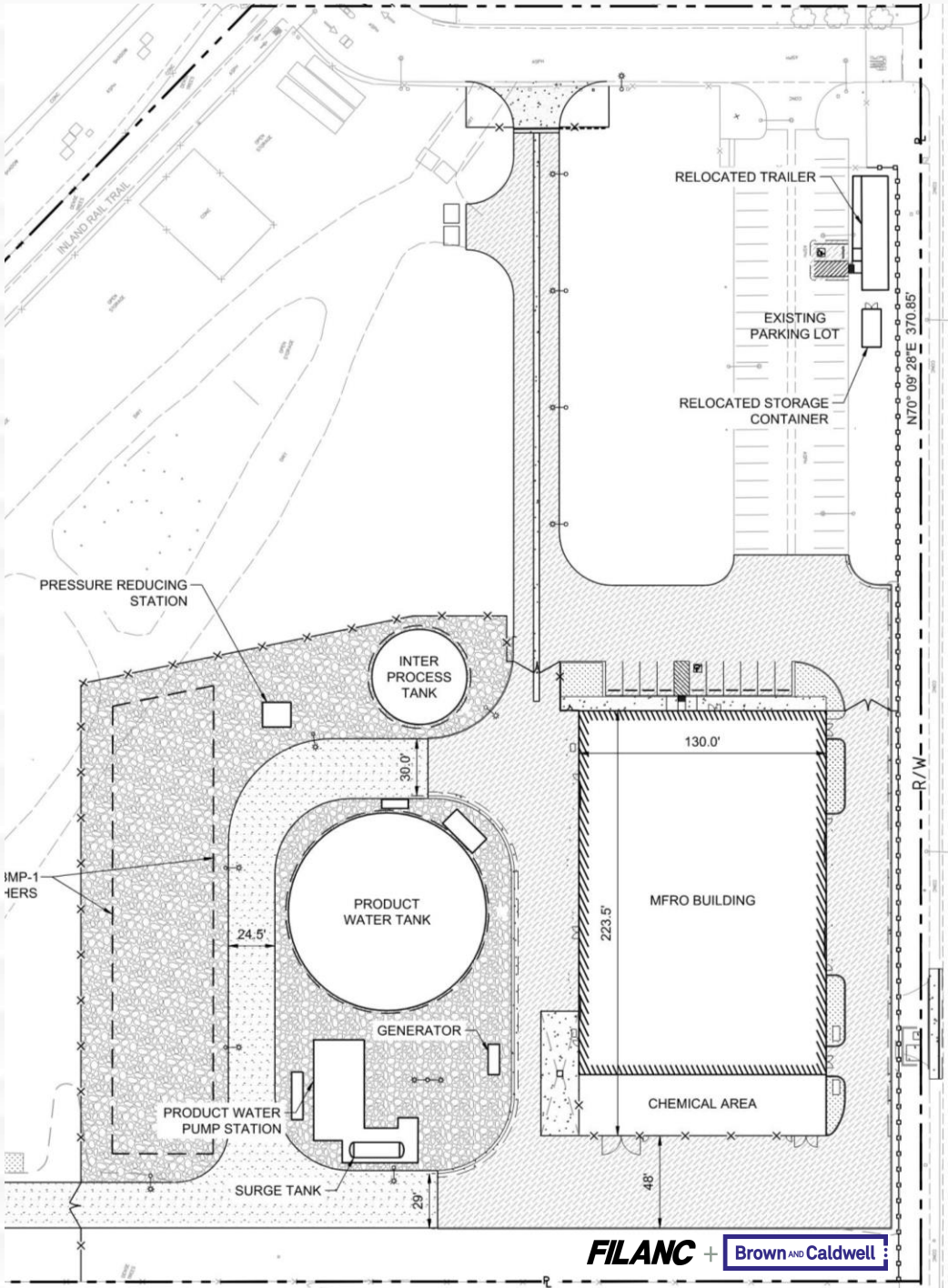


MFRO Project Details

MFRO Process Flow Diagram

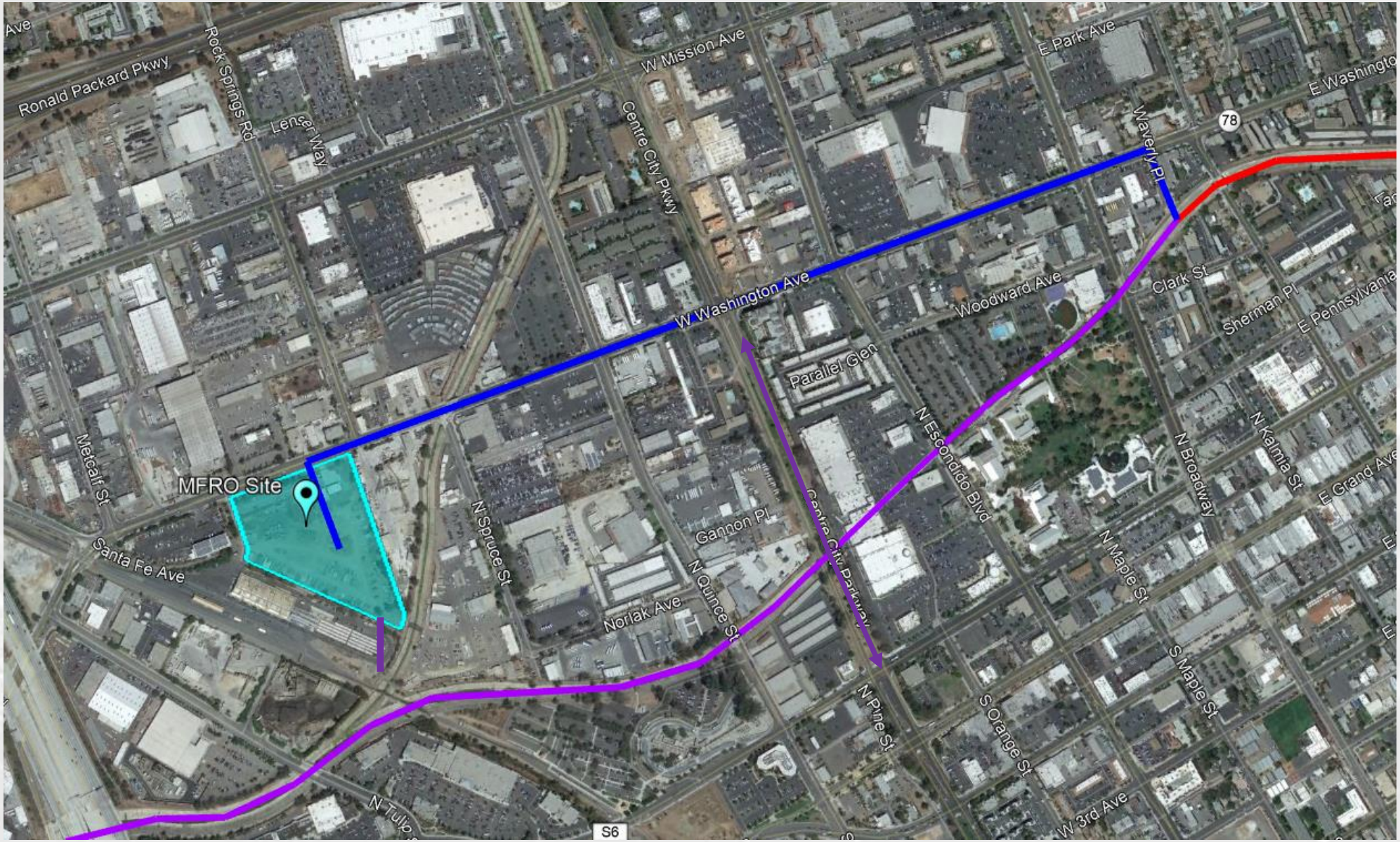


MFRO Site

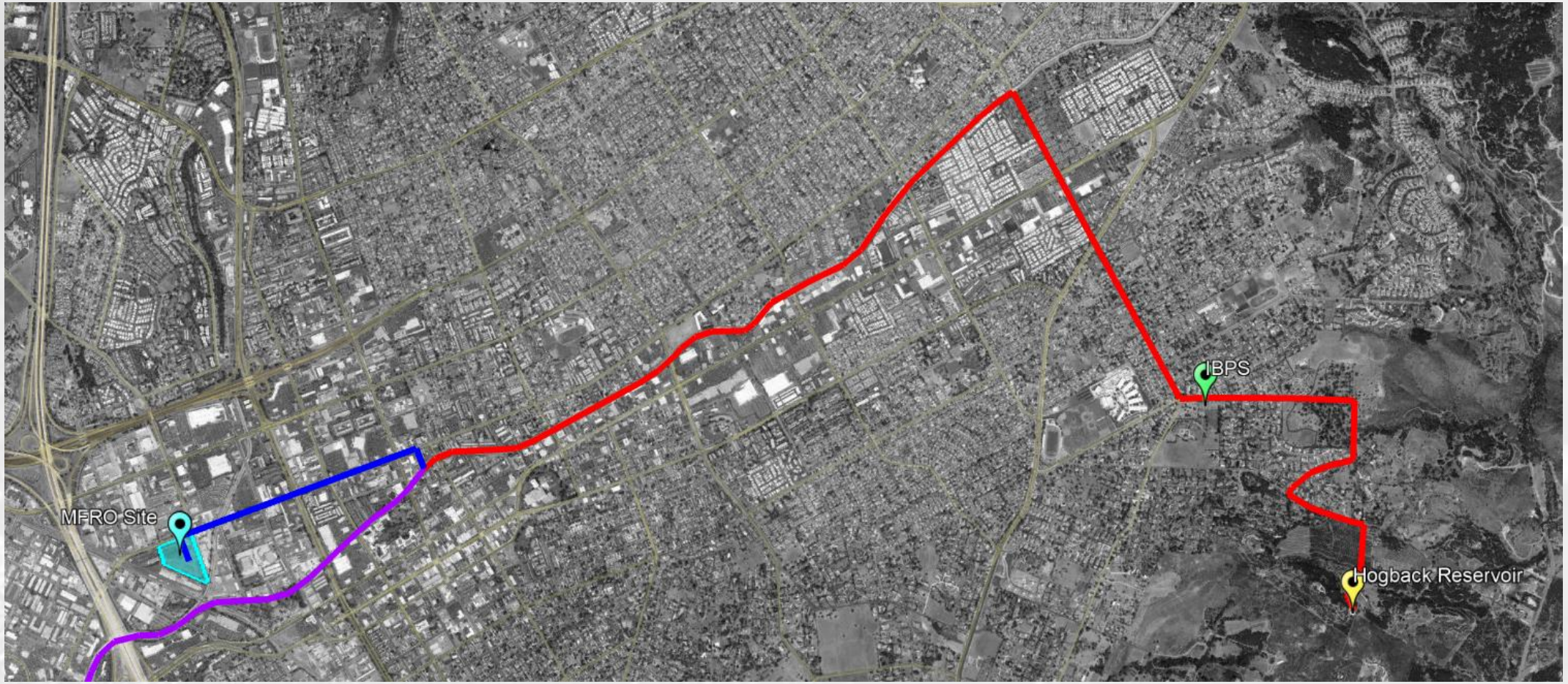


Black & Veatch

MFRO Product Water Pipeline



Intermediate Booster Pump Station



Construction Progress

Construction Progress

- MFRO Site – Underground utilities
- Product Water Pipeline – 95% complete
- IBPS – Site demolition

Owners Agent – Lessons Learn

Lessons Learned

- Changes will Occur
- Extension of Staff
- Being Pulled in Many Directions

ACKNOWLEDGEMENTS / QUESTIONS

Acknowledgements

Angela Morrow
Project Manager

John Del Fante
Operations/Process

Many others

John Bekmanis
Project Manager

Jay DeCarolis
Process Engineer

Many others

Gary Silverman
Project Manager

Tony Ruiz
Lead Estimator

Matt Appleton
Construction Manager

Many others

JP Semper
Project Manager

Scott Lacy
Design Manager

Jocelyn Lu
Project Engineer

Many others

Questions

Contact Us

Building a World of Difference

John Bekmanis

1 760 621 8421

bekmanisjt@bv.com

Standing Items

- **Regulatory Updates**
  - —DDW
  - —OCHCA
- **State Section Update**
  - —Joone Lopez (MNWD)
- **Potential Funding for Projects**

Local, State and Federal Funding Opportunities

PROGRAM	Total allocation	Funding available this Round	Purpose	Eligible Projects	Status	Anticipated Timeline	Notes
On-Site Retrofit Program (OSRP)	$2M per year		Provides financial incentives directly to customers	Public and private owners to convert potable water irrigation or industrial water systems to utilize recycled water.	SOLICITATIONS OPEN	First come first serve basis starting 7/1 through 6/30 or until funds are exhausted.	Contact: Jessica Arm, Assistant Resource Specialist II (213) 217-6819 http://www.bewaterwise.com/on-site-retrofit-program.html
MWD Local Resource Program (LRP)			Provides financial incentives for the development of water recycling, groundwater recovery, and seawater desalination projects.	Projects can include: • Water recycling • Groundwater recovery • Seawater desalination Three incentive payment options: • Sliding scale incentives up to $340/AF over 25 years, • Sliding scale incentives up to $475/AF over 15 years, or • Fixed incentive up to $305/AF over 25 years.	SOLICITATIONS OPEN	First come first serve basis starting 7/1 through 6/30 or until funds are exhausted.	Contact: Kira Alonzo Senior Engineer (213) 217-6489 http://www.mwdh2o.com/AboutYourWater/Planning/Funding-Programs/Local-Resource-Program-Funding
Water Savings Incentive Program			Open to all commercial, industrial, agricultural, institutional and large Landscape customers	Project examples: • Replacement of older, less water-efficient equipment, • Comprehensive changes to industrial processes that reduce water consumption, • Improvements to existing irrigation systems and landscaping to improve water use efficiency.	SOLICITATIONS OPEN	Payment amount is up to $0.60 per 1,000 gallons saved per year over the project live, up to a maximum of 10%. Incentives are limited to 50% of eligible project costs	

Local, State and Federal Funding Opportunities

PROGRAM	Total allocation	Funding available this Round	Purpose	Eligible Projects	Status	Anticipated Timeline	Notes
SoCal Water$mart		Dependent on type of project	Business and residential rebates to help encourage water efficiency and conservation	**Commercial Projects:** Plumbing Fixtures Landscaping Equipment Food and HVAC Equipment Medical and Dental Equipment **Residential Projects:** Turf Removal Residential Devices	SOLICITATION OPEN		https://socalwatersmart.com/en/commercial https://socalwatersmart.com/en/residential
MWD Stormwater for Direct Use Pilot Program	$5M		Beginning early 2020, The MWD will evaluate local stormwater capture projects to better understand their performance and regional water supply benefits. This program will financial incentives to develop, monitor and assess up to 10 new or existing stormwater recharge projects across the district's service area.	To be eligible, project must: • Include meter(s) for measurement of capture and use • Offset potable or reclaimed water use • Be within Metropolitan's service area • Have an estimated minimum design capture and use of one acre-foot per year • Have completed CEQA documents, if needed • Submit project schedule • Submit original project construction cost at the time of application (for retrofit projects only)	SOLICITATIONS OPEN	First come first serve basis starting 7/1 through 6/30 or until funds are exhausted.	Matt Hacker Senior Resource Specialist (213) 217-6756 https://www.mwdh2o.com/media/6883/stormwater-for-recharge-monitoring-equip-installation-project-application-sample.pdf
MWD Stormwater for Recharge Pilot Program	$7.5M		Beginning early 2020, The MWD will evaluate local stormwater capture projects to better understand their performance and	To be eligible, project must: • Measure capture and recharge • Demonstrate how stored water recharges usable groundwater • Describe how the project will increase groundwater production	SOLICITATIONS OPEN	First come first serve basis starting 7/1 through 6/30 or until funds are exhausted.	Matt Hacker Senior Resource Specialist (213) 217-6756 https://www.mwdh2o.com/media/20

Local, State and Federal Funding Opportunities

PROGRAM	Total allocation	Funding available this Round	Purpose	Eligible Projects	Status	Anticipated Timeline	Notes
			regional water supply benefits. This program will financial incentives to develop, monitor and assess up to 10 new or existing stormwater recharge projects across the district's service area.	or decrease Metropolitan demand • Possess the right to capture and recharge stormwater in the area of the proposed project and not impact downstream users • Have an estimated design capture of at least 40 acre-feet per year • Be located within Metropolitan's service area • Create new water supply by increasing total recharge to a groundwater basin and decreasing stormwater flows to the ocean • Submit a minimum of three annual monitoring reports			711/mwd_recharge_final.pdf
DWR Water Use Efficiency: CalConserve Revolving Fund (Proposition 1)	$10M	$10M	Sustainable funding source for urban water use efficiency projects.	Projects including but not limited to: • Dish/clothes washer upgrades • Water-saving plumbing fixtures • Hot-water recirculating pumps • Leak detection & repair • Landscape irrigation upgrades • Commercial, institutional, and industrial water efficiency	Solicitation Open and proposal accepted through GRanTS application	Continuously	Funding will be split: • $1.75 million is to be loaned out for water use efficiency upgrades • $5 million is to be loaned out for fixing expensive and difficult to repair customer leaks
DWR IRWM Grant Program Implementation (Proposition 1, Round 2)	$418M statewide $98M for LA Region	TBD	Projects and programs that support IRWM.	• Water reuse & recycling • Water conservation • Surface storage/GW recharge • Conjunctive use • Water conveyance	DWR released of DRAFT Proposal Solicitation Package (PSP) for Public	Open	See link below for website: https://www.water.ca.gov/Work-With-Us/Grants-And-

Local, State and Federal Funding Opportunities

PROGRAM	Total allocation	Funding available this Round	Purpose	Eligible Projects	Status	Anticipated Timeline	Notes
				• Watershed restoration and protection • SW resource management • Desalination • WQ improvements	Comment Period (45-day minimum)		Loans/IRWM-Grant-Programs/Proposition-1
DWR IRWM Grant Program Planning (Proposition 1, Round 2)	$5M	TBD	Projects and programs that support IRWM.	Planning projects that accomplish: • Development of an IRWM plan that meets the IRWM Plan Standards • Compliance with recent legislation • Improvement of an existing IRWM plan.	DWR released of DRAFT Proposal Solicitation Package (PSP) for Public Comment Period (45-day minimum)	Open	See link below for website: https://www.water.ca.gov/Work-With-Us/Grants-And-Loans/IRWM-Grant-Programs/Proposition-1
DWR IRWM Grant Program DAC Involvement (Proposition 1)	$51M statewide $9.8 M for LA Region	$9.8M for LA Region	Projects and programs that support IRWM.	Projects ensuring DAC involvement in IRWM planning efforts, including but not limited to eligible projects described in the Implementation Grant list.	Solicitations Continuously Open	SOLICITATION OPEN	
USEPA Water and Infrastructure Finance and Innovation Act (WIFIA) Program	$20M minimum project size for large communities $5M minimum project size for small communities (<25,000)	Funding available now 49%maximum portion of eligible project costs that WIFIA can fund	• Local, state, tribal and federal government entities • Partnerships and joint ventures • Corporations and trusts • CWSRF and DWSRF programs	• Wastewater conveyance and treatment projects • Drinking water treatment and distribution projects • Enhanced energy efficiency projects at drinking water and wastewater facilities • Desalination, aquifer recharge and water recycling projects • A combination of eligible projects secured by a common security pledge or submitted under one application by an SRF program.	EPA announces WIFIA funding availability and application process details in the Federal Register and on its website (www.epa.gov/wifia)	CLOSED	NEPA, Davis-Bacon, American Iron and Steel and all federal cross-cutter provisions apply. **Includes a**cquisition of property if it is integral to the project or will mitigate the environ. impact of a project.

Local, State and Federal Funding Opportunities

PROGRAM TITLE	Description	Eligible Applicants	Federal/Non-Federal Cost Share	Current Status
WaterSMART Grants – FY 2022 **Drought Resiliency Projects**	Purpose: Funding for on-the-ground projects and modeling tools that will increase water reliability and improve water management.	States, Indian tribes, irrigation districts, water districts, or other organizations with water or power delivery authority located in the Western United States or United States Territories specifically: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming (the "Western United States"), and American Samoa, Guam, the Northern Mariana Islands, the Virgin Islands, and Puerto Rico ("Territories") (collectively "Western United States or Territories").Nonprofit conservation organizations that are acting in partnership and with the agreement of an entity described above.	Total Funding Available: $16.5M Funding Request: Funding Group I: Up to $500,000 per agreement for smaller, on-the-ground projects that should be completed within 2 years Funding Group II: Up to $2,000,000 per agreement for larger, phased on-the-ground projects that may take up to 3 years to complete Non-Federal Cost Share: 50% or greater.	The FY22 Funding Opportunity was **closed** on Wednesday October 5, 2021 at 3:00 PM (PST) via www.Grants.GOV For more information: https://www.grants.gov/web/grants/view-opportunity.html?oppId=335035
WaterSMART Grants – FY 2022 **Water and Energy Efficiency Grants**	Purpose: On-the-ground water management improvement projects, including projects that conserve water and address water supply reliability..	States, Indian tribes, irrigation districts, water districts, or other organizations with water or power delivery authority located in the Western United States or United States Territories specifically: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming (the "Western United States"), and American Samoa, Guam, the Northern Mariana Islands, the Virgin Islands, and Puerto Rico ("Territories") (collectively "Western United States or Territories").Nonprofit conservation organizations that are acting in partnership and with the agreement of an entity described above.	Total Funding Available: $15.0M Funding Request: Funding Group I: Up to $500,000 per agreement for smaller, on-the-ground projects that should be completed within 2 years Funding Group II: Up to $2,000,000 per agreement for larger, phased on-the-ground projects that may take up to 3 years to complete Non-Federal Cost Share: 50% or greater.	Applications due: Wednesday November 3, 2021 at 3:00 PM (PST) via www.Grants.GOV For more information: https://www.grants.gov/web/grants/view-opportunity.html?oppId=335103

Local, State and Federal Funding Opportunities

PROGRAM TITLE	Description	Eligible Applicants	Federal/Non-Federal Cost Share	Current Status
WaterSMART Grants – FY 2022 **Small-Scale Water Efficiency Projects**	Purpose: To support small water efficiency improvements that have been identified through previous planning efforts.	States, Indian tribes, irrigation districts, water districts, or other organizations with water or power delivery authority located in the Western United States or United States Territories specifically: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming (the "Western United States"), and American Samoa, Guam, the Northern Mariana Islands, the Virgin Islands, and Puerto Rico ("Territories") (collectively "Western United States or Territories").Nonprofit conservation organizations that are acting in partnership and with the agreement of an entity described above.	Up to $75,000 for projects to be completed within two years. Non-Federal Cost Share: 50% or greater.	FY21 selections were announced on August 31, 2021
WaterSMART Grants – FY 2022 **Water Marketing Strategy Grants**	Purpose: Planning activities to develop water marketing strategies that establish or expand water markets or water marketing activities between willing participants.	States, Indian tribes, irrigation districts, water districts, or other organizations with water or power delivery authority located in the Western United States or United States Territories specifically: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming (the "Western United States"), and American Samoa, Guam, the Northern Mariana Islands, the Virgin Islands, and Puerto Rico ("Territories") (collectively "Western United States or Territories").Nonprofit conservation organizations that are acting in partnership and with the agreement of an entity described above.	Up to $200,000 for projects to be completed within two years; or up to $400,000 for projects to be completed within three years. Non-Federal Cost Share: 50% or greater.	FY21 selections were announced July 1, 2021.

Local, State and Federal Funding Opportunities

PROGRAM TITLE	Description	Eligible Applicants	Federal/Non-Federal Cost Share	Current Status
WaterSMART Grants – FY 2022 **Environmental Water Resources Projects**	Purpose: To support water conservation and efficiency projects that result in quantifiable and sustained water savings and benefit ecological values; water management or infrastructure improvements to mitigate drought-related impacts to ecological values; and watershed management or restoration projects benefitting ecological values that have a nexus to water resources or water resources management.	Category A: States, Indian Tribes, irrigation districts, and water districts; State, regional, or local authorities, the members of which include one or more organizations with water or power delivery authority; and other organizations with water or power delivery authority. Category B: Nonprofit conservation organizations that are acting in partnership with and with the agreement of an entity described in Category A. Category C: Nonprofit conservation organizations submitting an application for a project to improve the condition of a natural feature such as wetlands on Federal land where entities in Category A within the applicable service area have been notified and do not object to the project. Applicants must be located in the Western United States or United States Territories specifically: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming (the "Western United States"), and American Samoa, Guam, the Northern Mariana Islands, the Virgin Islands, and Puerto Rico ("Territories") (collectively "Western United States or Territories").	Total Funding Available: $2.0M per agreement for a project that can be completed within 3 years.	The FY22 Funding Opportunity was closed on August 4, 2021. Applications due: Thursday December 9, 2021 at 3:00 PM (PST) via www.Grants.GOV For more information: https://www.grants.gov/web/grants/view-opportunity.html?oppId=335081

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Cooperative Watershed Management Program **FY19: $2.25M** **FY20: $2.25M** **FY21: $4.25M**	**Phase I** Watershed group development, watershed restoration planning, and watershed management project design.	States, Indian tribes, local and special districts (e.g., irrigation and water districts), local governmental entities, and non-profit organizations that are located in the Western United States or Territories. Established watershed groups that represent a diverse group of stakeholders, have completed a watershed restoration plan, are capable of promoting sustainable use of water resources located in the Western United States or Territories.	Up to $100,000 may be awarded to an applicant per year, for a period of up to two years. Non-Federal Cost Share: No Non-Federal cost-share required.	FY21 selections were announced June 15, 2021. The FY22 Funding Opportunity schedule is currently under development.
Drought Contingency Planning	Funding for development, or update, of comprehensive drought plans.	States, Indian tribes, irrigation districts, water districts, or other organizations with water or power delivery authority located in the Western United States (except Alaska).	Up to $200,000.Non-Federal Cost Share: 50% or greater.	FY21 selections were announced on April 21, 2021.
Drought Emergency Response Actions	Emergency response actions undertaken by Reclamation to minimize losses and damages resulting from drought.	States and Indian tribes in the Western United States (except Alaska).	Funding availability is dependent on appropriations.	Reclamation will accept emergency assistance requests on an on-going basis.

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Title XVI Program **FY19: $58.6M** **FY20: $63.6M** **FY21: $63.6M**	**Title XVI Authorized Projects** Funding for planning, design, and construction of specific congressionally authorized water recycling and reuse projects	Sponsors of water reclamation and reuse projects specifically authorized for funding under Title XVI of P.L. 102-575.	Typically, between $1 million and $6 million per applicant. Non-Federal Cost Share: 75% or greater.	FY21 selections were announced January 19, 2021.
	Title XVI WIIN Water Reclamation and Reuse Projects Funding for planning, design, and construction of WIIN Act water recycling and reuse projects	Sponsors of water reclamation and reuse projects with completed feasibility studies that have been submitted to Reclamation for review.	Typically, between $1 million and $6 million per applicant. Non-Federal Cost Share: 75% or greater.	FY21 project selections were transmitted to Congress on July 23, 2021. Funding will not be awarded until the projects are named in enacted appropriations legislation.
	Title XVI Feasibility Studies Funding for development of new Title XVI water reclamation and reuse project feasibility studies	Entities with water delivery authority, all located in the Western United States or Territories (except Alaska).	Up to $150K for studies to be completed in 18 months; up to $450K for those to be completed within 3 years. Non-Federal Cost Share: 50% or greater.	No funding opportunity is planned this year.

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PROGRAM TITLE	Description	Eligible Applicants	Federal/Non-Federal Cost Share	Current Status
Desalination Construction **FY19: $12M** **FY20: $12M** **FY21: $12 M**	Funding for planning, design, and construction of WIIN brackish groundwater and ocean desalination projects	Sponsors of desalination projects located in the Western United States or Territories (except Alaska and Hawaii) with completed feasibility studies that have been submitted to Reclamation for review.	Typically, between $1 million - $6 million per applicant. Non-Federal Cost Share: 75% or greater.	FY21 project selections were transmitted to Congress on July 23, 2021. Funding will not be awarded until the projects are named in enacted appropriation legislation.
Basin Study Program **FY19: $5.2M** **FY20: $5.2M** **FY21: $9.4M ($3M for Priorities TBD)**	**Applied Science Grants** Projects to develop hydrologic information and water management tools and to improve modeling and forecasting capabilities. ($2M)	States, Indian tribes, irrigation districts, water districts, universities, non-profit research institutions, organizations with water or power delivery authority, or non-profit organizations located in the Western United States or Territories.	Up to $200,000 per agreement for a project that can be completed within two years. Non-Federal Cost Share: 50% or greater.	FY21 selections were announced September 2, 2021.

Upcoming Webcasts, Conferences and Meetings

➢ Webcasts:

- **Exploring Agriculture Reuse**

  November 10, 2021 (11 am PT)

➢ Conferences & Meetings

- **OC Reuse Chapter Meeting (Zoom)** | December 16, 2021

- **2022 Annual WateReuse Symposium** | March 6-9, 2022| San Antonio, TX

See www.watereuse.org to register and for more information.

Roundtable: What's going on - All

Have a question?

Select the "Raise Hand Zoom" button or
select *9 on your telephone.

Nominations and Volunteers Reminder

THANK YOU

Meeting Adjourned