



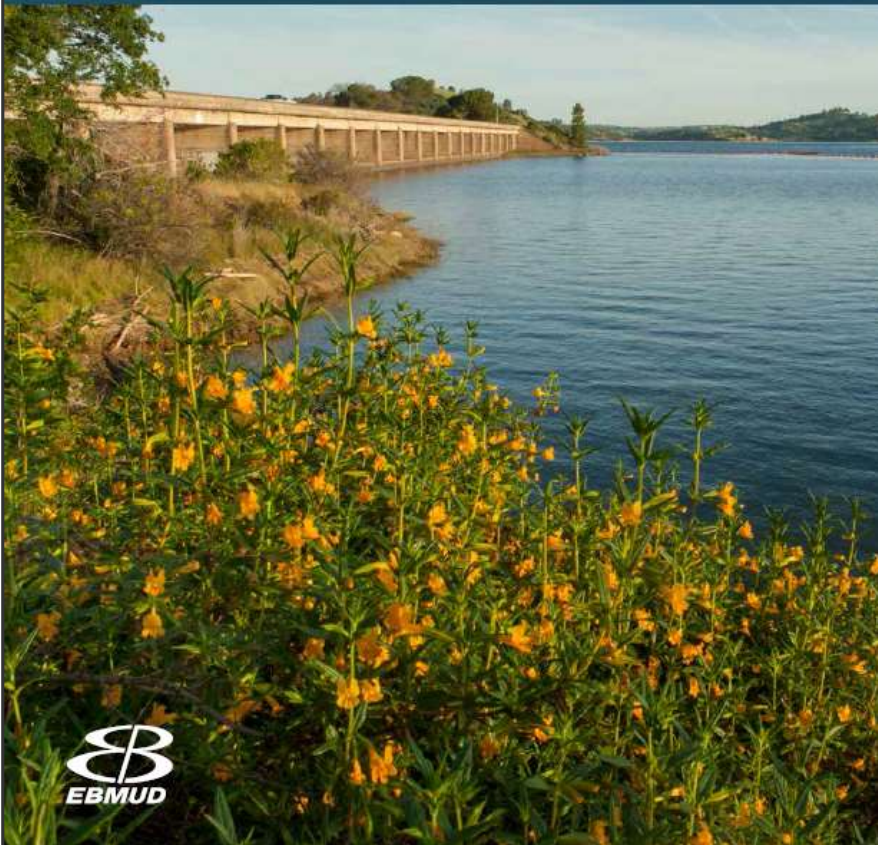
CalWEP Fall 2022 Plenary

Planning for the Future

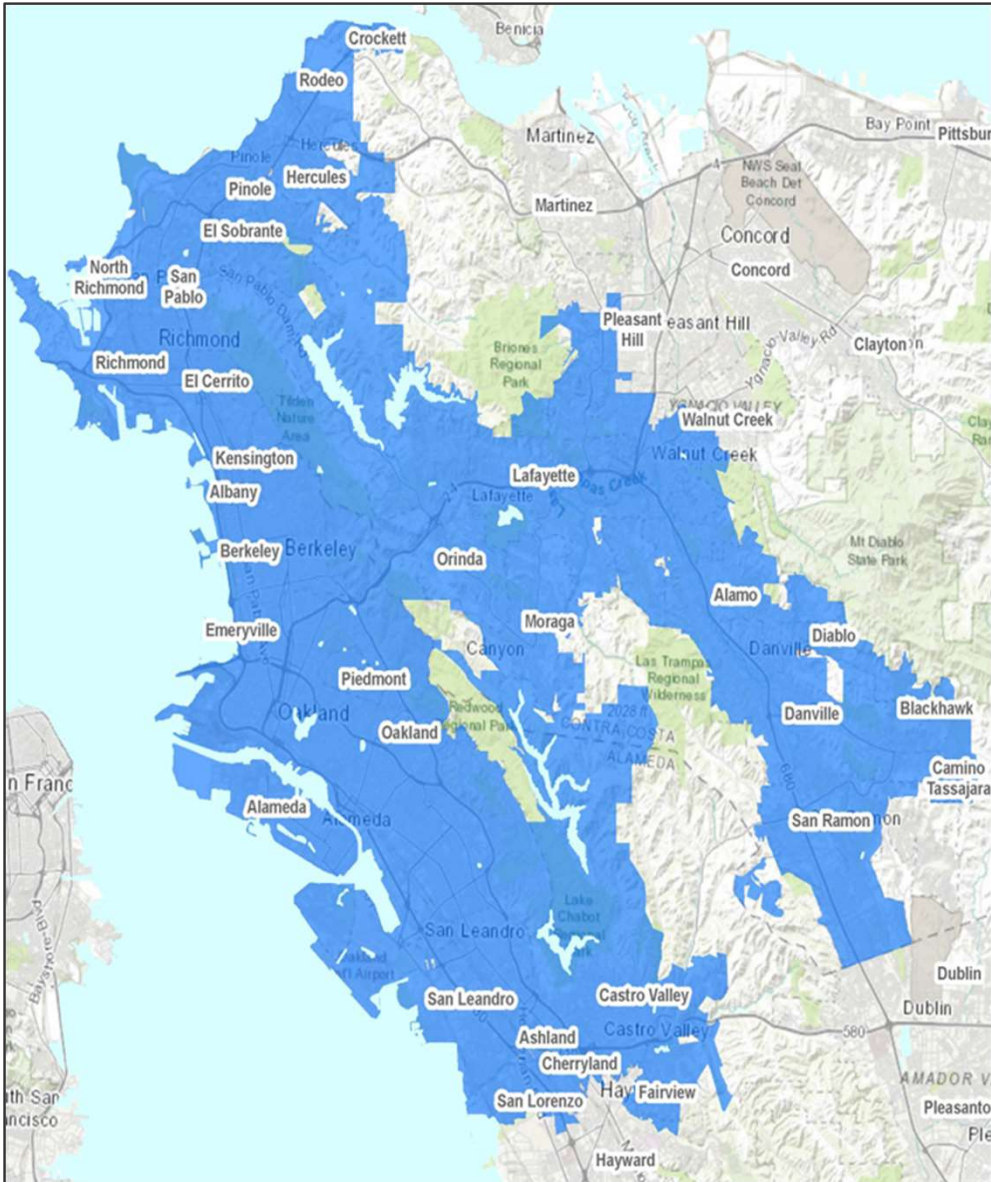


WATER CONSERVATION STRATEGIC PLAN 2021

EAST BAY MUNICIPAL UTILITY DISTRICT



- EBMUD's Demand Study
- Water Conservation Strategic Plan 2021
 - Program elements
- Recent Internal Research



6 Treatment plants



129 Reservoirs



136 Pumping plants

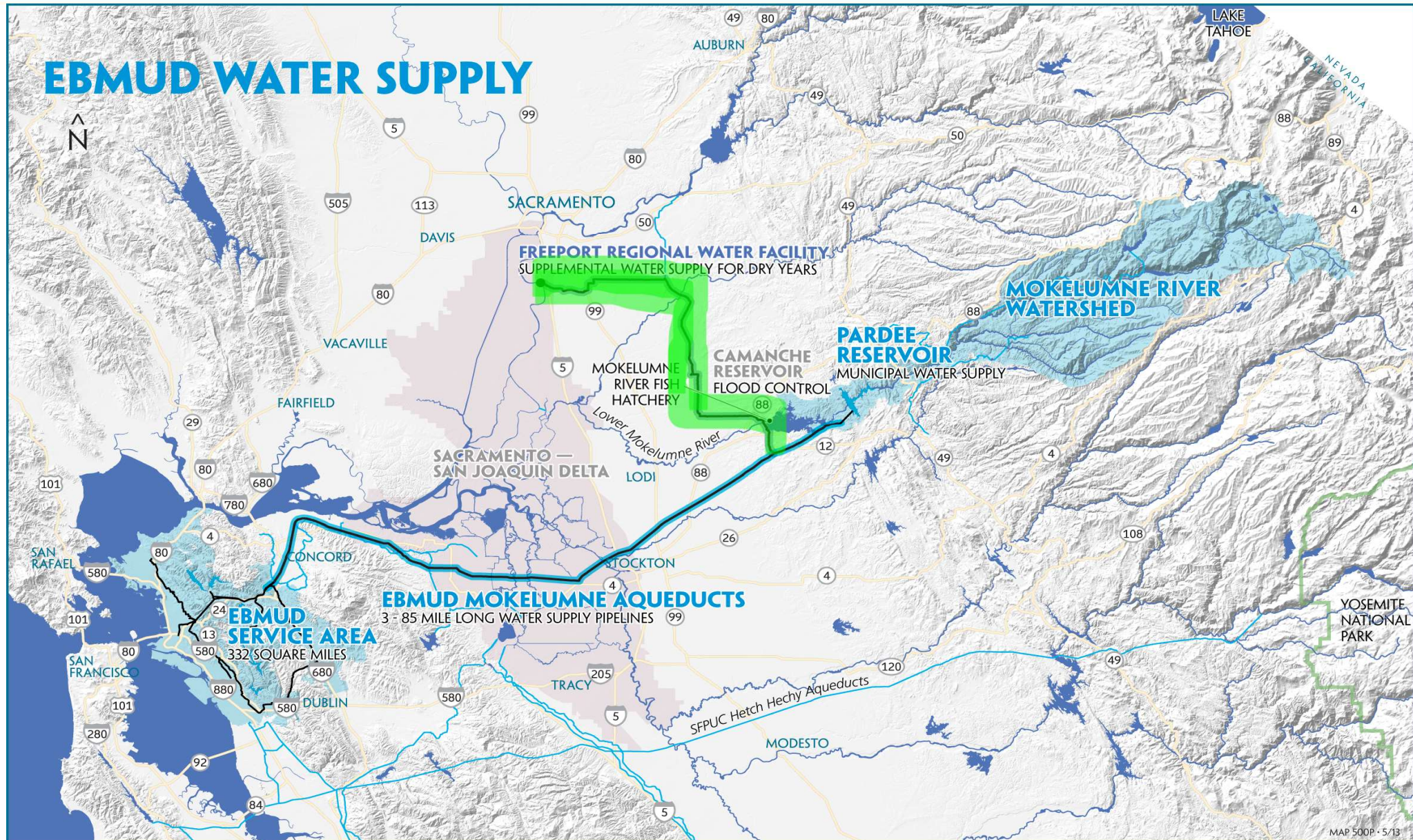


4,200 mi. pipelines



400,000 Meters

From the Snowflake to the Bay

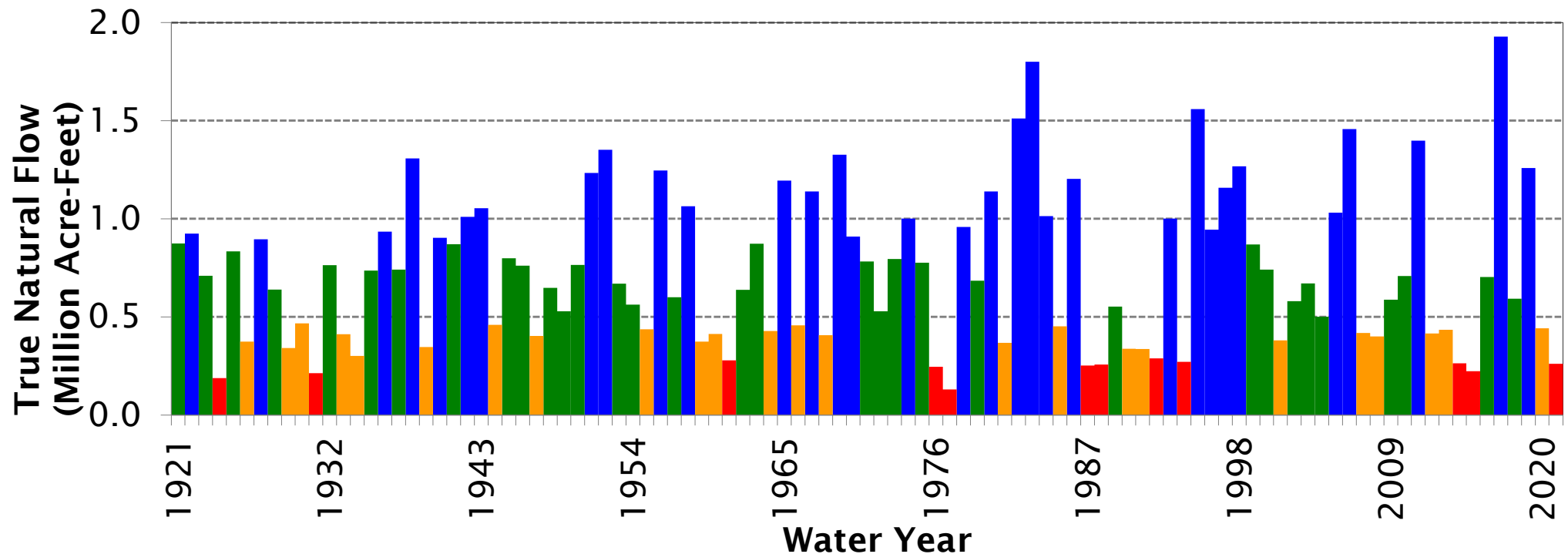


Water Supply Uncertainty



Mokelumne River Historic Water Supply Variability

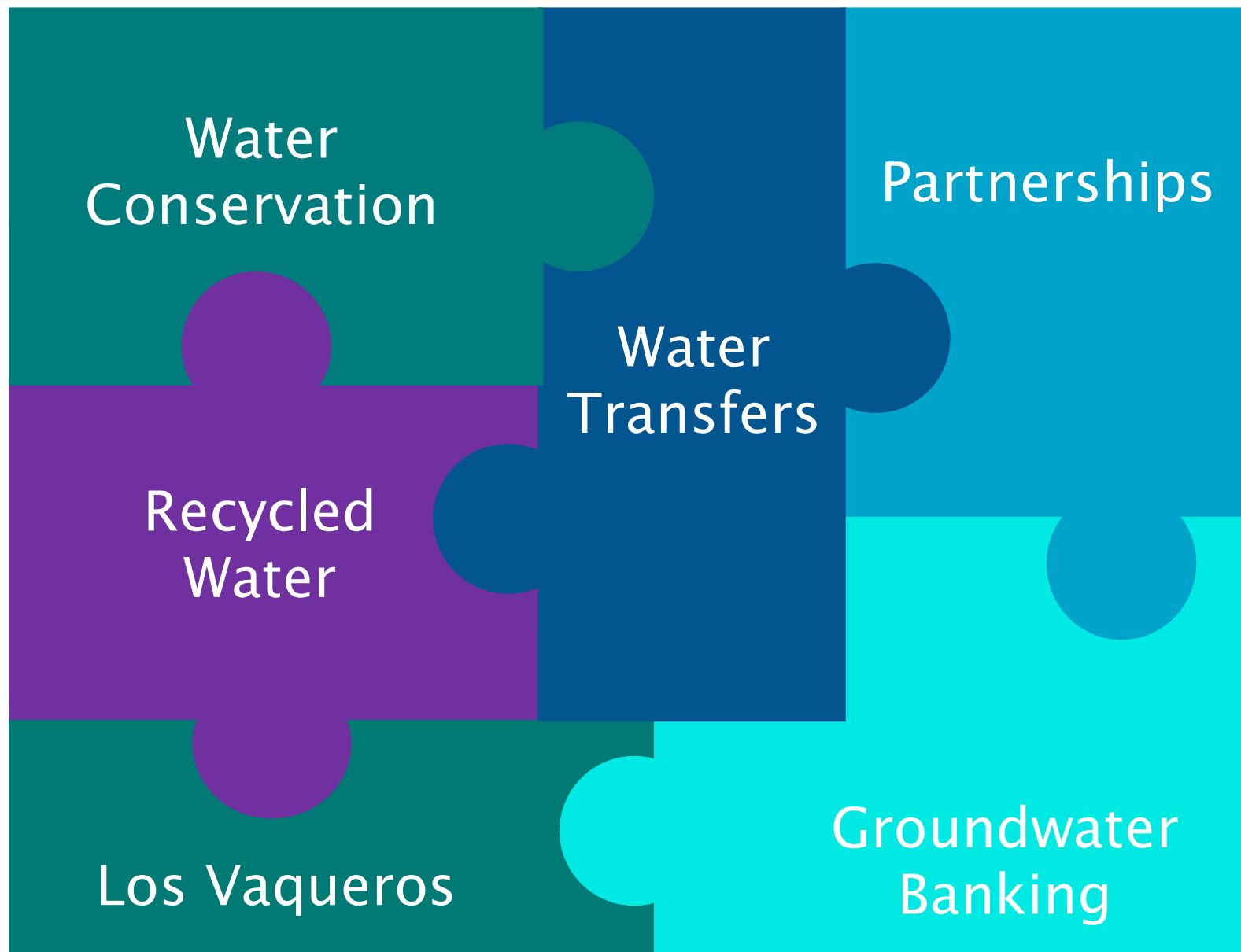
■ Normal and Above ■ Below Normal ■ Dry ■ Critically Dry



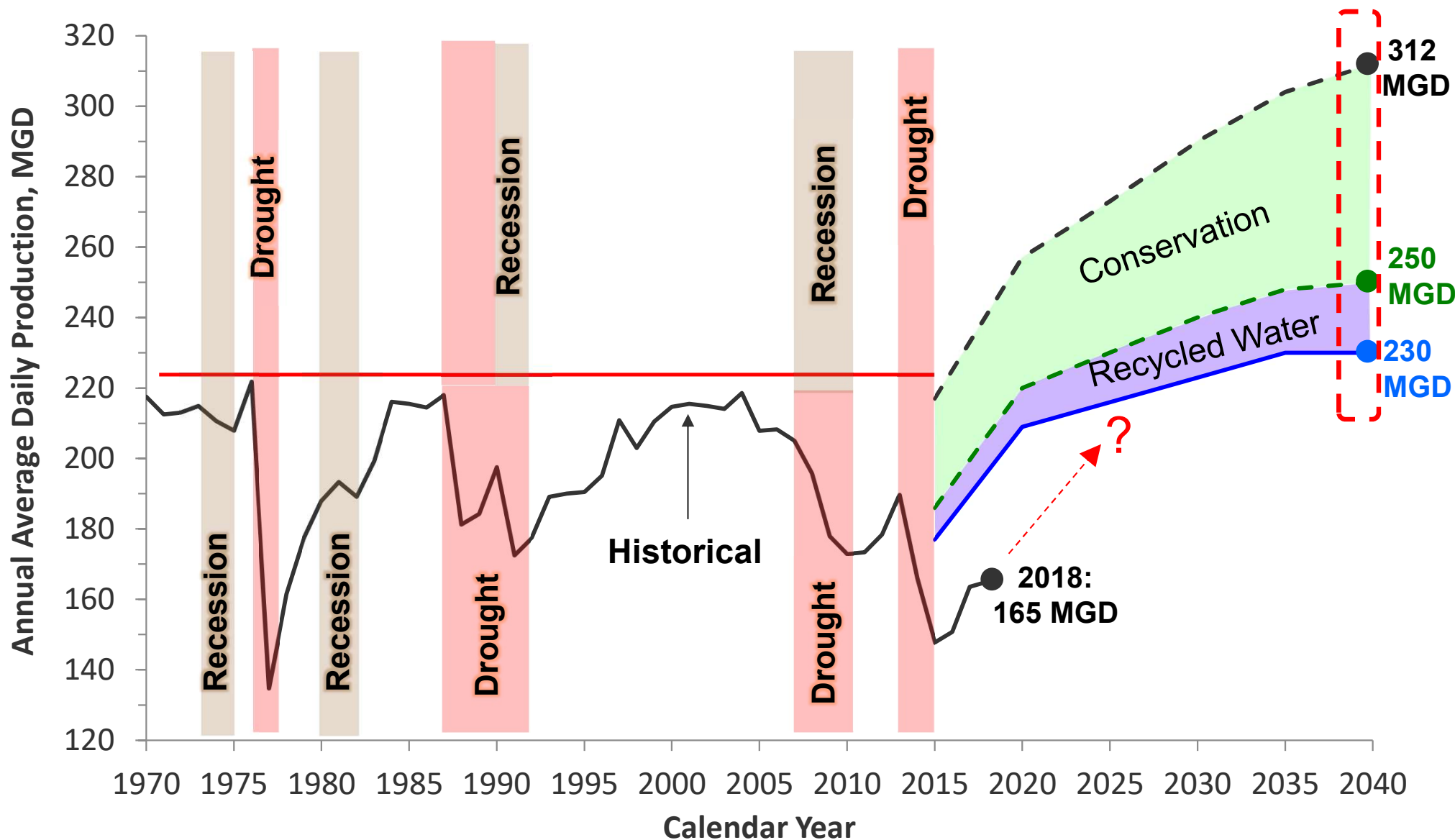
Key Takeaways

- 1 90% of the District's water supply comes from the Mokelumne River.
- 2 Mokelumne River runoff is highly variable.

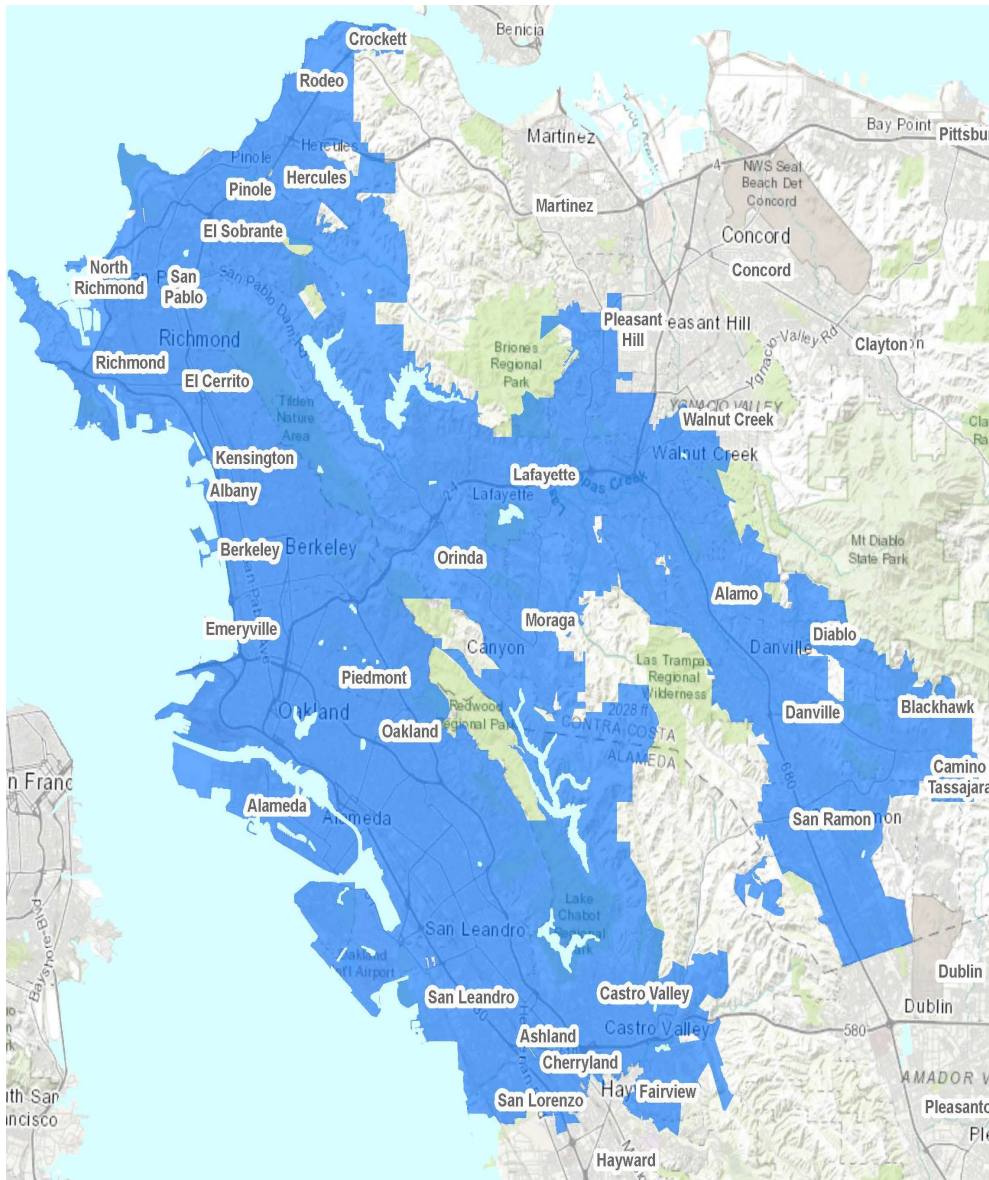
EBMUD's Long-Term Water Supply Planning



Update 2040 Demand Study Forecast



2050 Demand Study



**Land Use
Agencies**

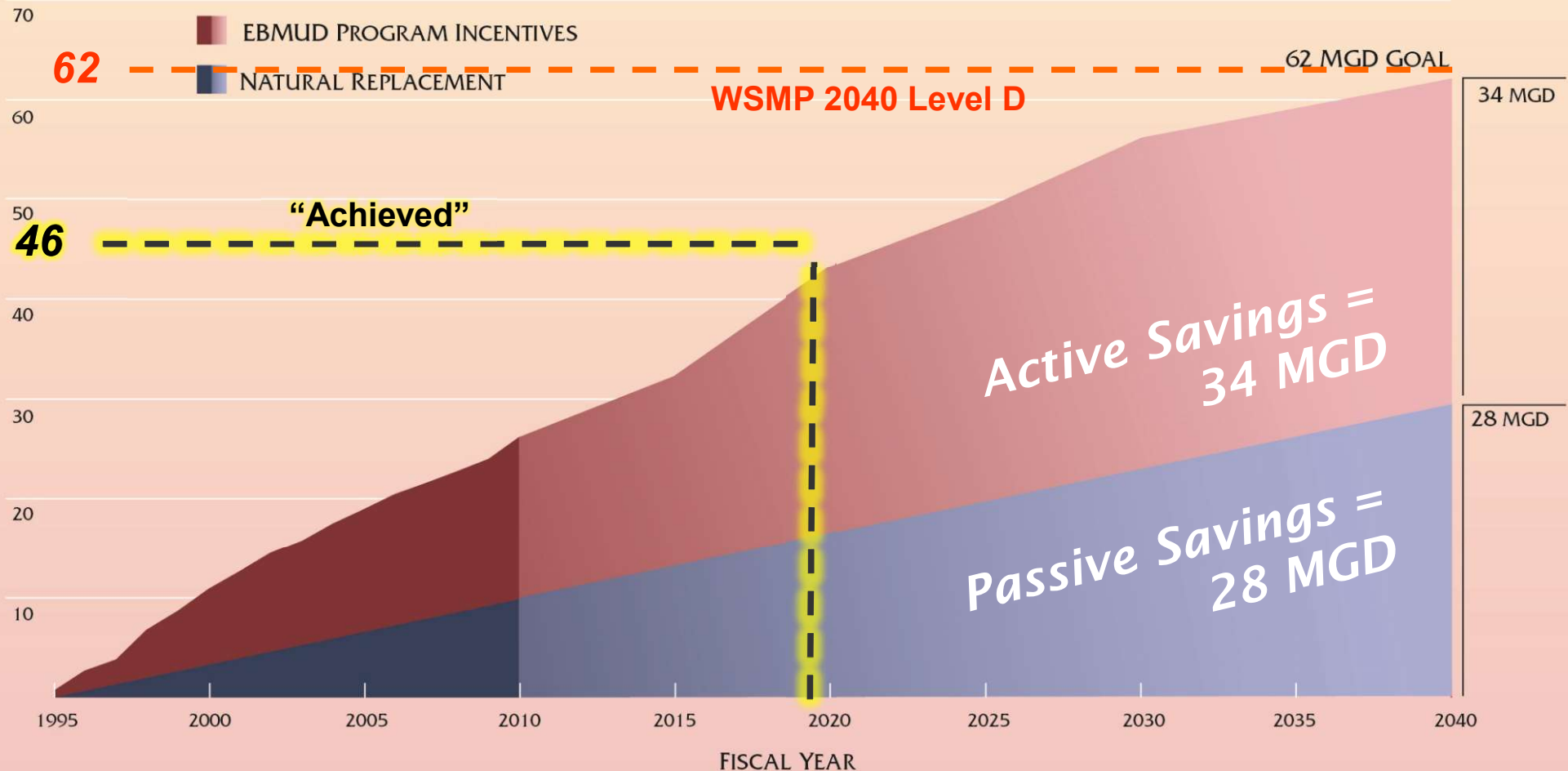


Approach & Methodology

Water Conservation: WSMP 2040



WATER CONSERVATION
(MGD)



NOTES:

1. This figure depicts EBMUD's conservation efforts since the implementation of the Water Conservation Master Plan in 1994 and projected in the 2011 update, and it excludes savings associated with prior conservation efforts implemented in the 1970s.

Demand Study 2050

Overall Forecasting Approach

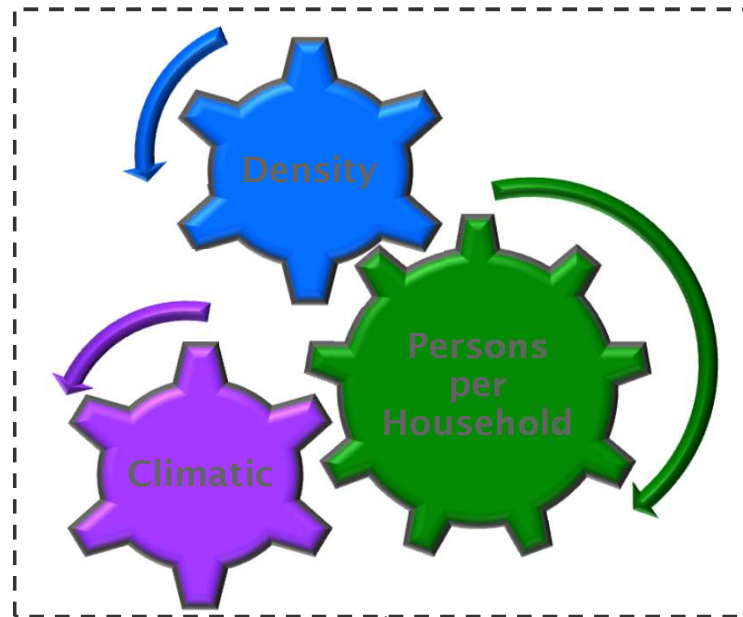


Driver Forecasts



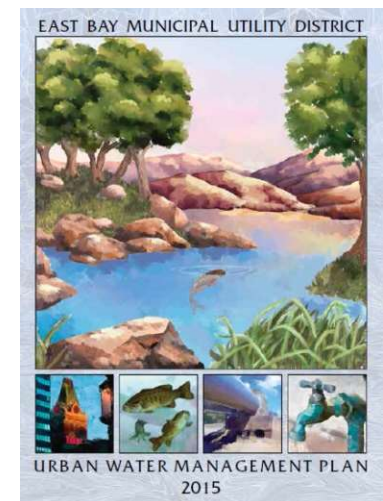
*Number of
Units*
(e.g., homes)

Water Demand Model



*Water Demand
per Unit*
(e.g., gallons per
day per home)

2050 Demand Study/ UWMP Forecast



Water Demand
(e.g., gallons
per day)



What the Model Predicted



Growth: 2019 to 2050

- **Residential Dwelling Units (DUs): ~239,600 (~43% Increase)**
 - Single Family: 61,500 DUs (*incl. ADUs, Townhomes, & Condos*)
 - Multiple Family: 178,100 DUs
- **Non-Residential Building Space: ~159 Million ft² (~67% Increase)**
 - Commercial: 55 M ft²
 - Industrial: 47 M ft²
 - Institutional: 57 M ft²

ADUs = Accessory Dwelling Units

Approach & Methodology

Water Conservation

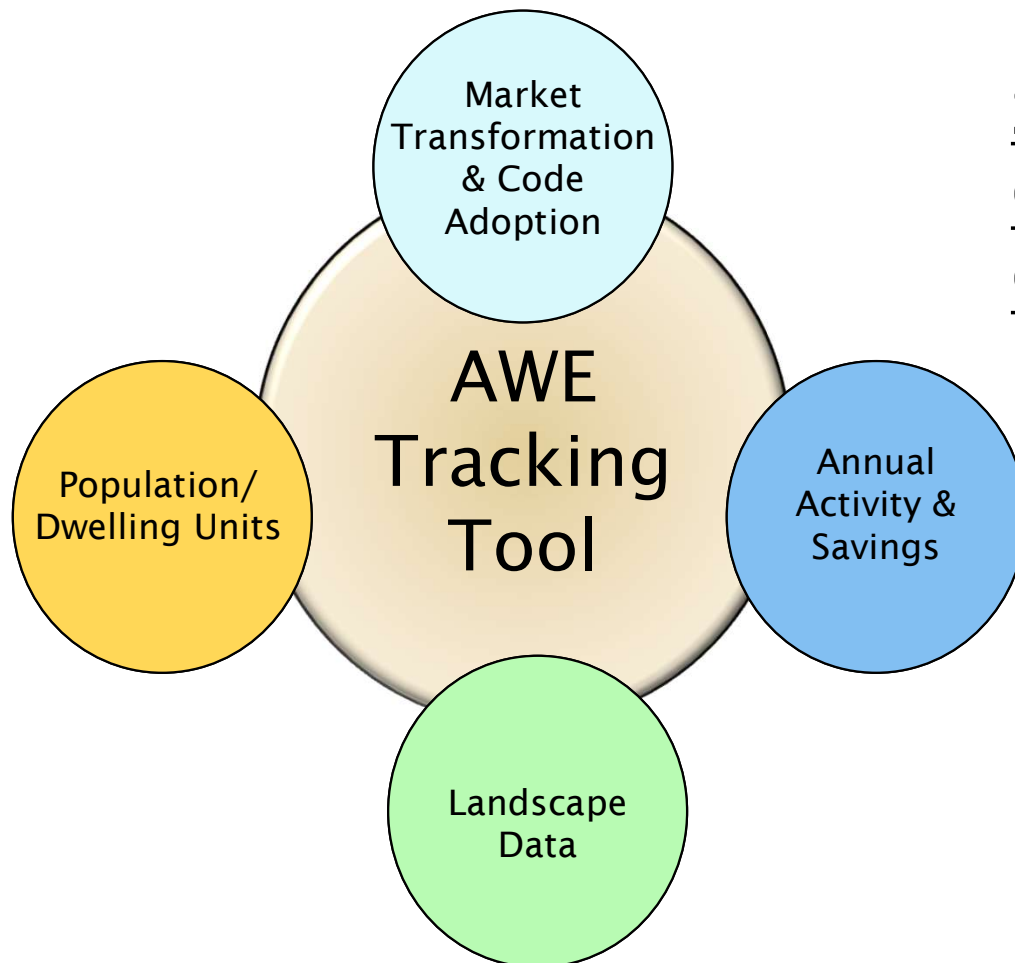


Alliance
for Water
Efficiency

AWE CONSERVATION TRACKING TOOL

Version 3, Standard North American Edition

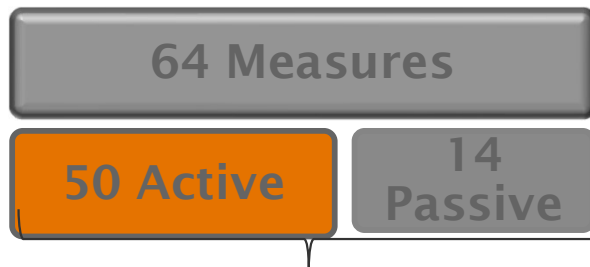
About Tracking Tool



Service-area Wide Conservation Potential for Six Customer Classes:

- Single-family
- Multi-family
- Commercial
- Industrial
- Institutional
- Irrigation

Water Conservation Measure/Activity Selection

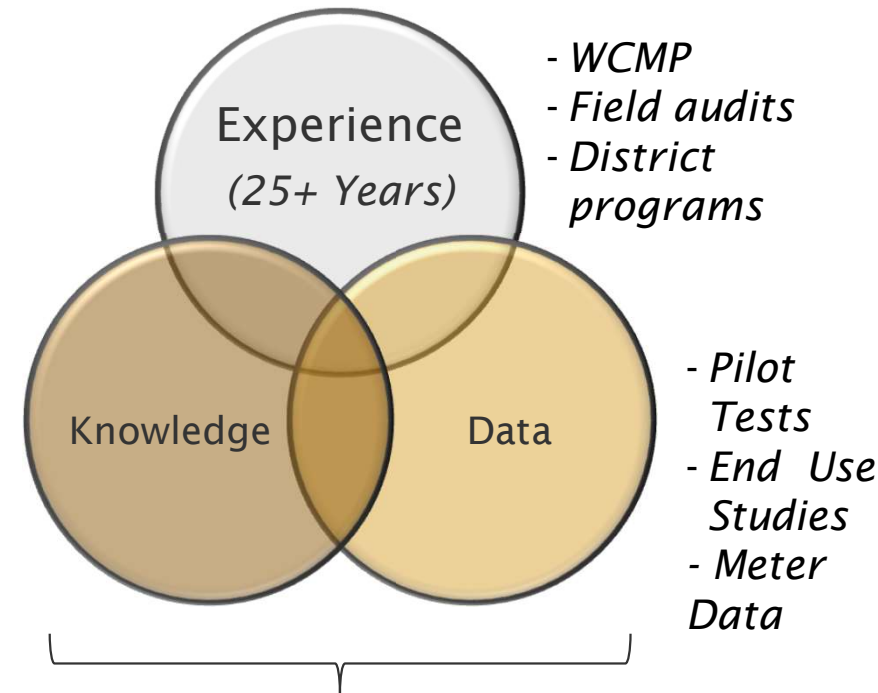


Examples

- Codes
- Rebates
- Surveys
- Metering Technology



- Journals
- Seminars
- Water orgs.
- Regulations

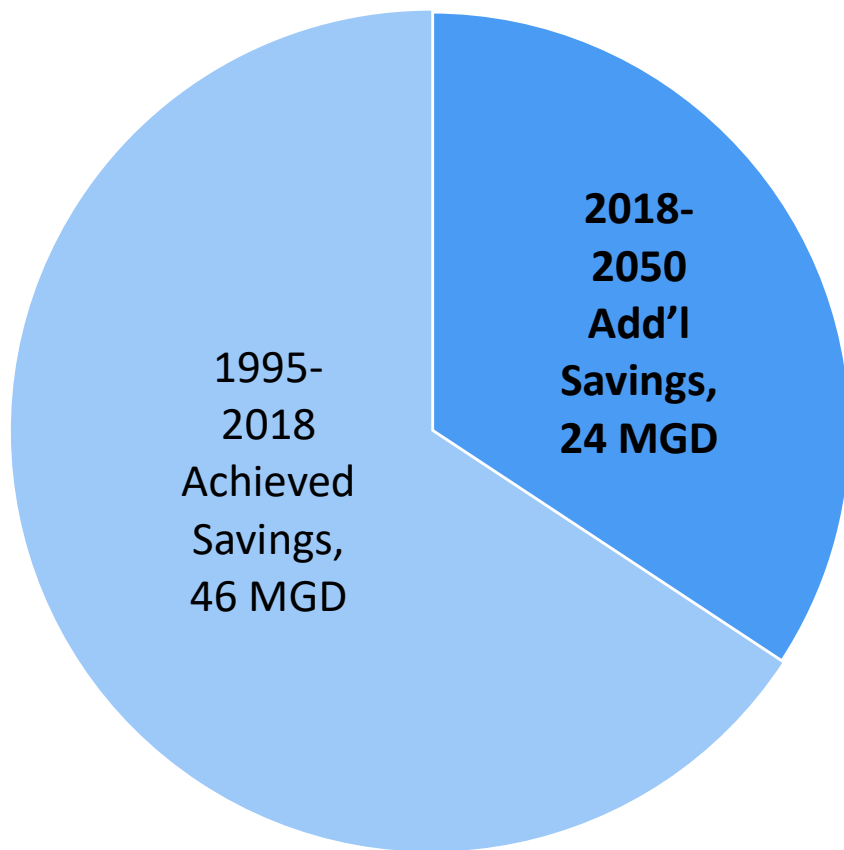


- Activity Level
- Participation Level
- Savings Potential

Water Conservation: New Forecast



70 MGD by 2050



Grouped Measures:

Plumbing Codes
Supply-Side Conservation
Metering Technology
Customer Water Reports
Commercial/Ind. Technology Upgrades
Customer Surveys
Landscape Rebates
Landscape Water Budgets
Device Distribution
Water Rates

Water Conservation: Comparison

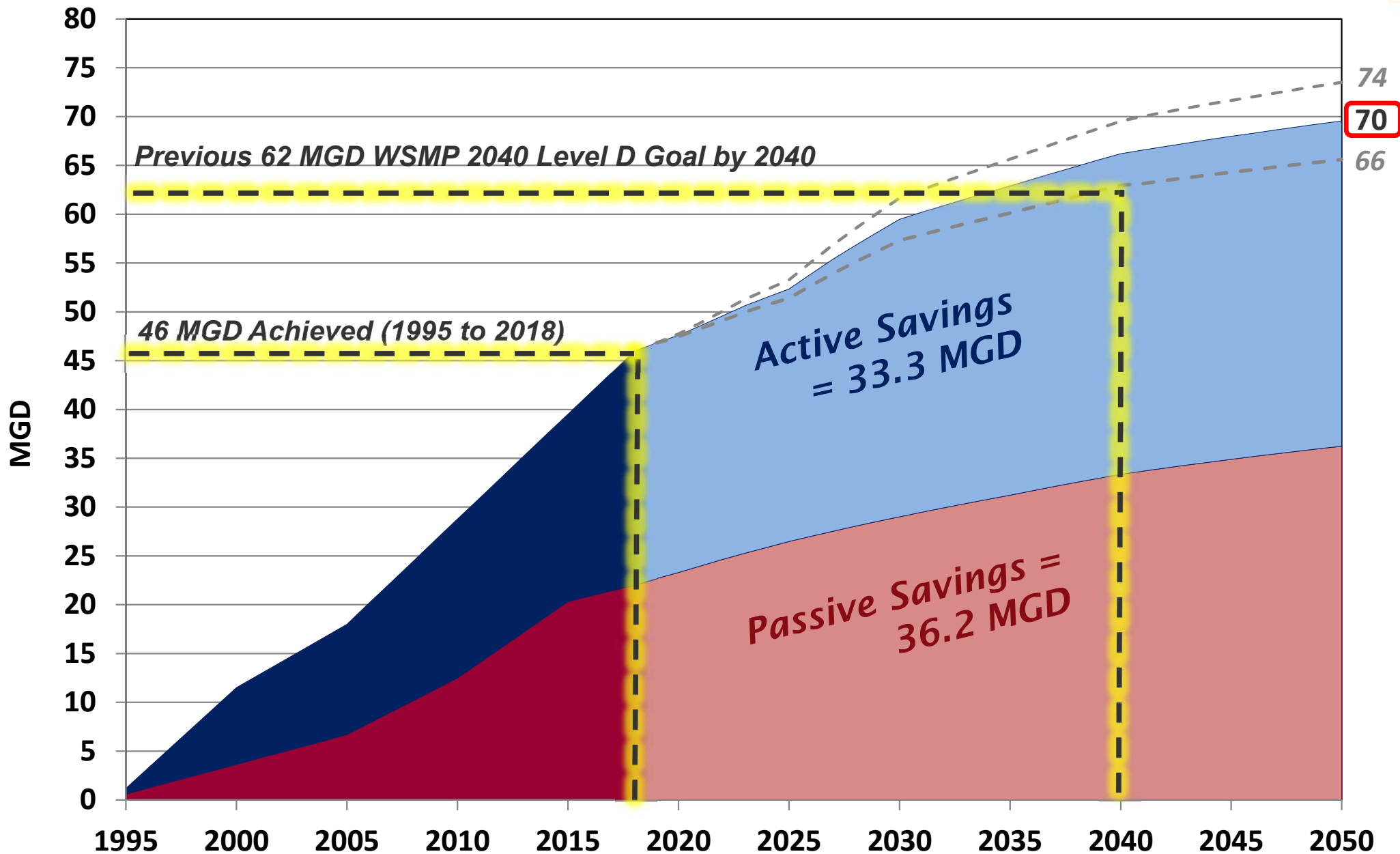


Source	Period	Total Savings (MGD)	Annual Savings (MGD/year)
Historical Demand	2005 to 2018	24	1.8
WSMP 2040	2008-2040	39	1.2
Analysis for 2050 Demand Study	2019-2050	24	0.8

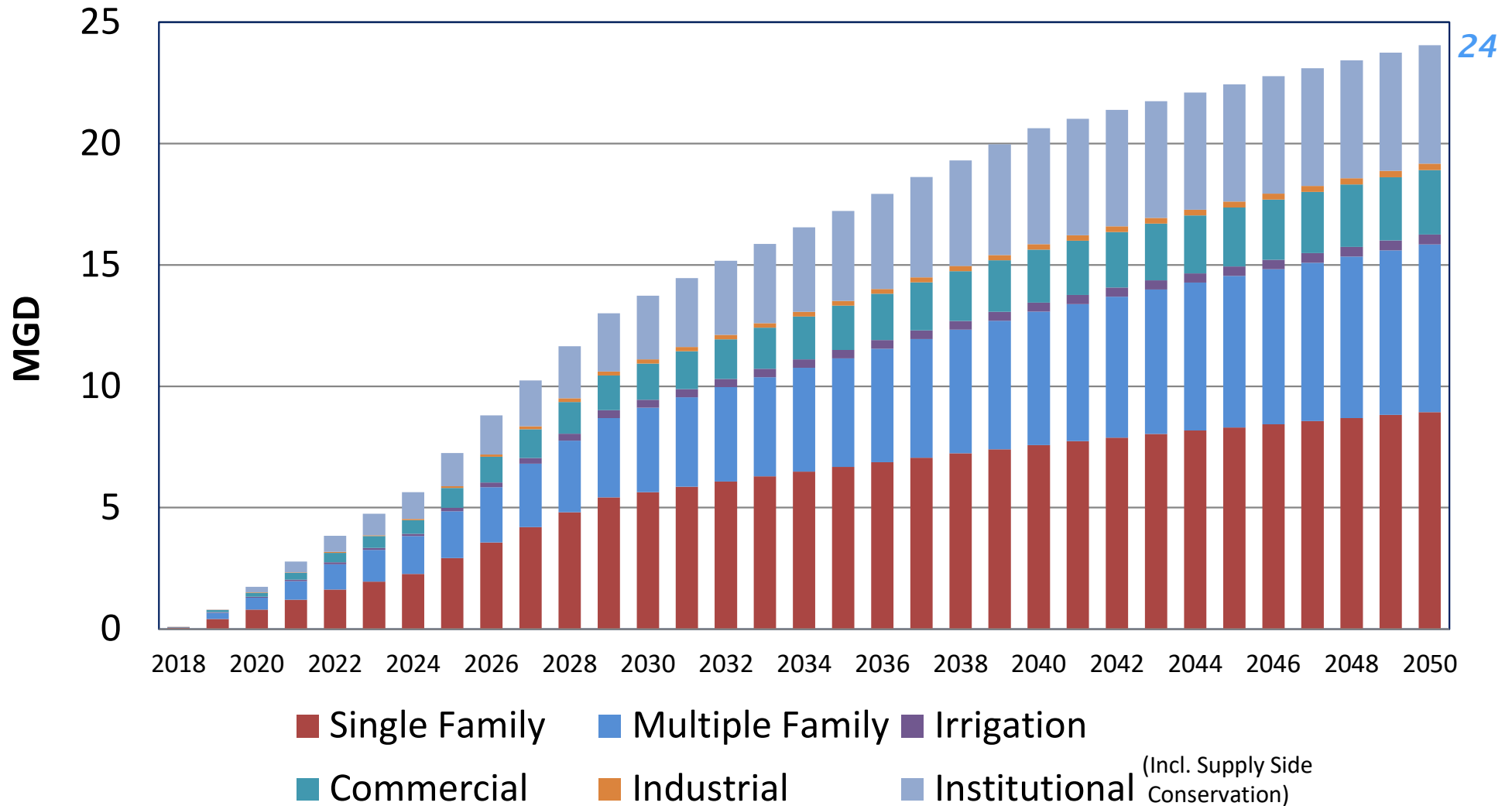
A red bracket on the right side of the table groups the 'Annual Savings' for the WSMP 2040 and Analysis for 2050 Demand Study rows. A red callout box labeled '-33%' points to this bracket, indicating the percentage reduction in annual savings from the WSMP 2040 forecast to the 2050 demand study forecast.

Conservative Forecast

Water Conservation: 1995 to 2050 Forecast



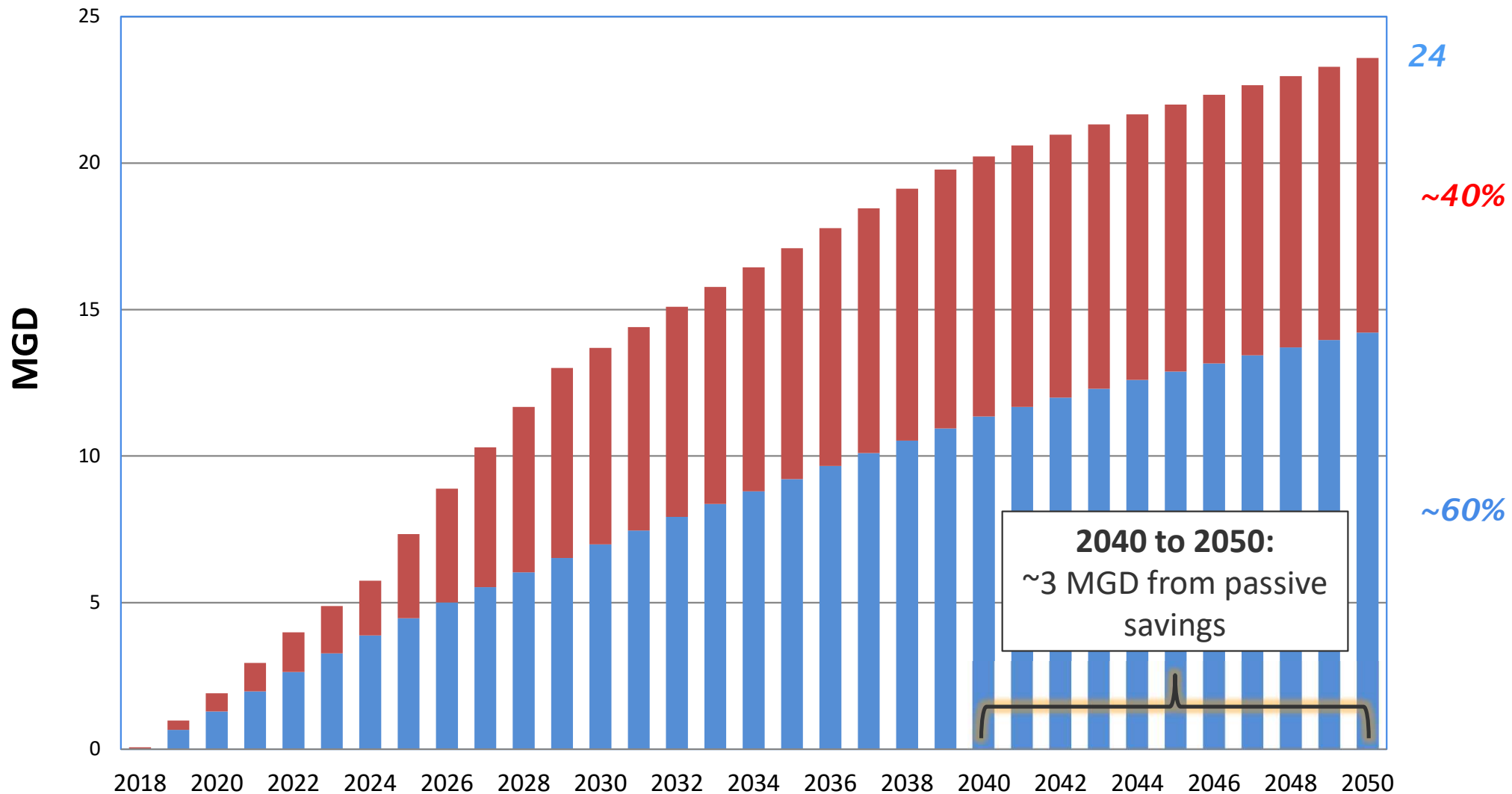
Water Conservation: Sector Savings



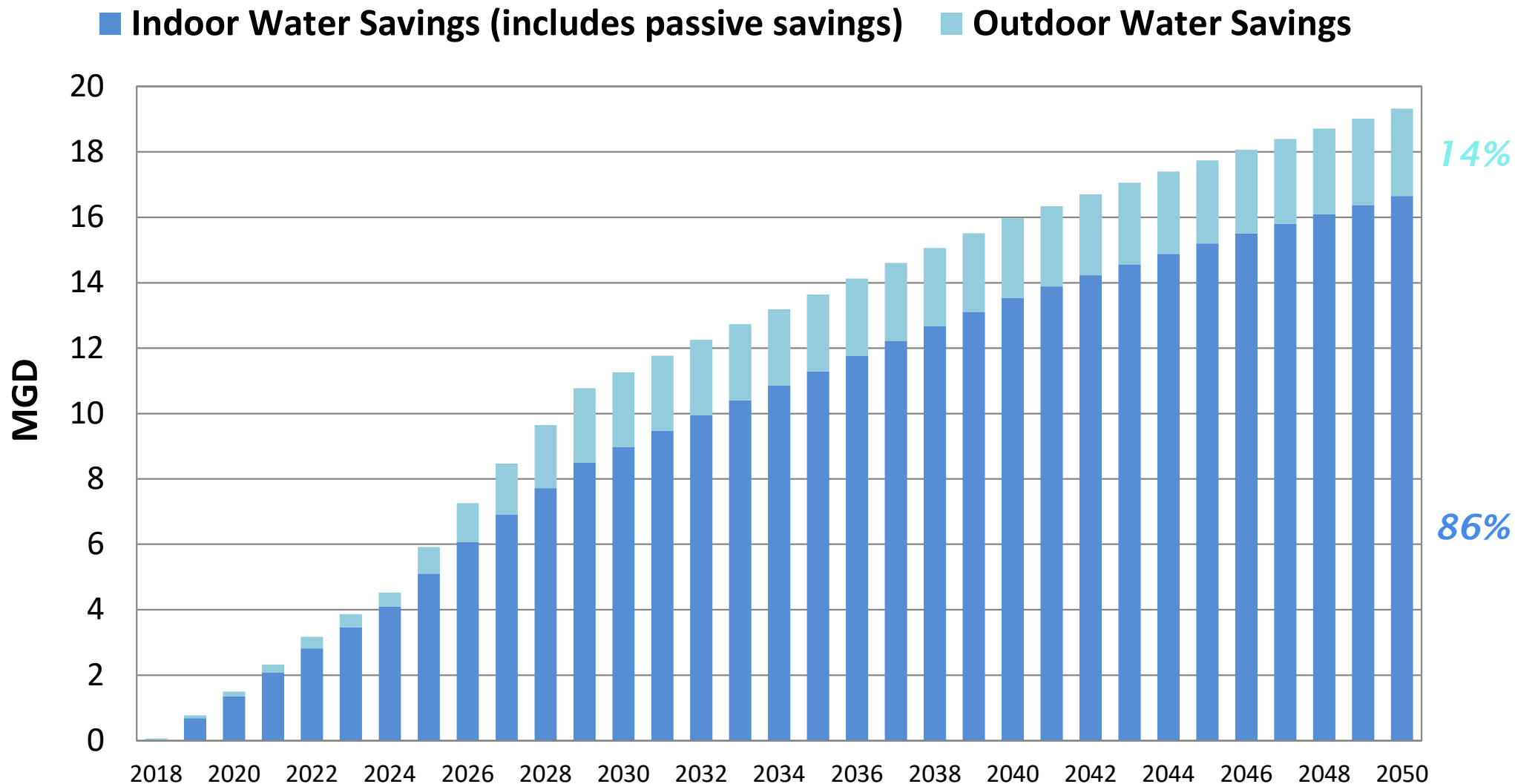
Water Conservation: Passive and Active Savings



■ Passive Savings ■ Active Savings



Indoor and Outdoor Water Savings from Programs and Standards*



* Does not include 4.3 MGD supply-side conservation

EBMUD Water Conservation Program



EAST BAY MUNICIPAL UTILITY DISTRICT

Ultra-Low-Flush Toilet Rebate Program

For Business and Residential Customers



Water Conservation Division
P.O. Box 24055, MS #48
Oakland, CA 94623
510.287.5500

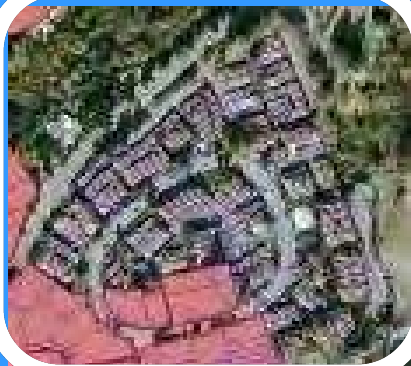
STEPS TO RECEIVE A REBATE

1. Review EBMUD approved fixture list.
2. Purchase and install your new toilet(s). Toilets must replace existing toilets using more than 1.6 gallons per flush. No rebates are given for new construction.
3. Fill out the application below. ALL INFORMATION MUST BE PROVIDED.
4. Return completed application and *original*, legible purchase receipt to:
EBMUD, P.O. Box 24055, MS 48, Oakland, CA 94623.
If you need your original receipt returned, please enclose a self-addressed stamped envelope.



District Strategies Improving Resiliency

Water Conservation - Master Plan (2021 Update)



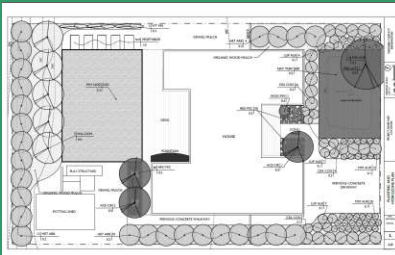
Water
Management



Rebates &
Incentives



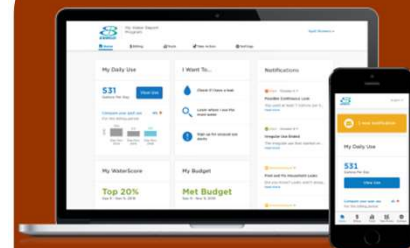
Education &
Outreach



Regulation &
Legislation



Supply Side
Conservation



Research &
Development

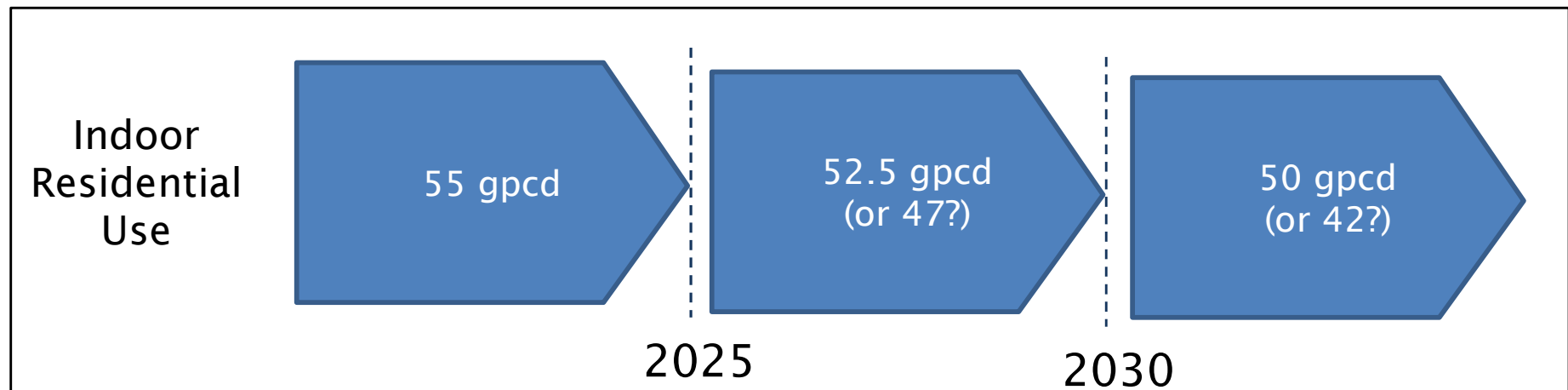
Regulatory Requirements



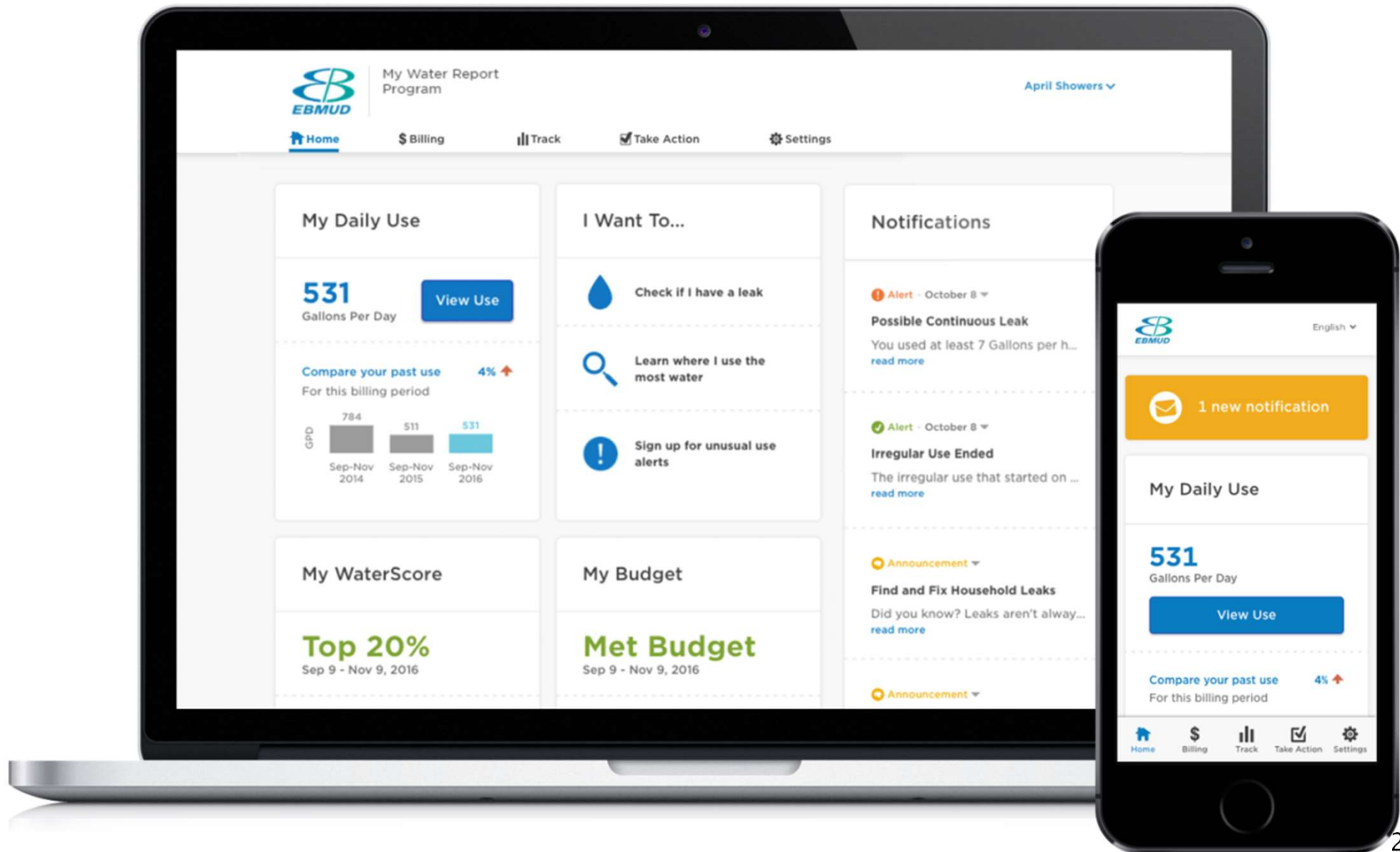
Water Use Objectives:

$$\begin{aligned} &\text{Indoor Residential Use} \\ &+ \\ &\text{Outdoor Residential Use} \\ &+ \\ &\text{Dedicated Commercial Irrigation Use} \\ &+ \\ &\text{Distribution System Water Loss} \\ &= \end{aligned}$$

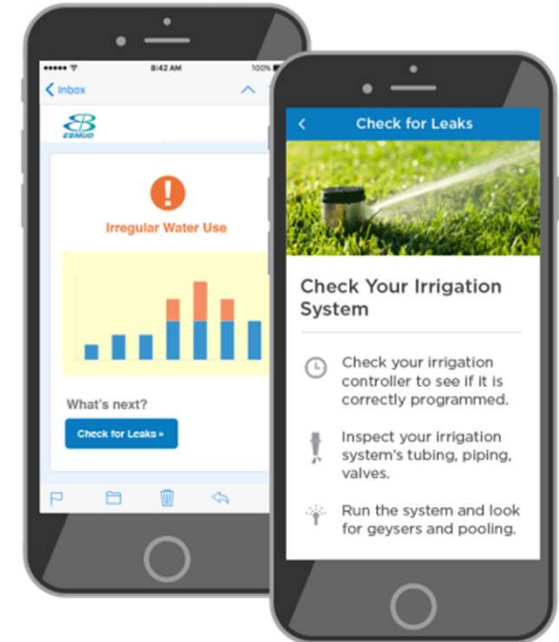
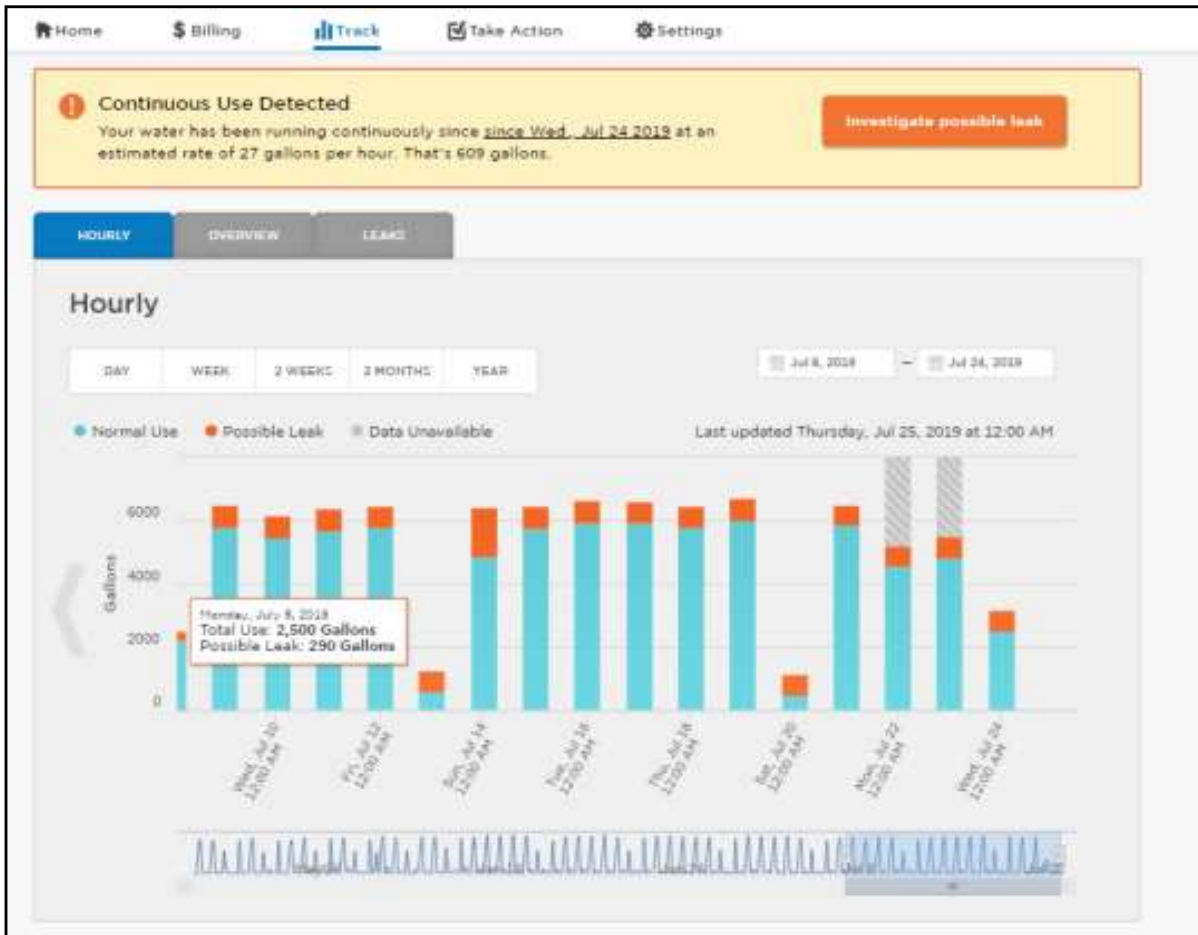
Annual Water Use Objectives



Water Management Services



Water Management Services: New Tools and Technology



LEAKS 101

The most common causes of irregular water use are easy to find and fix. For more detailed tips, log on to ebmud.waterinsight.com/LeakCheck.



Running Toilets

Listen for running water or do a dye test. Check the flapper and the float valve.



Irrigation

Check your controller settings. Inspect your system for breaks or excessively damp areas.



Pipes & Fixtures

Look for wet spots near your faucets, showerheads, and water heater, and behind appliances.

Key Takeaway

- 1 New technology gives us better tools to help customers save water.

Water Management Services: Empowering Customers



WaterRight Program
123 Main Street
Anytown, CA 98765

415.555.5555 info@citywater.com

YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: 456 Washington St., Anytown
ACCOUNT NUMBER: 123873124-01

SIGN UP TO GET THIS REPORT VIA EMAIL:
citywater.com

Blair Jones
123 Washington St.
Anytown, CA 98765

Are we comparing you fairly?
2 occupants and a 2,000 to 4,000 sq. ft. yard.
Not right? Log on to correct us. Your comparisons and recommendations will adjust accordingly.
citywater.com

How much you could be saving
If you took the actions below, you'd be closer to 152 GPD. That's \$515 per year in potential savings.

Your WaterScore

AUG 1 to SEP 31, 2014

You used **more** water than most of your neighbors.

Gallons Per Day (GPD)
22 CCF = 276 GPD

Category	GPD
Efficient Neighbors	111 GPD
Average Neighbors	250 GPD
You	276 GPD

Water-saving actions just for you

Selected assuming your home has 2 occupants and a 2,000 to 4,000 sq. ft. yard.
Log on to correct us!

Potential savings if you:

Action	GALLONS PER DAY	DOLLARS PER YEAR
Install a faucet aerator	24	\$142
Fill up the clothes washer	18	\$92
Change grass to native plants	82	\$281

Log On
Take the guesswork out of saving water. See:
• Where you're using the most
• All actions relevant to you
• Step-by-step tips and rebates
citywater.com
Registration Code: XYZXYZ
Zip Code: 98765
A free service offered by your water utility and powered by WaterSmart Software®

Recommended Water Budget Single Family

Thank you for participating in our Single Family Water Budget Program. The following is your customized water usage profiles for the last two years. The graphical description compares your measured water usage versus your budgeted water usage for each billing period. The purpose of the budget report is to show customers how efficiently water is being used inside and outside the home.

Customer Name: Melissa P Blackwell
Service Address: 1511 Richmond St
City: El Cerrito
Account #: 1248900001
Meter #: 14681355
Est. Irrigated Acre(s): 0
Household occupants: 2
Base Household use: 80

Water Budget Summary
Gallons used Jan 12 months: 45,140
Gallons used previous year: 45,432
Percent of budget Jan 12 months: 94%
Percent of budget previous year: 97%
2 years estimated savings in gallons: 1,625

Irrigated Area at 1511 Richmond St

Billing Period	2013	2014
Budget (GPD)	183	183
Consumption (GPD)	179	175
Usage (GPD)	183	175

EBMUD estimates the average water use per person with high efficiency fixtures at 40 gpd/gallon per day.
Program description: ETR represents the estimated water use of each water use for each billing period. The Water Budget Calculation does not use rain, typically irrigation systems can be turned off for the water months of November, December, January, and February.
The Minimum Sustainable Water Budget for landscaping effective January 2015, is calculated using 80% of ETR for the irrigated area of landscaping. If you find the irrigated area is not accurate or need the same information on this program, contact EBMUD at (415) 387-0900.

www.ebmud.com/watersmart We make it easy to conserve. EBMUD



EAST BAY MUNICIPAL UTILITY DISTRICT

Commercial, Institutional, Industrial Newsletter

Volume 12, 2020

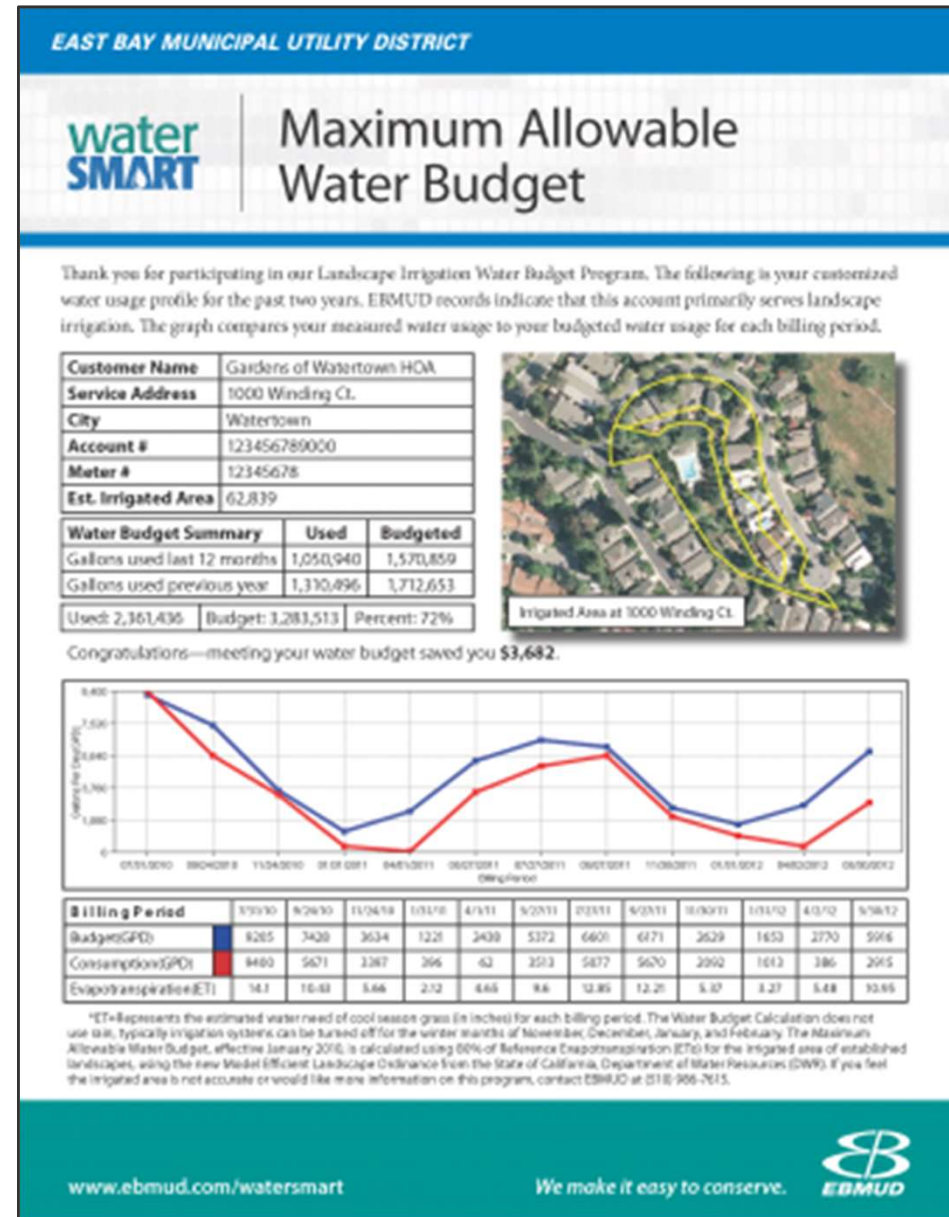
Key Takeaway

- The District is planning to integrate water budgets into standard water reports.

Water Management Services: IRIS Water Budgets



- Customized monthly water budgets for large irrigation accounts
- Includes local weather data, parcel information
- EBMUD is planning to modernize this system and expand to residential customers



Rebates & Incentives



- Some rebates “sunsetted” due to market saturation
- Commercial & multifamily
- Current focus is outdoor water use
- New: flowmeter rebate



Key Takeaways

- 1 Incentives and rebates continue to be important, but they may look different than they did ten years ago.
- 2 New focus on improving landscape designs for lasting savings.

Rebates & Incentives: Landscape Rebate Components



- Lawn replacement
- Efficient irrigation
 - Drip conversion
 - High efficiency nozzles
 - Smart controllers
 - Pressure regulators
 - Irrigation submeters

Rebates & Incentives: Super Rebate & Median Rebate



Super Rebate

Adopt all of these practices:

- Sheet mulching
- Use of compost
- Native plants
- Planting in the cool season



Lawn Strips

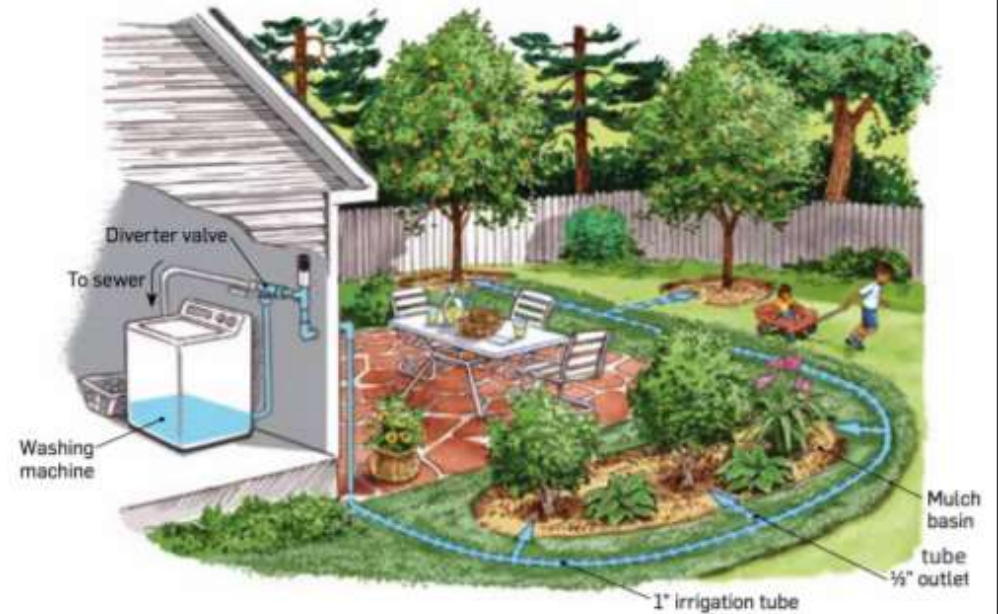
Double the standard rebate for strips of turf surrounded by hardscape

Perfect for HOAs, Cities, commercial properties

Rebates & Incentives: Flowmeter & Graywater Rebates



Laundry-to-Landscape System



Education & Outreach



Key Takeaway

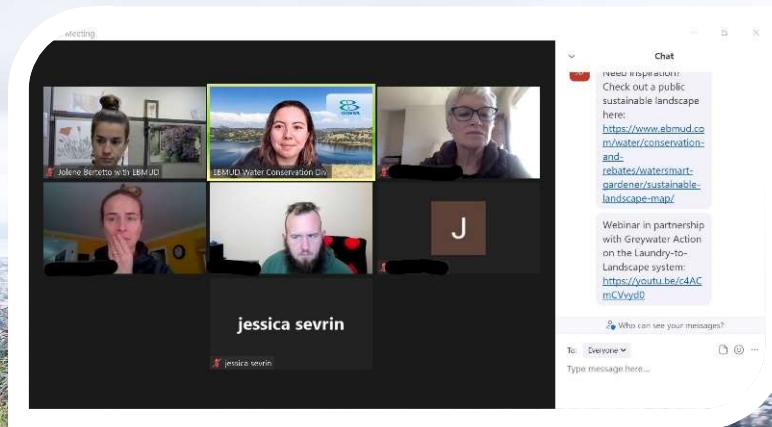
- 1 Updating materials and using new platforms to reach customers.



Virtual Office Hours Landscape Rebate



- Piloted Fall 2021, launched Jan 2022
- Recurring, drop-in office hours using Zoom
 - Lunch, 12-1pm
 - Evening, 5-6pm
- Topic: landscape rebate questions
- Target audience: residential customers
- Very short presentation (3 slides)
- Majority time dedicated to customer questions



- Lunch Office Hours- 2nd Tuesdays from 12-1pm: [REGISTER HERE](#)
- Evening Office Hours- 4th Tuesdays from 5-6pm: [REGISTER HERE](#)



Education & Outreach: Advertising and Marketing



Just a sip,
please

ebmud.com/drought

make
every drop
count



Regulations & Legislation



- **State and Federal Efficiency Regulations**
- **State Long-Term Framework and SB 555**
- **District Water Service Regulations**
 - Section 31 Reviews of Applications for New Service



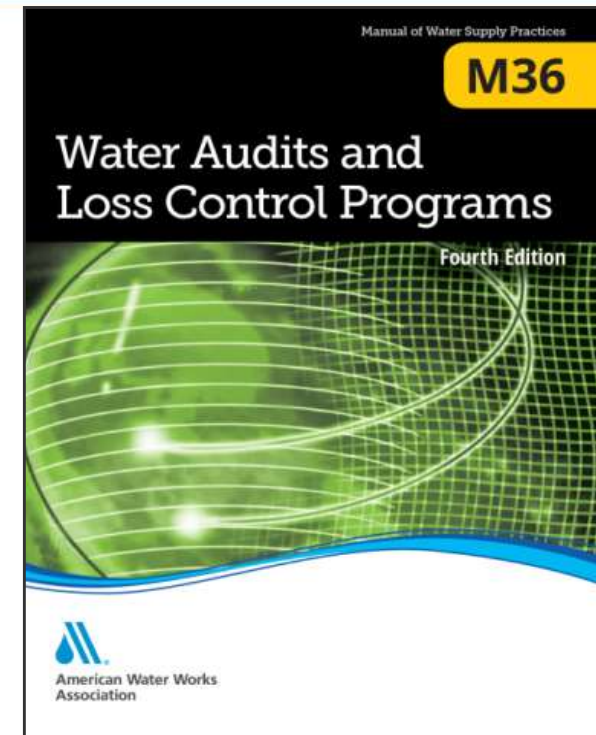
Key Takeaway

- 1 Regulatory requirements will continue to drive water conservation.

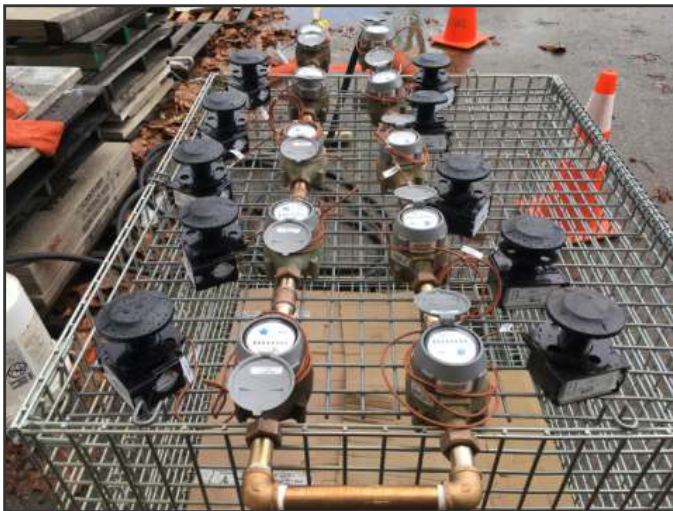
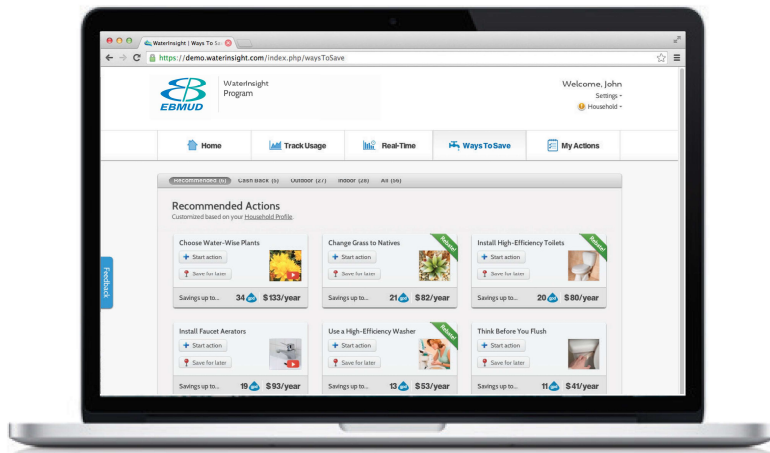
Supply Side Conservation



- Pressure management
- Active leak detection
- Speed and quality of repairs
- Infrastructure management



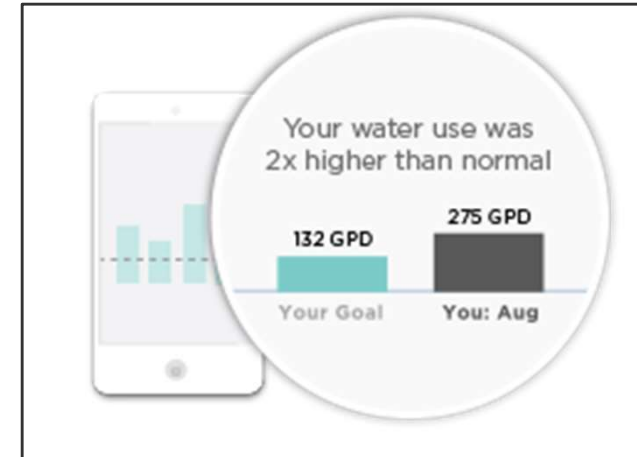
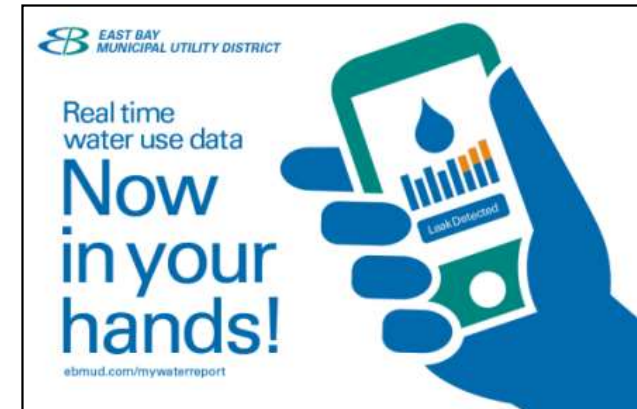
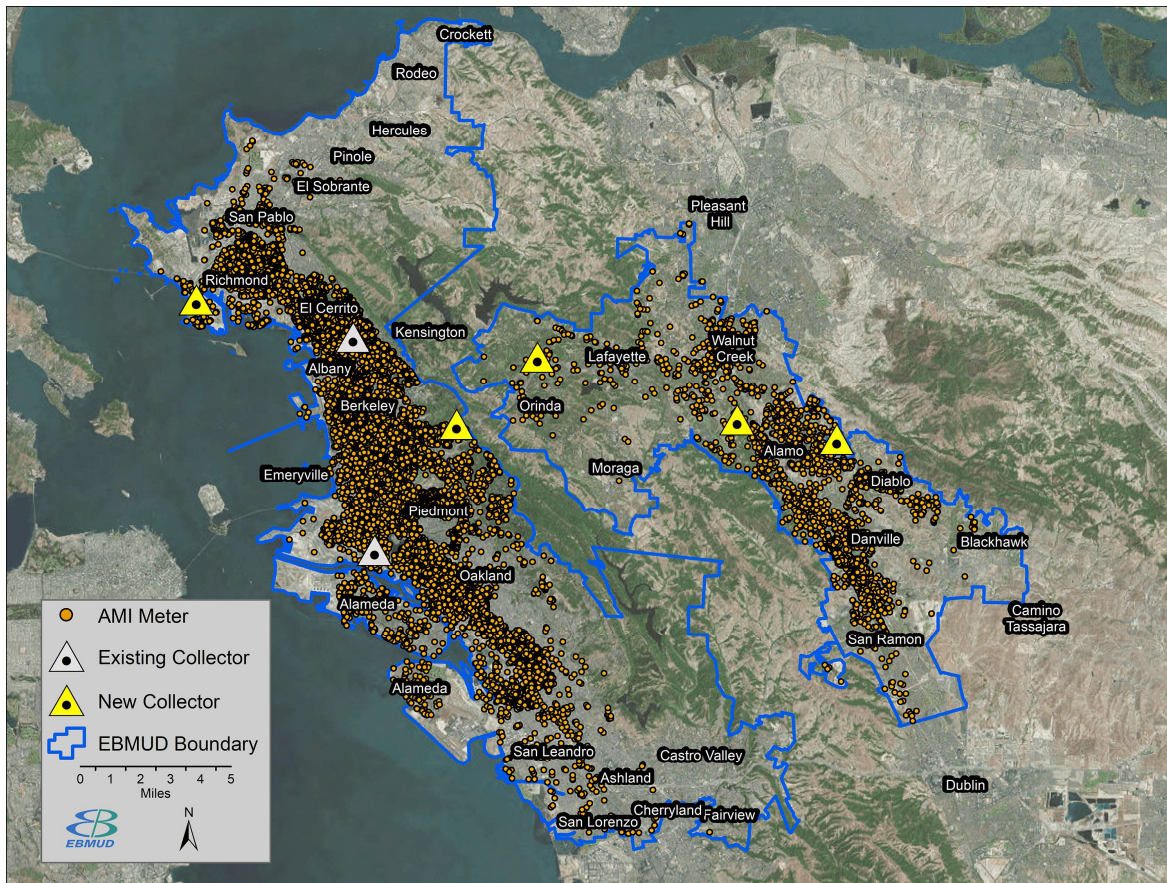
Research & Development



Key Takeaway

- 1 Continue to be a leader in research and development.

Research & Development: Current Focus on AMI



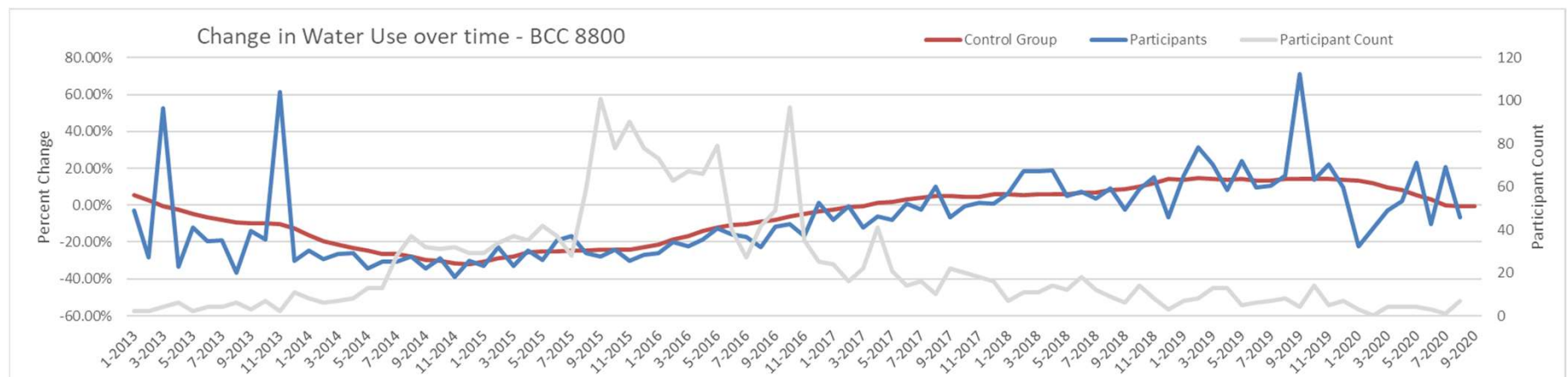
Key Takeaway

- 1 Better data = better tools and more water savings.

Internal Research



- LCR
 - SFR since 2015
 - Refining the control groups
- SFR MWELO
 - Plan reviews since 2007
 - Focus on 55% ref. ET





Thank You