



Greenhouse Gas Reporting: A Water Wholesaler Perspective


June 19, 2019

Outline

- Metropolitan activities
- Greenhouse gas reporting
- Recommendations



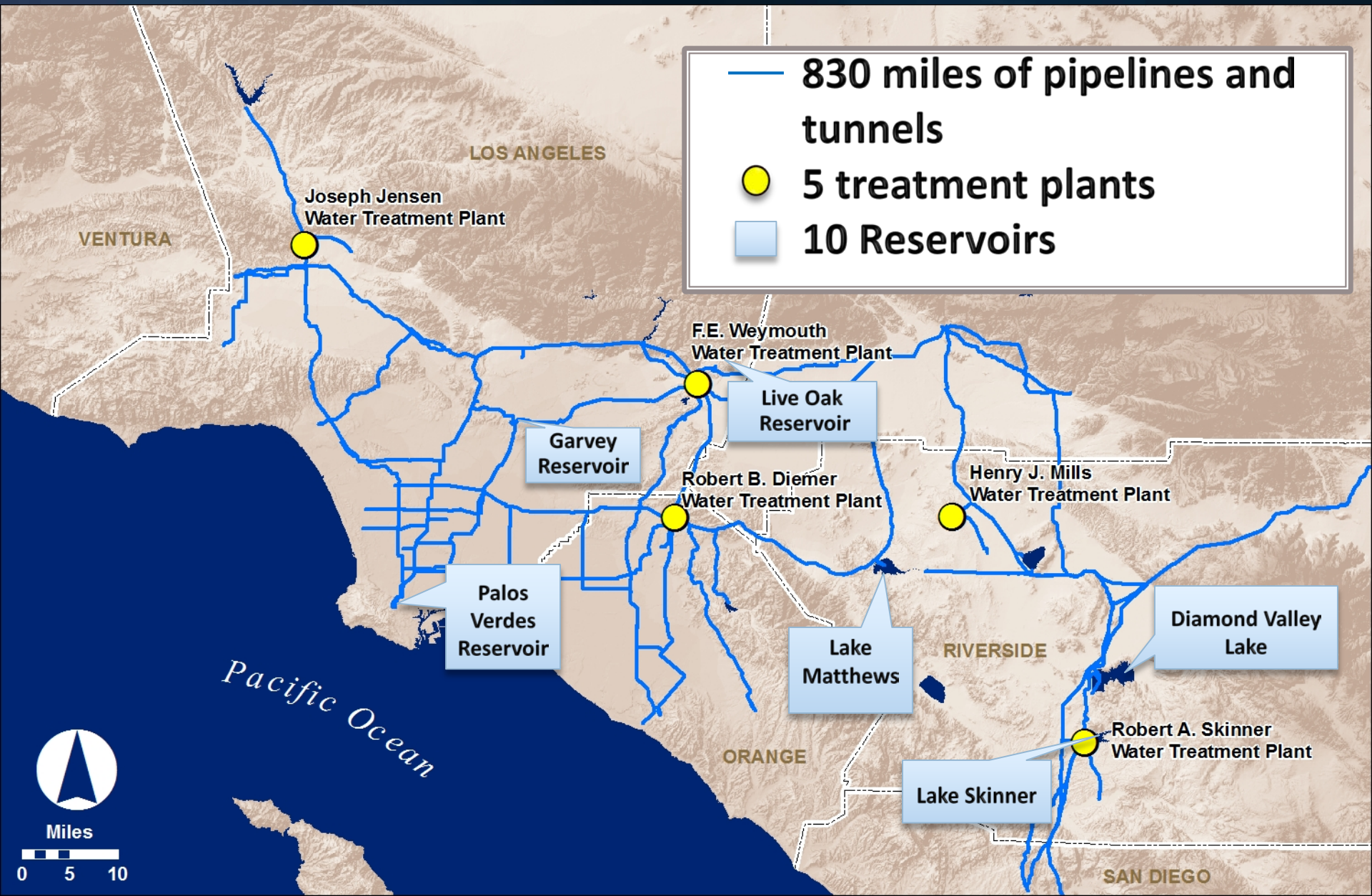
Metropolitan Service Area



Regional Water Wholesaler
26 Member Agencies
5,200 Square Miles, 6 Counties
~19 Million People
~3.6 MAF Regional Annual Demand (MWD supplies about one-half)

Metropolitan
Service Area

Treatment and Conveyance System



Water-Energy Nexus



From its beginning, Metropolitan has understood the relation between water and energy

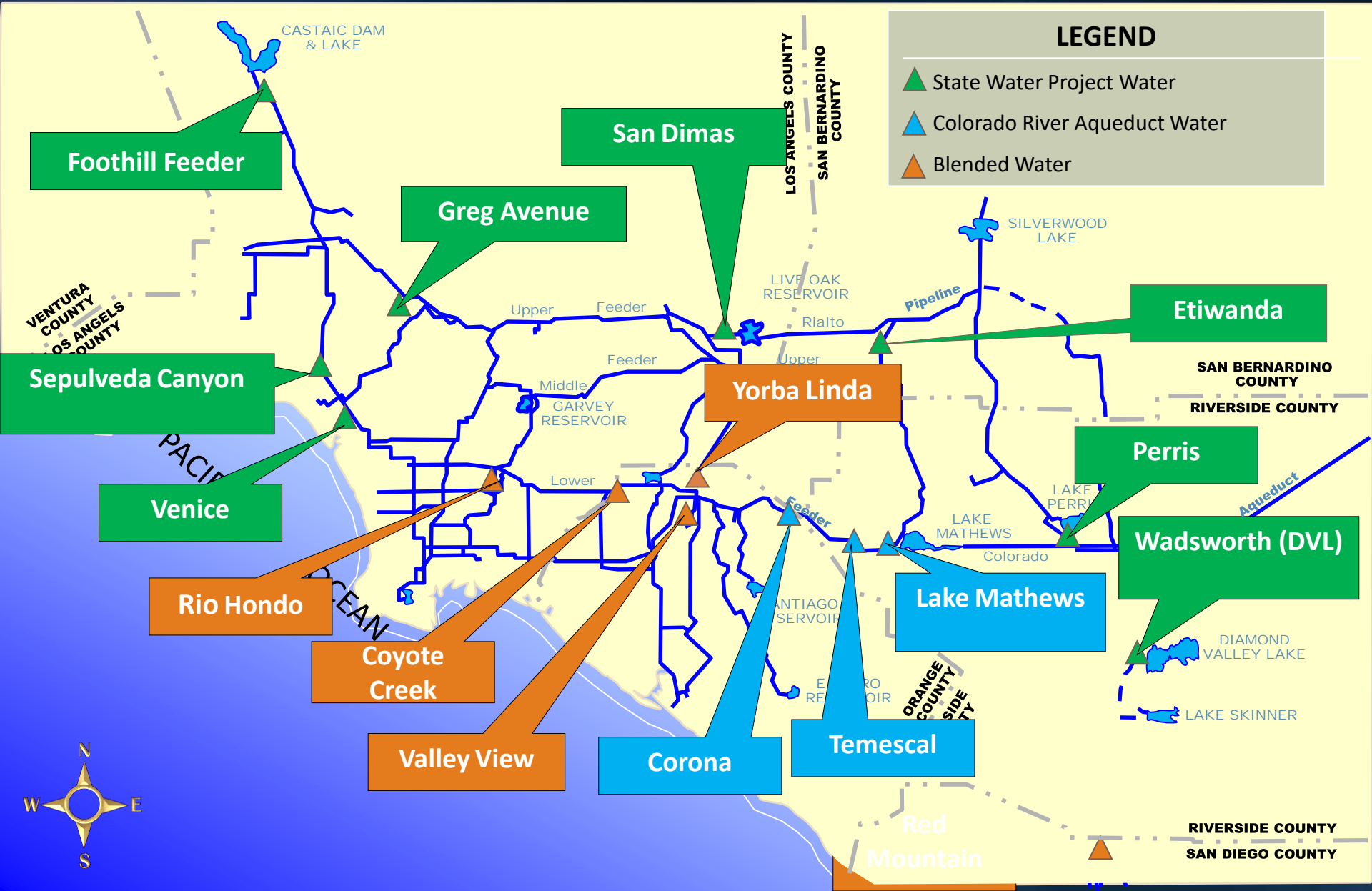
Original Hoover power contractor (1937)
Guaranteed repayment of Federal cost
Receives nearly 30% of Hoover output

Metropolitan has been a key player in the development of the lower Colorado River water and energy resources

- Paid for the Parker Dam
- Paid ½ cost of Parker Dam power plant
- Federal hydropower provides 70–100% CRA needs



16 Hydroelectric Power Plants: 131 MW



Metropolitan Supplied Solar Power

Facility	MW	% Demand
Skinner WTP	1.0	20%
Weymouth WTP	3.0	35%
Jensen WTP	1.0	20%
Diamond Valley Lake Visitor Center	0.5	100%



Energy Reduction Actions and Improvements

- Facility improvements and energy audits
- On-peak/Off-peak optimization
- Employee ride share program
- Vehicle emissions
 - Fleet pool: 40% hybrid
 - Electric vehicle charging stations
 - Implementing alternative fueled trucks (Nat. gas)

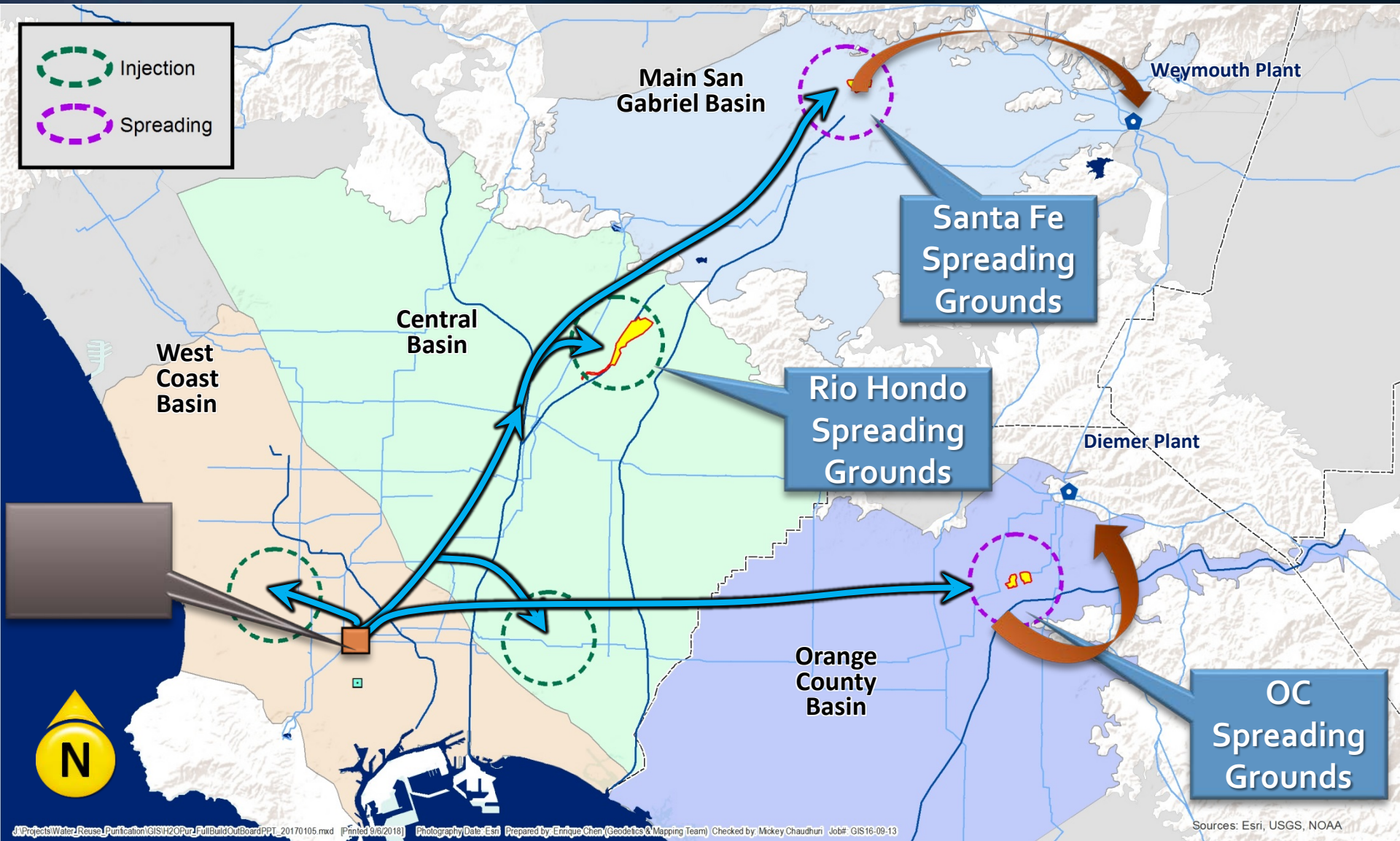


Investing in the Future

**Metropolitan's
Cumulative Investment:
\$1.4 Billion**



Sustaining Local Groundwater



What We are Planning To Do

- Climate Action Plan –
 - Inventory and monitor ongoing emissions
 - Mitigate GHGs associated with future projects
 - Reduce overall GHG footprint
- Energy Sustainability Plan
 - Support the Climate Action Plan
 - Goals:
 - Increase flexibility and efficiency
 - Reduce energy costs and GHG emissions
 - Demonstrate leadership in energy sustainability



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Metropolitan's Energy Intensity

SWP West Branch: 2,580 kWh/AF

SWP East Branch: 3,236 kWh/AF

Water Treatment Plant

VENTURA

AN BERNARDINO

F.E. Weymouth
Water Treatment Plant

Treatment 46 kWh/AF

CRA: 2,000 kWh/AF

Robert B. Diemer
Water Treatment Plant

Distribution -59 kWh/AF

RIVERSIDE

Robert A. Skinner
Water Treatment Plant

ORANGE

SAN DIEGO

Hydropower reduces energy intensity

- CRA: Hoover Dam
- SWP: Hyatt-Thermalito

Extraordinary Drought Actions (2014-16)

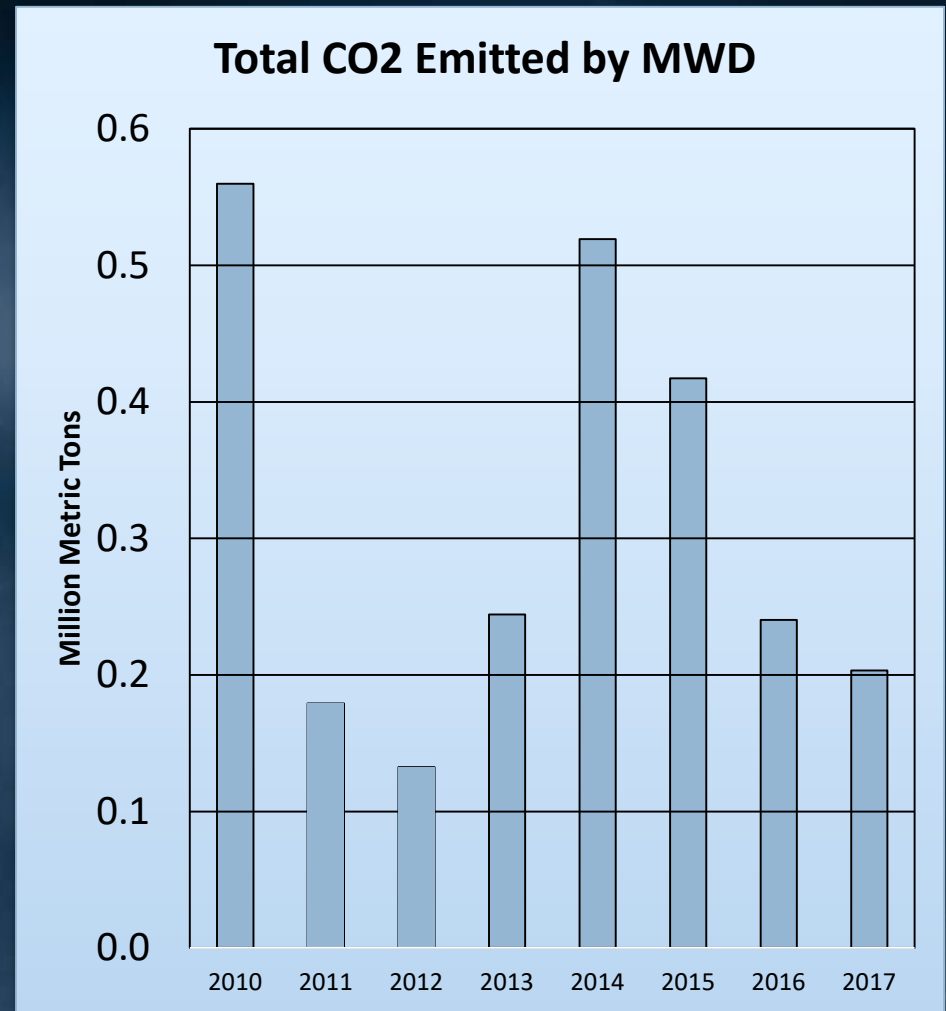


Extraordinary Wet Year Operations in 2017



Reporting GHG Emissions

- CARB since 2009
 - Mandatory reporting began in 2013
- TCR since 2008
- Participated in TCR's water-related activities



Note: does not account for upstream Scope 3 emissions from DWR

Tracking GHG at Multiple Facilities . . .

- Treatment plants (5)
- Aqueduct pumping plants (5)
- Distribution system
 - 3 pump stations
 - Pressure control / hydro. plants
- Reservoirs (10)
- Miscellaneous facilities
- 230 kV system T&D losses
- Vehicles and aircraft fuels



... Requires Established Procedures



Determine Data
Required for GHGs
Emissions



Request and Prepare
Required Data



Input Data into GHG
Workbook



Submit Reports



Verify Submitted
Reports

... And Defined Organization



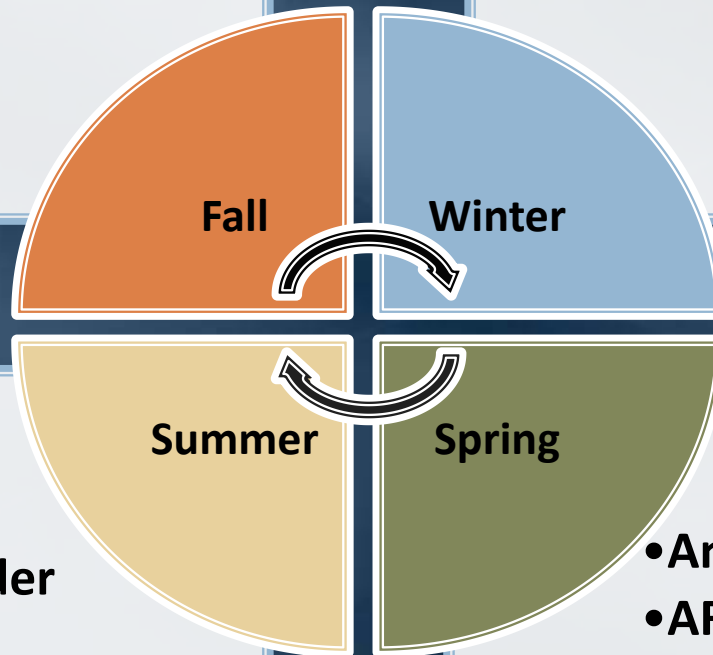
Reporting is a Year-Round Process

•Reporting and Verification

- ARB Deadline September 1st
- TCR Deadline December 15th

•Data collection

- Multiple facilities
- Six greenhouse gases
- Data preparation



- Begin verification
- Agreement / task order preparation* for Verification

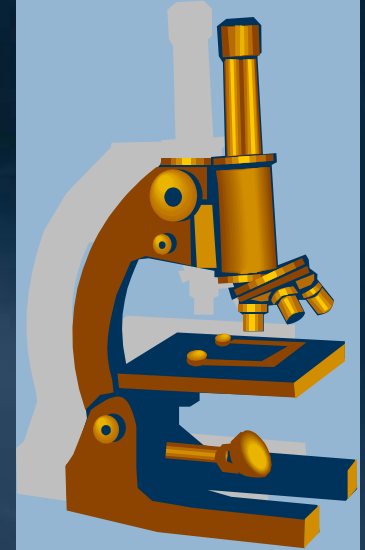
*Task performed every six years

•Analyze and review

- ARB Report - Submission/Certification (Deadline June 1st)
- TCR Report Submission (Deadline June 30th)

Verification is Important but Requires Staff and Financial Resources

- Required for CARB and TCR
- Independent accredited verifiers
- Scope
 - Schedule of verification activities
 - \$7,000-\$10,000 annually
 - Planning meetings
 - Audit GHG information and calculations
 - Required facility site visits every three years
 - Submits verification opinion statement and report
- Recordkeeping requirements



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Recommendations for GHG Reporting

- Start with basic reporting
 - Less requirements = more participation
- Narrative section to explain year-to-year variation
- Avoid duplicate reporting processes
- Allow flexibility in how storage is accounted for

Final Thoughts

- Water agencies are taking significant actions to reduce GHG emissions
- Hydrological variation and other factors may mask progress in reducing GHG's
- New alternative local supplies can be energy intensive
- Consider providing financial and technical assistance to smaller agencies for verification
- Managing the impacts of climate change on water supplies – **adaptation** – is a key concern for water managers

Thank you!

Brad Coffey

bcoffey@mwdh2o.com

(213) 217-5845

