



# **GHG Emissions from Water Sector: Bay Area Trends & Projections**

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## Background & Purpose

- Analyze Bay Area GHG trends based on ARB Scoping Plan economic sectors
- Compare projections to State's & Bay Area's 2050 goal
- Estimate GHG reductions due to existing policies/programs
- Estimate magnitude of “gap” between projections & goal
- Identify potential policies or actions to reduce the gap
- Include best measures in 2015 Bay Area Clean Air Plan

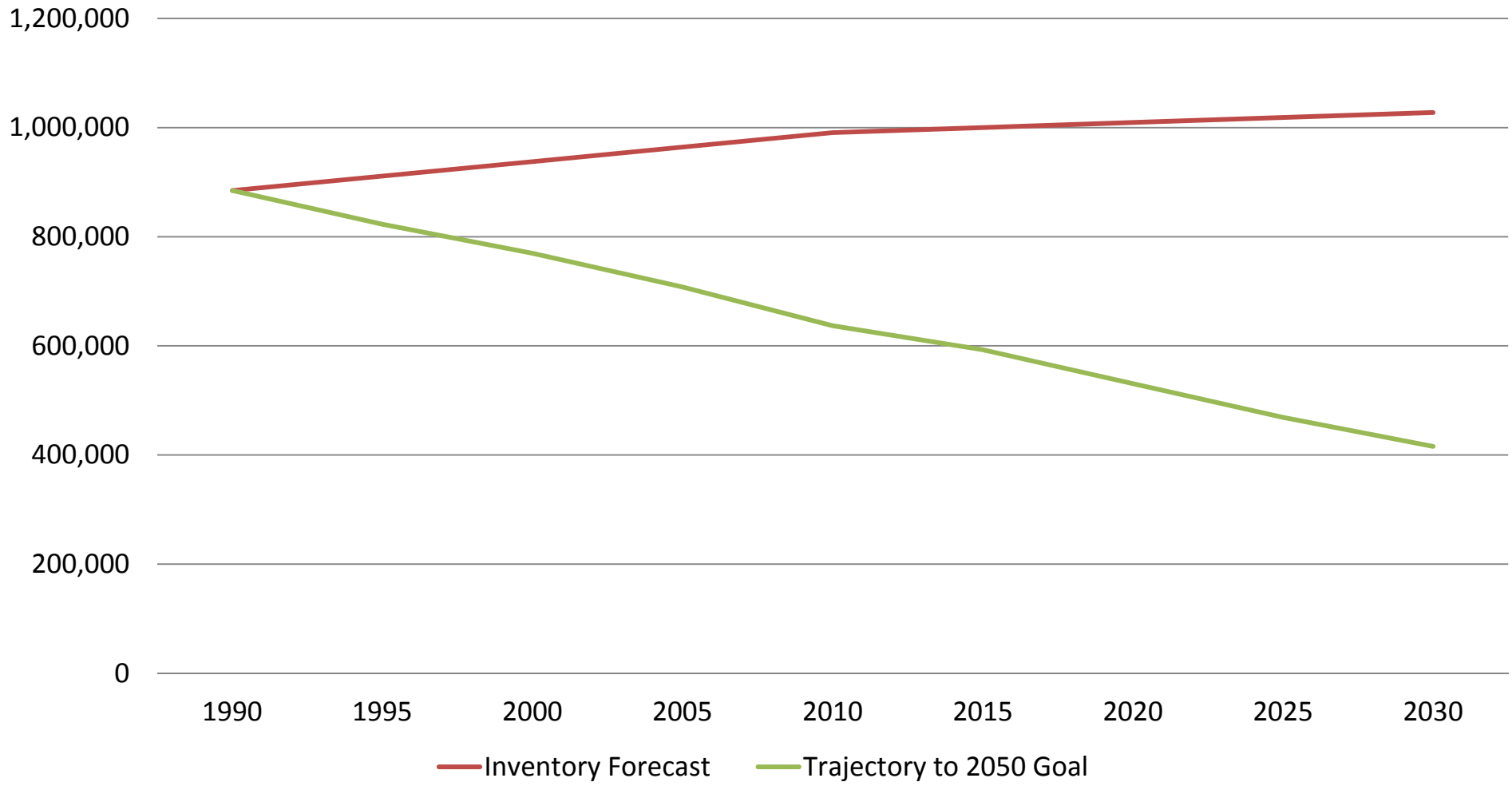


# Projections & Trends

- Direct Emissions: 2011 Bay Area GHG inventory (CO<sub>2</sub>e) backcast to 1990
- Projected to 2030
- Estimated indirect GHG emissions using Bay Area water consumption data for years 1990, 2010 and 2030
- Combined indirect and direct GHG emissions associated with water sector
- Trajectory to 2030 based on goal to reduce emissions 80% below 1990 baseline by 2050
- Straight-line interpolation thru 2030

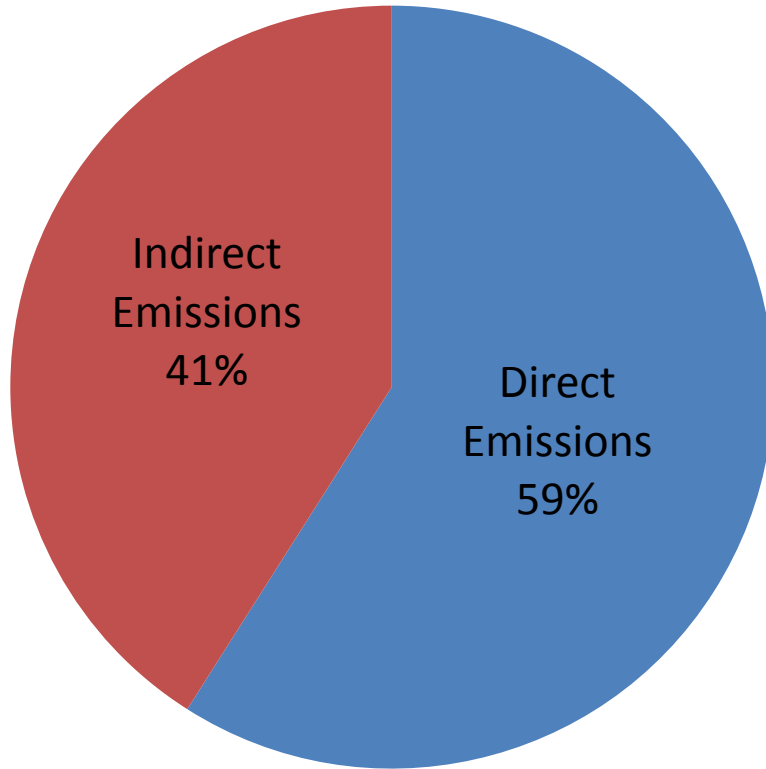


# GHG Emissions from Bay Area Water Sector 1990-2030 (metric tons CO<sub>2</sub>e/yr)

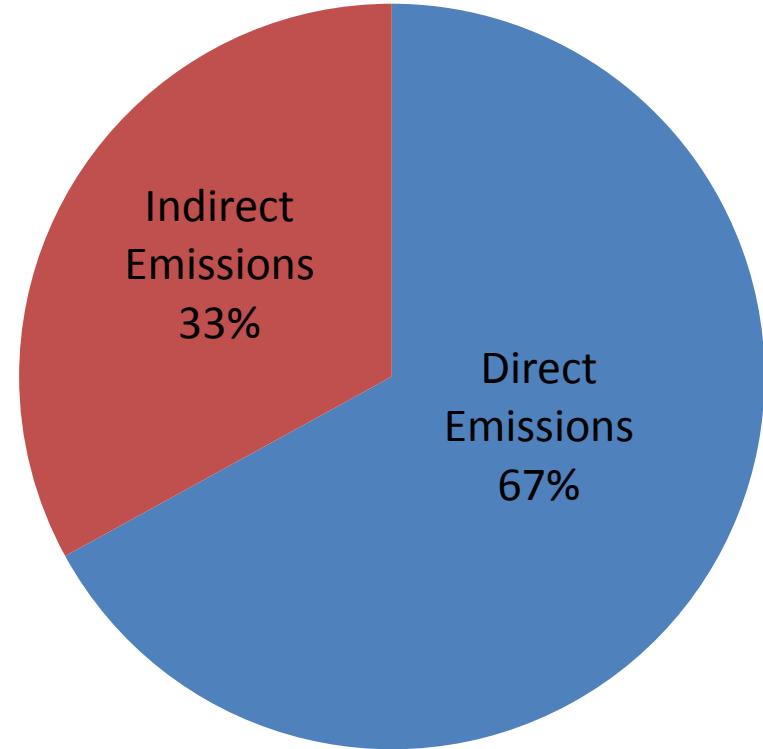




# Indirect v. Direct GHG Emissions



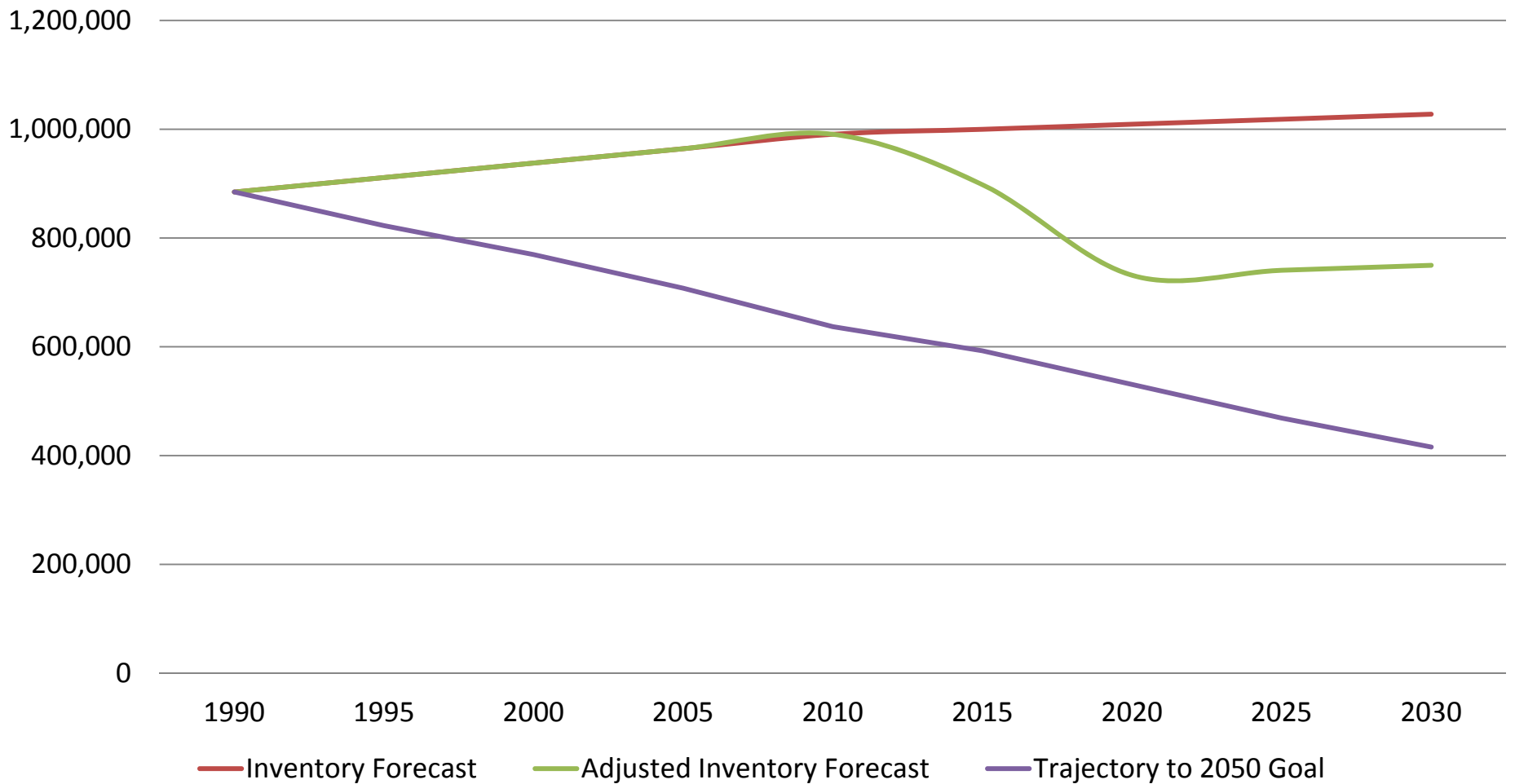
2011



2030



# Adjusted Bay Area GHG Emissions Projections: 1990-2010 (metric tons/year)





# Challenges & Opportunities

Major Sources of GHGs: wastewater treatment (direct emissions), & energy used to pump, convey and treat water (indirect emissions)

## Challenges:

- Limited control over water consumption
- Per capita water use is declining but population is rising
- New state regs to reduce nutrient discharge at POTWs may increase GHGs

## Opportunities:

- GHGs from POTWs subject to Air District permit requirements
- Drought provides opportunity to reduce water use
- Potential for Air District to provide funds/incentives for green infrastructure in POTWs