

# Lessons on Managing the Delta under Shortage Conditions

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DELTA STEWARDSHIP COUNCIL



# Disclaimers

- I am not speaking for the SWRCB or the DSC
- I am not presenting State policy
- I am expressing personal observations and opinions, except where specifically referenced to published materials
- **The co-equal goals:**

*'Coequal goals' means the two goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. The coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place. (CA Water Code §85054)*



# Role of the Delta Watermaster

- **The Office of the Delta Watermaster was created as part of the Delta Reform Act of 2009**
- **The Watermaster is an independent officer of the State**
- **Appointed to a four-year term by the State Water Resources Control Board (Water Board)**
- **Reports jointly to the Water Board and the Delta Stewardship Council**
- **The Watermaster is responsible for:**
  - **Overseeing day-to-day administration of water rights located in the Delta**
  - **Implementing legislative mandates relating to water in the Delta**
  - **Improving water supply reliability, resiliency and predictability**
  - **Advising the Council and the Board on Delta Policy**



# Overview

- **2015 Diversion Reduction Program**
- **Water Availability Analysis**
- **Delta Enforcement**
- **Implementing Diversion Measurement**
- **Measuring Consumptive Use**
- **The New Delta Accords Process**



# 2015 Diversion Reduction Program Background

- **April 2015: Facing a 4<sup>th</sup> year of drought, threat of curtailments, minimal snowpack, Governor Brown extended emergency drought proclamation**
- **Central and South Delta farmers proposed a voluntary program to reduce their surface water diversions during the summer months – June through September**
- **Goal: reduce 2015 agricultural irrigation diversions by 25% vs. 2013 baseline in order to reduce stress on the water system**
- **SWRCB agreed, in return, to refrain from enforcing deeper curtailments if ordered later in the season**
- **Trading for Risk Management**



# Diversion Reduction Report

- **217 Plans Prepared, Covering 2/3 of the Central and South Delta: 180,000 acres (and portion of CCCo)**
- **Program Overachieved Target: 32% Reduction Reported**
- **Flexibility and Voluntary Nature of the Program Incentivized Creativity and Micro-response**
- **Likely Helped to Avert Riparian Curtailment and May Have Influenced Delta Outflow**
- **Great Example of Voluntary Action to Address a Common Problem**
- **Achieved Results without Waiving Cherished Rights, Going to Court, or Triggering Regulation**
- **Report Posted on Watermaster Website**  
[http://waterboards.ca.gov/water\\_issues/programs/delta\\_watermaster/docs/diversion\\_reduction15.pdf](http://waterboards.ca.gov/water_issues/programs/delta_watermaster/docs/diversion_reduction15.pdf)



# Water Availability Analysis

- **Real-time test of the priority system**
  - Coordinated with the Division of Water Rights
  - Alerted diverters to potential insufficiency
  - Conceived of as a tool for administering curtailments under the priority system
- **Confounding Riparian Overlay**
- **Compare forecasts of supply and demand**
  - Monthly time step
  - Watershed-wide
  - Notice, order or empty threat?



# Delta Enforcement

- **On June 7, the Water Board dismissed enforcement actions against BBID and WSID**
- **Prosecution Team failed to carry its burden of proving violation of drought curtailment orders**
- **Certain issues are being litigated in consolidated cases:**
  - Does the Water Board have jurisdiction to curtail pre-1914 and riparian rights?
  - Can watershed-wide analysis support a charge of trespass by unlawful diversion?
- **Division of Water Rights and Delta Watermaster are reviewing procedures in light of dismissal and lessons learned**
  - Watch for a retrospective review of curtailment management
  - What if the priority system cannot be administered under drought conditions?
- **Implications of *MID v. Tanaka*?**





# Implementing Diversion Measurement

- **Trailer bill signed in June, 2015 as part of drought emergency response**
- **Implementing regulations widely vetted prior to Water Board adoption in early 2016, effective beginning in 2017**
- **Measurement Devices, Measurement Methods or Alternative Compliance Plans to achieve accuracy targets**
- **Current outreach on implementation strategies through Delta Water Agencies and technical representatives**
- **Compliance challenges are being addressed; some can be resolved only with experimentation and experience**
  - Syphons, tidal gates, shared diversions, “springing” water rights



# Consumptive Use Study

- **Comparative Study of Methods for Determining Consumptive Use of Water within the Delta**
- **Preliminary report, based on finding from first year, is now available: <https://watershed.ucdavis.edu/project/delta-et>**
- **Current Findings:**
  - Crop ET estimates for the Delta in 2015 were broadly consistent with average year California Water Plan and literature
  - All methods estimated CU during 2015 within 20% in a blind test
  - The greatest difference across methods occurred in December and January
  - Vineyards, potatoes and tomatoes had largest discrepancies
  - 2015 data provide initial reference for future comparisons, to quantify variation, and to identify conditions with higher discrepancies
  - 2016 plan is to improve calibration and systematically eliminate bases for discrepancies



# The New Delta Accord Process

- **No one was happy with 2014/2015 drought management**
- **Challenge of balancing a complex system at the tail of the curve**
  - Models rely on long-term averages
  - System measurements are gross, not fine
  - Contention in the margin of error
- **Outreach to water system managers**
- **Quest for “rules of thumb” to provide predictability**
  - Progression from technical to policy to legal issues
  - Currently focused on “net Delta outflow” and “surface v. subsurface”
  - Objective: modest consensus on recommendations to the SWRCB



# Questions?

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