



DELTA

Regional Monitoring Program

Selina D. Cole
Technical Advisory Committee Co-chair
Central Valley Water Board
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Delta RMP Mission

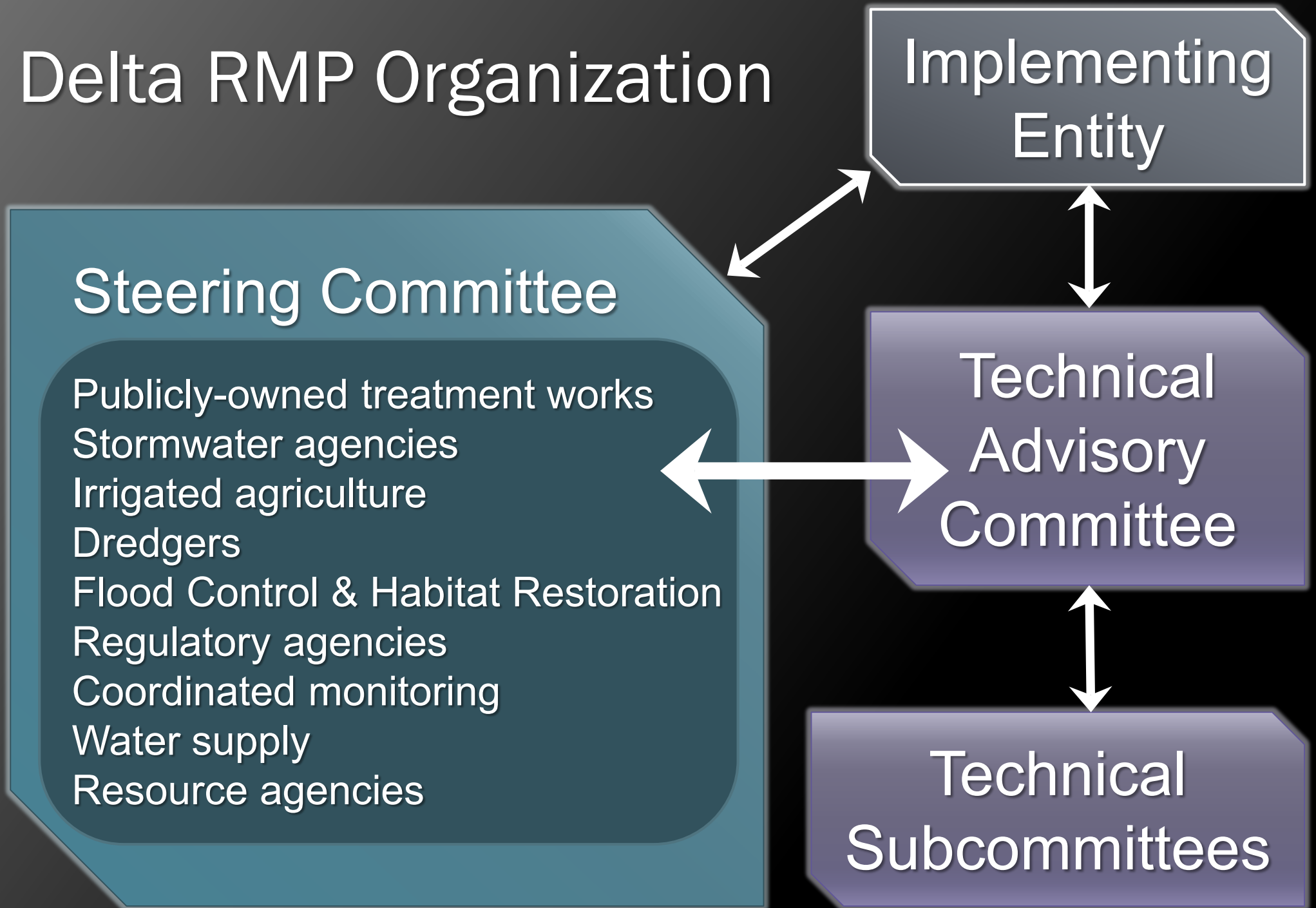
*“To inform decisions on how to protect,
and where necessary, restore
beneficial uses of water in the Delta,
by producing objective and cost-
effective scientific information critical
to understanding regional
water quality conditions and trends.”*

Goals & Objectives

Coordinated Delta-wide monitoring,
reporting, and assessment of water quality

- 1) Improve the efficiency of data collection & management
- 2) Inform decision makers and educate the public
- 3) Raise awareness of water quality conditions
- 4) Foster independent science, peer review

Delta RMP Organization



Steering Committee

Publicly-owned treatment works

Stormwater agencies

Irrigated agriculture

Dredgers

Flood Control & Habitat Restoration

Coordinated monitoring

Regulatory agencies

Water supply

Resource agencies

- POTW
- Large MS4
- Small MS4
- Ag Coalitions
- Port of Stockton
- DWR
- IEP
- Regional Board
- State Board
- EPA
- Met
- NOAA

General Management Questions

Priority

- Status & Trends-

Is there a problem or are there signs of a problem?

- Sources, Pathways, Loadings, Processes

Which sources and processes are most important to understand and quantify?

- Forecasting Scenarios

- Effectiveness Tracking

Current Monitoring



➤ Pesticides and Toxicity



➤ Mercury and Methylmercury



➤ Nutrients



➤ Contaminants of Emerging Concern (starting Sept.2020)

Pesticides & Toxicity

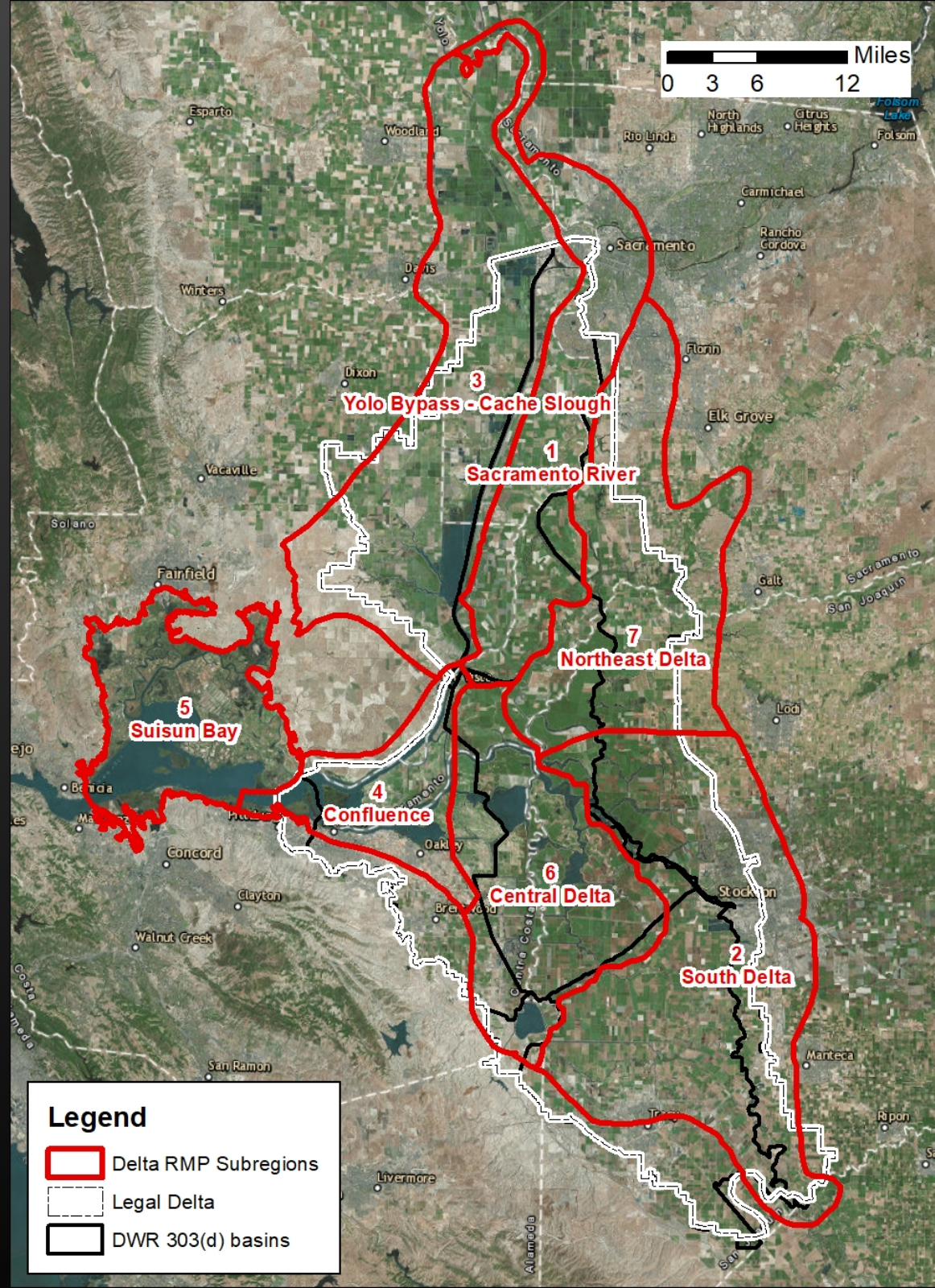
Priority Assessment Questions

Type	Questions
Status & Trends	<p>To what extent do current use pesticides (CUPs) contribute to observed toxicity in the Delta?</p> <ul style="list-style-type: none">• Which pesticides have the highest potential to be causing toxicity in the Delta and therefore should be the priority for monitoring and management?• What are the spatial and temporal extents of lethal and sub-lethal aquatic and sediment toxicity observed in the Delta? <p>What are the spatial/temporal distributions of concentrations of currently used pesticides identified as likely causes of observed toxicity?</p>

Pesticides & Toxicity Monitoring Design

Annual Monitoring:

- 2 subregions & 2 fixed sites
- 6 events = 48n
- ~170 pesticides
- 5-species toxicity testing



Mercury – Priority Assessment Questions

Type	Questions
Status & Trends	<p>What are the ambient concentrations of total mercury and methylmercury (MeHg) in fish, water, and sediment, particularly in subareas likely to be affected by major sources or new sources (e.g., large-scale restoration projects)?</p> <ul style="list-style-type: none">• Are trends over time in MeHg sport fish similar or different among Delta subareas?• Do trends over time in MeHg in water similar or different among Delta subareas?

Mercury Monitoring (2016 – 2019)

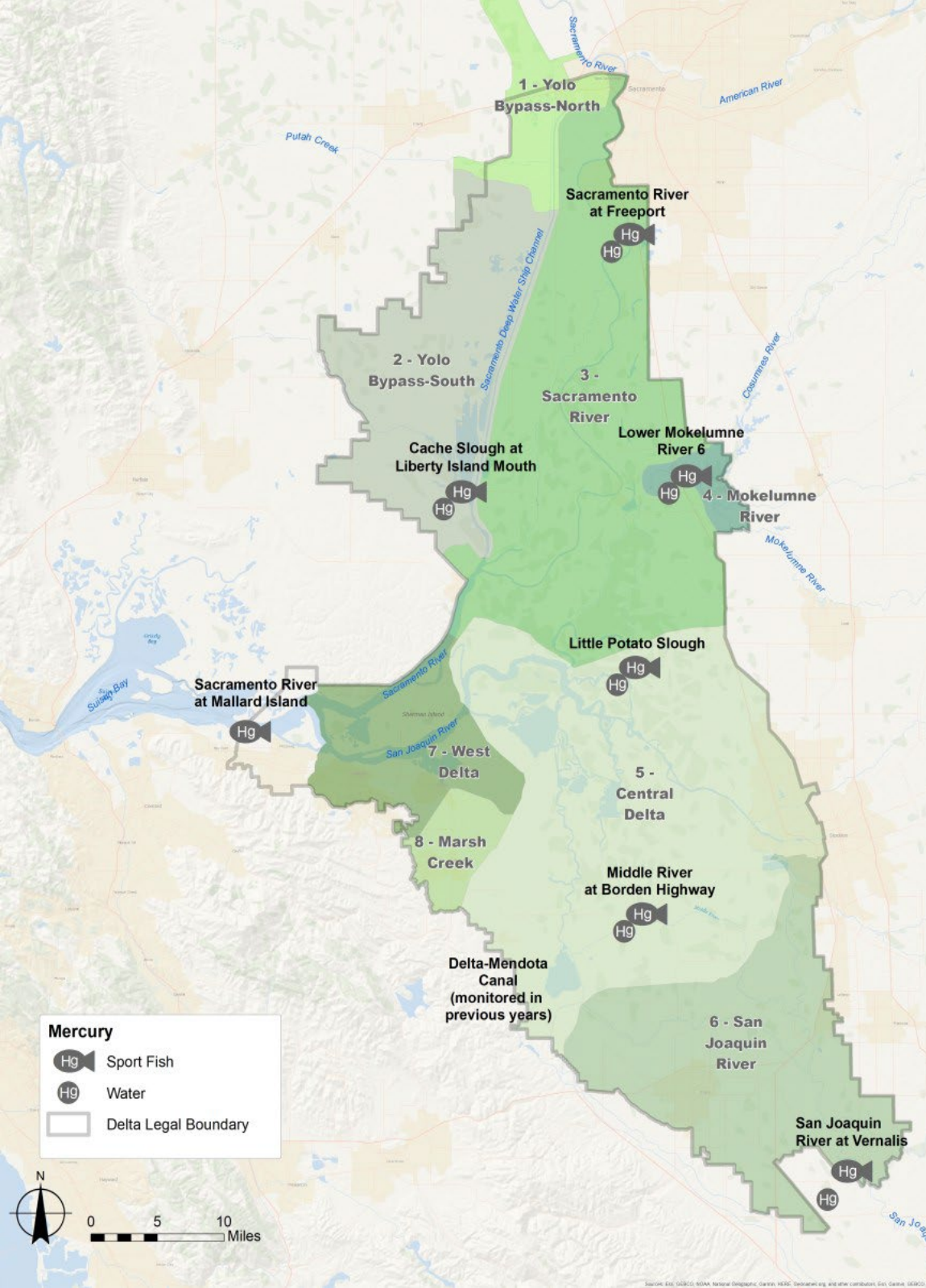
Sport Fish:

- Annual Fall sampling
- 16 sportfish, 8 fixed sites

Water sampling:

- 8 sites, 10 events/year
 - Total mercury, methylmercury ancillary parameters

New! Monitoring sites near Restoration projects



Nutrients – Priority Assessment Questions

Type	Assessment Questions
Status & Trends	How do concentrations of nutrients (and associated parameters) vary spatially and temporally?
Sources, Pathways, Loadings & Processes	Which sources, pathways and processes contribute most to observed levels of nutrients? <ul style="list-style-type: none">• How have source controls and water management actions changed ambient levels of nutrients and associated parameters?• What are the loads from tributaries to the Delta?• What are the types and sources of nutrient sinks within the Delta?• What are the types and magnitudes of nutrient exports from the Delta to Suisun Bay and water intakes for the State and Federal Water Projects?

Nutrients Studies

Synthesis & Modeling

- 1) Assessment of Nutrient Status and Trends in the Delta 2001–2016:
Effects of drought on ambient concentrations and trends
- 2) Modeling: Water source analysis and particle tracking simulations
- 3) Intercalibration Study for Chlorophyll Fluorescence Sensors

2020 Modeling & Monitoring

- 1) Sacramento River nutrient change study:
Conducted during the Regional San
wastewater hold
- 2) WY2016 Biogeochemical Modeling
- 3) High-frequency Cross-Delta monitoring (3rd year)

Delta RMP Data

**Data are used for the
Water Board's
“Integrated Report”**

**Data inform water
quality decision making**



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Delta RMP Reporting

Annual data reporting

Currently improving consistency across program components



Next Steps

Multi-year planning & Growing the RMP

Monitoring

- Contaminants of Emerging Concern Study

Coordination

- IEP, USGS, DWR, DSP, etc.

Resources

- Supplemental Environmental Projects
- Grant opportunities



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