Delta Regional Monitoring Program

Panel Presentation-
Delta Independent Science Board
May 12, 2016

Presentation Outline

- Background
- Governance
- Monitoring Design
- Funding
- Program Needs

Background 2008-2012

- Strawman Proposals-2008-2009 Objectives

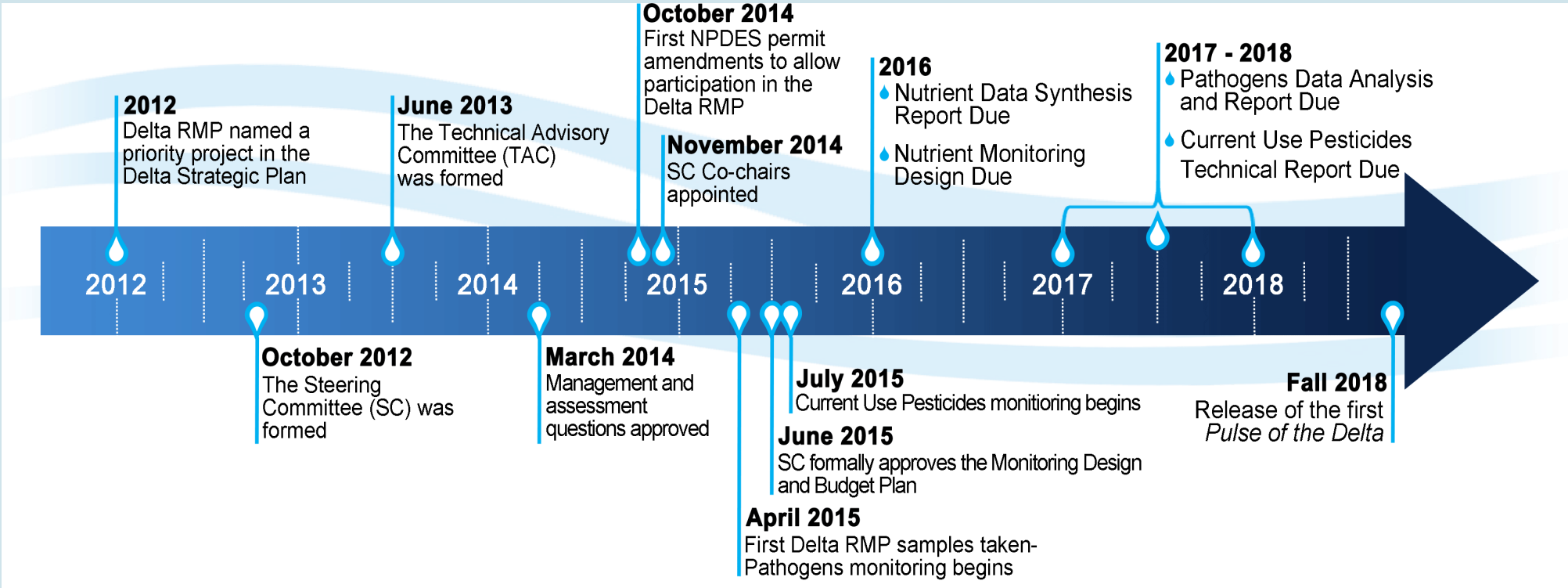
  - **Reporting data** from existing, ongoing monitoring efforts,
  - **Answering important questions that require a comprehensive, regional view**

- Draft Program Plan-2010 Objectives

  - Compile, synthesize, and **report data regularly**
  - **Answer important questions that require a comprehensive, regional view**

- Draft Alternative Approach-2012

Event Timeline

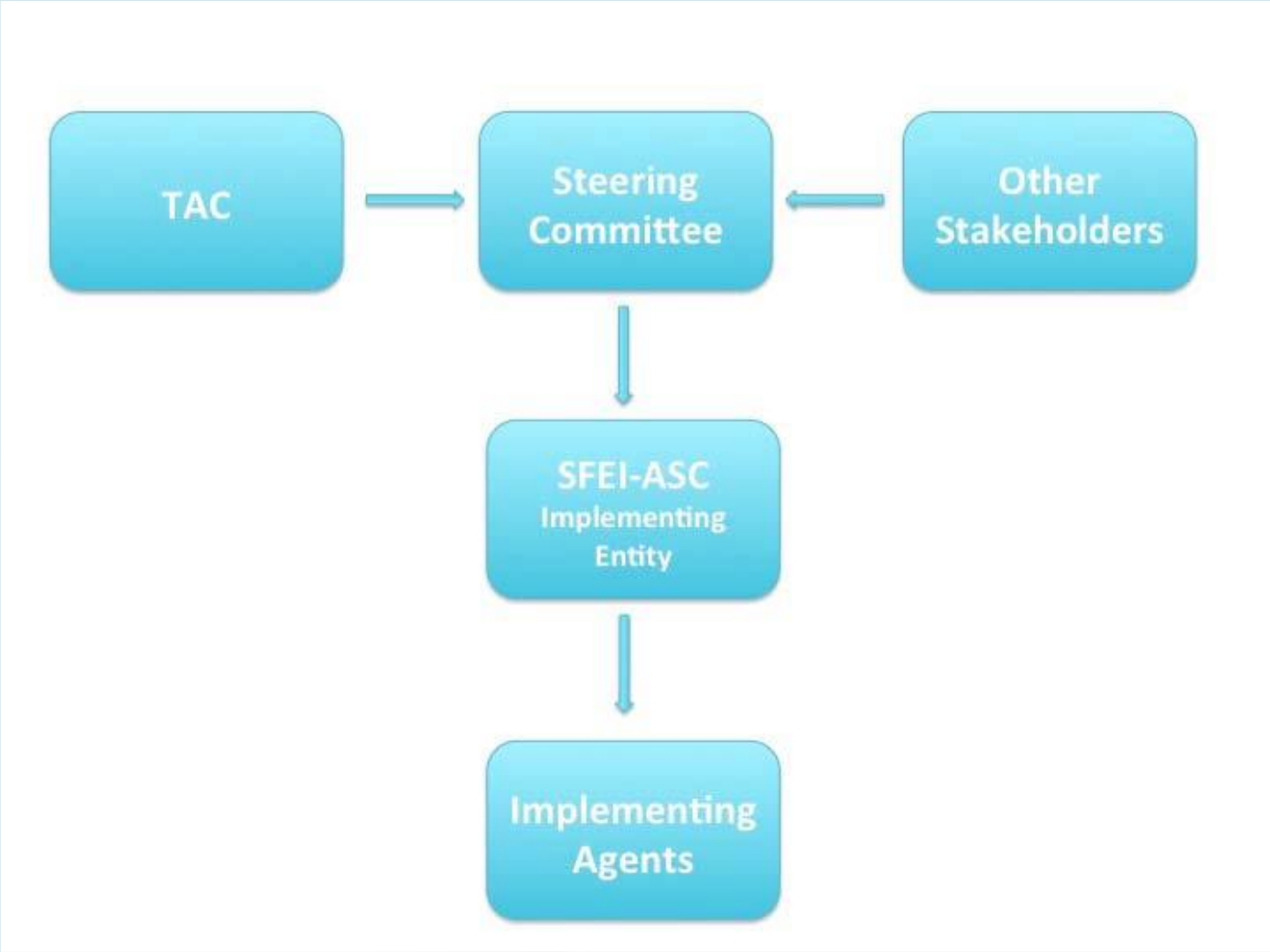


Background 2012-Present

- Establish Steering Committee 2012
- 10 meetings between Oct. 2012-Oct. 2013
- Mission Statement Approved March 2013

  - *The Mission of the Delta Regional Monitoring Program is 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 in the Delta.*

Governance


TAC
Steering Committee
Other Stakeholders
SFEI-ASC
Implementing Entity
Implementing Agents

Steering Committee Members

October 2012:

Three Publically Owned Treatment Works, Two Stormwater Agencies, One Irrigated Agriculture

Two Regulatory, One Water Supply, One Resource Agency

December 2015:

Added One Regulatory, One Irrigated Agriculture, and One Stormwater. Identified Resource Agency Representatives

Technical Advisory Committee

- Under direction of the Steering Committee, provides technical recommendations to the Steering Committee
- Consists of technical representatives from the RMP membership groups, one to one representing Steering Committee members
- Responsible for developing, reviewing, and revising the monitoring design and special studies in line with management questions

Governance Documents

- Delta RMP Guiding Principles
- Delta RMP Committee Roles
- Delta RMP Adequate Participation
- Draft Communication Plan
- Delta RMP Draft Charter

Management Questions

- Status & Trends-Is there a problem or are there signs of a problem?

  - Is water quality currently, or trending towards, adversely affecting beneficial uses of the Delta?
  - Which constituents may be impairing beneficial uses in subregions of the Delta?
  - Are trends similar or different across different subregions of theDelta?

Management Questions

- Sources, Pathways, Loadings, Processes- Which sources and processes are most important to understand and quantify?

  - Which sources, pathways, loadings, and processes (e.g. transformations, bioaccumulation) contribute most to identified problems?
  - What is the magnitude of each source and/or pathway (e.g. municipal wastewater, atomospheric deposition)?
  - What are the magnitudes of internal sources and/or pathways (e.g. benthic flux) and sinks in the Delta?

Management Questions

- Forecasting Scenarios-
  - How do ambient water quality conditions respond to different management scenarios
  - What constituent loads can the Delta assimilate without impairment of beneficial uses?
  - What is the likelihood that the Delta will be water quality-impaired in the future?

- Effectiveness Tracking-
  - Are water quality conditions improving as a result of management actions such that beneficial uses will be met?
  - Are loadings changing as a result of management actions?

Monitoring Design

- TAC formed subcommittees for priorities identified by Steering committee

➢ Mercury/Methyl Mercury

➢ Nutrients

➢ Pathogens

➢ Pesticides

Monitoring Design

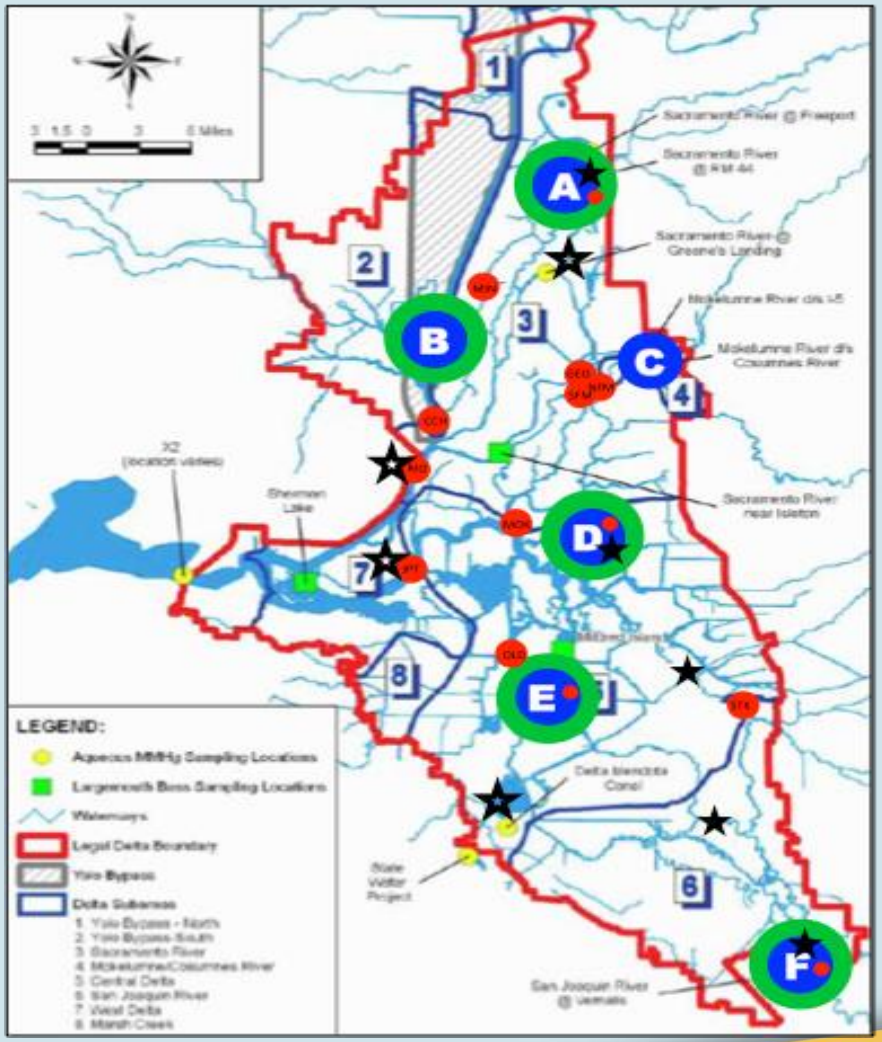
- Mercury/Methyl Mercury

  - Sport Fish-Annual sampling at 10 fixed sites in late summer to early autumn

  - Water-Monthly sampling at five sites aligning with sport fish monitoring sites.

  - 2016 changed design to Sport Fish annual sampling at 6 fixed sites for 10 years and Water Sampling quarterly for 5 years at DWR/USGS flow monitoring locations

Mercury/Methyl Mercury Monitoring Sites



Proposed Sites for Mercury Sampling

Proposed Fish Sites J

Proposed Water Sites

DWR/USGS Flux Sites

Permittee Proposed Sites

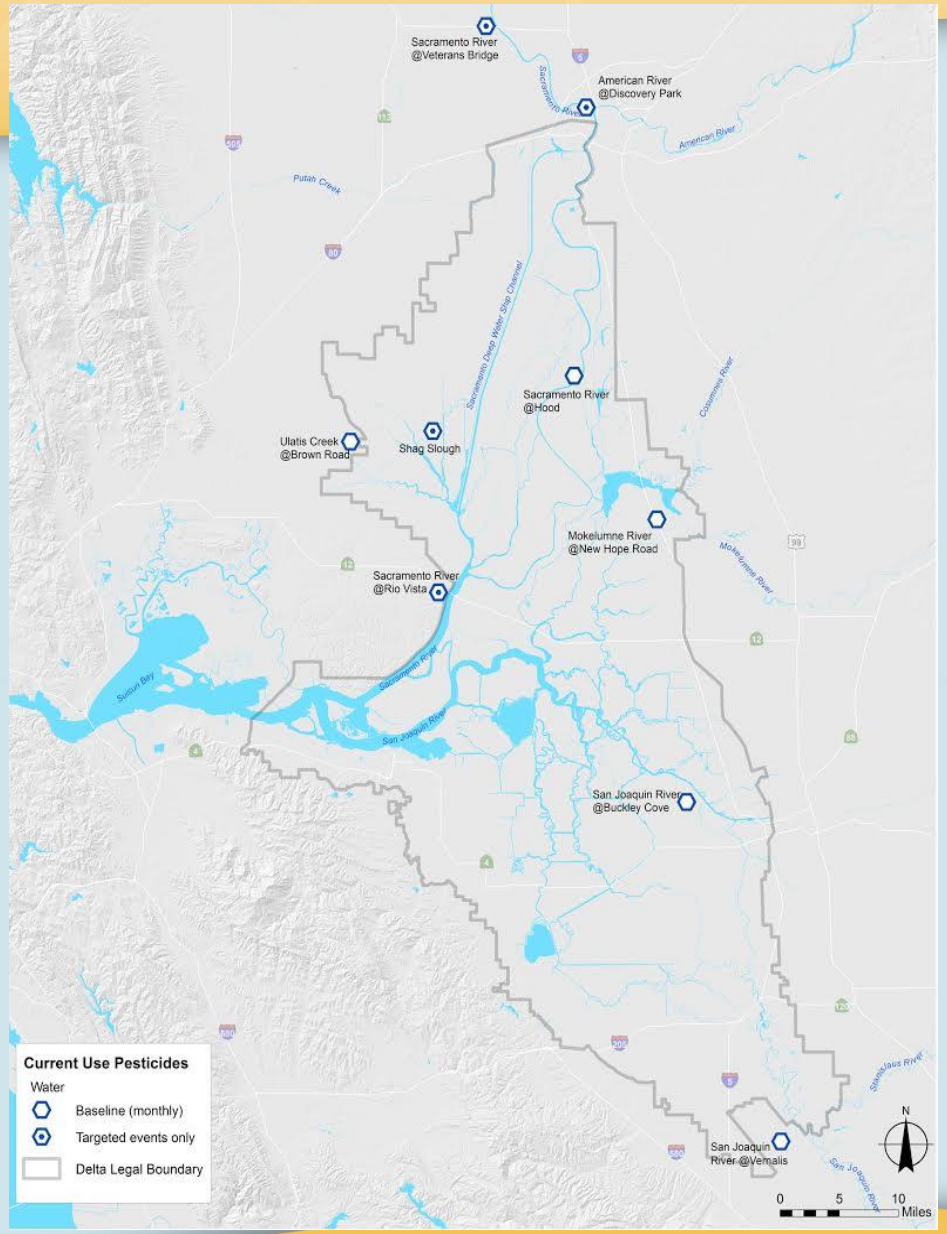
A	Sacramento R @ RM44 (resolve RM44 vs Freeport vs Hood)
B	Liberty Island
C	Mokelumne R ds Cosumnes R
D	Little Potato Slough
E	MID flux station (close to Middle R at Hwy 4 fish station)
F	San Joaquin R @ Vernalis

Monitoring Design

- Current Use Pesticides

  - Five sites-Monthly sampling at targeted weather/temporal events
  - USGS Pesticide Scan and toxicity for three species
  - Pesticide focused Toxicity Identification Evaluations for a subset of samples with ≥50%
  - Sediment sampling done by Surface Water Ambient Monitoring Program

Current Use Pesticides Monitoring Sites



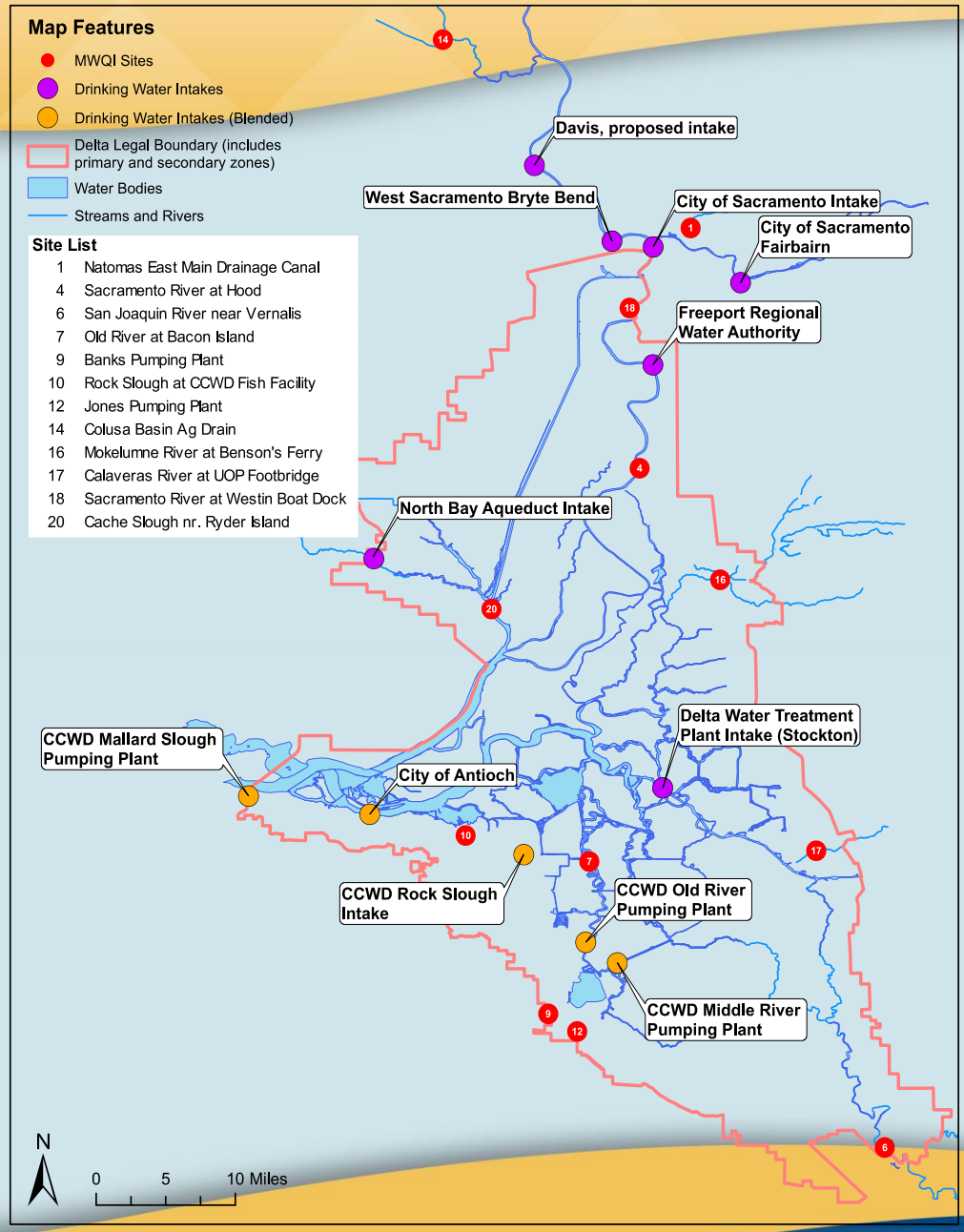
Monitoring Design

- Pathogens

  - Two year special study-Monthly sampling for Cryptosporidium and Giardia at ambient locations in coordination with DWR Municipal Water Quality Investigations locations

  - Delta RMP pays for additional lab analysis, data management and reporting

Pathogen Monitoring Locations



Monitoring Design

- Nutrients

  - Synthesize and analyze data, designing a monitoring program based on findings

  - Synthesis will focus on ammonium, nitrate, dissolved inorganic nitrogen, total dissolved nitrogen, dissolved organic nitrogen, phosphate, chlorophyll-a, dissolved oxygen

Budget Estimates Monitoring Design

Program Element	Funding Level* Low	Medium	Higher
Current Use Pesticides	$477,000	$627,000	$1,619,000
Mercury			
– Sport fish sampling	$73,000		$140,000
– Water sampling	$69,000	$138,000	$165,000
Nutrients			
– Synthesis	$70,000	$110,000	$160,000
– Monitoring Design	$65,000		$65,000
Pathogens (2-yr study)			
– Ambient monitoring (2 yrs)	$72,000	144,000	$288,000
– Additional special studies		47,250	
Annual Cost	**$826,000**	**$1,204,250**	**$2,484,250**

***Does not include ~25% Program Management**

Funding

- Steering Committee Members-Pay to Play
- Initially cost neutral
- Each member group determines their own formulas for funding

  - POTWs flow/level of treatment plus base
  - Stormwater population base
  - Irrigated Agriculture exchange of monitoring
  - Water Supply $100,000
  - Regional Water Board SWAMP Funds

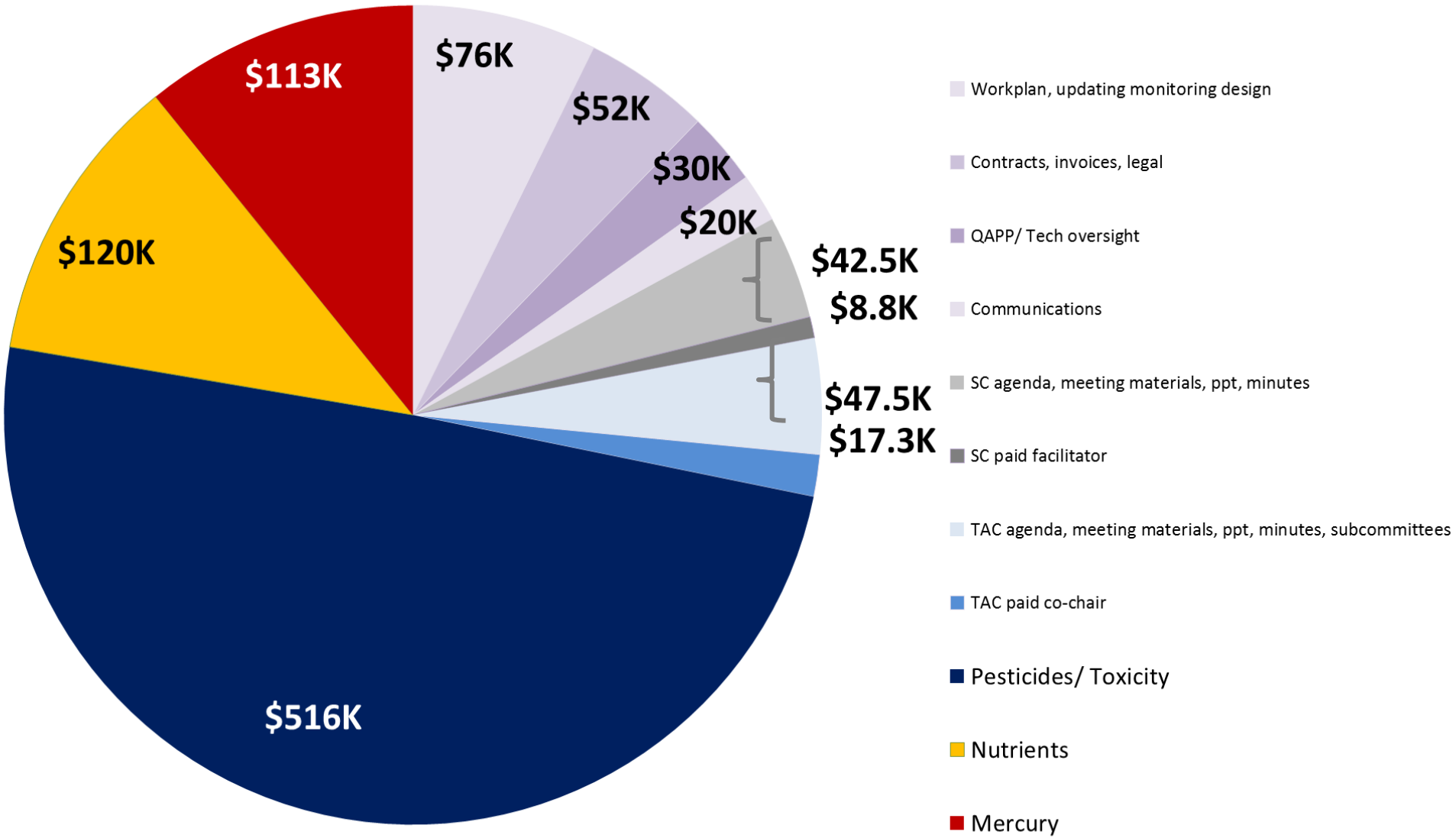
Funding-Detailed Workplans

Detailed Workplans show what revenue is available to fund TAC recommended monitoring

- FY 15/16 Anticipated Revenue/Budget $895,826
- FY 15/16 Received to date $979,559

- FY 16/17 Anticipated Revenue/Budget $1,043,03

Delta RMP FY16/17 Budget



Program Needs

- Coordination-IEP, USGS, DWR, FWS, etc
- Assessment-External data
- Funding-Monitoring Exchanges, Grant Opportunities

Questions?

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