



Where do we go from here?

Jon Marshack
Executive Director

Greg Gearheart
Co-Chair Alternate

Setting the Stage

- 💧 Where have we been?
- 💧 What challenges have arisen?
- 💧 Where do we want to go?
- 💧 How can we be more effective?
 - 💧 Given existing constraints
- 💧 Was our strategy on target?
- 💧 What would we do differently?
- 💧 Are we organized the right way for the job?

The Problem

- 💧 Each study generates single-purpose data
 - 💧 Inconsistent
 - 💧 Monitoring objectives
 - 💧 Sampling protocols and analytical techniques
 - 💧 Quality assurance/quality control methods
 - 💧 Data management and documentation protocols
 - 💧 Assessment strategies
 - 💧 Can not integrate data from multiple studies
- 💧 No common place to find and access data
- 💧 Address current management questions?

The Response – CA Senate Bill 1070



- Form the California Water Quality Monitoring Council
- Develop recommendations
 - Maximize the efficiency and effectiveness of existing water quality data collection and dissemination
 - Ensure data are made available to decision makers and public
- Develop a comprehensive monitoring program strategy for California

Where we have been

- 💧 SB 1070 became law 2006
- 💧 MOU signed by Cal/EPA and Natural Resources Secretaries 2007
- 💧 Initial Recommendations delivered 2008
- 💧 Monitoring Program Strategy delivered 2010
- 💧 First Triennial Audit (self-evaluation) 2014

Strategy: Five-part Solution



- 1) Decentralized organizational structure
 - ◆ Issue-specific workgroups of technical experts
 - ◆ Common Monitoring Council policies and guidance
- 2) Set of performance measures
 - ◆ To evaluate and enhance efforts
- 3) Single global point of entry to data and information
 - ◆ Leads to set of theme-based Internet portals
- 4) Standardize only as needed to bring data together
- 5) Data management standards for more efficient data access and integration

More Than Just Data on the Web

- 💧 Forming and maintaining lasting relationships
 - 💧 Through theme-specific workgroups
- 💧 Implementing a portal design that requires and motivates parties to solve issues related to
 - 💧 Monitoring and assessment coordination
 - 💧 Data integration
- 💧 Focus directly on management questions
- 💧 Provides structure that initiates dialogues
 - 💧 Induces broader-based thinking
 - 💧 Enables broader-based assessments



Theme-Specific Workgroups Formed

WATER BODY TYPES	T H E M E S				
	Is Our Water Safe to Drink?	Is It Safe to Swim in Our Waters?	Is It Safe to Eat Fish and Shellfish from Our Waters?	Are Our Aquatic Ecosystems Healthy?	What Stressors & Processes Affect Our Waters?
Streams & Rivers	Safe Drinking Water Workgroup	[Hatched Pattern]	Bioaccumulation Oversight Group (SWAMP)	Healthy Watersheds Partnership (SWAMP)	California CyanoHAB Network
Lakes				[Hatched Pattern]	
Estuaries				Estuary Monitoring Workgroup	
Ocean Waters	N/A	Safe to Swim Workgroup	[Hatched Pattern]	Ocean & Coastal Workgroup	
Wetlands	N/A	N/A	[Hatched Pattern]	Wetland Monitoring Workgroup	
Tap Water	Safe Drinking Water Workgroup	N/A	N/A	N/A	
Groundwater		N/A	N/A	N/A	

Additional Workgroup Efforts

- 💧 Data Management Workgroup

- 💧 Data access
- 💧 Data management
- 💧 Web development
- 💧 GIS



- 💧 Water Quality Monitoring Collaboration Network

- 💧 Support local and regional monitoring efforts
- 💧 Web-based seminars
 - 💧 Share experiences
 - 💧 Foster use of appropriate methods

Government Organizations Listed in SB 1070

- Initially focus on the...efforts of state agencies, including, but not limited to
 - State and Regional Water Boards
 - Department of Water Resources
 - Department of Fish and Wildlife
 - California Coastal Commission
 - State Lands Commission
 - Department of Parks and Recreation
 - Department of Forestry and Fire Protection
 - Department of Pesticide Regulation
 - Department of Public Health





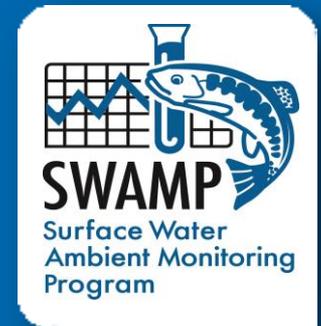
Portals Released

- 💧 Safe to Swim July 2009
- 💧 Safe to Eat Fish & Shellfish Dec 2009
- 💧 Wetland Eco Health June 2010
 - 💧 major revision June 2013
- 💧 Stream Eco Health June 2012
- 💧 Ocean/Coastal Eco Health
 - 💧 Rocky Intertidal Habitats Oct 2013
- 💧 Estuary Eco Health Oct 2013

Methods Standardization



- 💧 Healthy Watersheds Partnership and Bioaccumulation Oversight Group
- 💧 SWAMP Strategy and tools for consistent monitoring and assessment
 - 💧 Documented monitoring and assessment Standard Operating Procedures (SOPs)
 - 💧 Quality assurance procedures
 - 💧 Data quality documentation procedures
- 💧 California Environmental Data Exchange Network (CEDEN)



Methods Standardization



- Wetland and Riparian Area Monitoring Plan
 - Framework for monitoring, assessment, and reporting
 - Based on Level 1-2-3 Framework of U.S. EPA
- California Rapid Assessment Method (CRAM)

- Cost-effective and defensible methods for monitoring wetland condition
- Modules by wetland type
- Training



EcoAtlas data visualization

- Landscape context to aquatic resource extent, condition, and project information
- Integrates maps, restoration information, and monitoring results
- California Aquatic Resources Inventory (CARI) base map



Role of the Monitoring Council

- 💧 Develop monitoring program strategy
 - 💧 Establish policies and guidelines for workgroups and portals
- 💧 Oversee strategy implementation
 - 💧 Resolve key issues
 - e.g., between workgroups
 - 💧 Support workgroup initiatives
 - 💧 Improve workgroup and portal visibility



Original Concept

- 💧 SB 1070 was the first step
 - 💧 Form the Monitoring Council
 - 💧 Develop the comprehensive monitoring program strategy
 - 💧 Develop initial products as proof of concept
 - 💧 Collaborative efforts
 - 💧 Data and information access
- 💧 Go back to the legislature for funding and dedicated staff
 - 💧 The Great Recession got in the way

What Are Our Challenges?



- 💧 No dedicated funding and personnel for the program
 - 💧 Resources are needed to initiate and sustain collaboration
 - 💧 Staff time for workgroup meetings and coordination of monitoring, assessment, and reporting
 - 💧 Improving data management and data access infrastructure
 - 💧 Portal development and maintenance

Funding to Date



- Monitoring Council staff
 - SWRCB (0.8)
 - DWR (0.5)
- Regular monitoring program funds
 - SWRCB
 - DWR
 - USEPA
 - CIAP
- One-time grants
 - USEPA wetland program development
 - Resources Legacy Fund (ocean roadmap)
- IT support (web, GIS, data management)
 - SWRCB (in-house)
 - SFCWA (34 North)

Added Support from Legislature and Administration Unlikely

💧 Needs

- 💧 Departmental involvement and support for workgroup coordination efforts
- 💧 Open-up siloed environmental data systems
- 💧 Develop and maintain portals
- 💧 No current champion in Legislature
- 💧 Administration not in favor of growing programs

What Are Our Challenges?



- 💧 Still seeking formal agency and departmental endorsements
 - 💧 Inconsistent workgroup leadership
 - 💧 Restricted participation in workgroups and portal development
 - 💧 Uneven awareness of workgroups and tools that could improve performance
 - 💧 Many workgroup-developed tools have no agency home
- 💧 Departments must see relevance to them

Audit Recommendations Still Relevant?

- 💧 Workgroups to develop business plans
 - 💧 Identify key workgroup actions, necessary resources and potential funding sources to ensure sustainability
- 💧 Develop recommendations to ensure that water resource data can be effectively shared between agencies and with other data providers and users
 - 💧 Standard data formats and transfer protocols

Where Do We Go From Here?

- 💧 With departmental support, we could
 - 💧 Sustain and grow collaboration at grass roots level
 - 💧 Open up silos of data and information
 - 💧 Address critical management questions
 - 💧 Management of Delta and water infrastructure
 - 💧 Impacts of drought, climate change, ocean acidification
 - 💧 Provide predictive data to inform adaptive resource management
- 💧 Success depends on integrating workgroup and portal efforts into agency operations

What We Need from Agency Secretaries

- 💧 Endorse Monitoring Council Strategy
- 💧 Encourage departmental directors to
 - 💧 Support strategy implementation
 - 💧 Allow staff to participate in workgroup actions
 - 💧 Use workgroup tools
 - 💧 Add services to make data accessible

Discussions with Cal/EPA



- 💧 Appreciate progress made to date
- 💧 Grass roots-level efforts are pragmatic
- 💧 Overall mission and approach are sound
- 💧 Monitoring Council not currently a high priority for agency secretaries
- 💧 Is the Monitoring Council organized the right way to implement the Strategy?

Discussions with Cal/EPA



- 💧 To gain support, we must demonstrate relevance to high-profile administration interests
 - 💧 Monitoring Council programs support California Water Action Plan
 - 💧 Bay-Delta Dashboard concept paper
 - 💧 Departments need to see and be able to control relevance to their programs
- 💧 Better support management decision making

Tie Efforts to Delta Priorities



💧 Delta Stewardship Council

💧 Environmental Data Summit vision paper

💧 Data Mgmt. Workgroup to detail implementation

💧 DPIIC high-impact science actions

💧 Build on Estuary and Wetland workgroup efforts

💧 Delta Conservancy and others

💧 Habitat restoration tracking and effectiveness monitoring

💧 Wetland Workgroup tools (e.g. EcoAtlas, CRAM)

💧 Delta Dashboard – Estuary Portal + B-D Live