SWAMP Assessment Framework

Outline 06/03/10

Recommendations from the SPARC review:

- SWAMP should develop a framework for statewide assessment to supplement the efforts currently taking place within the regions
- The framework should provide the conceptual structure for the acquisition and use of monitoring information and should include layers of increasing detail (from overall objectives to definitions of indicators and the methods used to evaluate them on a range of spatial scales
- The framework should include the design of a monitoring framework as well as data mining efforts that will support both statewide and local/regional objectives and that could be managed at the Regional Board level
- The assessment strategy should also provide the ability to prioritize individual issues for further investigation (e.g., specific agricultural chemicals, water withdrawals, endocrine disruptors) and a related approach to indicator tool development
- The assessment strategy should define at least at a high level the conceptual linkages among program goals, user needs, monitoring objectives, study design, and data analyses and interpretation
- List the needs of key clients and audiences so the statewide assessment strategy addresses these needs
- Develop a budget process to determine what proportion of SWAMP funds should be allocated to statewide objectives
- Develop an updated list of program goals so the statewide assessment strategy should build upon them.

Introduction

- Audience for this report is ….
- SPARC recommendation
  - Develop statewide assessment framework
  - Motivation for SPARC recommendation
- SWAMP's earlier role re statewide assessment
  - All waterbodies and beneficial uses
  - SWAMP's past efforts
- SWAMP now
  - SPARC preceded formation of Monitoring Council
  - SWAMP collaborating closely with Monitoring Council and theme-based workgroups
  - This assessment framework reflects SWAMP's relationship to Monitoring Council

SWAMP's Current Scope

- Matrix of water body types vs. beneficial uses provides overall structure; water body types analogous to themes and subthemes identified in Council recommendations / strategy
- SWAMP originally tasked with addressing all elements of the matrix
- SWAMP now focused on four key efforts:
  - Subset of elements in matrix
  - Technical support to theme-based workgroups / programs addressing other elements
  - Technical support to regional-scale programs

    - Support / contribute to statewide data management and data access infrastructure and tools
- Goals are to:
    - Improve comparability at regional and statewide scales
    - Improve efficiency, find cost savings
    - Support development of monitoring, assessment, and data management infrastructure for broad range of programs

Table 1. Water quality monitoring, assessment, and reporting planning matrix, summarizing key programs currently focused on subsets of the water body – beneficial use matrix. [may need tuning to better reflect Council's structure of themes / subthemes]

<table>
<tr><th rowspan="2">Water Body Type</th><th colspan="4">Beneficial Use</th><th></th></tr>
<tr><th>Aquatic Ecosystem Health</th><th>"Swimmable"</th><th>"Fishable"</th><th>"Drinkable"</th><th>Stressors & Processes</th></tr>
<tr><td>Wadeable Streams</td><td>SWAMP Healthy Streams Partnership</td><td rowspan="4">Beach Water Quality Workgroups</td><td rowspan="5">SWAMP Bioaccumulation Oversight Group</td><td rowspan="3">CDPH Drinking Water Program / DWR Water Quality Programs</td><td></td></tr>
<tr><td>Large Rivers</td><td>Stream Pollution Trends (SPoT) / EPA Flowing Waters Study</td><td></td></tr>
<tr><td>Lakes</td><td>EPA Lakes Survey</td><td></td></tr>
<tr><td>Estuaries</td><td rowspan="2">Areas of Special Biological Significance / Sediment Quality Objectives</td><td></td></tr>
<tr><td>Ocean, Coastal Waters & Bays</td><td>N/A</td><td></td></tr>
<tr><td>Wetlands</td><td>Wetland Monitoring Workgroup</td><td>N/A</td><td>N/A</td><td></td></tr>
<tr><td>Groundwater</td><td>N/A</td><td>N/A</td><td>N/A</td><td>Groundwater Ambient Monitoring & Assessment Program / CDPH Drinking Water Program / DWR Water Quality Programs</td><td></td></tr>
</table>

Assessment Approach

- Based on established principles of monitoring design and assessment
    - National Water Quality Monitoring Council cycle (Figure 1)
    - USEPA 10 elements
    - CA Monitoring Council performance measures
    - Describe principles in context of Table 1 and Council's theme-based workgroups

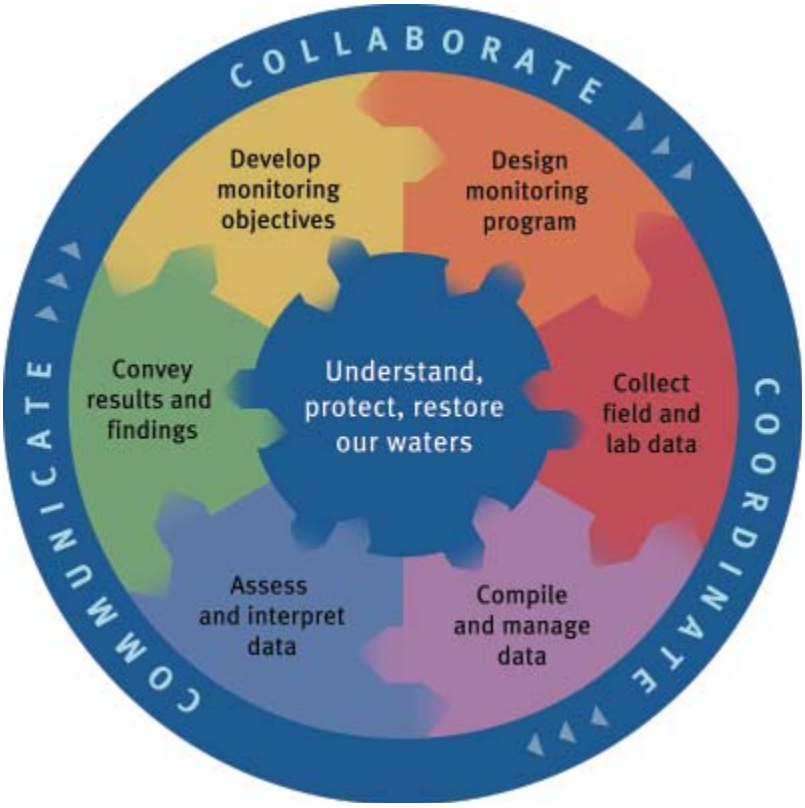

Figure 1. Iterative process of monitoring design, assessment, and communication as described by National Water Quality Monitoring Council.

- Define key steps in the iterative process
- Describe how / where SWAMP's skills provide opportunities to improve practice statewide and support efforts of theme-based workgroups, e.g.:
    - Develop large-scale probabilistic designs
    - Approach for identifying, refining, and standardizing indicators
    - Defining core assessment questions and approaches
    - Criteria for effective assessment thresholds
    - Data QA/QC and comparability
    - Important role for SWAMP coordinators at Regional Water Boards
- Nested spatial scales that reflect different management uses and priorities (Figure 2)

- SWAMP and the Monitoring Council relatively more involved at larger scales
- Monitoring and assessment approaches at more localized scales must produce data and information (for key parameters) that can be readily aggregated to larger scales
- SWAMP's support of watershed and regional programs (e.g., San Gabriel River, Santa Clara River, Delta RMP) is one important mechanism for accomplishing this

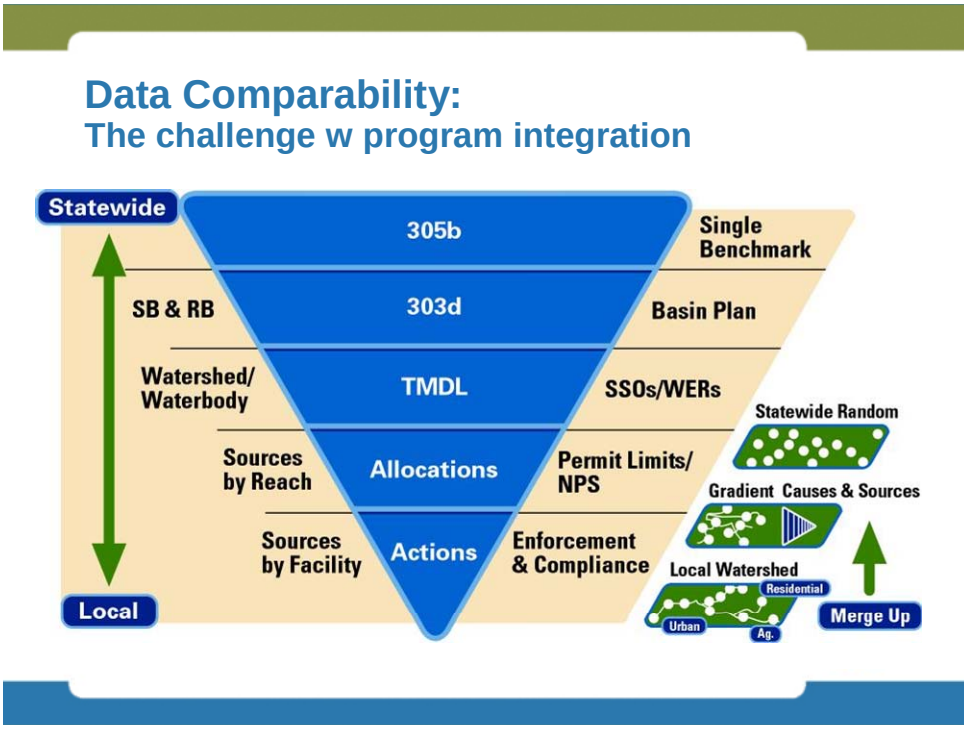

Figure 2. Nested spatial scales involved in monitoring and assessment.

Requirements and Guidance

- Present guidance analogous to that developed for portal development