

*A Symposium on SEZ Restoration Monitoring in the Tahoe Basin:
Are we getting the information we need?*

Science Needs

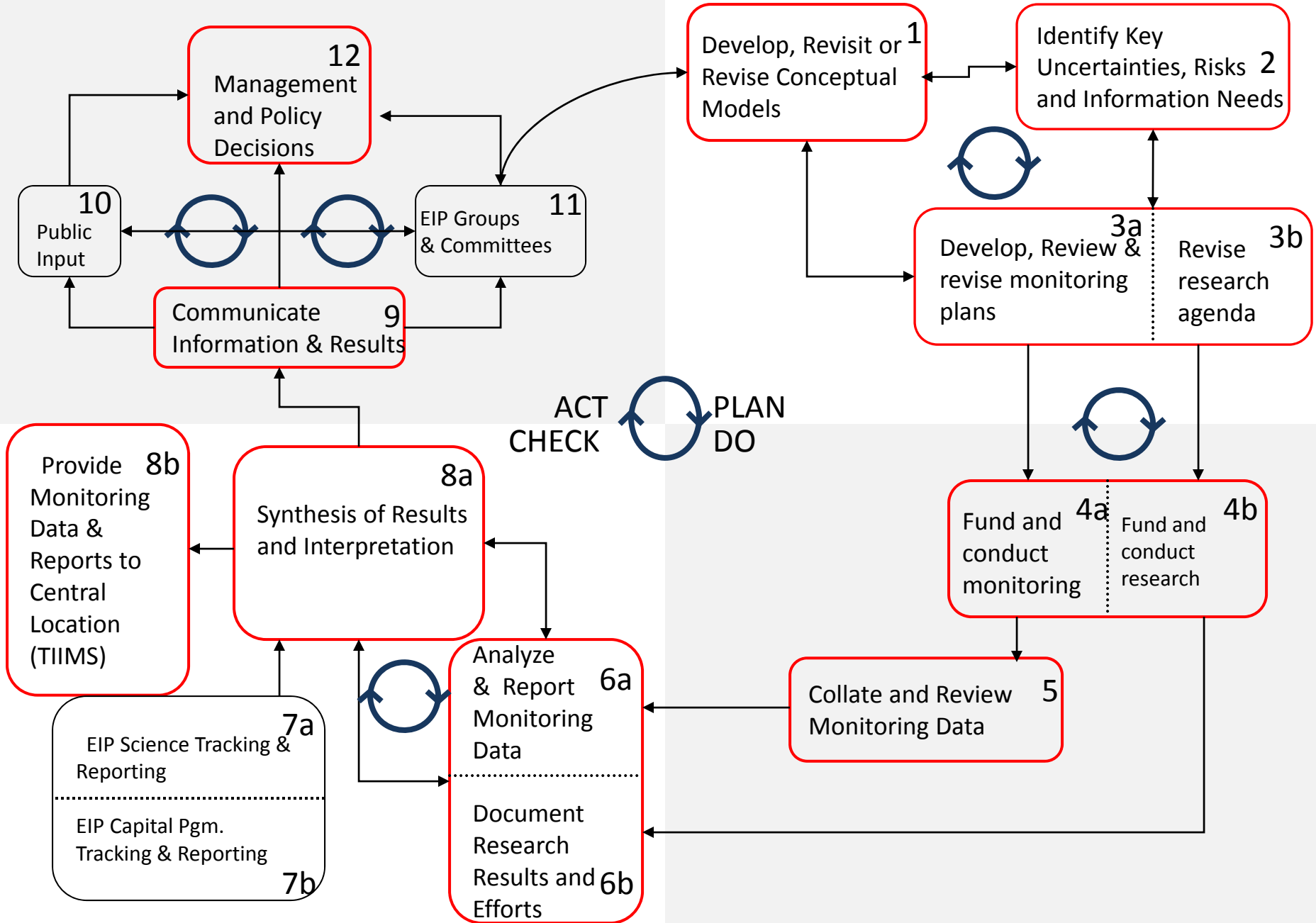
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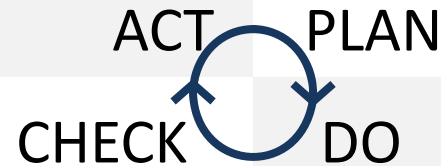
EIP Science Program Management System



Key Audiences

Policy Makers

Science/Research
Community



Science Integration
Groups
(TSACC, SMIT)

Implementers

Questions

- *How will the outcomes be reported?*



- Agencies concur on utility of framework for design of projects and monitoring plans



Questions

- *Are there other areas of need or support for standardization?*
- *Where will the data/reports be stored?*
 - *TIIMS?*
 - *My Water Quality website?*
- *Who will do the check?*
 - *Advisory team?/SMIT workgroup?*

Questions

- *Where are the best opportunities to adopt standardized protocols?*
 - Geomorphic stream monitoring (cross-sections, longitudinal profiles)
 - Bank stability or erosion?
 - Macroinvertebrates?

Monitoring/Quantifying Effectiveness: *Reference Conditions and Control Sites*

- *Is there a need to synthesize information about reference conditions and significant thresholds?*
- *Is there a need to refine/develop classification systems?*
- *What is the role of LTIMP in ambient monitoring?*



- **Need to evaluate current inventory of SEZ conditions and classification data to identify gaps and utility of reference conditions and control sites**

Questions

- *Under what conditions are controls being used?*

Questions

- *Is there a commitment to investing in rapid assessment tools for programmatic reporting?*

- Research opportunities to validate rapid assessment methods (e.g., CRAM stream module, fen PFC method) using level III data, particularly for general functions



Questions

- *Who will check the results?*

Questions

- *Is there utility in using rapid assessment methods to monitor projects, or is this seen as a program-level need?*
- *In either case, who will do it?*

Questions

- *Are there clear and specific policy directives regarding wildlife?*

Question: in the “build it and they will come” philosophy—*who are they?*

- Need more specific criteria to formulate robust questions
- Many models, inventories, and datasets are available
- Several recent proposals have not been funded



Questions

- *Should there be an effort to synthesize existing research, modeling tools, and monitoring?*
- *Would a Rapid Assessment tool like CRAM be sufficient to address objectives?*

Questions

- *Have data been collated and analyzed?*

Monitoring/Quantifying Water Quality Benefits

Stream Channel Erosion

Questions

- *How are water quality benefits of SEZ restoration going to be represented and reported to the public?*
- *Would results lead to reprioritization of investments?*

- Substantial investment in modeling tools
- *How can LTIMP be used effectively to evaluate these water quality benefits?*



Questions

- **Commitment to check seems questionable--***Will monitoring be used to check project effects, modeling tools, and programmatic objectives?*
- *How much would it really cost to design a system to do this?*

- Significant investment in monitoring of channel geomorphology and bank stability

Floodplain Deposition

Questions

- *Is floodplain deposition going to be claimed as a benefit of SEZ restoration?*
- *Would results lead to reprioritization of investments?*

Questions

- *What are the relative WQ benefits of different SEZ types (e.g., wet meadows versus marshes)*
- *What are hydrologic pathways and opportunities for pollutant reduction in urban areas using LiDAR dataset*



Questions

- ***How will monitoring and modeling be connected to evaluate the objectives?***
- *How much would it really cost to design a system to do this?*
- *Is there a need for a “rapid response” mechanism?*

Questions

- *Will implementers claim a water quality benefit from floodplain deposition, and if so, how are they proposing to monitor water quality?*

Monitoring/Quantifying Benefits Given Climatic Variation

There appears to be support for evaluating effects of climate on SEZ conditions and restoration—*is there support for a larger investment in programmatic monitoring infrastructure?*

Research (Coats et al.) underway to consider effects on hydrology; further opportunities in Round 11
What kinds of data are needed to evaluate climate effects and distinguish treatment from climate effects?
How can LTIMP be more effective?



Synthesis and policy review underway to consider effects on aquatic resources

Is there a need for a long-term regional monitoring program to evaluate climate and treatment effects?

What is the role of LTIMP?

Questions

- *How valuable would this information be in design and monitoring of projects?*

Take Home Points: Policy Makers

- How important is it to quantify benefits in terms of wildlife and water quality?
 - Is “build it and they will come” sufficient?
 - Is a theoretical water quality benefit sufficient, or does it need to be validated through some kind of monitoring?

Take Home Points: Researchers

- LTIMP role and structure
- What kinds of data are needed to evaluate climate effects, distinguish treatment from climate effects, and refine conceptual models?
- Is there a need to synthesize existing information about reference conditions and significant thresholds?

Take Home Points: Implementers

- Where is there consensus about standardizing protocols?
- What support is there in terms of staffing and funding for program-level effectiveness monitoring?

Take Home Points: Science Integration Groups

- How can research modeling and monitoring be linked to check assumptions about program effectiveness?
- What is the support for a central repository?
- Who will lead this integration effort, particularly for SEZ conditions?