

Delta Science Plan

One Delta, One Science

Questions for
Independent Science Board
June 20, 2013

Delta Science Plan

Structure of Science Strategy
Proposed Summits
Peer Review
Guiding Teams
Synthesis Mechanisms
Future of Delta Science Program

Performance Metrics

Overview – The Delta Science Plan

PROBLEM STATEMENT: There are many science efforts in the Delta, but most address a single objective or programmatic question. Despite the close working relationships of individual scientists, it is very difficult to track all activities on a given topic and what data, models and results are being generated. This lack of coordination makes it very difficult to conduct synthesis that can provide the broadly integrated knowledge base needed to provide the system-wide perspective essential to implement the Delta Plan and support adaptive management to achieve the Co-Equal Goals. In addition, there is no generally accepted and adequately supported organizational structure and process for ongoing scientific synthesis. Not surprisingly, there are only few examples of broad synthesis efforts in the Delta. But without them, "best available" science will not support for policy and management decisions.

OBJECTIVES	ACTIONS	EXPECTED OUTCOMES	DELTA SCIENCE PROGRAM ROLE(S)	DELTA PLAN RELEVANCE	RESOURCES
<i>Achieve the following:</i>	<i>Take the following actions to address the problem and meet the objectives:</i>	<i>Accomplished actions are expected to produce the following evidence or service delivery:</i>	<i>Delta Science Program roles in achieving the objectives, taking actions and producing expected outcomes:</i>	<i>Expected outcomes are linked to implementing the following elements of the Delta Plan:</i>	<i>To accomplish the set of actions the following are needed:</i>
<ul style="list-style-type: none"> Coordinate and facilitate science synthesis activities that contribute to holistic and balanced understanding of the Bay-Delta in a manner that complements and supports the integrated view provided by the Delta Stewardship Council Transform the policy, science and management interfaces to create shared understanding of problems and science-based solutions to achieve the coequal goals Create a shared vision for One Delta, One Science – the framework to develop an open Delta science community that works together to build a shared body of knowledge with the capacity to adapt and inform future water and environmental decisions in the Delta Demonstrate how science and adaptive management are essential for major planning, policy and management decisions 	<ul style="list-style-type: none"> Develop and implement a Delta Science Plan as a framework for conducting science that: <ul style="list-style-type: none"> Transforms the policy-science and science-management interfaces through new organizational structure (Chapter 2) Formalize the role of science and adaptive management in Delta decision making (Chapter 3) Grow the science knowledge base (Chapter 4) Provide sufficient and stable funding for Delta science (Chapter 5) Develop the framework for developing a Triennial Science Implementation Plan to coordinate adaptive management programs Create and sustain a web-based clearing-house for tracking science activities, their relationship to regulatory instruments, start 	<ul style="list-style-type: none"> Clear communication of synthesized science to policy and management decision-makers. A shared body of knowledge including understanding of uncertainties and current studies to explore competing hypotheses. Use of a shared body of knowledge as best available science to inform and select policy and management decisions. A strategy for collaborative adaptive management tailored to answering key knowledge gaps. A growing scientific knowledge base connected to adapting and developing policies Sustainable funding for Delta science and for supporting infrastructure All Bay-Delta water and environmental policy and management is founded on the highest caliber science Increased rate of learning as a result of coordinated 	<ul style="list-style-type: none"> Facilitate development and synthesis of best available science to grow the knowledge base. Establish a check-list for best available science applications. Foster communication of best available science to Bay-Delta decision makers. Provide technical assistance to advise adaptive management plans and provide direct links to a holistic view of adaptive management in the Delta Facilitate the process for establishing system-wide research priorities that integrate priorities of agencies and be the focal point of peer review of the intellectual merit of research priorities proposals. Manage the science project /program clearing house 	<ul style="list-style-type: none"> Develop, coordinate, and promote the use of science through the Delta Science Program Coordinated and collaborative implementation of the Delta Plan Develop an interagency structure for decision-making that fosters communication among scientists, decision-makers and stakeholders Provide a strategy for leveraging steady and reliable funding to sustain needed scientific advancements and infrastructure Address the science and information needs in the Delta Plan 	3

Delta Science Strategy

DELTA SCIENCE PLAN

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SCIENCE ACTION AGENDA

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State of Bay-Delta Science

STATE OF BAY-DELTA SCIENCE

Delta Science Strategy

DELTA SCIENCE PLAN

- ✓ Prioritization Processes
 - Research
 - Synthesis
 - Infrastructure
- ✓ Science Infrastructure Summits
- ✓ Common Peer Review Process
- ✓ Integrative Adaptive Management at System Level
- ✓ Teams to develop common understanding
 - Policy-Science Team and Science Synthesis Team

SCIENCE ACTION AGENDA

State of Bay-Delta Science

Delta Science Strategy

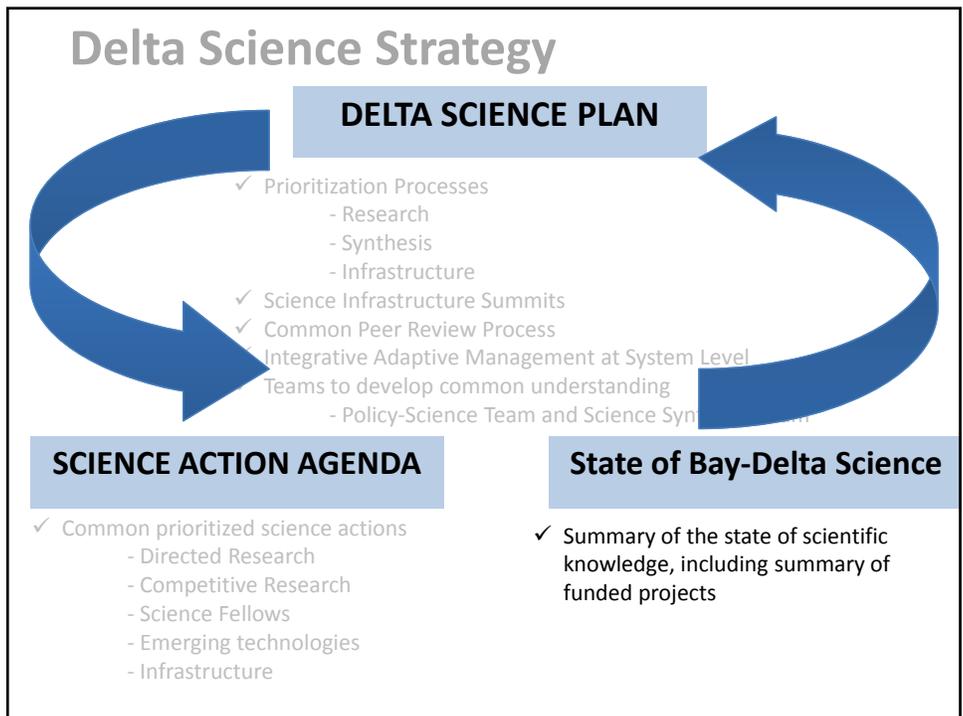
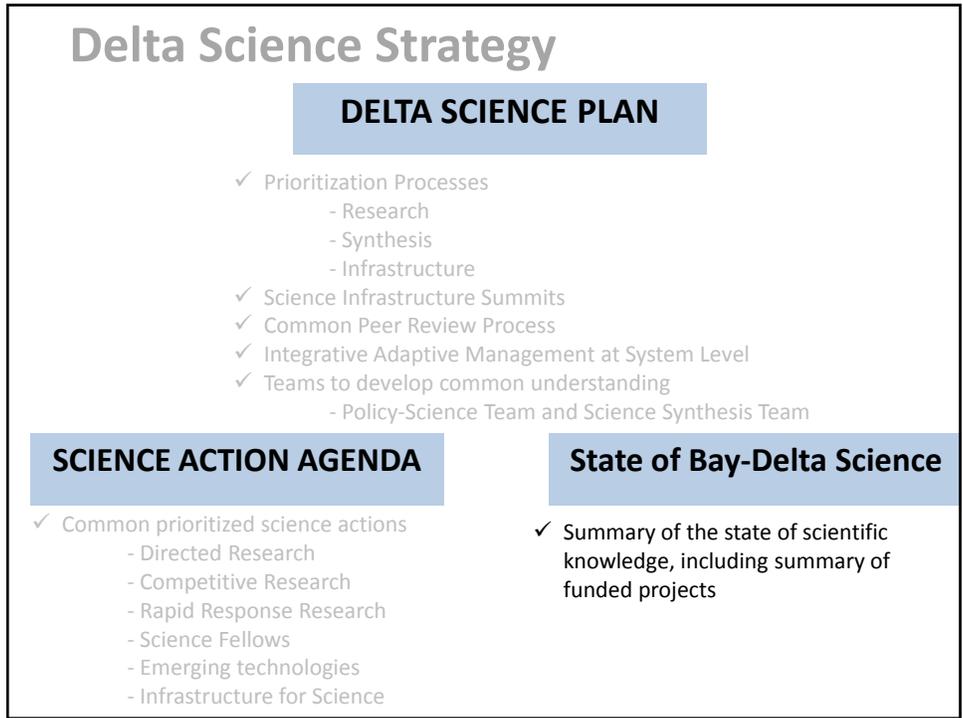
DELTA SCIENCE PLAN

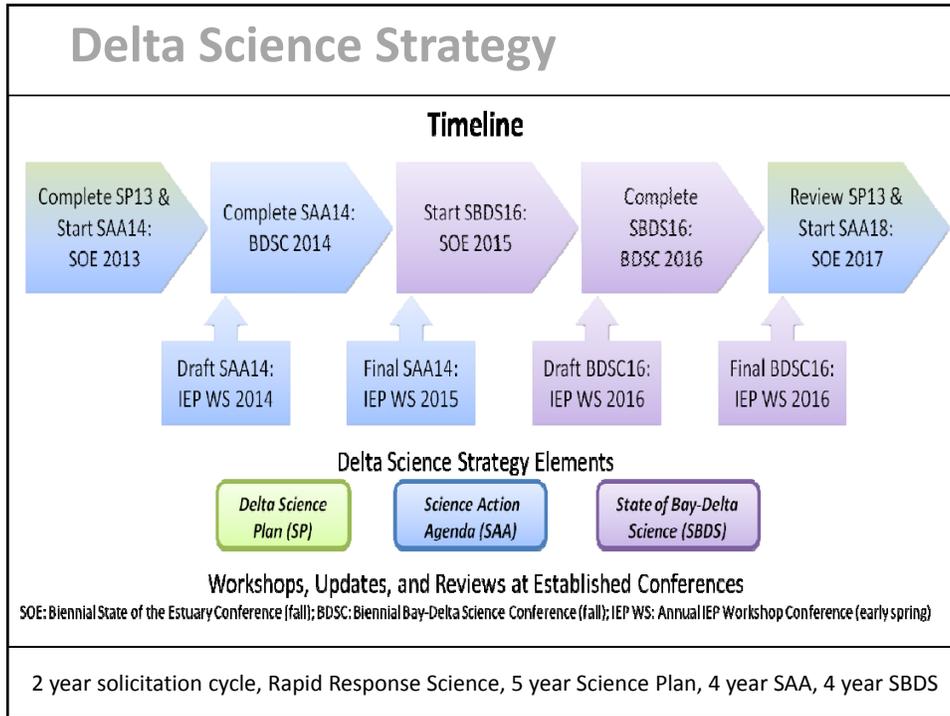
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SCIENCE ACTION AGENDA

State of Bay-Delta Science

- ✓ Common prioritized science actions
 - Directed Research
 - Competitive Research
 - Rapid Response Research
 - Science Fellows
 - Emerging technologies
 - Infrastructure for Science





Science Summits

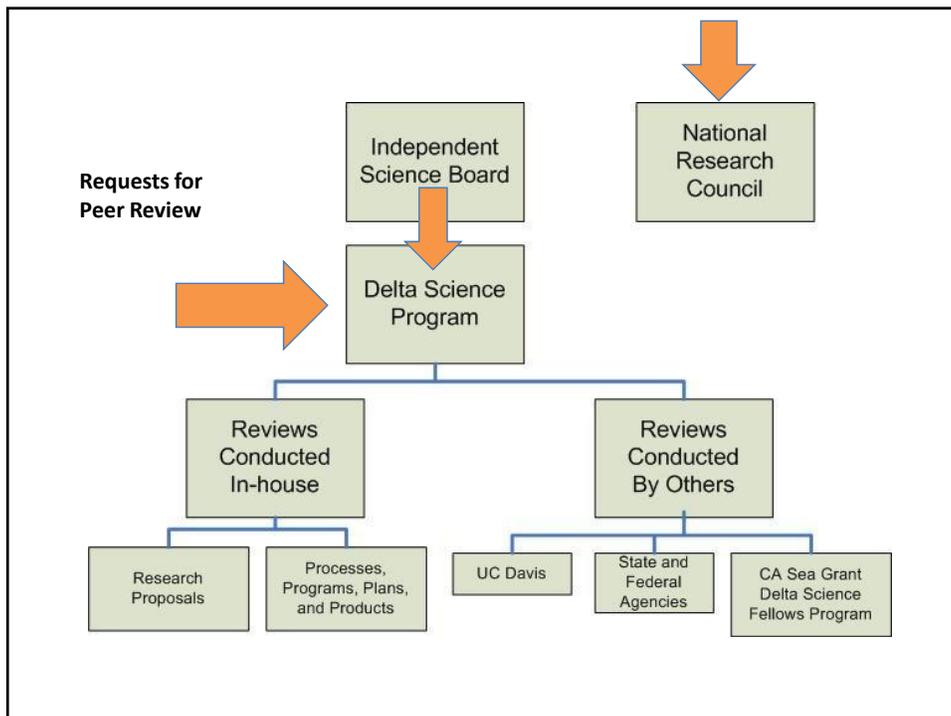
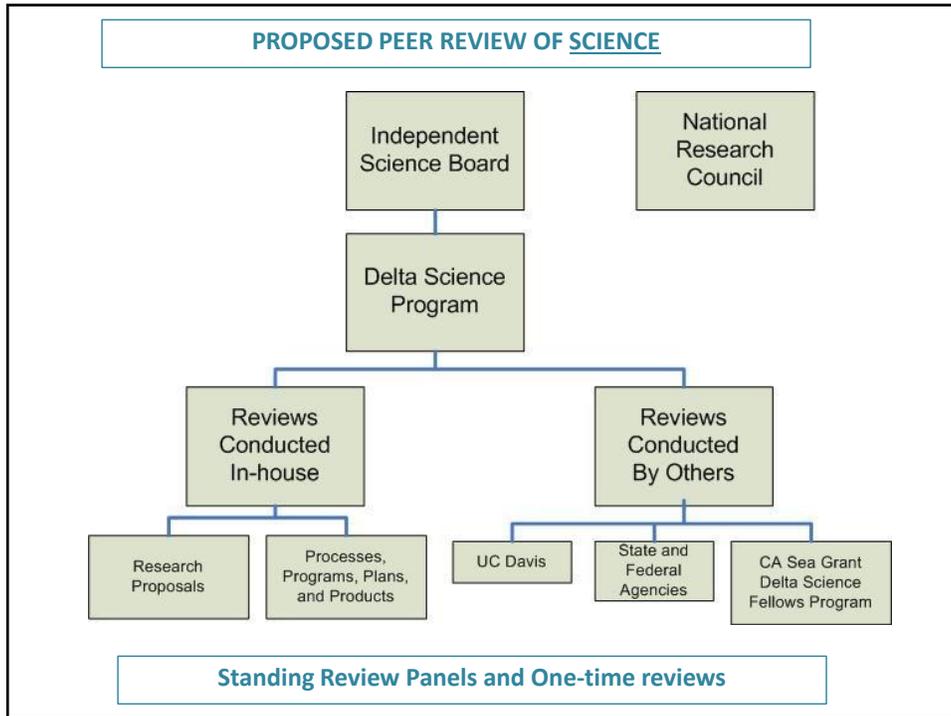
Building, sustaining innovations and emerging initiatives

- ✓ Data Management – interoperability, web services
- ✓ Community Modeling
- ✓ Adaptive Management

Immediate Study

- ✓ Assessment of monitoring – 2 year funded study

One Delta, One Science

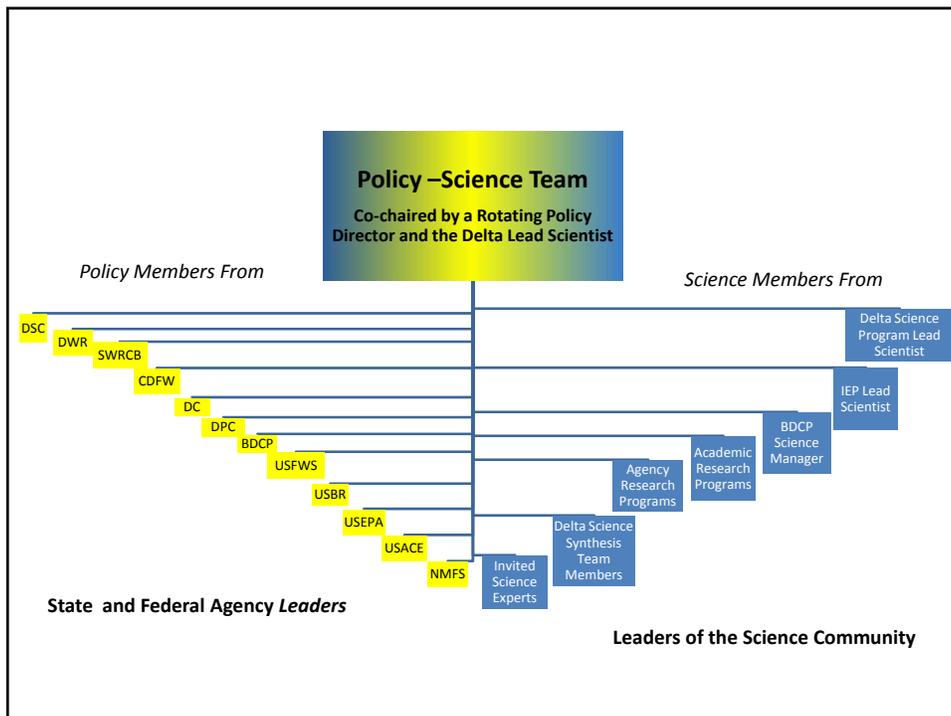


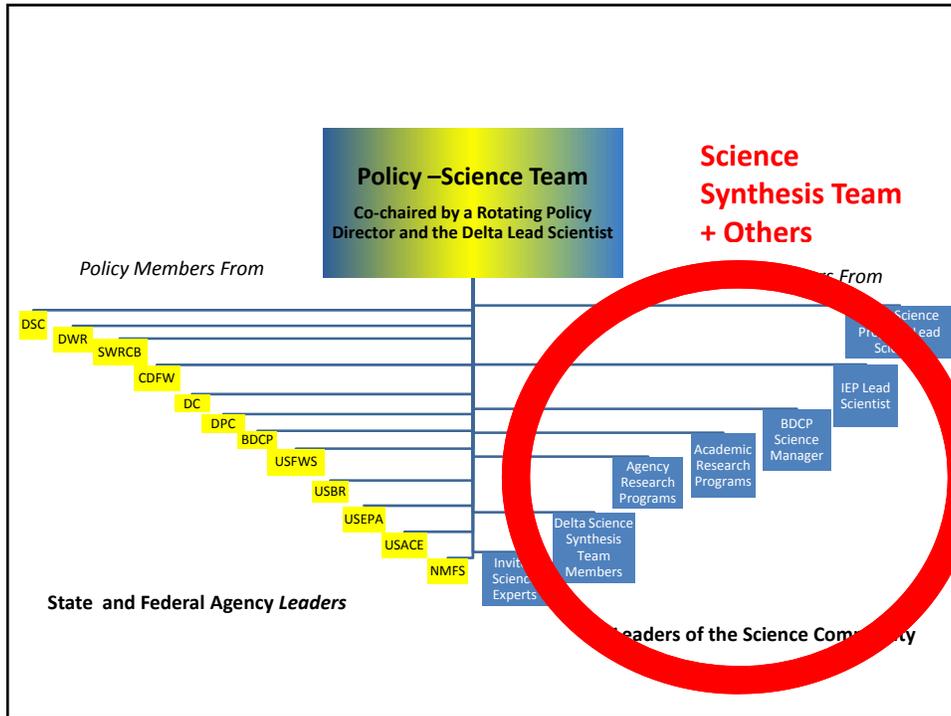
Revised Science Management Structure

These teams meet around issues.

Policy Science Team

Science Synthesis Team





Synthesis Mechanisms

- ✓ Invited paper: including CABA, . . .
- ✓ Invited panel
- ✓ 'Delta Center for Analysis and Synthesis' mechanism
- ✓ PSP Grant
- ✓ Science Fellow

Discussion document only

The Future DSP

- Independent
- Leadership – role of staff and lead scientist
- Balancing '*Feast or Famine*' cycles
- Concept of 'rotators' – community of science
- Delta Collaborative Analysis and Synthesis

The Future for Agency/Local Government Scientists

- Enabling the next generation of scientists
- Career-track scientists
- Access to basic tools – journals
- Time for Synthesis/Innovation

Discussion document only

Thank You for your attention

We welcome your input