# Delta Science Plan Update

## Organizing Science to Inform Management and Policy

Delta Stewardship Council Meeting

February 21, 2013

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# Conclusions

1. Strengthen science infrastructure
2. Establish a policy-science team
3. Strengthen science-management interfaces
4. Establish a Delta Science Synthesis Team and facilitate synthesis activities

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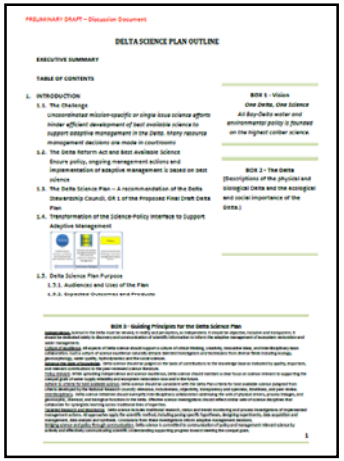
# *Delta Science Plan Outline*

- Strategies/approaches for:
  - Transforming the Science-Policy-*Management* Interfaces
  - Organizing Science
  - Science to Inform Adaptive Management
  - Strategies and Approaches for Building Best Available Science
  - Funding Delta Science
  - The Future of Delta Science



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DELTA SCIENCE PLAN OUTLINE

EXECUTIVE SUMMARY

TABLE OF CONTENTS

1. INTRODUCTION
   1.1. The Challenge
   1.2. The Delta Reform Act and Best Available Science
   1.3. The Delta Science Plan – A recommendation of the Delta Stewardship Council, Ch 1 of the Proposed Final Draft Delta Plan
   1.4. Transformation of the Science-Policy Interface to Support Adaptive Management
   1.5. Delta Science Plan Purpose
      1.5.1. Audiences and Uses of the Plan
      1.5.2. Expected Outcomes and Products

BOX 1 - Vision
*One Delta, One Science*
*All Bay-Delta water and environmental policy is founded on the highest caliber science.*

BOX 2 - The Delta
[Descriptions of the physical and biological Delta and the ecological and social importance of the Delta.]

BOX 3 - Guiding Principles for the Delta Science Plan

# Strengthen Science Infrastructure

- Prioritizing research
- Shared models
- An integrated monitoring approach
- Data management and accessibility
- Analysis and synthesis of scientific knowledge
- Independent scientific peer review and advice
- Communication
- Resolving uncertainties
- Scientific disagreement

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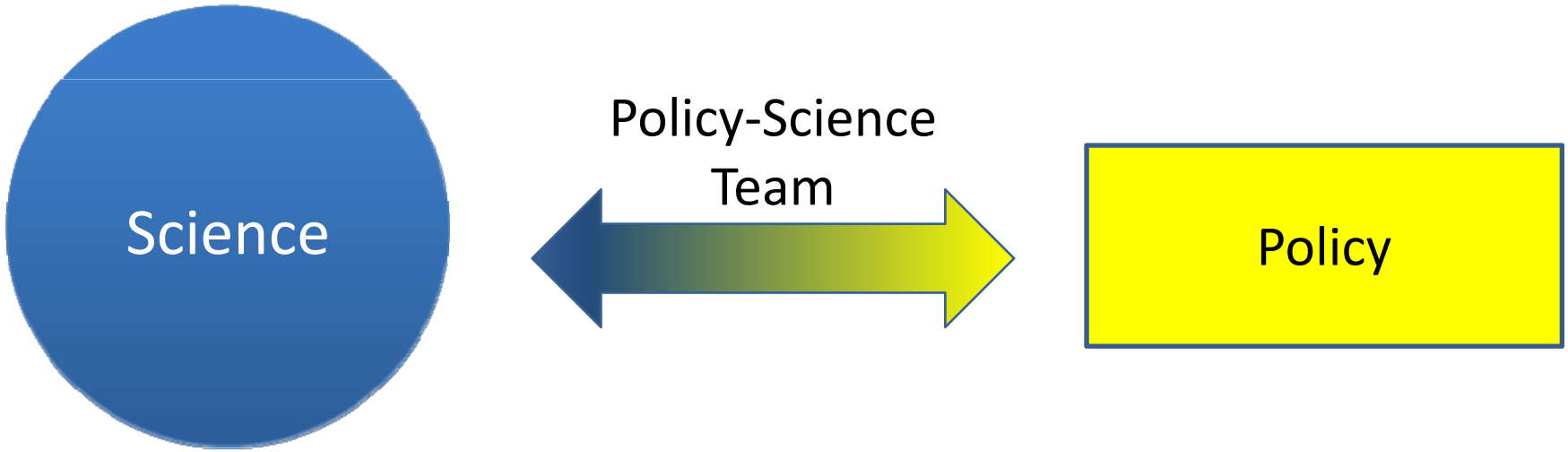
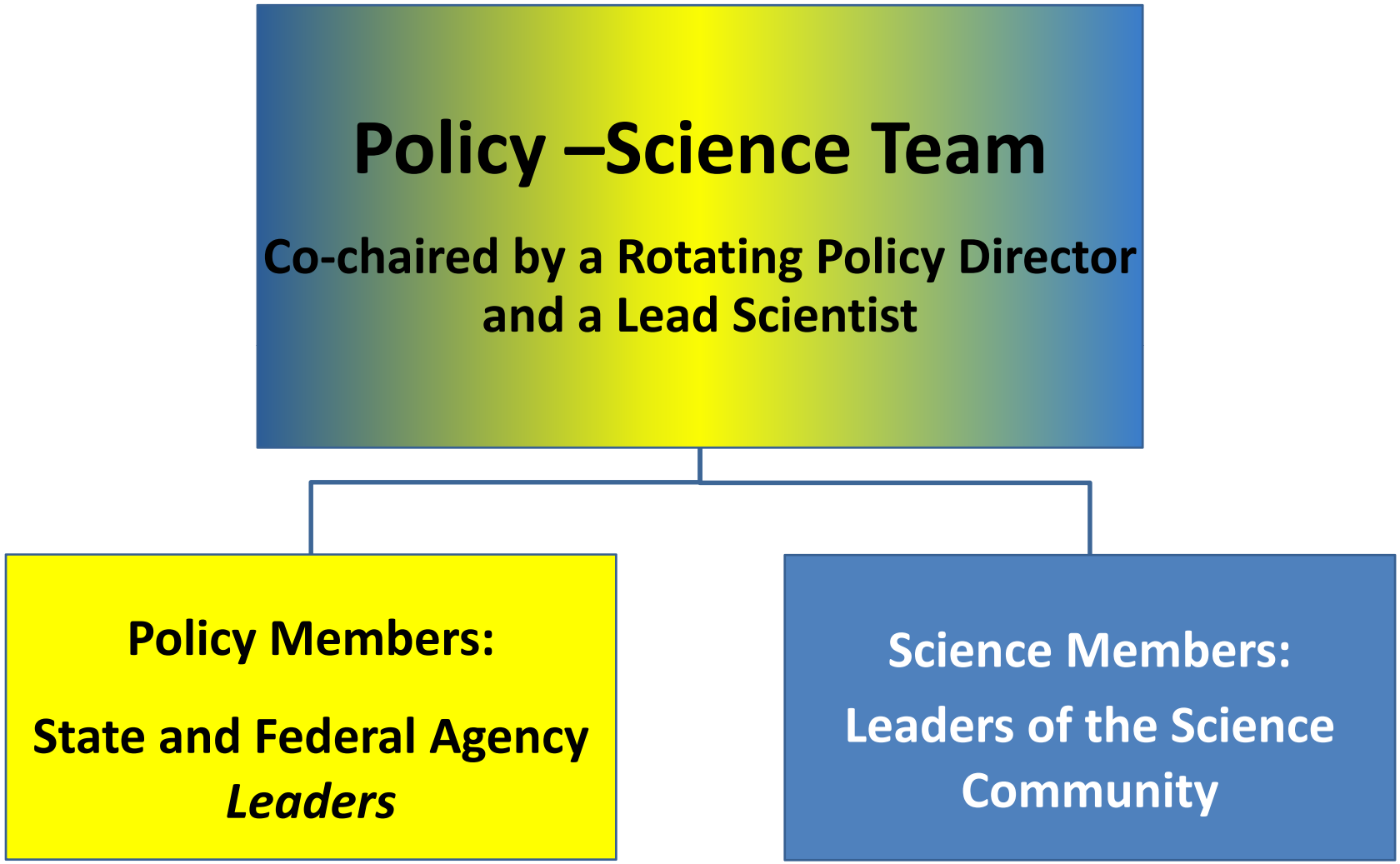
# Transforming the Science-Policy Interface

*"A collaborative effort is needed, where scientists and governance professionals work together as a single team, rather than have two separate entities."*

- National Research Council Committee on Sustainable Water and Environmental Management in the California Bay-Delta (2012)



# Draft Concept




Policy-Science Team

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# Transformation of the Science - Policy - Management Interfaces

Policy-Science Team

Policy

Science

Science-Management Teams

Management

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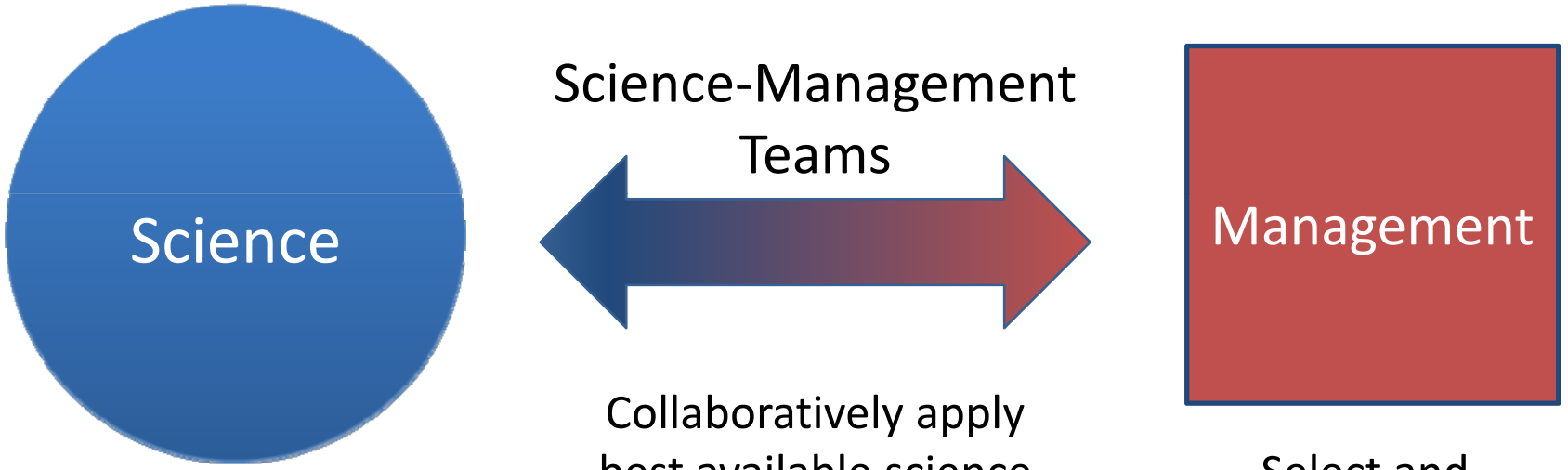
# Strengthen Science-Management Interfaces




Collaboratively develop, synthesize and communicate best available science

Collaboratively apply best available science and advise adaptive management of projects

Select and implement management based on policy directives

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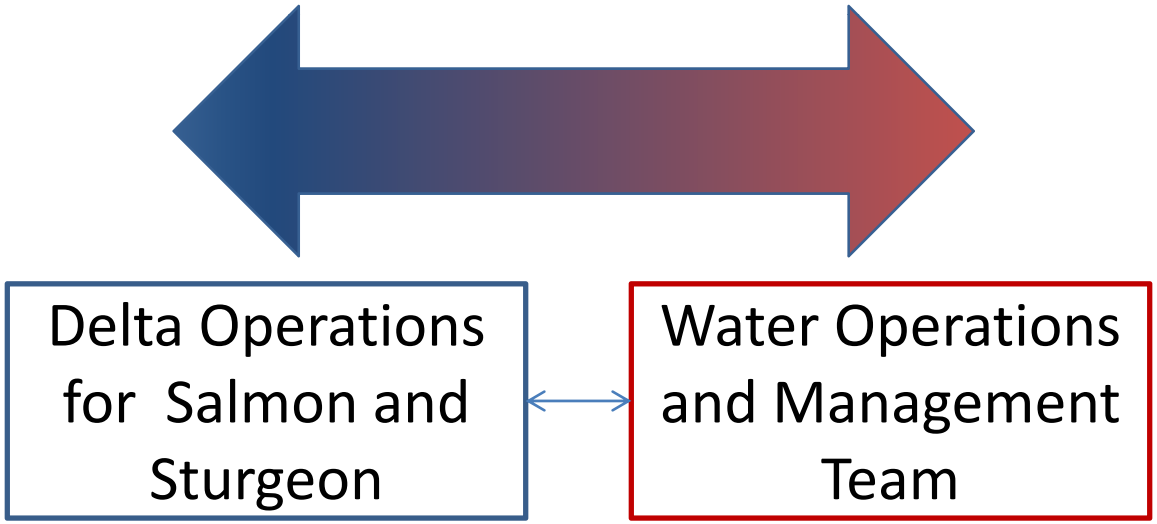
# Example Science-Management Team

## Long-term Operations of the Central Valley Project and State Water Project



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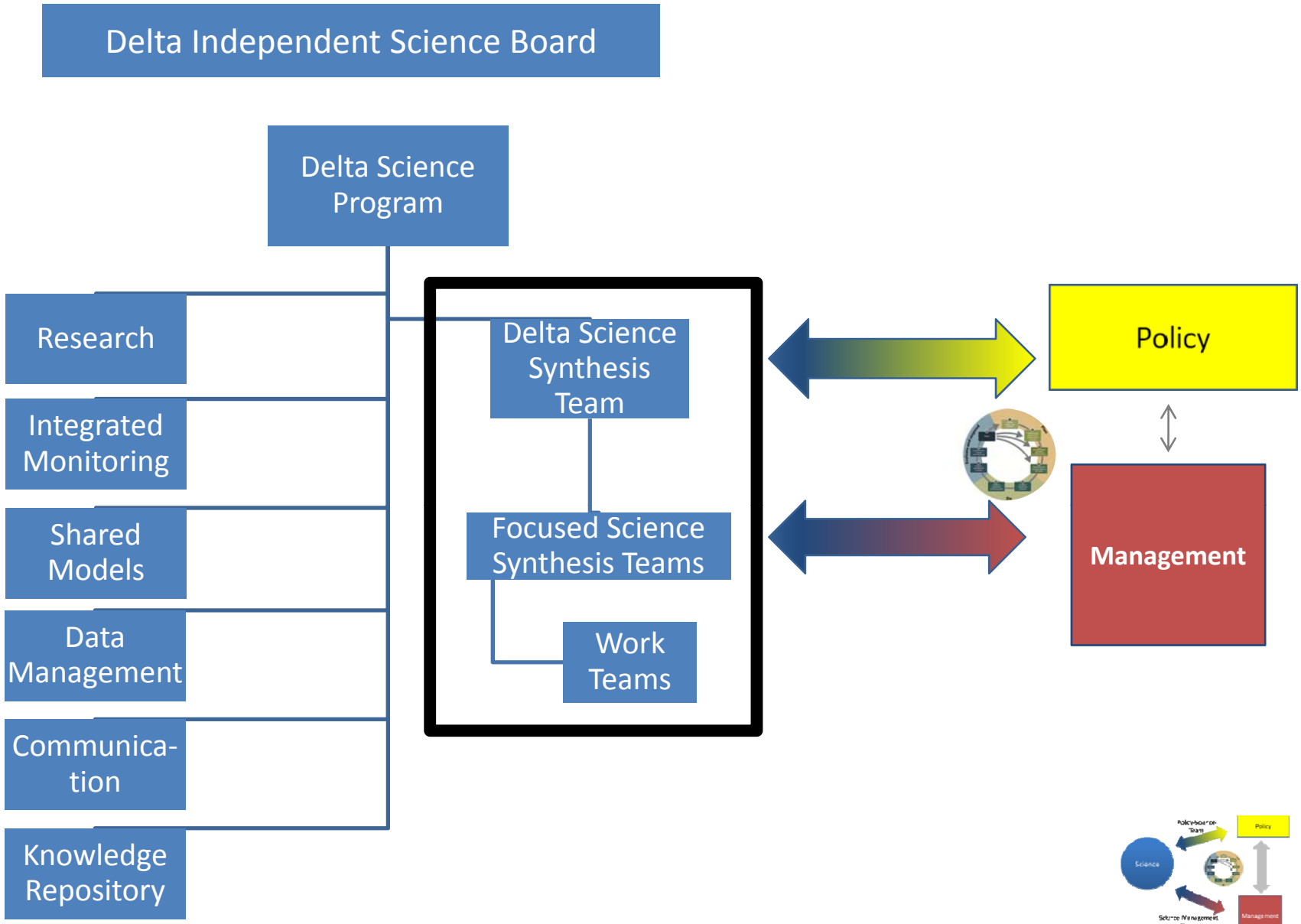
# Organizing Science – Big Picture

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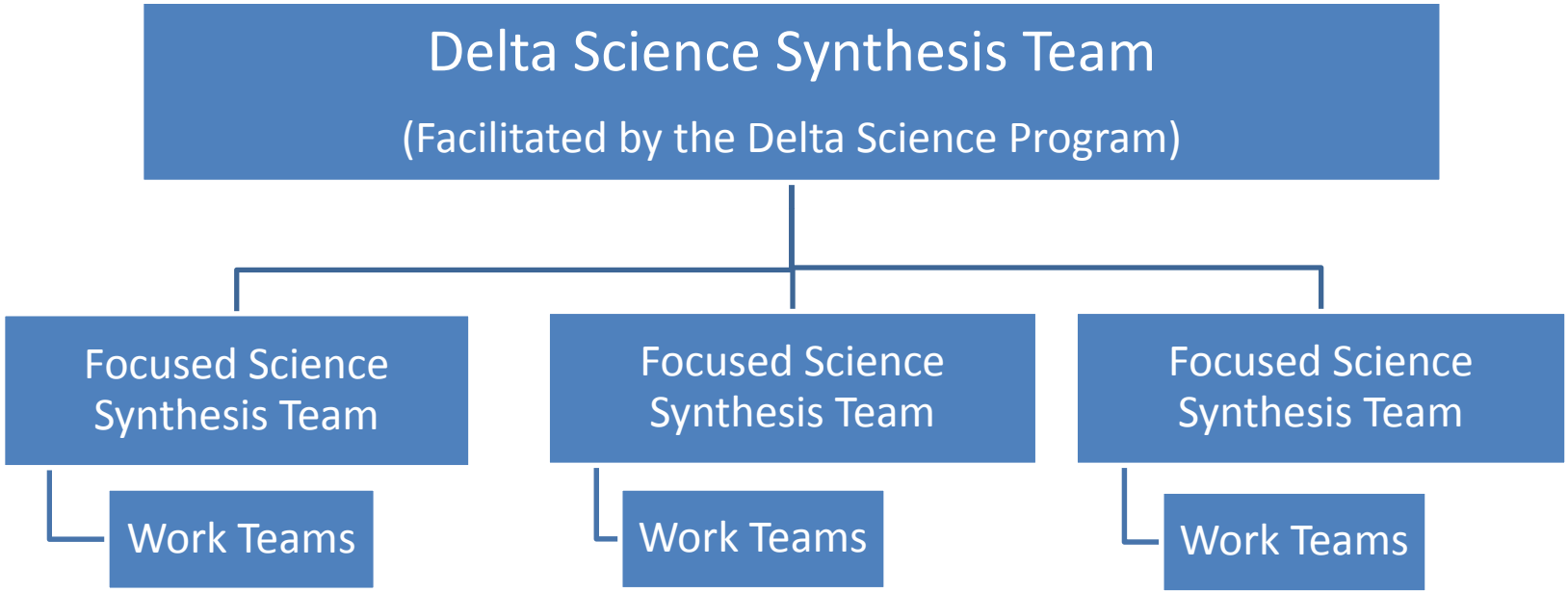
# Organizing Science Synthesis

Community of Science

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# Science Synthesis: NCEAS Example

Delta Science Synthesis Team

Focused Science Synthesis Team

National Center for Ecological Analysis and Synthesis (NCEAS)
IEP Work Team

Work Teams

POD Work Teams

Food Webs Work Team

Contaminants Work Team

*Ecological Applications*, 20(5), 2010, pp. 1417–1430
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Analysis of pelagic species decline in the upper San Francisco Estuary using multivariate autoregressive modeling (MAR)

Ralph Mac Nally,[1,10] James R. Thomson,[1] Wim J. Kimmerer,[2] Frederick Feyrer,[3] Ken B. Newman,[4] Andy Sih,[5] William A. Bennett,[6] Larry Brown,[7] Erica Fleishman,[8,11] Steven D. Culberson,[9,12] and Gonzalo Castillo[4]

[1]*Australian Centre for Biodiversity, School of Biological Sciences, Monash University, Melbourne 3800 Australia*
[2]*Romburg Tiburon Center, San Francisco State University, 3152 Paradise Drive, Tiburon, California 94920 USA*
[3]*Applied Science Branch, U.S. Bureau of Reclamation, 2800 Cottage Way, Sacramento, California 95825-1898 USA*
[4]*U.S. Fish and Wildlife Service, 4001 N. Wilson Way, Stockton, California 95632 USA*
[5]*Department of Environmental Science and Policy, University of California, Davis, One Shields Avenue, Davis, California 95616 USA*
[6]*Center for Watershed Sciences and Bodega Marine Laboratory, University of California, Davis, P.O. Box 247, Bodega Bay, California 94923 USA*
[7]*U.S. Geological Survey, Placer Hall, 6000 J Street, Sacramento, California 95819-6129 USA*
[8]*National Center for Ecological Analysis and Synthesis, University of California, 735 State Street, Suite 300, Santa Barbara, California 93101 USA*
[9]*CALFED Science Program, 650 Capitol Mall, 5th Floor, Sacramento, California 95814 USA*

http://www.water.ca.gov/iep/pod/

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