The State of Bay-Delta Science 2008

Briefing for The Delta Vision Blue Ribbon Task Force

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Perspective One:

The Delta is a continually changing ecosystem. Uncontrolled drivers of change (e.g., population growth, changing climate, land subsidence, seismicity) mean that the Delta of the future will be very different from the Delta of today.

[A Delta] governance system must be supported by robust programs of science focused on improving understanding of the Delta and of the effects of policies and programs.

–Delta Vision Blue Ribbon Task Force, 2007

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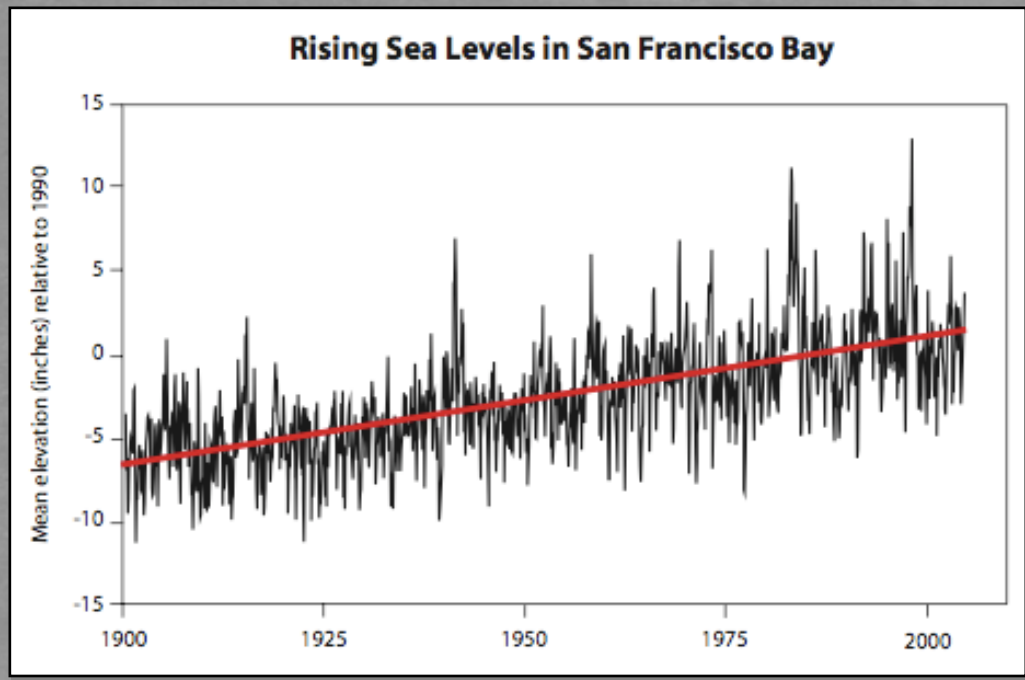
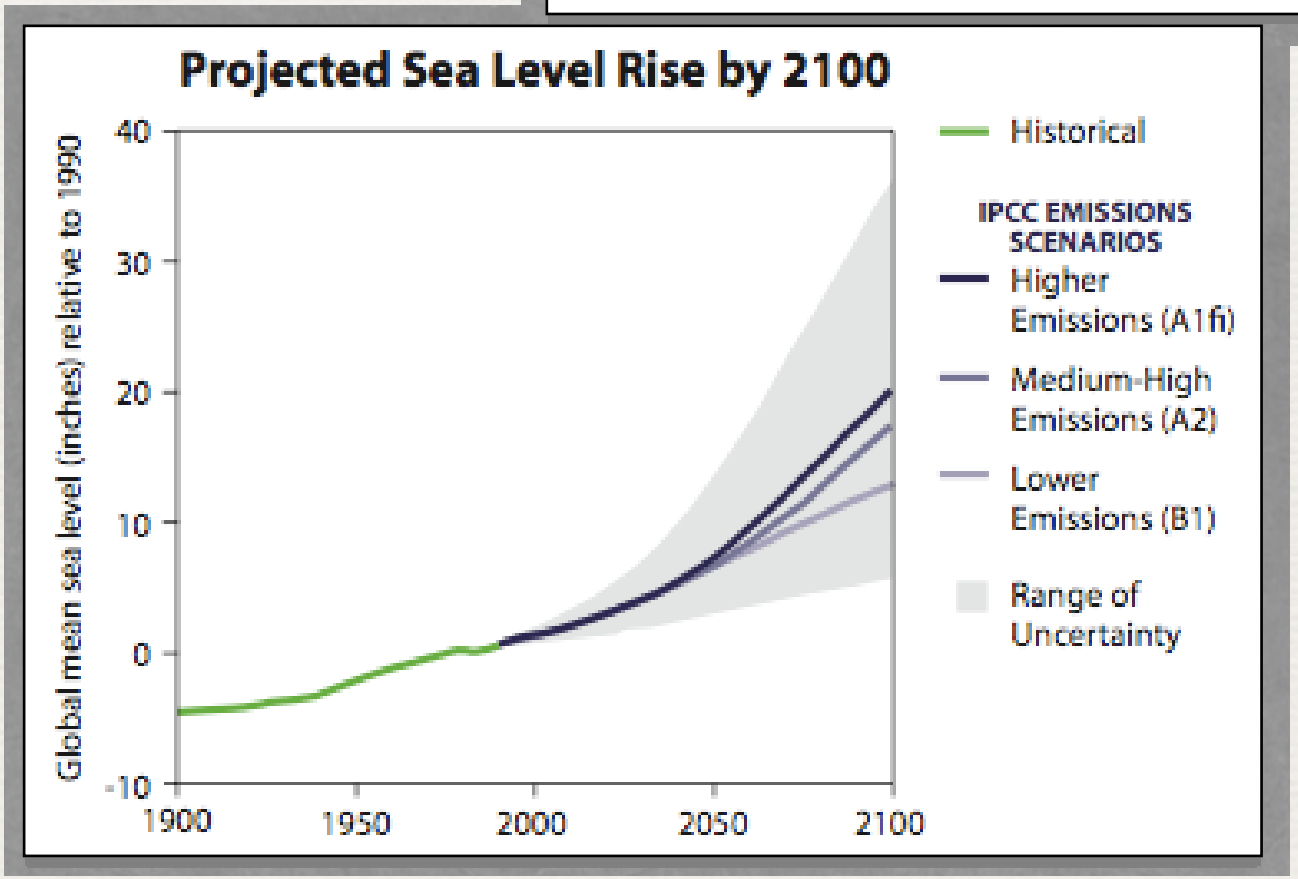
Sea Level Rise





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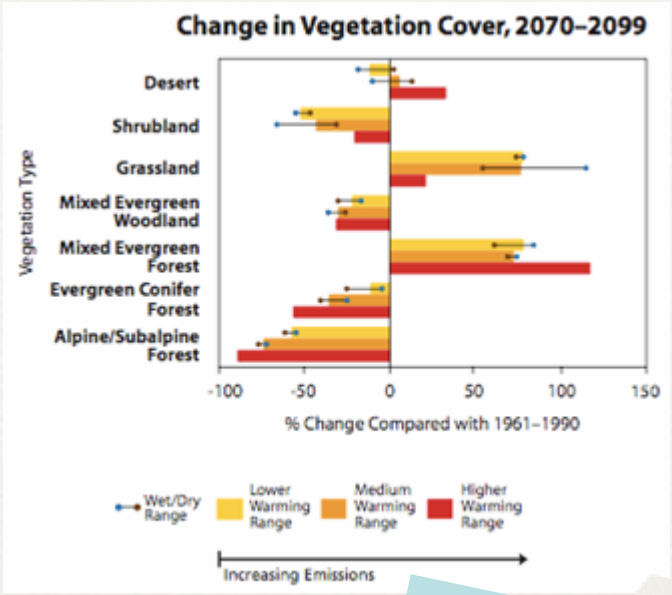
Perspective Two:

Because the Delta is continually changing, we cannot predict all the important consequences of management solutions. The best solutions will be robust but provisional, and will need to be responsive and adaptive to future changes.



Adaptive management provides an effective tool for addressing future uncertainty and is heavily dependent on a solid infrastructure for science. Focused Delta science as part of a system of adaptive management will be an essential component of the new vision.

–Delta Vision Blue Ribbon Task Force, 2007

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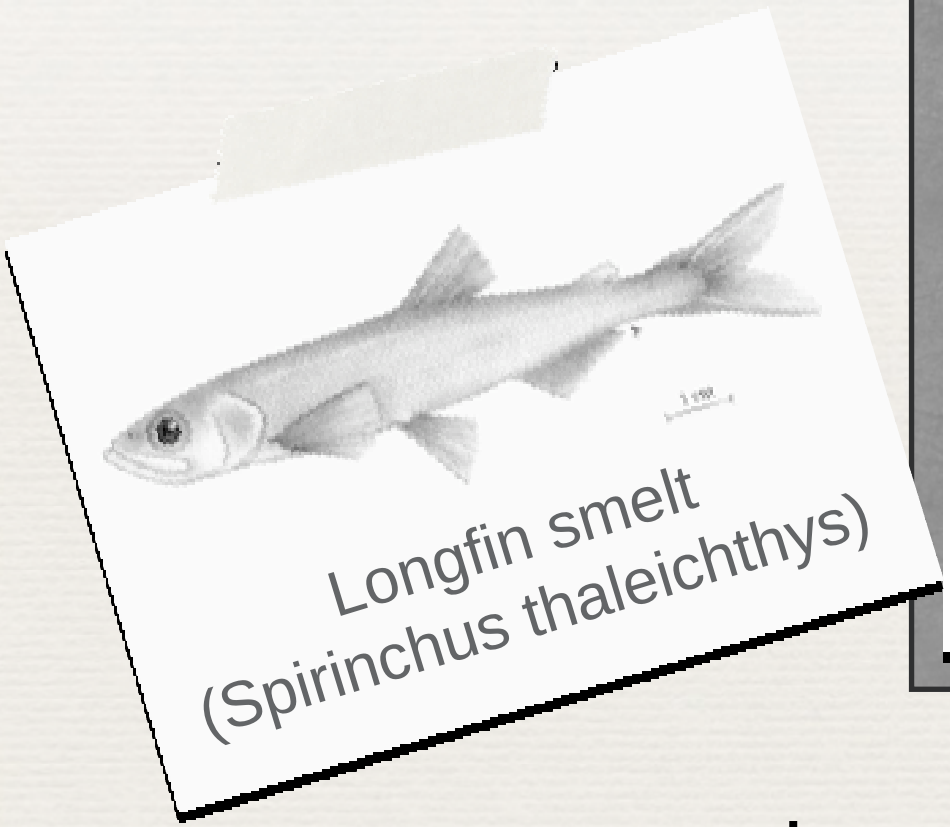
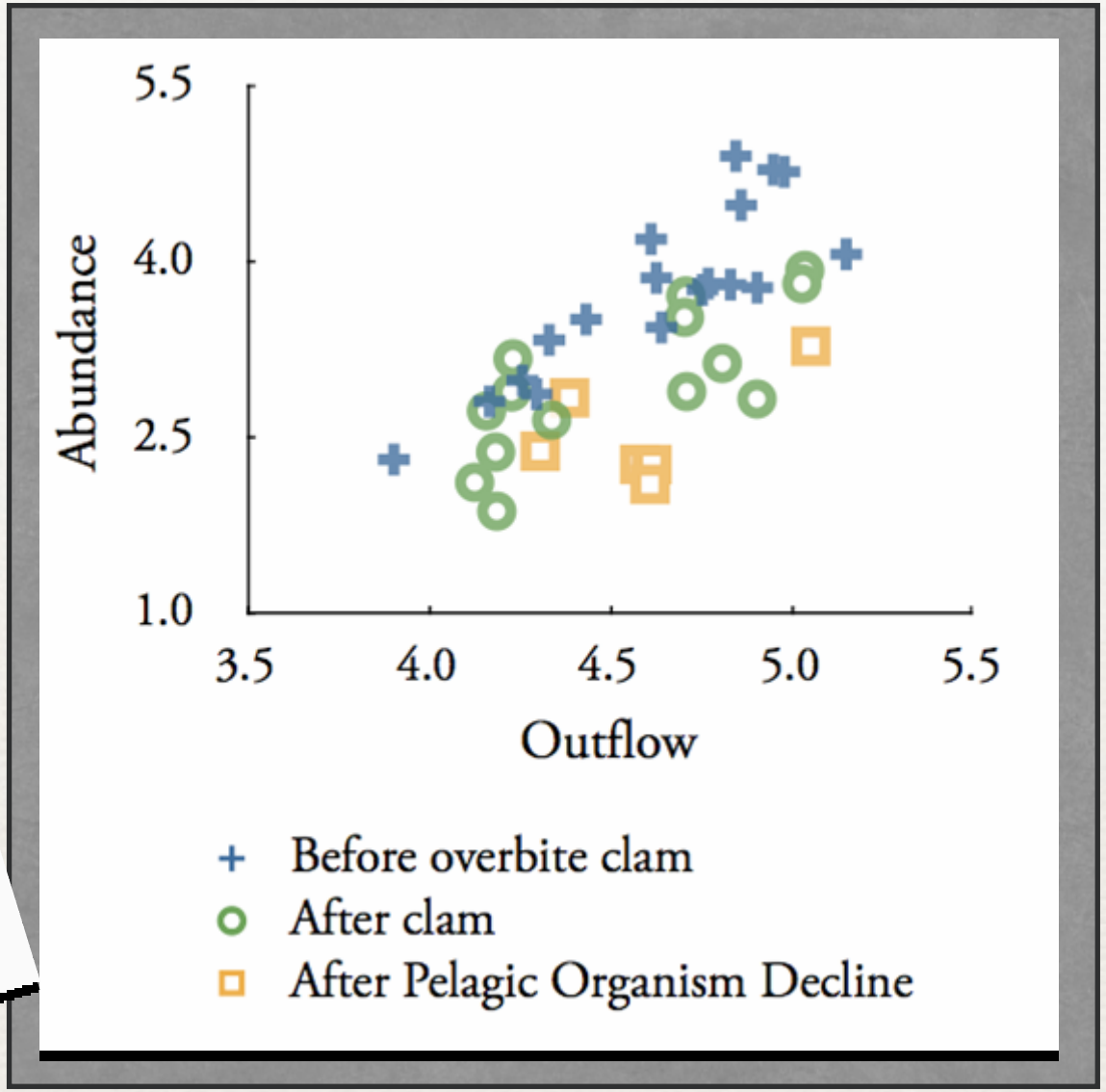
Abundance Related to Delta Flow





Longfin smelt

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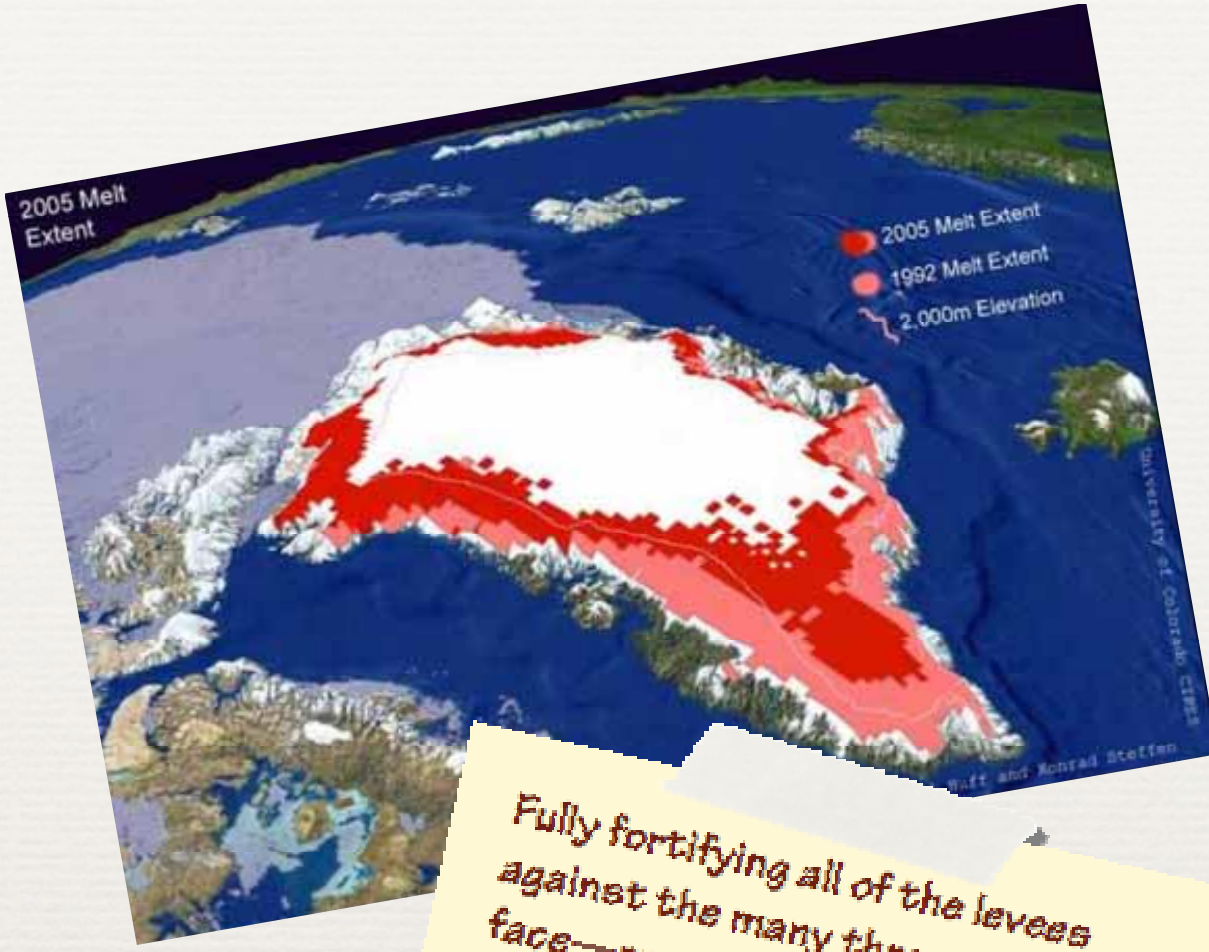
Perspective Three:

It is neither possible nor desirable to freeze the structure of the Delta in its present, or any other form. Strengthening of levees is only one element of a sustainable solution and is not applicable everywhere.



Fully fortifying all of the levees against the many threats they face—ranging from earthquake risks to subsidence to climate change—would be astronomically expensive.

--Delta Vision Blue Ribbon Task Force, 2007

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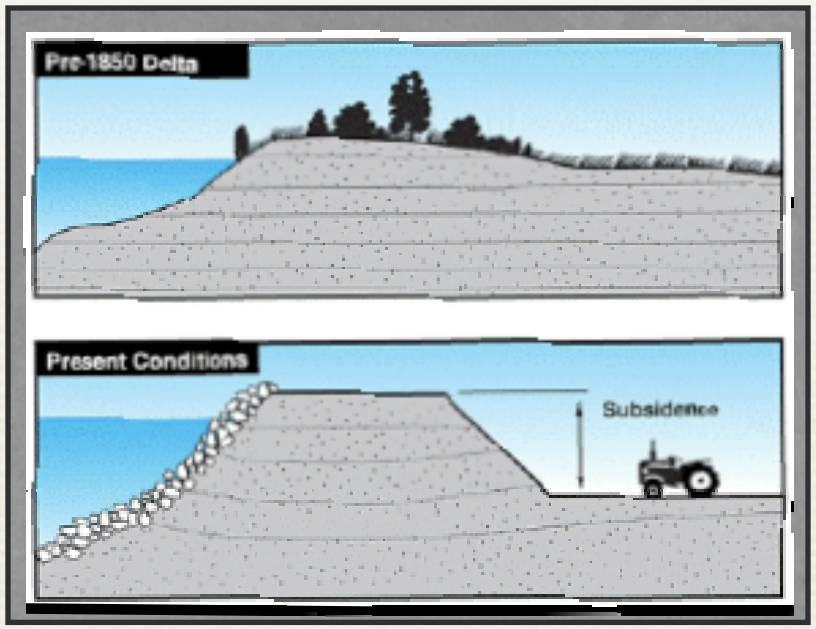
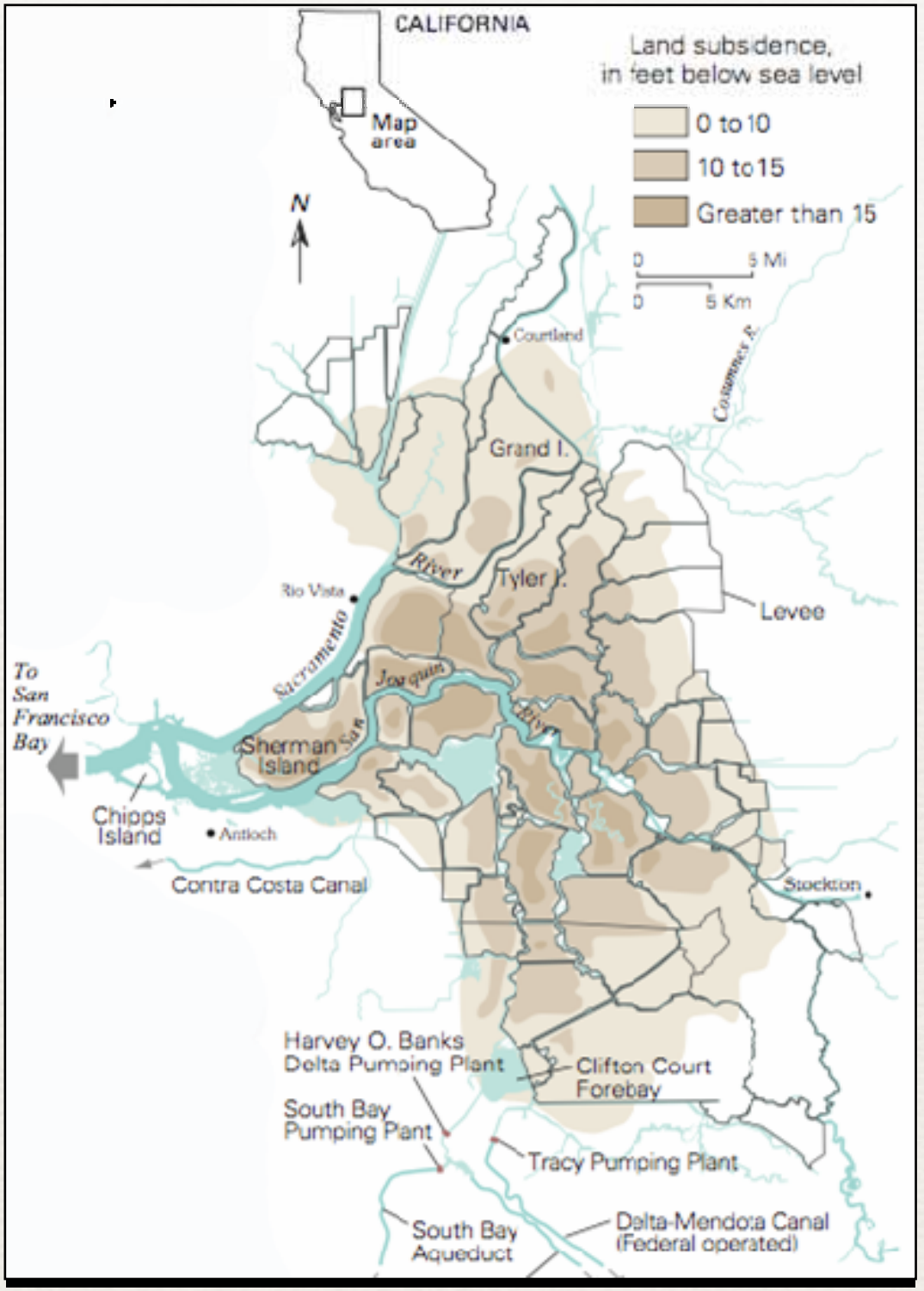
Subsidence





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Perspective Four:

The problems of water and environmental management are interlinked. Piecemeal solutions will not work. Science, knowledge, and management methods all need to be strongly integrated.

The Delta ecosystem and a reliable water supply for California are the primary, co-equal goals for sustainable management of the Delta.

–Delta Vision Blue Ribbon Task Force, 2007

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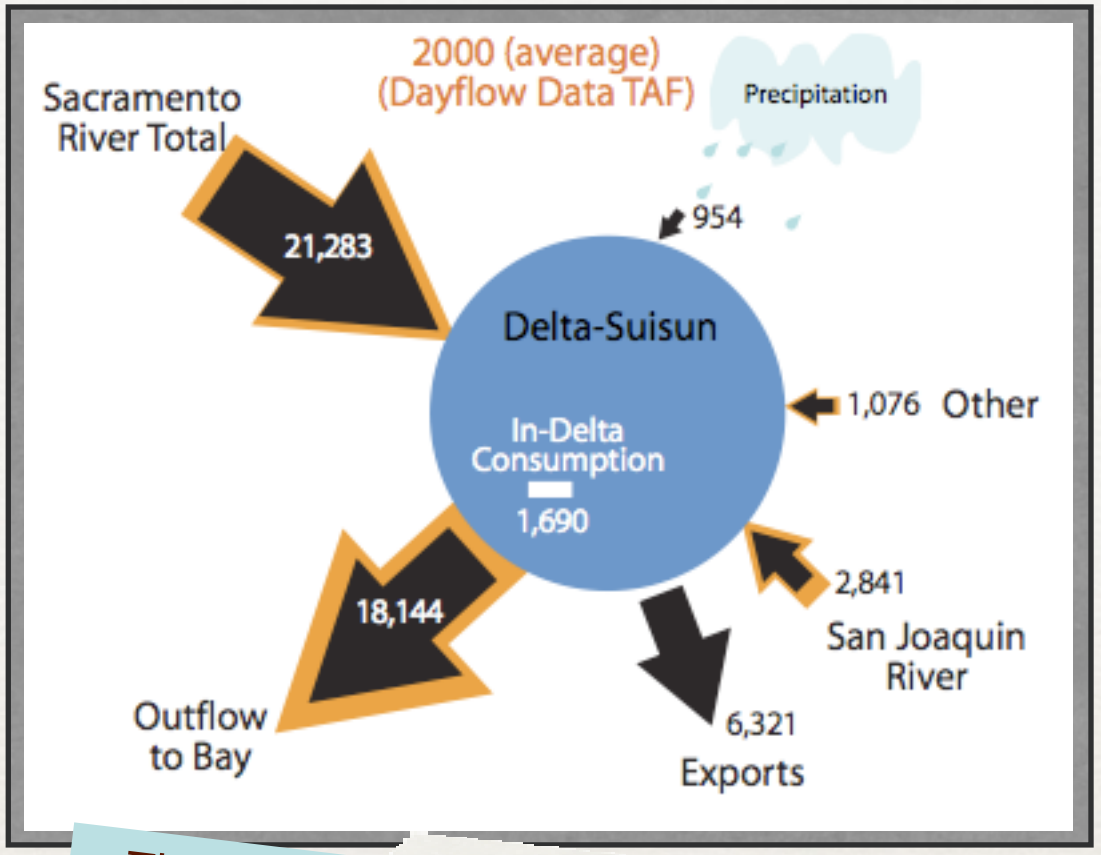
Perspective Five:

The capacity of the Sacramento-San Joaquin water system to deliver human, economic, and environmental services is likely at its limit. To fulfill more of one water using service we must accept less of another.



The Delta is critically important to California but cannot be sustained as we know and use it today. Its unique character and its capacity to serve California are threatened by diversions of water, urbanization, flood and seismic risks, and invasive species.

–Delta Vision Blue Ribbon Task Force, 2007

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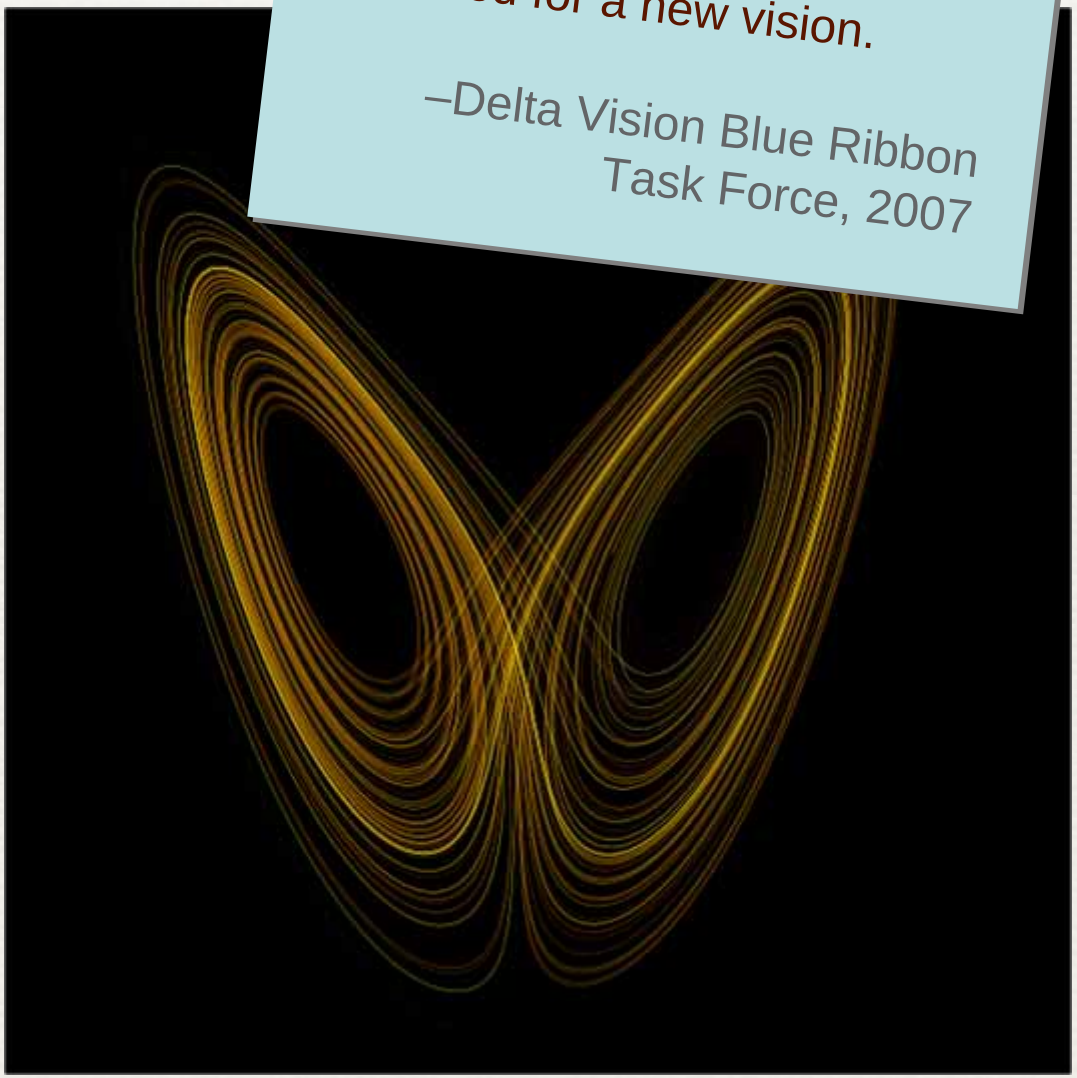
Perspective Six:

Good science provides a reliable knowledge base for decision making, but for complex environmental problems, even as we learn from science, new areas of uncertainty arise.

> Applied science, particularly science supported through the CALFED Bay-Delta program, provided the foundation of understanding that identified the need for a new vision.
>
> –Delta Vision Blue Ribbon Task Force, 2007



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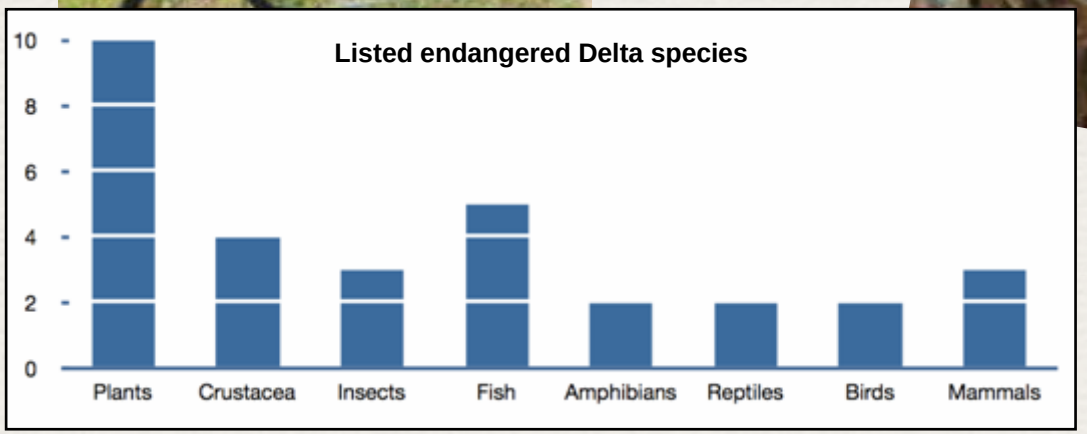
Perspective Seven:

Accelerated climate change means that species conservation is becoming more than a local habitat problem. Conservation approaches need to include a broad range of choices other than habitat protection.

> Estuaries are variable environments by nature, and therefore the Delta should incorporate enough of that variability to achieve the desired functions and processes and support desired species. This will be especially true in the longer term, as climate change makes it more difficult to sustain relatively constant conditions.
>
> –Delta Vision Blue Ribbon Task Force, 2007



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The Way Forward

- **What Science Contributes to Policy Discussions**
  - Objective information about the system and its behavior
  - Evaluation of system responses to policy options
  - Formalized and informed debate about science and policy for environmental and water management

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State of Bay-Delta Science 2008: The Full Report

Chapters:

- Science and the Sacramento-San Joaquin Delta
- Geophysical Setting and Consequences of Management
- Water Quality
- Aquatic Ecosystems
- Levee System Fragility
- Water Supply
- Integration Among Issues of Water and Environmental Management
- Science in Policy Development for the Bay-Delta Ecosystem

Final Report out in late Spring 2008

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Questions?