Staff Technical Workshop

Analytical Tools Used to Develop the Amendment to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary and Supporting Revised Substitute Environmental Document (SED)

December 12, 2016

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Workshop Purpose

- State Water Board staff technical workshops on December 5 and December 12
- To describe the models and tools used in the Substitute Environmental Document (SED) for the amendment to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan)
- Answer questions to help interested persons prepare oral and written comments

Outline (Dec. 12)

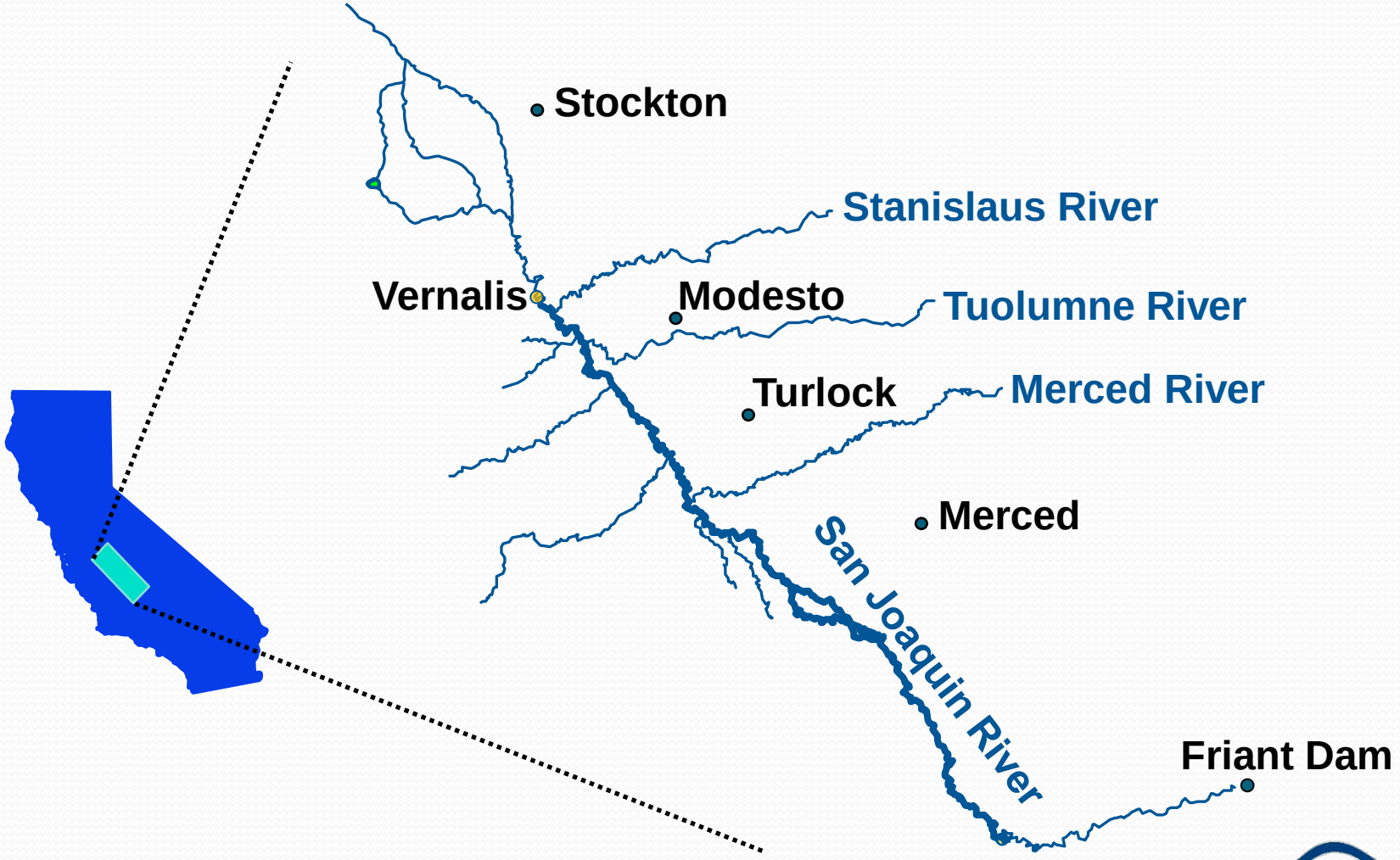
- Welcome, Introduction, and Overview
- Facilitation: Gita Kapahi, Office of Public Participation
- Refresher Overview of Water Supply Effects (WSE) Model
- Overview of Impacts Analysis
- Groundwater Use Methodology and Results
- Ag Economic Effects and Statewide Agricultural Production (SWAP) Model
- Regional Ag Economic Effects and IMPLAN Multipliers
- South Delta Salinity and Agricultural Effects
- City and County of San Francisco Effects

The Project

Update of Bay-Delta Plan:

- San Joaquin River flows for reasonable protection of fish and wildlife
- Southern Delta salinity for reasonable protection of agriculture
- Program of implementation

Lower San Joaquin River (LSJR) Basin



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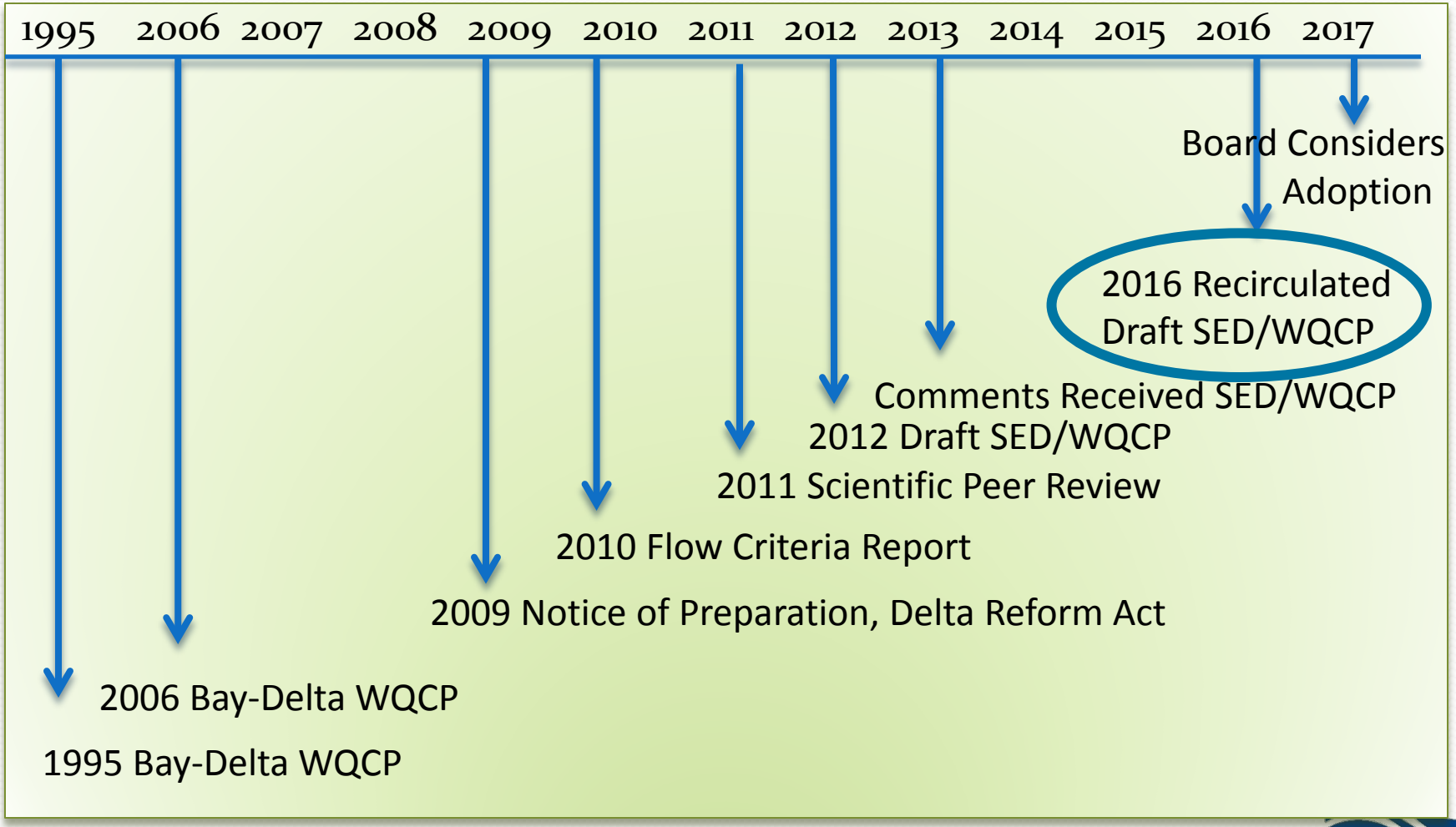
WQCP/SED Timeline



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Current Plan Out of Date

- Plan last updated 21 years ago in 1995
- Species have been declining – the need for update was identified 10 years ago (in 2006 Plan update)
- Endangered Species Act increasing water restrictions
- Administration's California Water Action Plan directs the State Water Board to complete the update of the Plan to further achievement of the co-equal goals in the Delta
  1. Providing a more reliable water supply for California
  2. Protecting, restoring, and enhancing the Delta ecosystem

Why Focus on Flow?

- Scientific studies show that flow is a major factor in the survival of fish such as salmon
- Many benefits of flow, including improved growth and survival of native fish by improving water temperatures and increasing floodplain habitat
- Flow affects risk of disease, risk of predation, reproductive success, growth, smoltification, migration, feeding behavior, and other ecological factors
- Non-flow measures can also be important, but State Water Board has limited authority to require non-flow measures

This is Hard, Requires Balancing

- State Water Board's 2010 flow criteria report – a purely technical assessment and no balancing – concluded that 60 percent of flow should be left in the LSJR for the benefit of fish
- Current uses (agriculture, drinking water) rely on up to 80 percent or more of the unimpaired flow
- Unlike the 2010 report, this staff proposal considers other uses and aims to strike a balance among competing uses of water
- The staff proposal recommends a range of between 30 and 50 percent of unimpaired flow, with a starting point of 40 percent – this is a big increase

This is Hard, Requires Balancing

- This is less than what environmental and commercial fishing interests favor, and more than agricultural and affected urban users want
- Balancing is hard, but is what we are called upon to do
- Because it is hard, State Water Board has a long history of encouraging settlements

Settlements are Encouraged

- The flow proposal includes "adaptive implementation," which allows adjustments so water is used wisely and more effectively – implementation of non-flow measures could also reduce the flows needed
- Board is looking for durable local solutions that will improve flows and other conditions that can reduce the need for flow
- Local water agencies and local people working with agency experts and other organizations can provide the foundation for such durable solutions
- The California Natural Resources Agency is leading settlement discussions to explore the potential for a comprehensive agreement on environmental flows in both the San Joaquin and Sacramento River basins