



# **San Joaquin River Flow Workshop & Southern Delta Salinity, Bay-Delta Strategic Workplan Updates**

September 17, 2008

Coastal Hearing Room

Joe Serna Jr./Cal EPA Building



# Bay-Delta Strategic Workplan

- Describes high priority Bay-Delta activities Water Boards will take in next 5 years
- Implements Water Boards' core water quality and water right responsibilities
- Continues meeting prior Water Board commitments
- Builds on existing processes, including Bay Delta Conservation Plan (BDCP)



# General Updates

- Central Valley Regional Water Board approved the Workplan on September 11
- San Francisco Bay Regional Water Board will consider the Workplan later this year

# Updates on Workplan Elements

- Water Quality/  
Contaminants Control
- Comprehensive  
Monitoring Program
- Southern Delta  
Salinity/San Joaquin  
River Flows
- Suisun Marsh
- Review of Bay-Delta  
Plan
- SWP/CVP Methods of  
Diversion
- Investigate, Enforce  
Water Rights, Other  
to Ensure Flows
- Water Use Efficiency
- Other Activities



# Water Quality/Contaminants Control

- TMDLs
- Drinking Water Policy
- Once-Through Cooling Policy
- Sediment Quality Objectives
- Invasive Species Management
- Blue-Green Algae Control
- Characterize Delta Island Discharges
- Evaluate/Control Effects of Ammonia
- Selenium Screening Study
- In-Delta Pesticide Use



# Once-Through Cooling

- Expert review panel completed review of proposed once-through cooling policy for coastal and estuarine power plants and provided final findings in August 2008
- Substitute Environmental Document for a proposed statewide policy expected in early 2009



# Sediment Quality Objectives

- September 16 State Water Board hearing adopted phase I sediment quality objectives for enclosed bays and estuaries
- Phase II objectives are expected to be completed by the end of 2010

# Comprehensive Review of Bay-Delta Plan

- August 29 notice of October 8 public workshop to identify elements of the Bay-Delta Plan that may need amendment
  - Comments due by noon on October 1
- August 29 solicitation of factual issues for evidentiary hearings
  - Comments due by 5 pm on September 29
  - Evidentiary hearings, notice this fall, planned to begin early next year





# Factual / Informational Hearings

- Two hearings on ten topics
  - Early February, with notice in Fall
  - April, with notice in January
- Establish facts and inform periodic review and updates of Water Quality Control Plans
- Notices will include description of procedures for hearings

# Water Use Efficiency

- 20X2020 multi-agency team on water conservation
  - September 15 workshop on technical memos
  - Final plan expected early 2009
- Development of urban water conservation regulatory program
  - Workshop scheduled for October 1; comments due by noon on September 23
  - Discuss if any or all of 14 BMPs identified in California Urban Water Conservation Council MOU should be mandated



# Minimum In-Stream Flow Standards

- In August Department of Fish and Game provided list of 22 priority streams for instream flow assessment
  - Includes 2 San Joaquin River tributaries (#2 Tuolumne River, #12 Merced River)
  - Includes 4 Sacramento River tributaries (#1 Butte Creek, #8 Bear River, #17 Deer Creek, #21 Middle Fork Feather River)
- Will be considering high priority streams to establish minimum flows consistent with both Bay-Delta workplan and Board strategic plan



# Continued Coordination Activities

- Invasive species management
- Blue-green algae control
- Suisun Marsh
- Participation in Delta Vision, BDCP
- Delta smelt refuge population
- Screening Delta and tributary diversions



# Regional Monitoring Program

- Short-Term:
  - Annual comprehensive assessment of existing water quality data
  - Cost neutral
- Long-Term:
  - Integrated, coordinated Delta Regional Monitoring Program



# Evaluating Effects of Ammonia

- Delta smelt
- Primary production



# Selenium Screening Studies

- Analyze archived fish to:
  - Establish background selenium levels
  - Determine potential impairment



# In-Delta Pesticide Use

- Improve coordination with DPR & Delta County Agriculture Commissioners
- No funding identified



# Southern Delta Salinity Objectives

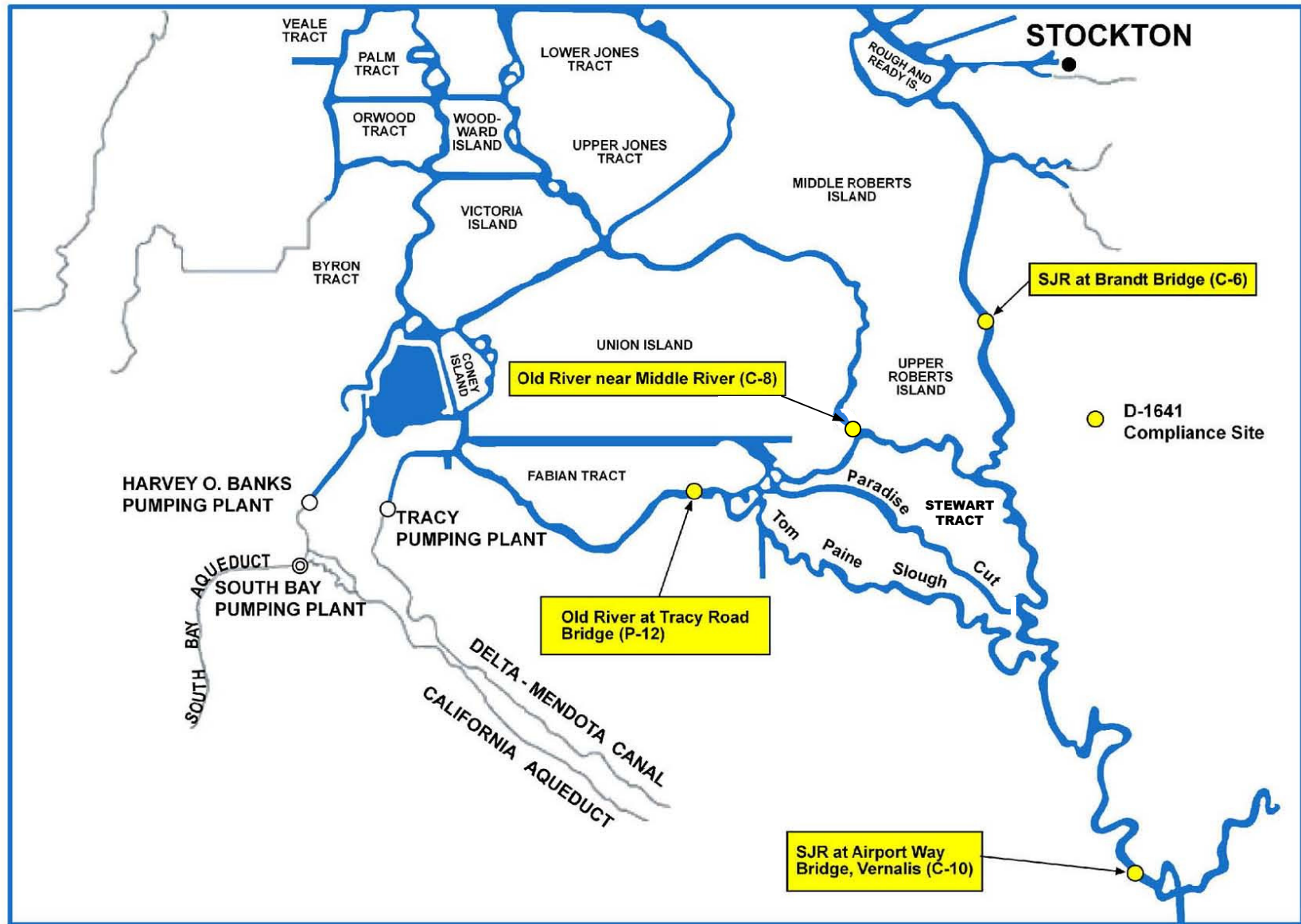
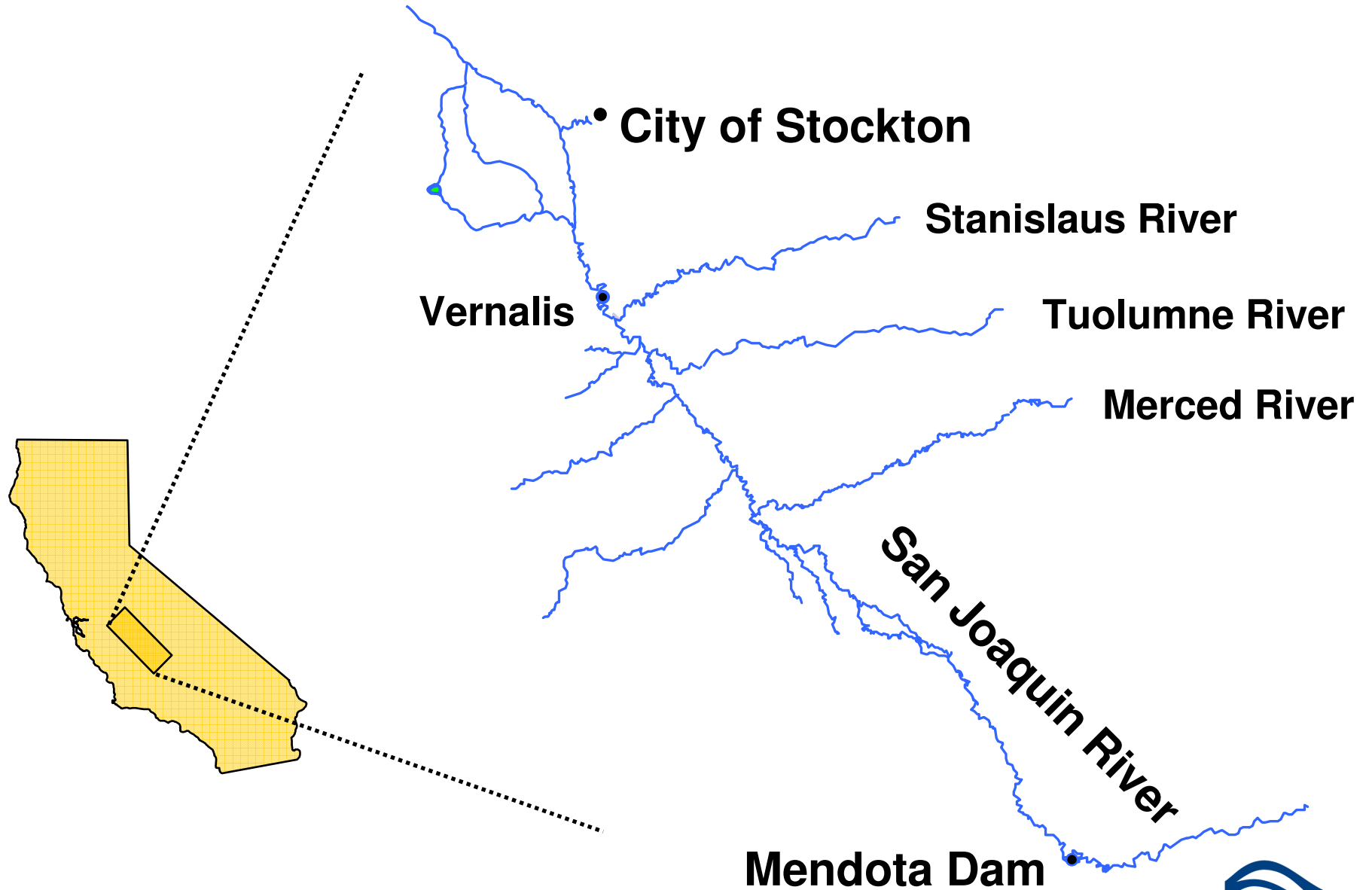
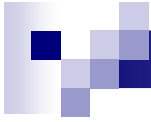


Figure adapted from Department of Water Resources

# Southern Delta Salinity Objectives Status Update

- Evaluation of potential crop yield impacts based on latest literature and methods
  - Follow up staff workshop – October 2008
  - Final report – December 2008
- CALSIM and DSM2 analysis of water availability coordinated with same for:
  - SJR flow objectives
  - Upstream SJR salinity objectives
- CEQA scoping meeting



# 1995 Water Quality Control Plan

- State Water Board first established SJR flow objectives at Vernalis to protect fish & wildlife beneficial uses based in part on Principles for Agreement
- Objectives set for three time periods:
  - Spring flows (February- April 14 & May16 - June)
  - Spring pulse flows (April 15 - May 15)
  - Fall pulse flows (October)
- Spring flow & spring pulse flow objectives based on water year type and required location of 2-ppt isohaline



# 1996 Litigation on 1995 Plan

- San Joaquin River (SJR) Tributaries et al. vs. State Water Board
- SJR flow objectives based on limited information
- As a result State Board agreed to review SJR flow objectives during a future review of 1995 Plan



# San Joaquin River Agreement

- Alternative method of implementing SJR flow objectives
- Signatories: DWR, DFG, USBR, USFWS, SJR parties, SWP/CVP contractors, NGOs
- Conditions: SJRGA members meet VAMP flows, USBR & DWR meet SJR portion of all other Bay-Delta Plan requirements met through flow
- Expires December 31, 2009 with the option to extend



# Vernalis Adaptive Management Plan (VAMP)

- Protect juvenile Chinook salmon
- Evaluate relationship between SJR flows & State Water Project/Central Valley Project exports with Head of Old River Barrier (HORB) installation on survival of marked juvenile salmon migrating through Delta



# Water Right Decision 1641

- Establishes responsibility for meeting objectives
- Requires USBR to meet spring flow & fall pulse flow objectives
- Approves conduct of VAMP through 2011 to obtain more scientific information





# Concerns Raised During Review of 1995 Plan

- Objectives/VAMP not protective of salmon, steelhead, & pelagic species
- VAMP experimental results
  - Recent concerns related to delta smelt restrictions: no HORB, change in sampling design
- Implementation of spring flows inappropriate
- Requirement related to 2ppt isohaline inappropriate because affected by Sacramento basin hydrology

# 2005 DFG San Joaquin River Fall-Run Chinook Salmon Population Model

- Tool used to develop DFG flow recommendations
  - Expand spring pulse flow period (up to 90 days)
  - Increase flows (up to 20,000 cfs) and frequency of higher flows
- DFG found that spring flow and spring pulse flow magnitude, duration, and frequency all have significant influence on SJR fall-run Chinook salmon abundance
- Model was not peer reviewed at time of 1995 Plan review
- DFG agreed to peer review model (planned for completion by summer 2007)



# 2006 Water Quality Control Plan

- Due to lack of scientific information SJR flow objectives unchanged in 2006 Plan
- Program of implementation changed to allow ongoing staged implementation of spring pulse flow objectives (VAMP) through 2011
- SJR flows identified as emerging issue requiring further consideration along with effects of SJR flows on pelagic organisms
- Board committed to hold workshop to consider:
  - DFG's model after peer review
  - Information developed by fishery agencies to determine needed changes to objectives
  - Peer review of VAMP study design to determine if changes needed



# Comments

## ■ Commenters:

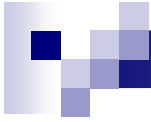
- Department of Fish and Game (DFG)
- San Luis Delta Mendota Water Authority (SLDMWA)
- South Delta Water Agency (SDWA)
- Department of Water Resources (DWR)
- Department of the Interior (DOI)
- California Farm Bureau Federation (CFBF)
- San Joaquin River Group (SJRG)
- United States Environmental Protection Agency (USEPA)



# Comments

## ■ General Themes

- San Joaquin River Flows may affect salt in the Delta
- More flow provides benefit for the fish/ecosystem
- Any tool used to recommend flows needs critical analysis
- Many factors contribute to salmon declines
- Actions other than modifying flows can be taken to reduce risk from diversions
- Board should better understand system before setting flow objectives



# Next Steps...