

Regional Board Workshop - 23 April 2004

Control Program for Factors Contributing to the Dissolved Oxygen Impairment in the Stockton Deep Water Ship Channel

Public Workshop



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Context

- Prior Regional Board actions
- Multiple TMDLs in San Joaquin River
- Flow is major issue
- Focus on legal requirements and solutions

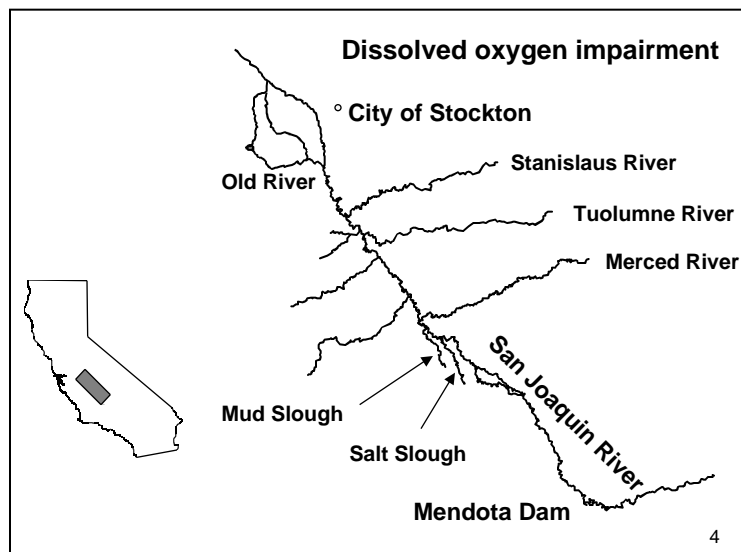
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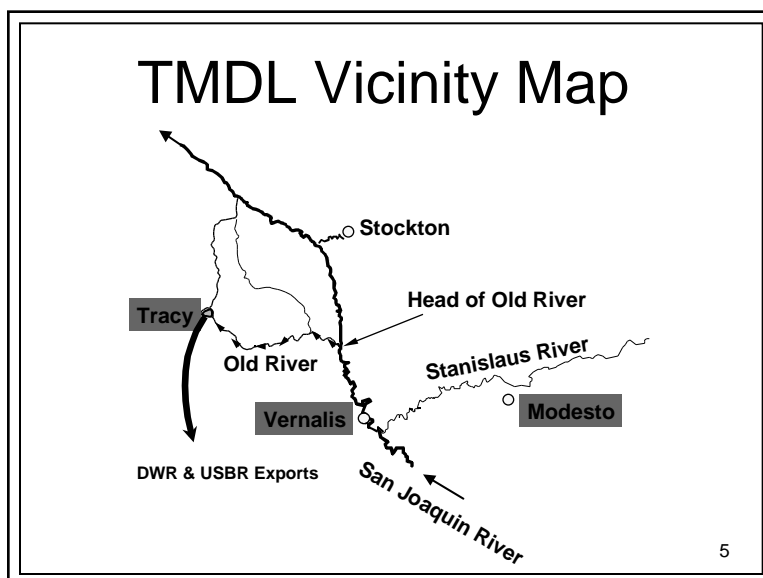
Outline

- Overview
- Total Maximum Daily Load
- Program of Implementation
- Alternatives Analyses and CEQA
- Comments
- Next Steps

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Description of Impairment

- Basin Plan objectives:
 - 6 mg/l between 1 Sept. to 30 Nov.
 - 5 mg/l remainder of year
- 303(d) listed in 1998
- Between Stockton & Disappointment Slough
- Seasonal and yearly variability

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Basin Plan Amendment

- Total Maximum Daily Load
- Program of Implementation
- Functionally Equivalent CEQA
- Requires adoption by Regional Board
- Approval by SWRCB, OAL and USEPA

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Commitments

- USEPA work plan – June 2004
- Bay Protection & Toxic Cleanup Plan
- D-1641: develop TMDL before further water right actions

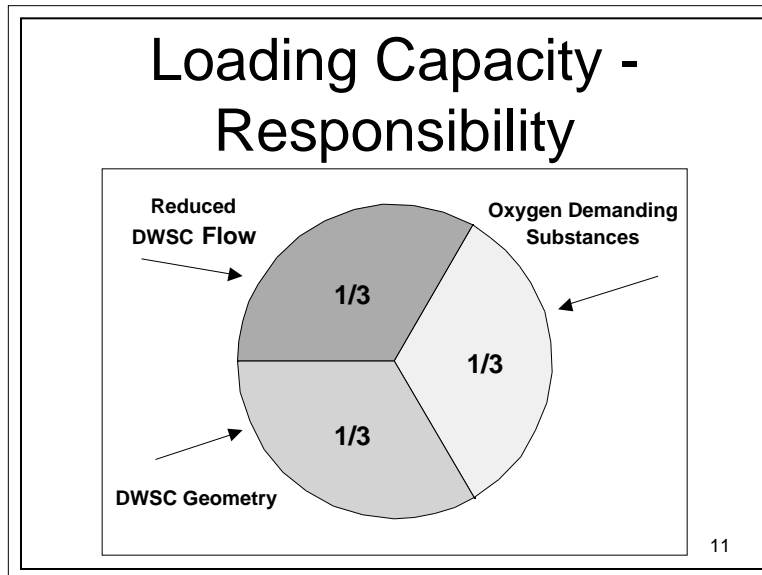
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Total Maximum Daily Load

Contributing Factors

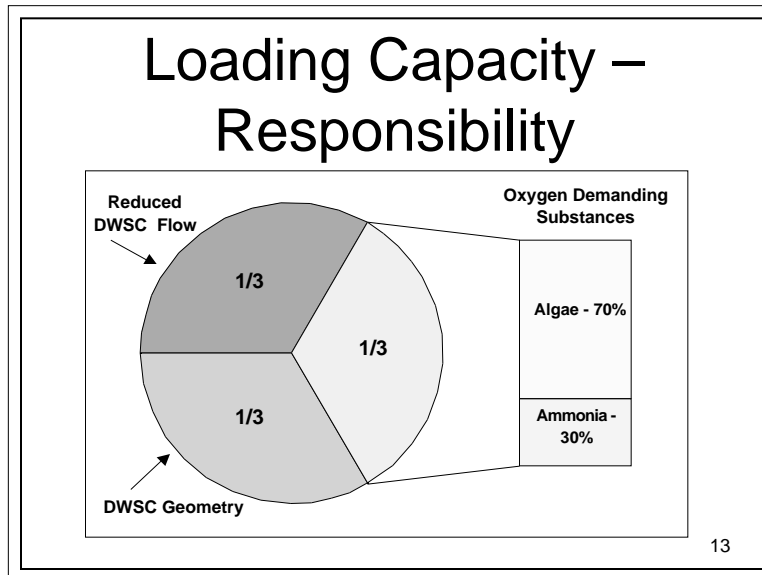
- Oxygen demanding substances
- DWSC geometry
- Reduced flow through DWSC
 - *Range of reasonable allocations*
 - *Numerous complexities and variables*

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- ## Oxygen Demanding Substances
- Substances that oxidize in DWSC
 - Various Sources
 - Algae from upstream / nutrients
 - Ammonia from wastewater
 - Other potential sources
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Wasteload and Load Allocations

- Further study needed
- Studies required in program of implementation
- Load limits based on study results

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DWSC Geometry

- Not a load of a substance
- Reduces loading capacity
 - Reduces natural re-aeration
 - Enhances oxygen demand
 - Increased residence times

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Reduced DWSC Flow

- Not a load of a substance
- Reduces loading capacity by increasing residence time

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Activities Affecting DWSC Flow

- Consumptive use and diversions
- Pumping at SWP & CVP facilities diverts flow down Old River
 - South Delta Improvements Project
 - Delta Improvements Package

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Program of Implementation

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Phased Implementation

- Source studies
 - Study plan by February 2005
 - Studies completed by December 2008
- Other actions addressing non-loads
- Next phase of TMDL
 - Detailed Wasteload & Load Allocations
 - Implementation of Mitigation Measures

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Oxygen Demand Studies

- Sources in watershed
 - Transformation
 - Conversion in DWSC
- Regulatory Drivers (as needed)
- CWC Section 13267 letters
 - NPDES permits
 - WDRs / Agricultural discharge program

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DWSC Geometry

Regional Board Actions:

- Section 401 WQ Certifications for further deepening
- Basin Plan recommendations to USACOE to address impact
- Alternate mitigation measures

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Reduced DWSC Flow

Regional Board Actions:

- Section 401 WQ Certifications if required for future projects
- Basin Plan recommendations
 - SWRCB water rights process
 - Water resources agencies
- Alternate mitigation measures

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Upcoming Studies

- Upstream studies
- DWSC modeling studies
- Aeration demonstration project
- Non-aeration alternatives studies

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Alternatives Analysis

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Alternatives Analyses Process

- CEQA (functional equivalence)
- Criteria
- Considerations
- Alternatives evaluation
- Consideration of cost and funding

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Alternatives Analyses Criteria

- Likelihood of Success
- Flexibility
- Equitability
- Time to Implement
- Consistency with Laws and Policies
- Costs

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Alternatives Analyses Considerations

- Non-load Related Factors
 - a. Consider loads only
 - b. Consider non-load factors
- Timing
 - a. No action
 - b. Phased approach
 - c. Current science
- Alternate Mitigation

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Alternatives Analyses Preferred Alternative

- Consider non-load related factors
- Phased approach
- Consider alternate mitigation measures
- Costs: \$15.6M for studies
(proposition bond funds & dischargers)

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Comments

- Technical comments
- Compliance with BPTCP
- No dates / assurance for actions
- Equal responsibility for 3 factors
- Flow objectives or load limits

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Next Steps

- Written comments by 14 May 2004
- Final staff report
- Regional Board consideration at public hearing (tentatively July 2004)
- Approval by SWRCB, OAL and USEPA

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