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# ***EWA Development Report***

Presented at the  
CALFED Policy meeting  
August 12, 1999



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## ***Outline***

- Review of EWA
- Computer Simulation and Evaluation of EWA Options
- General Conclusions
- EWA Implementation Issues
- Final EWA Structure Development Process



# ***Environmental Water Account (EWA)***

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- **Concept**
  - Flexible management of water operations could achieve fishery and ecosystem benefits more efficiently than a completely prescriptive regulatory approach.
- **Intent**
  - To provide flexibility to achieve environmental benefits and to provide certainty (ESA and other regulatory assurances) to water users and continuous improvement to water supply reliability and water quality benefits.



## ***EWA Primary Uses***

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- **Reduce Entrainment**
- **Ecosystem Protection**
- **Guidance for migratory fish**



# ***Benefits of EWA Water***

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- Evaluate the overall level of fishery protection which would likely be achieved from a range of prescriptive standards/EWA combinations.
- Describe the range of scientific supporting hypotheses for the EWA and other CALFED fishery actions.



# ***Simulation Process***

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- Select Baseline
- Select Early and Late Stage 1 EWA Assets
  - Monetary
  - Facilities
- Establish Operational Rules
- Run Daily Simulations
- Evaluate Impacts/Benefits



# *Simulated Early Stage 1 Assets*

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- South Delta Program - 8,500 cfs, Temporary barriers in.
- JPOD
- E/I, In-Delta AFRP Variances
- Ground Water (400 TAF; 40 TAF/Mo. in-out)
- Shasta Enlargement (50 TAF)
- Water Purchase (NOD, SOD, spot market) -- \$40m/yr.
- San Luis Storage Borrowing
- Unused System Capacities
- Demand Shifting (100 TAF/yr)



# *Simulated Late Stage 1 Assets*

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- Expanded Banks - 10,300 cfs
- JPOD
- E/I, In-Delta AFRP Variances
- Ground Water (600 TAF; 60 TAF/Mo. in-out)
- Shasta Enlargement (50 TAF)
- Webb Tract Storage (120 TAF, 2,000 cfs. in-out)
- Bacon+ Storage/Connected (200 TAF, 4,000 cfs in; 2,000 cfs. out)
- ET Reductions on Delta Islands (60TAF / year)
- Water Purchase (NOD, SOD, spot market) -- \$30m/yr.
- San Luis Storage Borrowing
- Unused System Capacities
- Demand Shifting (100 TAF/yr)



# *Essential EWA Assets*

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- A monetary account for water purchases
  - \$40M to \$50M at start of Stage 1- \$20M to \$30M at end of Stage 1
- Ability to purchase and transfer water at a reasonable cost and at needed times
  - Up to 100 TAF Sacramento River System
  - Up to 150 TAF San Joaquin River System
  - Up to 250 TAF in Export Areas
- Ability to Vary Standards
- Adequately screened project water diversion intakes in south Delta
- JPOD with no State and federal sublimits



# *Essential EWA Assets (con't)*

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- Access to storage upstream and south of Delta and Delta Islands
  - Utilize available storage in existing reservoirs; **San Luis is key** with other SWP and CVP storage.
  - Late in Stage 1 need storage closer to export pumps for flexibility. Wedd Tract and Bacon/others Islands with a direct connection to bacon and CCF
- Increased permitted export capacity
  - Increased Banks 8,500 cfs pumping window In early Stage 1.
  - Expand Banks permitted capacity to 10,300 cfs by end of Stage 1
- Access groundwater
  - At least 600 TAF in SOD area.
  - Facilities to increase recharge and extraction rates



# ***General Conclusions***

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- For a given amount of water, EWA could be more effective in reducing fish entrainment than prescriptive standards
- For a given level of protection, EWA could allow more exports than prescriptive standards
- Effectiveness of EWA would be greater with larger and greater diversity of assets.
- Various assets provided greater values than others.



# ***General Conclusions (con't)***

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- Uncertainties in application of EWA will require experiments in Stage 1.
- Burden of fish population recovery should not be solely that of EWA.
- EWA provides synergies of benefits between upstream and Delta Actions.
- EWA could provide incidental benefits to water supply and water quality.



## *Issues from Simulations*

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- While the EWA generally improved upon the water supply benefits over the baselines, the EWA did not make up the deficits.
- EWA assets would have to increase proportional to future demand, if the level of environmental protection is to be maintained.
- EWA was not used to improve water quality.



## *Issues from Simulations (con't)*

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- Disagreement on existing and future environmental protections needed in the Delta and EWA priorities of use.
- Rapid and substantial EWA debts occurred in San Luis, ability to payback in doubt.



# ***EWA Development Team (EWADT)***

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- Includes CALFED Policy and Stakeholder representatives.
- Develops information need for decision making
- Develops detailed EWA Strawman
- Develops proposals for EWA agreement



## ***EWADT Tasks***

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- Default Operating Requirements
- Relationship between the EWA and the state and federal projects
- Stage 1 assets and sharing between the EWA and Water users
- Relationship to ESA and CVPIA agencies
- Decision Making
- Financing



# ***EWADT Leader***

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- Provides direction for EWA development
- Recommends task leaders for:
  - Assets Acquisition
  - Governance and decision making
  - Financing
  - 1999-2000 early development assets
- Ensures coordination with CVPIA, b(2), ERP and other programs



# ***DNCT***

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- Oversees technical support
- Formulates policy options, such as governance and decision making.
- Develops options for the size and nature of the EWA



# *Milestones and Schedule*

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Form EWADT.....	Aug 18
Assign Team Leader(s).....	Aug 25
Outline Decision Making Process....	Sep 15
Define Feasibility of Assets.....	Oct 1
Develop Sharing Benefits.....	Oct 1
Develop Strawman.....	Nov 1
Develop Implementation Package...	Dec 12

