Pelagic Organism Decline

Seeking solutions to a complex challenge

Prepared for
SWRCB Pelagic Organism Decline Workshop
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Presentation Overview

- POD Study Background and Implementation
- New Processes related the Delta
  - Reconsultation on Biological Opinions (OCAP)
    - Adaptive, near-time decision-making process
  - Bay Delta Conservation Plan
  - Delta Risk Management Study (DRMS)
  - Delta Vision
- CVP/ SWP Operational Issues
  - Status of fish actions this year
  - Environmental Water Account this year
POD Funding

- 2005: DWR and Reclamation provided $1.7 million
- 2006: DWR and Reclamation provided $3.6 million
- CALFED Science Program grants have funded $2.2 million
- CALFED ERP Program funded $700,000
POD Background

- Late 2004 - Interagency Ecological Program announces decline to agency directors – including SWRCB Executive Director
  - IEP forms POD Work team
  - Work will be reviewed by National Center for Environmental Analysis and Synthesis (NCEAS)
  - Next Summary due by end of 2007
Recent POD Summary
and Action Plan

March 2007 - Resources Agency releases Pelagic Fish Action Plan

- Report documents the status of the ongoing analyses of possible causes
- Suggested actions to consider
  - Food Web Actions, Habitat Improvements, Invasive Species, Water Project Operations, Other Actions
- Collaborative effort involving:
  - DFG, DWR
  - USFWS, NMFS, USBR
New Processes Delta Processes

**Delta Vision**
Comprehensive Policy / Planning Process
Addresses land use, utilities, flood control, transportation, ecosystem, water quality.

- **Delta Risk Management Strategy**
  Provides technical decision-support.

- **Bay-Delta Conservation Planning**
  Focused on conservation of fish and fish habitat.

- **Operations Criteria and Plan**
  Developing operational criteria for ESA compliance.

- **POD Investigations**
  Seeking causes and appropriate responses.
Reclamation reinitiated consultation on the Biological Opinions (including) delta smelt in July 2006

- DWR is part of the reconsultation process
- 18 month process
- During interim, DWR and Reclamation will continue to operate under existing biological opinions ….
  
  - Using real-time water operations decision-making process
Real-Time Water Operations Decision-Making

- Delta Smelt Working Group (DSWG) adaptive management process
  - Data Assessment Team (DAT) and the DSWG track real-time hydrologic and fishery conditions
  - DSWG reports on a weekly basis to DAT
  - DAT passes recommendations on to Water Operations Management Team (WOMT)
  - WOMT consists of:
    - Federal and State agencies that administer ESA
    - Water project operators
Bay Delta

Conservation Plan (BDCP)

- Goal – Conservation Plan under
  - State Natural Community Conservation Planning Act (NCCPA)
  - Federal Habitat Conservation Plan (HCP)
- Focus – Fish in the Delta – Aquatic NCCP and HCP unprecedented
- Funded by water and power interests in the Delta
  - Proportional conservation contributions in exchange for operational assurances under the ESA (section 10) and NCCP
- Planning Agreement – Signed Oct 2006
- Steering Committee meeting every two weeks
  - DWR, DFG, Resources, NMFS, USFWS, USBR, 6 water users, 6 NGOs, Mirant – Open public meetings
- Conceptual plan expected by the end of 2007
Delta Vision

- Multiple Threats to a sustainable Delta (DRMS).
  - Global Warming, Floods, Sea Level Rise, Earthquakes, Urbanization, Invasive Species

- Need to analyze all aspects of the Delta
  - Infrastructure, natural resources, land use, water resources

- Governor appointed 8-member Blue Ribbon Task Force
  - February 2007

- Findings and Recommendations on the sustainable management of the Delta
  - January 2008

- Strategic Plan to implement the Delta Vision
  - expected by October 31, 2008
2007 Operational Issues and the Environmental Water Account

- EWA target fishery actions ~ 300 TAF
- Current EWA actions this year to date ~ 160 TAF
- ~ 265 TAF of water purchased year-to-date
  - Carriage water requirements for any north of Delta purchases
- Ability to carry up to 100 TAF EWA debt into next year
- Tier III if needed to avoid Jeopardy
Recent SWP & CVP Operations

- Early 2007 Old and Middle River (OMR) flows were kept between -3,500 cfs and -5,000 cfs.
- Early March - 5,000 cfs OMR
  - Consistent with DSWG Recommendations
Current Conditions

- Adult Smelt concentrated in Sacramento River and Cache Slough areas and Suisun Marsh
- Spawning just now beginning in small numbers
- No smelt found in the interior Delta
- 2007 Expanded smelt salvage to date at SWP/CVP
  - January = 0 (Reconsultation Level = 1,900)
  - February = 36 (Reconsultation Level = 1,700)
  - March = 0 (Reconsultation Level = 1,300)
- Larval Smelt in April and May are more free floating
January Adult Trawl Survey

Spring Kodiak Trawl Survey #1 of 2007
Distribution of Female Delta Smelt

Spring Kodiak Trawl Survey #1 of 2007
Distribution of Male Delta Smelt

Total = 61

Total = 47
February Adult Trawl Survey

Spring Kodiak Trawl Survey #2 of 2007
Distribution of Female Delta Smelt

Total = 49

Spring Kodiak Trawl Survey #2 of 2007
Distribution of Male Delta Smelt

Total = 58
March Adult Trawl Survey

Spring Kodiak Trawl Survey #3 of 2007
Distribution of Female Delta Smelt

Total = 38

Stage

1 (5.3%)
12 (Pre-spawn) (31.8%)
20 (Pre-spawn) (46.5%)
4 (Nature) (7.6%)
6 (Spent)

No Catch

Spring Kodiak Trawl Survey #3 of 2007
Distribution of Male Delta Smelt

Total = 22

Stage

1 (18.6%)
2 (Pre-spawn) (18.2%)
4 (Pre-spawn) (10.8%)
5 (Nature) (8.1%)
6 (Spent)

No Catch
Total Particle Entrainment vs. OMR flow
(for particles injected at Station 711, downstream of Cache Sl.)

- 50% hydrology
- 90% hydrology

Total Percentage of Particles Entrained at CVP and SwP after 31 days (%)

Old and Middle River flow (cfs)
Total Particle Entrainment vs. OMR flow
(for particles injected at Station 704, near the confluence)
In Conclusion

- Resources and expertise allocated to finding answers to this unexpected decline
- Progress in understanding the factors contributing to the decline
- Still exploring and learning about the relative importance of various factors on the abundance of at risk fish species
DWR Recommendation

- DWR invites the SWRCB to participate in efforts to find answers to a changing Delta
  - POD investigations
  - BDCP
  - Delta Vision
DWR Recommendations

- SWRCB should not consider changes to the current Bay Delta WQCP until:
  - POD investigations are synthesized
    - Initial NCEAS Report Late 2007
    - Final Report 2008
  - Reconsultation under Biological Opinions have been concluded
  - BDCP makes progress