

# Summary and Technical Basis for Recommendations of the Delta Smelt Working Group in WYs 2005 and 2006

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# The Delta Smelt Working Group

- Consists of experts in delta smelt biology
  - U.S. Fish and Wildlife Service
  - U.S. Bureau of Reclamation
  - U.S. Environmental Protection Agency
  - California Department of Fish and Game
  - California Department of Water Resources
- Charge
  - Review available monitoring data and advise the Service on the need for protective actions for fish

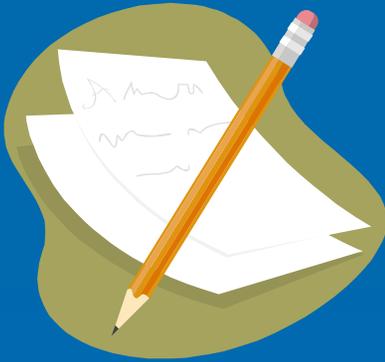
# Delta Smelt Risk Assessment Matrix

- Part of the Service's OCAP Biological Opinion
- A science-based guideline for the formulation of recommendations
- Helps to minimize incidental take at the CVP and SWP
- Used proactively to protect delta smelt
- Both a product and a tool of the Delta Smelt Working Group

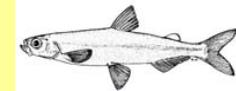
# DSRAM is based on

- Previous year's FMWT Index/Recovery Index
- Risk of entrainment
- Duration of spawning period
- Spawning stage
- Smelt distribution
- Salvage (calculation of adult concern level)

# DSWG Activities in WY 2005

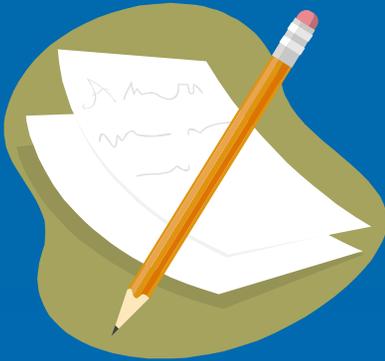


## DSRAM Scorecard January 2005

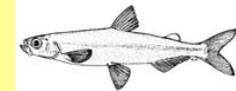


- ✓ R.I. Below 74
- ✓ Adult Salvage  $\geq$  892
- Adults at Spawning Stage
- Risk of Entrainment
- 20-mm Centroid

# DSWG Activities in WY 2005



## DSRAM Scorecard March 2005

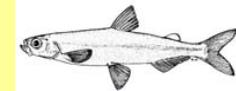


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# DSWG Activities in WY 2005



## DSRAM Scorecard April 2005

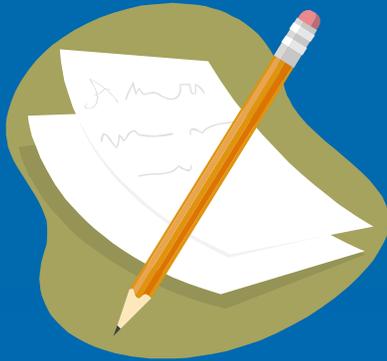


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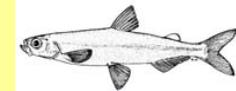
# Outcomes

- Working Group met to self-debrief
  - Narrow spawning window confirmed
  - 20-mm Survey → 2 (3?) cohorts
  - STNS = 0.3
- ➡ Concern likely high going into WY 2006
- ➡ New game plan?

# DSWG Activities in WY 2006

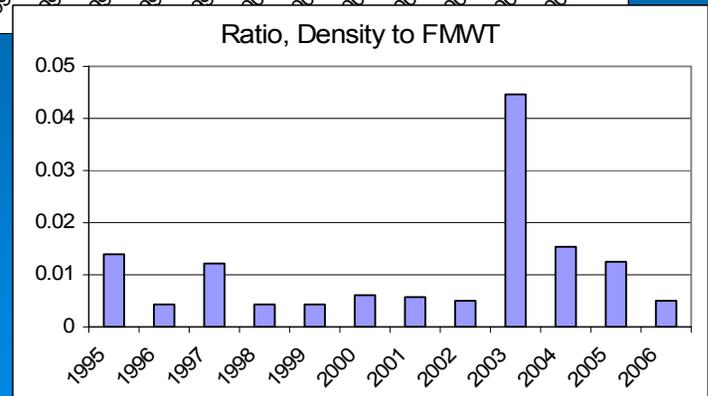
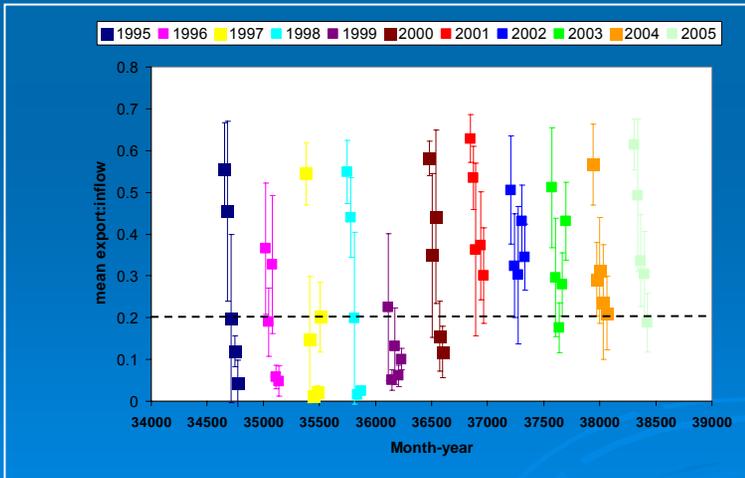
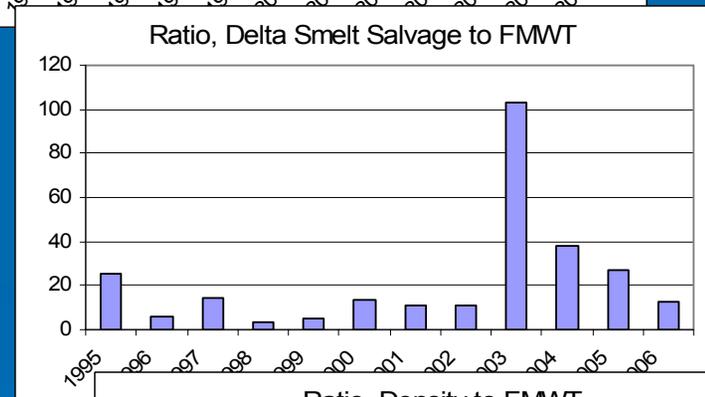
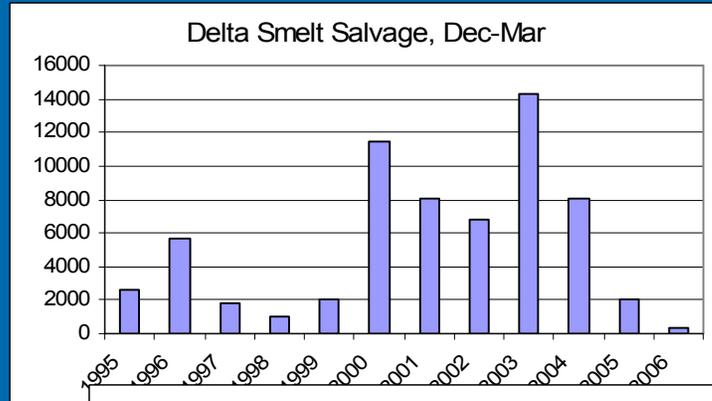
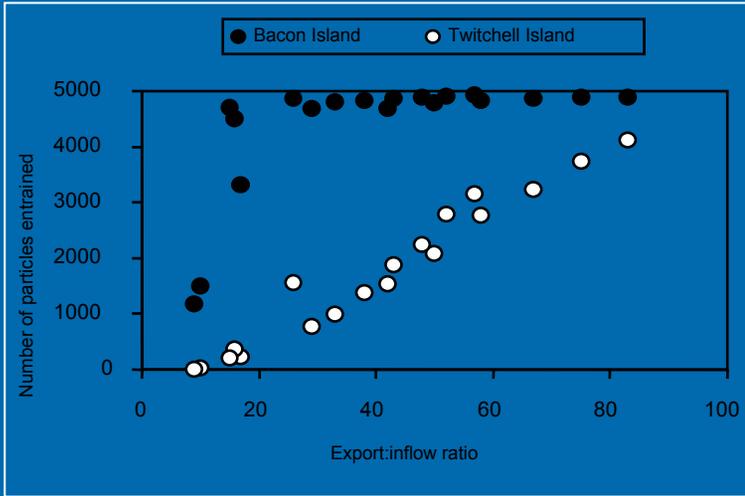


## DSRAM Scorecard December 2005

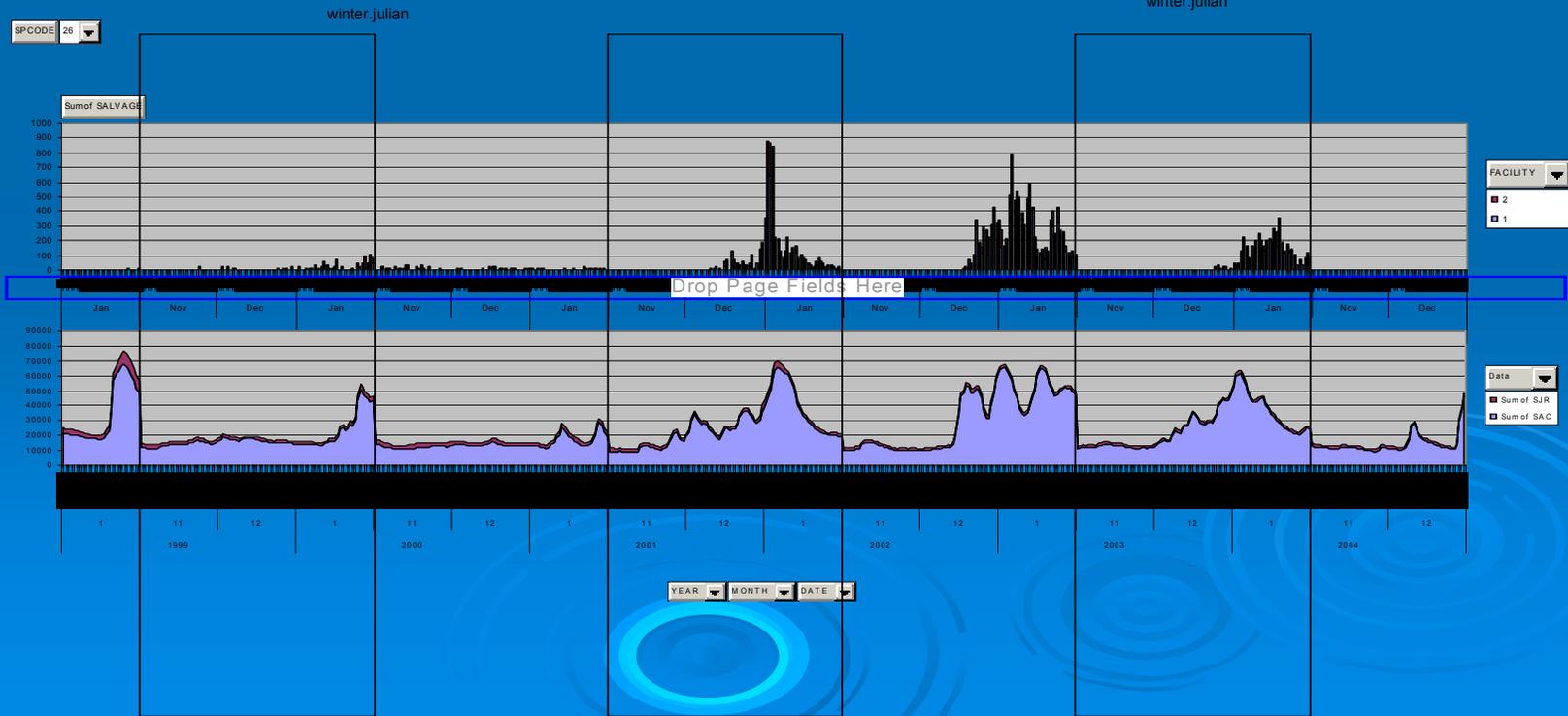
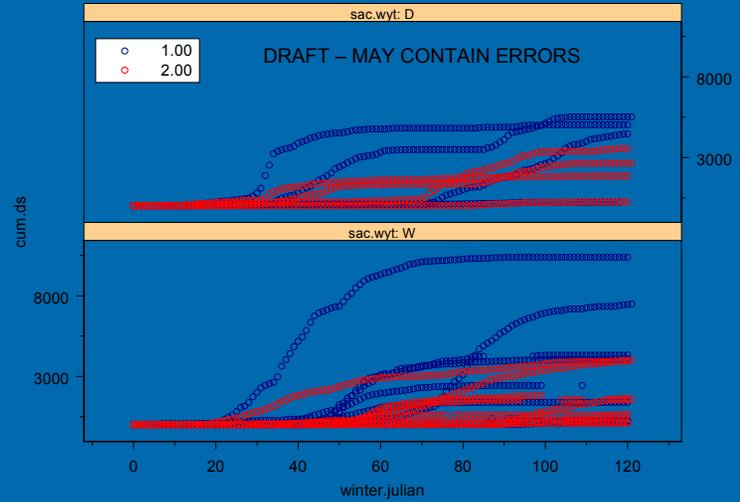
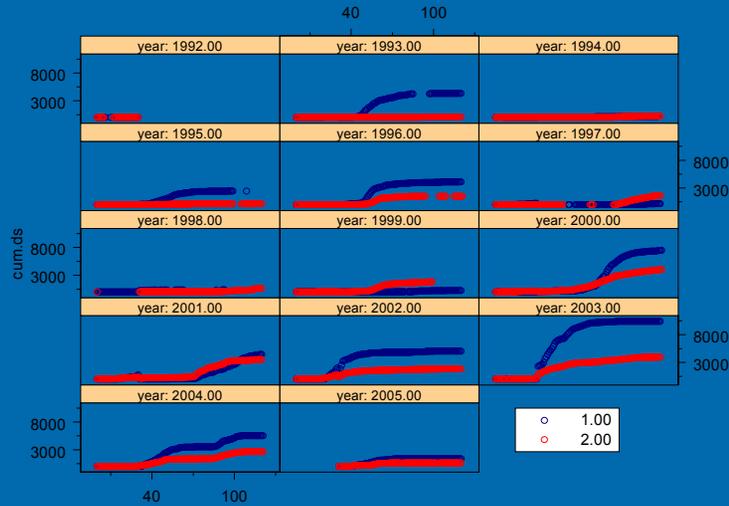


- ✓ R.I. Below 74
- Adult Salvage  $\geq$  143
- Adults at Spawning Stage
- Risk of Entrainment
- 20-mm Centroid

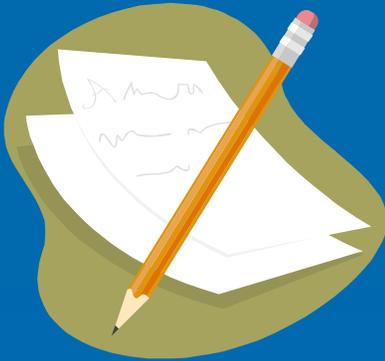
# Preliminary POD Observations



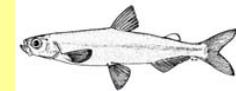
# Preliminary DSWG Observations



# DSWG Activities in WY 2006



## DSRAM Scorecard March 2006



- ✓ R.I. Below 74
- ✓ Adult Salvage  $\geq$  143
- ✓ Adults at Spawning Stage
- Risk of Entrainment
- 20-mm Centroid

# Outcomes

- Outflow →  $E/I \leq 15\%$
  - Adult salvage “concern level” exceeded March 2; no action taken
  - R.I. “rebounds” to 21
  - Success?
  - Next Steps
- 

# Questions?

