

# SWRCB Workshop 2: Bay-Delta Fishery Resources

NOAA Fisheries

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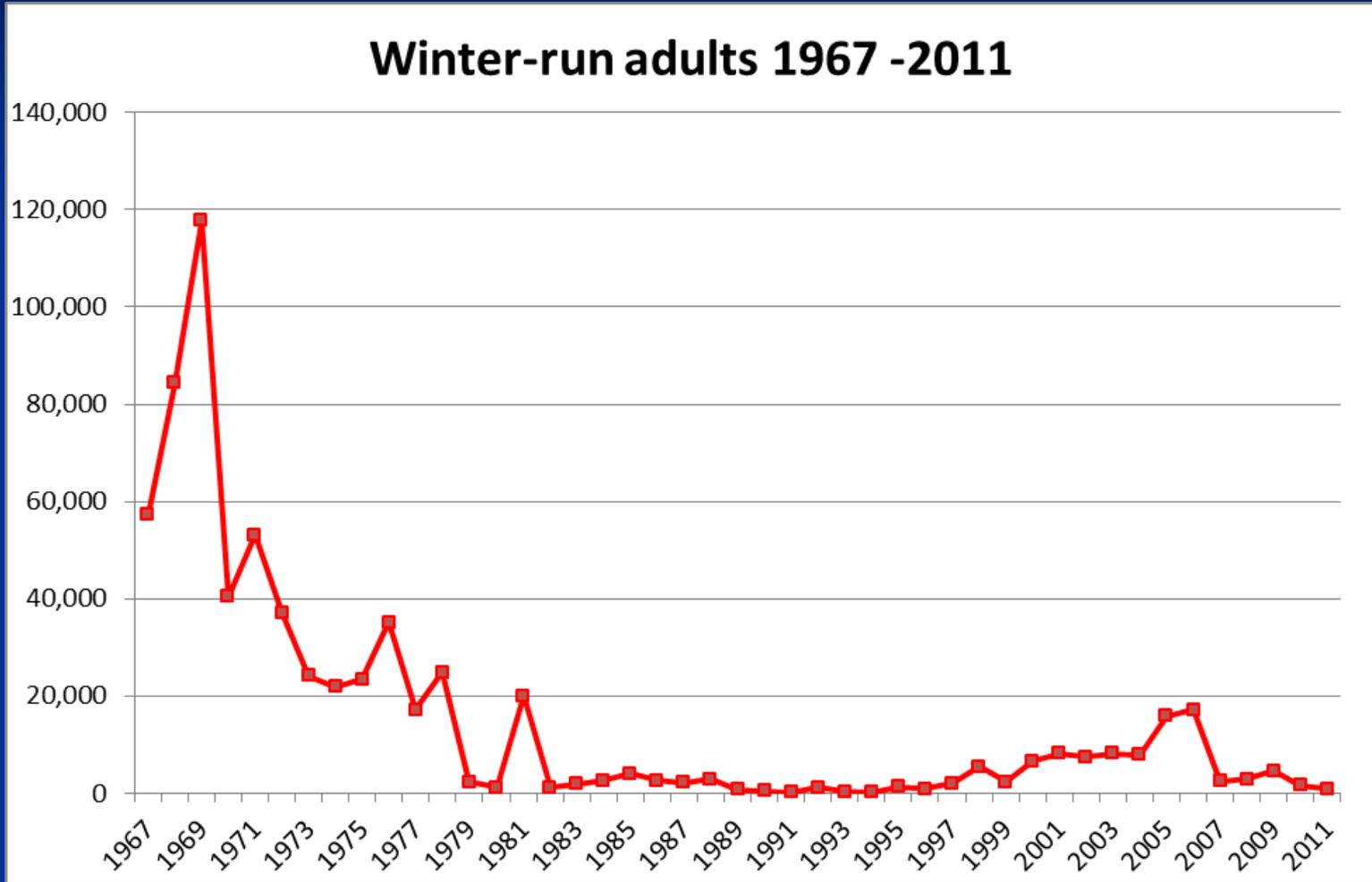
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# Key points

1. Low numbers for winter-run Chinook
2. NMFS 2009 Biological Opinion (BiOp)
3. The SWRCB should model a range of outflow objectives
4. Increased flows will benefit native fishes, including salmonid survival through the Delta
5. New or soon-to-be completed information is relevant

# Winter-Run Decline



# NMFS 2009 BiOp and RPA Actions

## Scope of BiOp

- a) CVP/SWP controlled streams on the Sacramento and San Joaquin Rivers and their tributaries
- b) Winter-run, Spring-run and Steelhead

## Additional areas under State Water Board jurisdiction:

- a) San Joaquin Tributaries Operations
- b) Sacramento River Tributaries
- c) Fall-run and Late fall-run

# Post NMFS 2009 BiOp Information

## New information since 2009/2010:

- a) Annual Reviews
- b) 2011 RPA amendments
- c) Joint Stipulation and associated sentinel steelhead study

# Post NMFS 2009 BiOp Information

## New information since 2009/2010:

### d) NAS study (2010)

- i. Overall RPA: “The assortment of actions among the three habitat realms (watersheds, mainstem rivers, and delta) is designed to improve survival and to enhance connectivity throughout this system. This approach is consistent with the contemporary scientific consensus on improving ecosystem functioning...”
- ii. OMR: “The committee concludes that the strategy of limiting net tidal flows toward the pump facilities is sound, but ...this action alone will [not] benefit the San Joaquin salmon, unless it is combined with an increase in San Joaquin River flows.”

# Dams and Cold Water Pool Management

- Reservoir releases are vital for salmon and steelhead survival.
- The process for establishing new outflow objectives should be accompanied by CalSim modeling/evaluation.
- This could include potentially modifying SWRCB or DFG 2010 springtime outflow criteria to protect reservoir releases

# Dealing with Uncertainty

- Precautionary approach
- Monitoring and adaptive management processes
- Substantial commitments of resources

# Forthcoming Information

1. NMFS Final Recovery Plan (Winter 2012/2013)
2. Winter-Run Life Cycle Model (first stages: Dec. 2013)
3. Scientific paper on migration patterns of juvenile winter-run Chinook salmon through the Delta (In review)
4. Report - Potential causes of 2011 winter-run decline
5. Technical memorandum for BDCP - Delta Salmonid Survival Objectives (early 2013)

# Suggestions for the SWRCB

1. **Upstream reservoir releases/ cold water pool management**
2. **Alternative methods to protect beneficial uses of salmonids**
3. **Increased outflow in the San Joaquin**
4. **Use the precautionary approach**
5. **Support modifications to the DCC Gates objectives**

# In conclusion

- Adequate flows are an essential component of habitat for all life stages of listed and non-listed anadromous fish
- There continues to be strong support, even with new information, for the goals and biological objectives identified in the DFG and SWRCB 2010 flow criteria reports.