Purpose of Workshop

• Receive public input on Sacramento River temperature management issues, including the 2016 Sacramento River Temperature Management Plan (TMP)

• Requirement of December 15, 2015 State Water Board Order 2015-043 (Order on Reconsideration of Temporary Urgency Changes to Delta Requirements)
Agenda

• State Water Board staff
• U.S. Bureau of Reclamation
• Fisheries Agencies
  – National Marine Fisheries Service (NMFS) (including presentation on NMFS’s RAFT and Salmon Survival models)
  – California Department of Fish and Wildlife
  – U.S. Fish and Wildlife Service
• Northern California Water Association Panel
• San Luis & Delta Mendota Water Authority Panel
• Public Comments
Order 90-5 Sacramento River Temperature Requirements

- Requires daily average temperature of 56 degrees F on Sacramento River at Red Bluff Diversion Dam “during periods when higher temperatures will be detrimental to the fishery”
- Allows temperature control point to be moved upstream upon concurrence of fisheries agencies and State Water Board
- Requires planning, monitoring and reporting
- Includes ramping rates and no impacts to Trinity
Order 2015-0043
TMP Requirements

• Requires development of 2016 TMP early in the year (March 15)
• Workshop on TMP before March 31, 2016
• No impacts to redd dewatering, stranding, or redirected impacts to other Sacramento or Trinity salmonids
• Stakeholder outreach
• Reevaluation of TMP on a monthly basis
Other Temperature Related Requirements of Order 2015-0043

• 2016 Drought Contingency Plan with updates
• Modeling, monitoring, reporting and coordination
  – Regular reservoir temperature profiles
  – Implementation of plan for accurate, timely, transparent, consistent and comparable modeling
• Evaluation of issues that occurred in 2015
  – Reservoir temperature profile measurement errors
  – Temperature exceedances and flow fluctuations
  – Modeling discrepancies on Sacramento and Trinity
Workshop Notice
Matters for Discussion

- 2016 TMP protection of winter-run Chinook salmon and other Sacramento River salmonids without redirected impacts
- Impacts and benefits of 2016 TMP
- Compliance with Order 2015-0043 requirements
- Long term measures to protect winter-run Chinook salmon
- Stakeholder input
2014 and 2015 Lessons Learned

• Begin planning early, particularly in potentially difficult years
• Regular and accurate reservoir temperature monitoring and reporting
• Margin of safety for climate and hydrologic forecast data
• Timely, accurate, transparent and consistent temperature modeling
• Improvements to temperature model and interpretation and development of other tools
• Maintain cold water at the redds without constraining redd location
• Avoid flow and temperature fluctuations until fish emerge, including use of more protective averaging period for temperatures
• Avoid use of side gates of temperature control device (TCD), prevent leakage of warm water in TCD, install Oak Bottom Curtain
• Preserve cold water as long as possible- temperature is key not quantity above a minimum level
• Improve stakeholder coordination
Questions?