

# 2016 SACRAMENTO RIVER TEMPERATURE MANAGEMENT PLANNING



CALIFORNIA

## Water Boards

STATE WATER RESOURCES CONTROL BOARD  
REGIONAL WATER QUALITY CONTROL BOARDS

**JULY 6, 2016 INFORMATIONAL ITEM**

# 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

- Required U.S. Bureau of Reclamation (Reclamation) to develop 2016 temperature management plan (TMP) early
- Workshop on TMP (held on March 18, 2016)
- No impacts to redd dewatering, stranding, or redirected impacts to other Sacramento or Trinity salmonids
- Stakeholder outreach
- Regular reevaluation of TMP
- Minimum October Shasta storage (1.6 MAF)

# Reclamation's 2016 TMP

- To National Marine Fisheries Service (NMFS) June 27

	June	July	August	September	October
Keswick avg. flow (cubic feet per second (cfs))	9,000	10,500	10,000	9,000	6,500
Keswick avg. temp (deg F)	52.42	52.41	52.39	52.35	52.3
Balls Ferry avg. temp (deg F)	55.03	54.96	54.58	53.85	53.01
Jellys Ferry avg. temp (deg F)	56.42	56.37	55.82	54.75	53.47

- **Real-time Management:**

- Verify weekly: Balls Ferry temperature of 56 F can be met, full side-gate operation of October 9 or later (from June 7 modeling), volume of cold water <49F at least 95% of June 7 forecasted
- If <49 water less than forecasted reduce flows by 1,000 cfs increments each week to no lower than 8,000 cfs
  - If no recovery of cold water pool with measures call a special Directors meeting to assess need for a revised plan

# Additional Actions

- Ramp up of July flows in two 750 cfs increments and flow cap of 10,500 cfs
- July flows include water diverted through the Glenn Colusa ID system to support smelt actions in Yolo Bypass and increased July outflows
- Attempt to maintain temperatures at most downstream redd below 55 F 7-day average of daily maximum (7DADM)

# Fisheries Agencies Concurrence

- NMFS concurred on June 28 finding that the TMP will likely provide the temperature needs for incubating winter-run Chinook salmon, although some temperature –dependent mortality is expected
- DFW concurred on June 29 based on the real-time management provisions and other measures

The slide features a decorative background of four horizontal, wavy blue lines that create a sense of movement and depth. The lines are layered, with the top line being the most prominent and the bottom line being the least. The waves are smooth and rhythmic, spanning the width of the slide.

# **Reclamation Presentation and Questions**