

# Water Quality Certification for the Oroville Facilities

State Water Resources Control Board

October 5, 2010

# Water Quality Certification

- Section 401 of the Clean Water Act requires every applicant for a federal license or permit which may result in a discharge into navigable waters to provide the licensing or permitting federal agency with certification that the project will be in compliance with specified provisions of the Clean Water Act, and other relevant requirements of state law.

# Oroville Facilities Application

- The application for water quality certification includes:
  - Preliminary Draft Environmental Assessment (PDEA, the FERC application),
  - Environmental Impact Report, and
  - Settlement Agreement.
- Staff also reviewed other key documents including the Environmental Impact Statement and Biological Opinions

# Beneficial Use Protection

- The Settlement Agreement provides measures that improve beneficial use protection. However, certain measures as written in the Settlement Agreement are either not enforceable, will not protect the beneficial uses, or will otherwise not meet water quality standards in a timely manner.

# Water Quality Certification

- The certification improves the clarity and enforceability of several unclear or unenforceable measures, avoiding potential future disputes and promoting compliance.
- The conditions in the certification provide protection of the beneficial uses over the 30 to 50 year life of the license, including anticipated changes in the physical environment, the regulatory environment, and the state of scientific understanding.

# Consistency with the Settlement Agreement

- Conditions S1, S2, S3, S4, S5, S10, S11, S15, S16, S17, S18, S19, S20, and S21 make no changes from the Settlement Agreement.
- These measures include plan approval by the Deputy Director to ensure that the specific actions protect water quality as anticipated.

# Water Quality Certification Measures with Substantive or Procedural Differences from the Settlement Agreement

- Fish Weir Program
- Temperature Conditions
- Habitat Expansion Agreement
- Water Quality
- Public Health

# Fish Weir Program Condition

- Condition S6 for the Fish Weir Program is consistent with the Settlement Agreement except it requires the installation of the interim weir within 5 years of license issuance.
- Timing is consistent with the Draft Biological Opinion.
- Change necessary to avoid take of spring-run Chinook salmon and to protect the cold freshwater and spawning beneficial uses.

# Temperature Conditions

- In some instances, the Settlement Agreement sets goals for temperature, rather than enforceable standards.
- DWR states that it cannot meet temperature goals prior to an anticipated facility modification.

# Temperature Conditions

- Conditions S7 and S8 reflect the Settlement Agreement, except for:
  - Requirement to submit plans for compliance with the water temperatures in the Settlement Agreement
  - Enforceable timelines for compliance with the water temperatures in the Settlement Agreement.
  - Conditions related to the recent failure of the river valves.

# Habitat Expansion Agreement

- Condition S9 requires mitigation for habitat loss above the facilities, and may be complied with by completion of the Habitat Expansion Agreement.
- The condition does not impose requirements above those included in the Habitat Expansion Agreement.

# Water Quality

- Condition S12 reflects the Settlement Agreement but adds measures to:
  - protect the public from cyanotoxins, an emerging public health concern, and
  - develop a methyl mercury management plan, if emerging science shows links to facilities management and potential mitigation actions.

# Public Health

- Condition S13 is consistent with the Settlement Agreement with the exception of a measure requiring a plan to protect the public from pathogens at the North Forebay Recreation Area.
- Condition S14 is consistent with the Settlement except for additional requirements to notify the public of the risks of contaminated fish consumption.

# Comment Letters

- American Whitewater and American Rivers
- Butte County
- Butte Water District, and others
- California Fisheries and Water Unlimited
- California Sportfishing Protection Alliance
- Coastside Fishing Club, and others
- Department of Water Resources
- City of Oroville – Oroville Redevelopment Agency
- City of Oroville
- Pacific Gas and Electric Company
- Patrick Porgans and Associates
- Plumas County Flood Control District
- South Delta Water Agency
- State Water Contractors
- NOAA Fisheries

# Beneficial Use Protection

- Past operations, and current operations of the Project do not protect the beneficial uses.

# Beneficial Use Protection per Biological Opinions

- “Consequently, NOAA Fisheries anticipated that the overall effect of water temperatures on adult spring-run Chinook salmon migration is that the tail end of the migration upstream during July may experience temporary delays, and an increased susceptibility to disease....”  
(NOAA OCAP BO, 2004)

# Beneficial Use Protection per Biological Opinions

- Salmon have shifted their spawning activity from below the Thermalito Outlet to the LFC and an average of 75% of the spawning now occurs in the LFC.  
(Draft Oroville BO)

# Beneficial Use Protection per Biological Opinions

- “In the case of the Feather River, significant redd superimposition occurs in-river due to hatchery overproduction and the inability to physically separate spring-run and fall-run adults. This concurrent spawning has led to hybridization between the spring-run and fall-run in the Feather River.” (NOAA Final BO for the SVP/SWP, 2009 )

# Beneficial Use Protection per DWR Studies

- Based on water temperature modeling for years 2000 and 2001 the Bureau of Reclamation concluded that it was unlikely that adult Chinook Salmon would use the Feather River below the Thermalito Afterbay Outlet except as a migration corridor (DWR, 2004, SP-F10, pp. 4-11).

# Beneficial Use Protection Per FERC Application (PDEA)

- “Based on available literature, and analysis of water temperature data collected from thermographs in the lower Feather River, increased incidence of disease and mortality, in-vivo egg mortality, and developmental abnormalities could occur in some areas of the river during some portions of the immigration and holding period.”  
(PDEA page G-AQUA 1-45)

# Beneficial Use Protection Per FERC Application (PDEA)

- “Pre-spawn mortality estimates in the lower Feather River from 2000 to 2003 were high.” “A combination of stress from water temperature, river flows, disease, high spawning returns, and recreational angling likely account for the high pre-spawn mortality estimates in the lower Feather River from 2000 through 2003.” (PDEA page G-AQUA 1-51)

# Beneficial Use Protection Per FERC Application (PDEA)

- The PDEA lists the following potential effects on aquatic resources of the No-Action Alternative (page 5.5-45)
  1. Ongoing genetic introgression
  2. Continued reduced macroinvertebrate productivity and diversity
  3. Continued deprivation of large woody debris and reduction of habitat quality
  4. Continued blockage of gravel and ongoing degradation of substrate quality
  5. Continued incremental decrease in channel complexity
  6. Continued degradation of spawning gravel, large woody debris, and habitat complexity