Russian River Frost Protection Workshop April 7th, 2009

Sean White, General Manager
Mendocino County Russian River Flood Control
and Water Conservation Improvement District

Background-MCRRFC&WCID

- District holds Permit 12947B (8,000 afy)
- Provide water for over 4000 acres of agriculture
- Municipal and Industrial
  - City of Ukiah
  - Millview CWD
  - Willow CWD
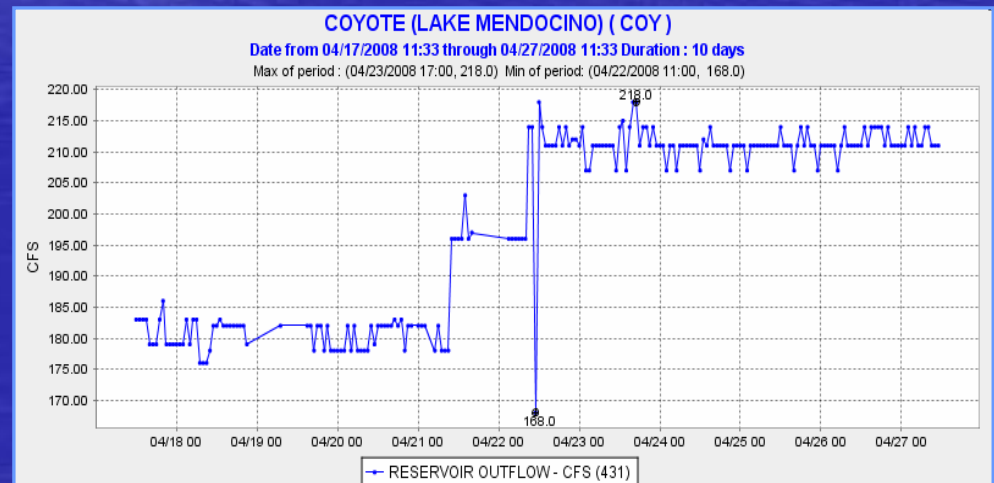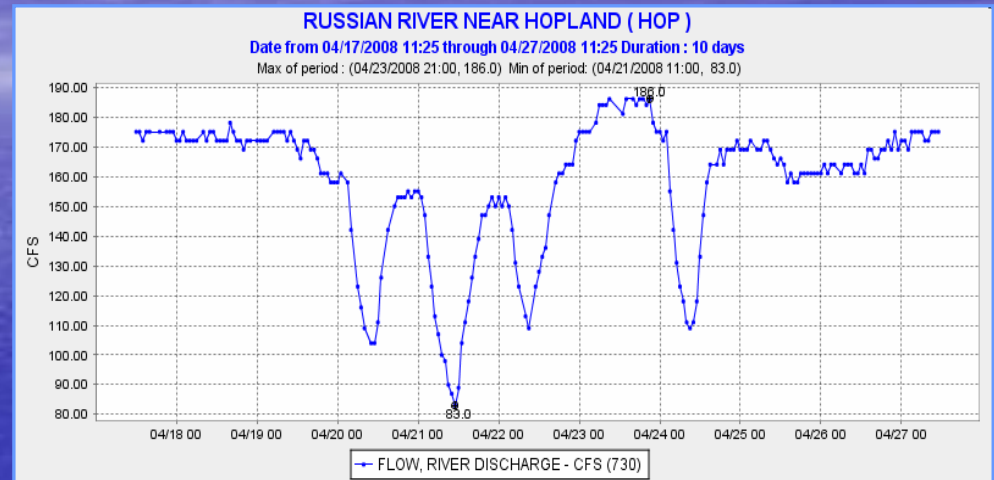 - Redwood Valley
  - Hopland PUD

Frost Prevention

- Season typically runs March 15th to May 15th
- Overhead sprinklers
  - Effective
    - Radiation
    - Advection
- Past practices
  - Less effective
  - Impacts to air quality
  - Noise
- Beneficial use

Frost Protection 2008

- Baseline Conditions
  - Low Base Flows
  - High Demand
  - Exceptional Event
- Additional Factors
  - Remote operation
  - No forecasting
  - Telemetry Lag time
- Impacts
  - Rate of change of instream flows lead to stranding of juvenile steelhead in mainstem

RUSSIAN RIVER NEAR HOPLAND (HOP)
Date from 04/17/2008 11:25 through 04/27/2008 11:25 Duration : 10 days
Max of period : (04/23/2008 21:00, 186.0) Min of period: (04/21/2008 11:00, 83.0)

FLOW, RIVER DISCHARGE - CFS (730)

COYOTE (LAKE MENDOCINO) (COY)
Date from 04/17/2008 11:33 through 04/27/2008 11:33 Duration : 10 days
Max of period : (04/23/2008 17:00, 218.0) Min of period: (04/22/2008 11:00, 168.0)

RESERVOIR OUTFLOW - CFS (431)

Frost Protection Task Force

- Initiated by NMFS and included: CDFG, SWRCB, NCRWCB, SCWA, MCRRFC&WCID, Mendocino County Farm Bureau, Ag representatives, Fish Friendly Farming, Trout Unlimited

- Developed Draft Protocol to provide SCWA with frost forecast information prior to onset of pumping

- Implementation stalled by drought and later derailed by NMFS letter to SWRCB asking for prohibition

Frost Protection 2009

- Lake Mendocino at historically low levels
  - Mandatory conservation between 35-50%
  - BOS Emergency Declaration
  - Petition for Temporary Urgency Change
- Local Control of remaining allocation
  - Some need frost protection more than irrigation
  - Some only need irrigation
  - Blanket prohibition will cause unnecessary impacts to agriculture

Management of Frost Demand

- Infrastructure, Tools and Data
  - Not a prohibition
  - Not a water master

- Short term
  - Draft Protocol

- Near term
  - Additional Gage
  - Interactive meters
  - Frost foreasting

- Long term
  - Offstream storage
  - Recycled Water