Russian River
Frost Protection Workshop
April 7th, 2009

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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
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 forecasting

- Long term
  - Offstream storage
  - Recycled Water