## APPENDIX F

Scoping Meeting Posters



# Welcome

Public Scoping Meeting
and Open House
for the

Long-Term Plan for Protecting

Late Summer Adult Salmon in the

Lower Klamath River

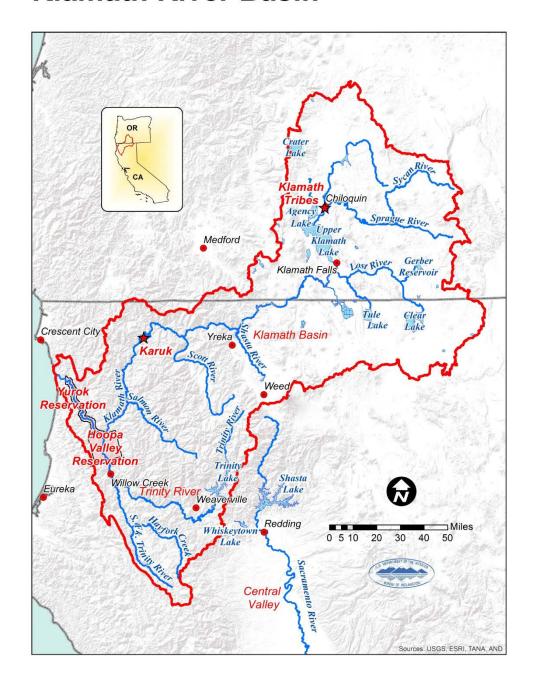


## **Purpose**

- Solicit early input from the public regarding the development of alternatives for the longterm plan and environmental impact statement
- Things to Consider:
  - Are there any impacts or resources that we need to be aware of?
  - What alternatives or mitigation measure do you think would help to lessen or avoid impacts?
  - Can you recommend any additional sources of information?
  - Are there other individuals or organizations that we should be working with?
- This Plan is separate from the Environmental Assessment currently underway for a potential flow augmentation action for 2015.

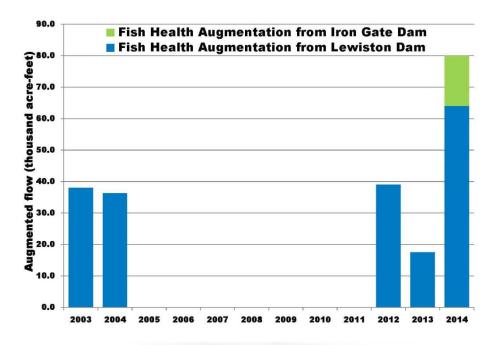


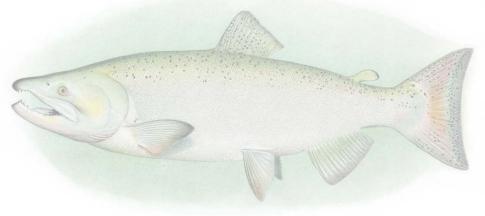
## Klamath River Basin





## Years of Flow Augmentation to Avert Fish Die-Off







## Klamath River

**Flow Augmentation Timeline** 

### March 2012 PFMC run projection:

384 000 adults Dry hydrologic conditions lead to low Klamath River accretion forecasts prompting concerns of disease outbreak

#### May 31, 2012

- TMC recommen · Klamath River flows augmented to 3,200 cfs Aug 15-Sep 21 Enhanced fish monitoring
- Aug 10 2012 Reclamation signs FONSI for release of up to 44,800 AF for emergency numoses
- 2012 Klamath River Postrun estimate: 292,000 adults. No substantial

#### August 12, 2013 Joint Memorandum (NOAA Fisheries/U.S. Fish & Wildlife Service):

#### Preventative Flow Augmentation

- Initiate preventative flow augmentation in lower Klamath River to min, 2,800 cfs when cumulative Chinook harvest in Yurok Tribal fishery in the estuary area meets or exceeds 7,000 fish
- Initiate preventative flow augmentation by Aug 22 if fish metric not triggered.

  Continue augmentation until Sep 21 unless mean daily water temp. in lower Klamath River is projected to be greater than or equal to
- 23° C, in which case continue until temp is projected to be less than 23° C.
- Implement real-time flow-temp management using existing water temp models. Implement fish pathology monitoring to determine the need for a fish pathology/mortality emergency release.
- Monitor conditions to inform need and timing of emergency flow releases based on real-time environmental conditions

#### **Emergency Flow Augmentation**

- If diagnosis of severe Ich infection of gills in 5% or greater of a desired sample of 60 adult salmonids, or
- Observed mortality of greater than 50 dead adult salmonids in a 20-kilometer reach in 24 hours combined with a confirmed presence of
- Immediately double pre-existing flows in the lower Klamath River for a period of 7 days.

#### March 2014

PFMC run projection: 92,800 adults

NOAA forecasts very low flow accretions in August & September

#### June 20, 2014

Hoopa Valley Tribe issues letter to Sec. of Interior urging flows be augmented Yurok Tribe, PFMC, and other entities

formally request that Reclamation augment flows

#### Reclamation receives letters from Central Valley Project water and power users

questioning the biological basis for augmented flows and expressing concern about impact to water supplies and power generation

#### July 29, 2014

Reclamation announces it will not provide augmentation flows on preventative basis, but will implement fish pathology/mortality component of the emergency fall flow release recommendation, as described in 2013 Joint Memorandum

#### August 2014

Hydrologic conditions and observed fish health worsens; Fish Health Assessment Team reports a significant fish die-off likely imminent

Reclamation determines an emergency release from Trinity Reservoir necessary: announces increased releases to achieve flow rate of ~2,500 cfs in lower Klamath River

#### September 15, 2014

Fish Health Center confirms presence of Ich parasites. Reclamation increases releases from Lewiston Dam to ~3,400 cfs in lower Klamath

Formal post-season fishery reviews not yet available: anecdotal reports indicate that fish health did not decline following flow doubling

2014 Klamath River Post-run estimate: 160.000 adults: documented reports of severely infected fish but no significant die-off

NEPA Environmental Assessment for potential flow augmentation action for fall 2015

NEPA EIS for Long-Term Plan to protect the returning adult salmon population in the lower Klamath River

1955-2001 2002-2011 2012 2013 2014 2015

Congress authorizes Trinity River

Division of Central Valley Project

Trinity/Lewiston Dams completed

Sec. of Interior increases flows/

initiates Trinity River Flow Study

Congress enacts Trinity River

implement salmon restoration

Congress enacts Central Valley

340,000 AF available to Trinity

Trinity River Flow Evaluation

Study completed, used as

Preferred Alternative in the

Record of Decision signed

1999

Project Improvement Act, making

Fish & Wildlife Mamt. Act to

Sep. 2002

Approx. 34,000

salmonids die off

over 2-week span

post-run estimate:

2004 Klamath River

post-run estimate:

2008 Klamath River

post-run estimate: 70.698 adults

2009 Klamath River

post-run estimate:

100,644 adults

>79.000 adults

192,000 adults

2003 Klamath River

38,000 AF released

### 36,313 AF released

39,000 AF released

### 17,500 AF released

March 2013

Sentember

May 2013

272,000 adults

PFMC run projection:

NOAA forecasts very low

flow accretions in August &

Suggested alternatives fail

to pass. Following input

decision to augment flows

to 2,800 cfs Aug 15-Sep 1

NCAO signs FONSI for

release of up to 62,000 AF

from Trinity Reservoir for

2013 Klamath River post-

preventative purposes

run estimate: 165.100

adults. No substantial

from basin partners,

Aug 6, 2013

64,000 AF released

#### Acronyms/abbreviations acre-feet

cubic feet per second Environmental Impact Statement Environmental Impact Report FONSI Finding Of No Significant Impact

Ichthyophthirius multifilis NCAO Northern California Area Office of the Bureau of Reclamation NEPA The National Environmental Policy

NOAA National Oceanic and Atmospheric Administration PFMC Pacific Fishery Management Council Trinity Management Council

### Agency Actions

Water Releases

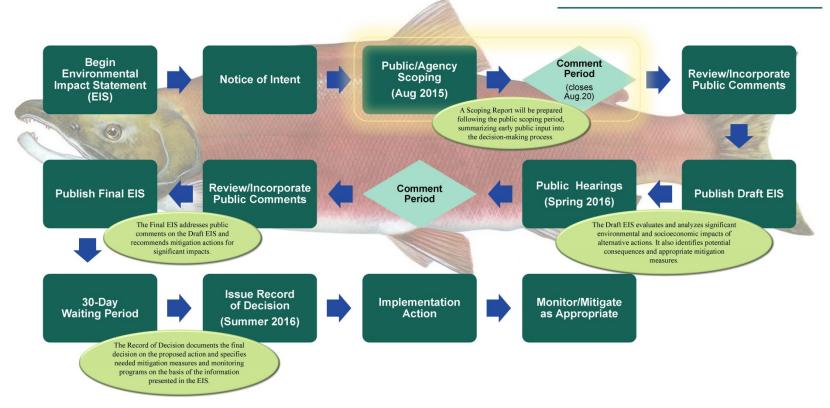
### Fish Statistics



### **The National Environmental Policy Act**

The National Environmental Policy Act (NEPA) requires the identification and analysis of potential environmental effects of major proposed federal actions and alternatives before those actions take place, and ensures that environmental factors are considered equally with the technical and engineering components of a decision.

Public involvement is integral to the federal decisionmaking process, and is required by NEPA. The Act's intent is to protect, restore, or enhance the environment through well-informed federal decisions.





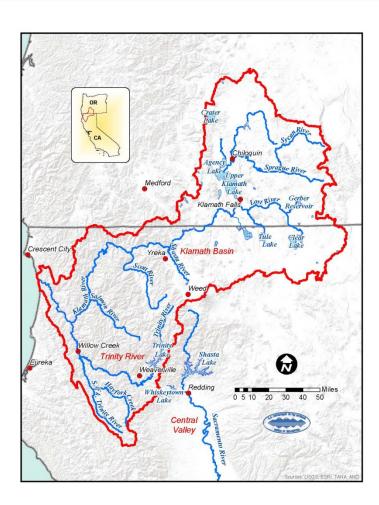
## Hydrology Klamath River Basin

### **Trinity River and Lower Klamath River**

Hydrology of the Klamath River Basin is derived from controlled sources, including Iron Gate Dam on the Klamath River and Lewiston Dam on the Trinity River.

Releases from deep portions of the reservoir ensure release of suitably cold water throughout the year in support of Trinity River Restoration Program goals.

Water was released from the Trinity Reservoir to augment flows in the lower Klamath River in 2003, 2004, 2012, 2013, and 2014 when risk of a potential die-off of adult salmon could occur during late summer. Supplemental flows used during these years were preventative or emergency scheduled quantities that ranged up to 80,000 acre-feet.





## Hydrology Trinity River Basin

Trinity Reservoir is the primary water storage facility in the Trinity River Division of the Central Valley Project. At capacity, it stores 2.448 million acre-feet, and receives an average annual inflow volume of approximately 1.2 million acre-feet. Water released from Trinity Reservoir flows to Lewiston Reservoir, a re-regulating reservoir formed by Lewiston Dam. From Lewiston Reservoir, water can be diverted for use in the Sacramento River Basin via the Clear Creek Tunnel, or pass through Lewiston Dam to flow 112 miles to the Klamath River, which then flows approximately 43 miles before entering the Pacific Ocean. The Trinity River Hatchery, located at the base of Lewiston Dam, also diverts a small quantity of water in support of fish hatchery operations.

### **Hydropower Generation**

The Trinity River Division has the capacity to generate substantial hydroelectric power per acre foot of water diverted because the elevational difference between Trinity and Keswick Reservoirs provides the gravitational flow to generate hydropower at a higher than average rate. In addition to generating power at Trinity and Lewiston Dams in the Trinity Basin, hydropower is also generated at Judge Francis Carr and Spring Creek Powerplants, then at Keswick Powerplant (part of the Sacramento River Division). In total, operations of the Trinity River Division alone can account for as much as 30 percent of the total power generation capability of the Central Valley Project.

