Trinity River Division/Project

- Trinity Reservoir capacity: 2.4 million af
- Shasta Reservoir capacity: 4.6 million af
Map and Hydrology

Average Annual Outflows

- Klamath River @ Keno 1.2 maf
- Klamath River @ Klamath 12.7 maf
- Trinity River @ Hoopa 3.5 maf
- Trinity River @ Lewiston 0.4 maf
- Trinity Exports to Sacramento 0.6 maf
- Sacramento River @ Keswick 7.4 maf
- Sacramento River @ Freeport 17.4 maf

Note: Hydrology is 1964-2001 average
Hoopa Valley, Yurok, and Karuk Tribes

“The fishery and other resources of the Trinity River and the lower Klamath River Basins defined the life and culture of area Indians since time immemorial. Salmon and other fish historically provided the primary dietary staple for tribes in the area.”

http://www.trrp.net/?page_id=23
Legislative and Project History

1955
Trinity River Act, Congress Authorizes TRD


1964-74
88% of Trinity inflow to Sacramento Valley

1981
Andrus Decision, DOI Initiates TRFE

1980
Flow Management EIS (Salmon population down 80 percent)

1983
Trinity River Fish and Wildlife Management EIS

1992
CVPIA Directs DOI to complete and implement Flow Evaluation (w/ Hoopa)

1994
Trinity River Restoration EIS Begins

1995
ROD Signed

2000
Restoration Program Begins

2005
Restoration Program Begins

1980
Flow Management EIS

1984
Trinity River Management Act requires restoration to pre-dam levels

1964
TRD Fully Operational

1994
Trinity River Restoration EIS Begins
EIS/EIR & ROD challenged in 2001 - District Court decision overturned in 2004
Pre- and Post-Dam Channel Impacts
Changes to Trinity River Channel Morphology

Pre-Dam

- Frequently mobile cobble bars
- Sparse vegetation on bars and floodplains dredged for gold

Post-Dam

- Thick riparian berms have armored previously mobile bars and have simplified channel morphology 40 miles downstream of Lewiston Dam
Historical Morphology and Habitat

Fry rearing habitat at low flows

Fry rearing habitat at high flows

Salmonid fry require clean exposed cobble gravel channel margins with low water velocity
Existing Morphology and Habitat

- Riparian berms
- Sand deposits along channel margins
- Fry rearing habitat provided only during low flow periods
Goals of the Trinity River Restoration Program (TRRP)

“Re-establish the natural physical processes that create and maintain high quality aquatic habitat”

“Create spawning and rearing conditions downstream of the dams that best compensate for lost habitat upstream”

Key Components: Flows + Channel Restoration + Gravel Injection
Increased Trinity River Flows: Mimicking Historic Hydrologic Patterns/Peaks

ROD instituted spring ecological flows (started in 2004)

Pre Dam Flows

Post Dam Flows (yellow line)

Source: Reclamation, 200
Bucktail Bridge at 11,000 (2011)
Bucktail Bridge at 11,000 cfs (2011)

1,300 cfs
Existing and Potential Channel Rehabilitation Sites

- $10 million/year
- Phase 1 (2005-2010) 19; Phase 2 (2010-2015): 23 - **34 completed**
- Hoopa, Yurok, DWR, DOI design
Lower Steiner Flat Reach Conceptual Designs
2015/2016 Flow Augmentation

Ichthyophthirius multifiliis ("Ich") parasite concerns related to potentially crowded conditions

- Additional 47 taf release in mid-Aug - Sept to maintain water temperatures and flush parasites to avoid outbreak
- Peak flow of 2800 cfs on Lower Klamath River
TRRP 2018 Summary

- **Flows:** Dam releases followed an ‘critically dry’ year hydrograph (1900 cfs peak in mid-April) - up to 369,000 af allocation

- **Rehabilitation:** Deep Gulch and Sheridan Creek sites

- **Watershed / Gravel Augmentation:** (0)? (based on sediment budget calculations) above Weaver Creek
2018 Critically Dry water year Lewiston dam release schedule for restoration of the Trinity River, CA

Hydrograph using ROD Critically Dry water year volume approved by the Trinity Management Council on March 28, 2018. ROD release volume for Critically Dry water year is 369,000 acre feet.

Go to www.trrp.net or call (530) 623-1800 for current river flows

Please take appropriate safety precautions whenever using the river

Note: Daily average flows shown in labels.
Trinity River Project and Restoration Program

Northern California
Water Education Foundation Tour
October 11, 2018