

Fall 2004 Augmented Flow Monitoring

Below is a list of the additional monitoring efforts (high and medium priority, excluding the genetic monitoring) that will be implemented to collect data to evaluate the effectiveness of augmented fall flows from the Trinity River, as approved by the TMC during its conference call on August 20, 2004. These efforts are in addition to ongoing monitoring efforts conducted by cooperating agencies and, unless otherwise noted, should continue through the end of September if possible.

After follow-up conversations with agencies involved in the monitoring efforts, it was decided to not conduct the direct observation of fish densities project due to concerns over visibility and practical limitations to collecting the needed information. The effort that was to be expended on this project has instead been shifted to a floating survey of the areas above the confluence of the Klamath and Trinity rivers (Big Bar to Weitchpec). While this was originally given a lower priority, data on fish moving up into the Klamath will fill an important information need and these surveys will provide an important watch for stressed fish in this reach as well.

1. Pathology Monitoring –

- a. Lower Klamath River – (approximately Terwer to Blue Creek reach) Yurok Tribe and FWS will implement fish sampling activities 2 to 3 days per week to ensure that enough fish are sampled (30 per week minimum) to ensure quality incidence and severity data.
- b. Upper Klamath River - (approximately Pecwan to Weitchpec) - Yurok Tribe will implement fish sampling activities 2 to 3 days per week to ensure that enough fish are sampled (30 per week minimum) to ensure quality incidence and severity data.
- c. Lower Trinity - Hoopa Valley Tribe will implement fish sampling activities to ensure that enough fish are sampled (30 per week minimum) to ensure quality incidence and severity data. FWS may assist with beach seining if increased sampling effort is necessary.
- d. Klamath River at Ishi Pishi Falls – The Karuk Tribe (funded independently) will implement fish sampling activities to ensure that enough fish are sampled (30 per week minimum) to ensure quality incidence and severity data.

2. Radio Tracking –

- a. Beacon transmitters to increase quality control of fixed receivers operated by the Yurok Tribe.

- b. Active tracking of adult salmonids upstream of Blue Creek (approximately Blue Creek to Weitchpec) 3 days per week by Yurok Tribe (1 day) and FWS (2 days). The Yurok Tribe conducts active radio tracking below Blue Creek.
3. Direct Observation/Raft Survey – Weekly surveys of the Klamath River from Orleans to Weitchpec. This reach will be divided up into two sections (approximately Orleans to Big Bar and Big Bar to Weitchpec). Surveys will identify concentrations of fish, especially at thermal refugia, and any evidence of fish mortality. Cooperative project between the Yurok Tribe, FWS and the Karuk Tribe (funded separately).
4. Water Quality in Estuary – Four sets of water quality samples will be collected in the estuary by the Yurok Tribe to collect data on the influence of augmented fall flows on water quality in the estuary.
5. Stranding Survey - Three surveys will be conducted in the upper Trinity River in areas where stranding has occurred in the past. These surveys will be conducted by the Yurok Tribe and FWS.
6. Riparian Monitoring – this project will probably not be conducted due to the inability to obtain pre-high flow information. If pre-flow data exists it may be implemented.

Information Reporting – after each sampling effort a brief summary of the results (location, # fish sampled, weather, any other general observations, etc) will be provided to FWS (joe_polos@fws.gov) and will be summarized at least weekly. This information will be widely distributed (TMC, TAMWG, cooperating agencies, etc) and CDFG (Sara Borok) has offered to post the information on the information portal established by the KFAT. All information will be characterized as preliminary. If possible, summaries will be provided twice a week. Summaries will be sent out Tues afternoon or Wed morning to ensure that there is time for agency action if warranted.

Table 1. Additional monitoring efforts for the fall 2004 Trinity River augmented flow and approximate sampling efforts.

Project	Task/Area	Yurok	FWS	Hoopa
Pathology Monitoring ^{1,2}	Klamath-below Blue Creek	1 crew, 2 days per week	1 crew, 2 days per week	
	Klamath-above Blue Creek	1 crew, 2-3 days per week		
	Lower Trinity			1 crew, effort depending on fish availability
Radio Tracking	Beacons transmitters	Yurok tribe to purchase, install and maintain		
	Klamath River - active Tracking upstream of Blue Creek	1 crew, 1 day per week	1 crew, 2 days per week	
Direct Observation/Raft Survey ³	Weekly survey of Klamath River from Orleans to Weitchpec	1 crew, 1 day per week	1 crew, 1 day per week if needed	
Water Quality in Estuary	4 sets of samples collected throughout the augmented flow period.	Yurok Tribe will collect samples		
Stranding Survey	3 surveys throughout the augmented flow period	1 person	1 person	
Riparian Monitoring				???

1 – minimum of 30 samples per week

2 – Karuk Tribe will be conducting disease sampling at Ishi Pishi falls

3 – Yurok Tribe will survey from Big Bar to Weitchpec. Karuk Tribe will survey from Orleans to Big Bar. FWS will assist when needed.