



United States Department of the Interior



FISH AND WILDLIFE SERVICE

CA-NV Fish Health Center
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Anderson, CA 96007

MEMORANDUM

DATE: 8/14/2007

TO: Klamath Fish Health Distribution List

FROM: Ken Nichols
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SUBJECT: 2007 Klamath River Pathogen Monitoring

As a component of Klamath River fish health assessment, the California-Nevada Fish Health Center is examining juvenile Klamath River Chinook Salmon to monitor the incidence of *Ceratomyxa shasta* and *Parvicapsula minibicornis* infection. Fish are collected by biologists with the Karuk Tribe, Yurok Tribe, Hoopa Tribe and U.S. Fish and Wildlife Service. The Fish Health Center is providing laboratory support for the project. Sampling began the week of April 15, 2007 and will continue into August.

Pathogen testing by QPCR has been performed for fish collected through July 14. *C. shasta* has been detected in 21% (268/1254) of Klamath Chinook salmon and 2% (4/182) of Chinook salmon sampled in the Trinity River. *P. minibicornis* has been detected in 74% (507/683) of Klamath Chinook salmon and 38% (28/74) of Chinook salmon sampled in the Trinity River. *C. shasta* was detected in 33% (28/84) and *P. minibicornis* was detected in 66% (35/53) of juvenile coho salmon sampled in the Klamath River. The next update of these data will be available after September 1.

2007 Juvenile Salmonid Disease Monitoring - preliminary data

Source: 8/14/07 memo from Ken Nichols (FWS)

- Juvenile Chinook salmon disease monitoring began on April 15.
- Sampling summarized through July 14, next update will be available by Sept 17.
- *Ceratomyxa shasta* was detected in 21% of Chinook sampled in the Klamath River and 2% of the Chinook sampled in the Trinity River.
- *Parvicapsula minibicornis* was detected in 74% of Chinook sampled in the Klamath River and 38% of the Chinook sampled in the Trinity River.
- Assessment of infection in the lower Klamath/Estuary will be done following recovery and decoding of CWTs.
- High infection rates of *C. shasta* and *P. minibicornis* have been observed in previous sampling (see attached table), although high rate of *P. minibicornis* in Trinity fish may be due to more sensitive assay (QPCR).

Source: From: PFMC, Sept 2007. Klamath River Fall Chinook Overfishing Review, draft report.

Table 5-12. Klamath Basin juvenile Chinook pathogen infection rates. (Sample size in parentheses)

Pathogen	Brood Year	Klamath	Trinity	Estuary		
				Iron Gate CWT	Trinity CWT	Unmarked
<i>Ceratomyxa shasta</i>	2000	50% (34)	0% (38)	NA	NA	29% (42)
<i>Parvicapsula minibicornis</i>	2000	88% (25)	6% (31)	NA	NA	84% (43)
<i>Ceratomyxa shasta</i>	2001	37% (38)	0% (14)	60% (5)	19% (68)	26% (47)
<i>Parvicapsula minibicornis</i>	2001	95% (39)	0% (19)	100% (5)	14% (64)	60% (47)
<i>Ceratomyxa shasta</i>	2003	34% (735)	Not Sampled	Not Sampled	Not Sampled	Not Sampled
<i>Parvicapsula minibicornis</i>	2003	77% (732)	Not Sampled	Not Sampled	Not Sampled	Not Sampled

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Hourly Data for TRINITY RIVER AT DOUGLAS CITY

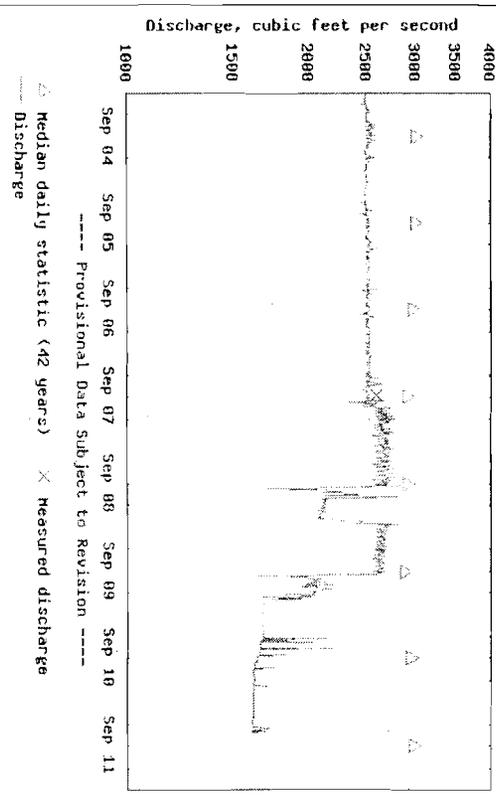
TRINITY RIVER AT DOUGLAS CITY -- DGC
September 2007

Date	TEMPERATURE, AIR (DEG F)				TEMPERATURE, WATER (DEG F)			
	HRS	MAX	Min	MEAN	HRS	MAX	Min	MEAN
09/01/2007	24	96.1	50.1	72.2	24	57.9	53.6	56.4
09/02/2007	24	95.1	48.2	70.9	24	58.1	54.1	56.6
09/03/2007	24	96.0	49.5	72.0	24	58.3	54.3	56.8
09/04/2007	24	82.8	53.0	67.5	24	58.5	54.9	57.1
09/05/2007	24	92.5	45.1	67.2	24	58.1	53.8	56.5
09/06/2007	24	98.0	47.6	70.1	24	58.4	54.3	56.9
09/07/2007	24	96.4	49.3	70.8	24	58.3	54.5	56.9
09/08/2007	24	96.8	49.3	70.2	24	58.0	54.0	56.4
09/09/2007	24	98.8	49.3	70.7	24	57.4	54.2	56.2
09/10/2007	24	100.1	46.5	70.5	24	57.1	54.1	56.0
Average for month				70.2				56.6

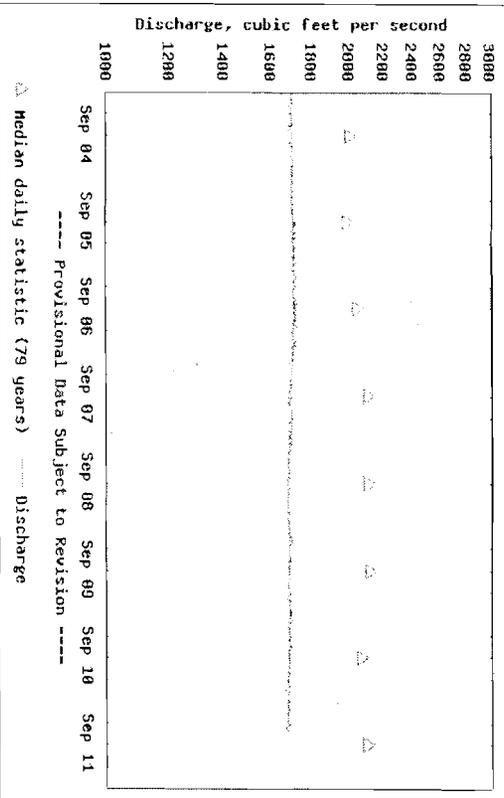
California Data Exchange Center **Mail to Webmaster**



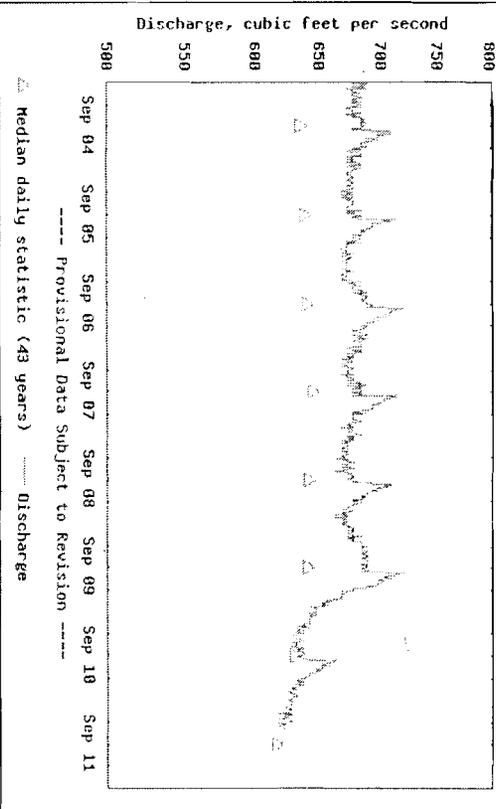
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USGS 11523000 KLAMATH R A ORLEANS



USGS 11530000 TRINITY R A HOOPA CA



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