

## MEMORANDUM

**DATE:** June 17, 2010

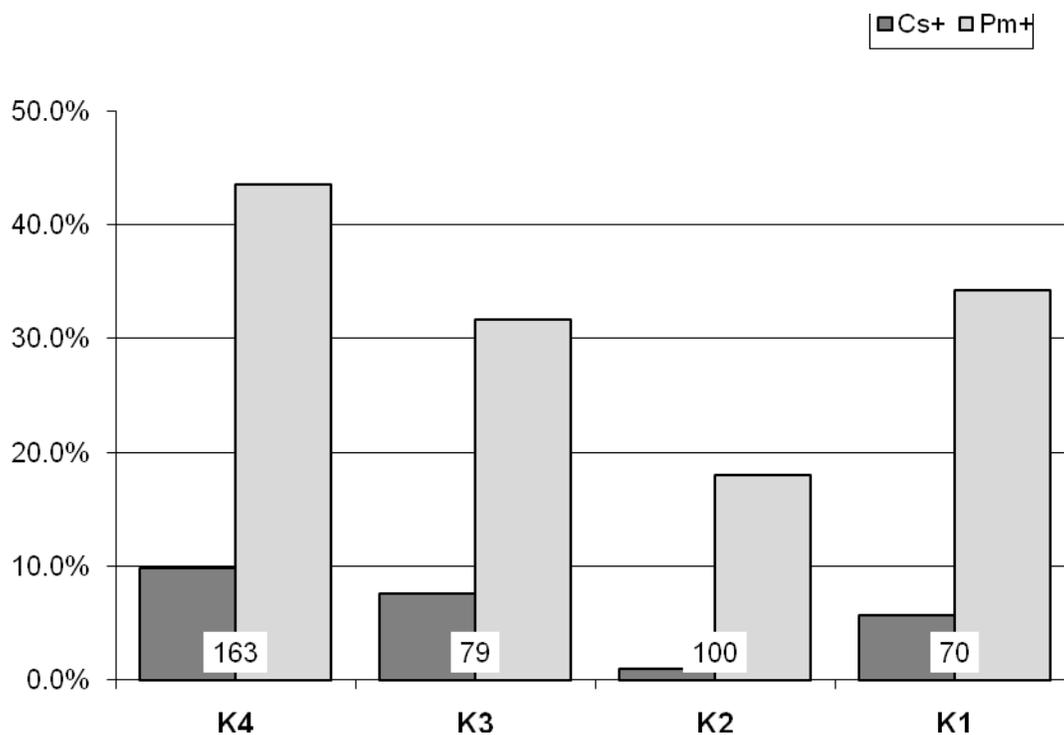
**TO:** Nick Hetrick, Arcata FWO

**FROM:** Kimberly True  
CA-NV Fish Health Center  
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Kimberly\_True@fws.gov

**SUBJECT:** 2010 Klamath River Salmonid Health Monitoring

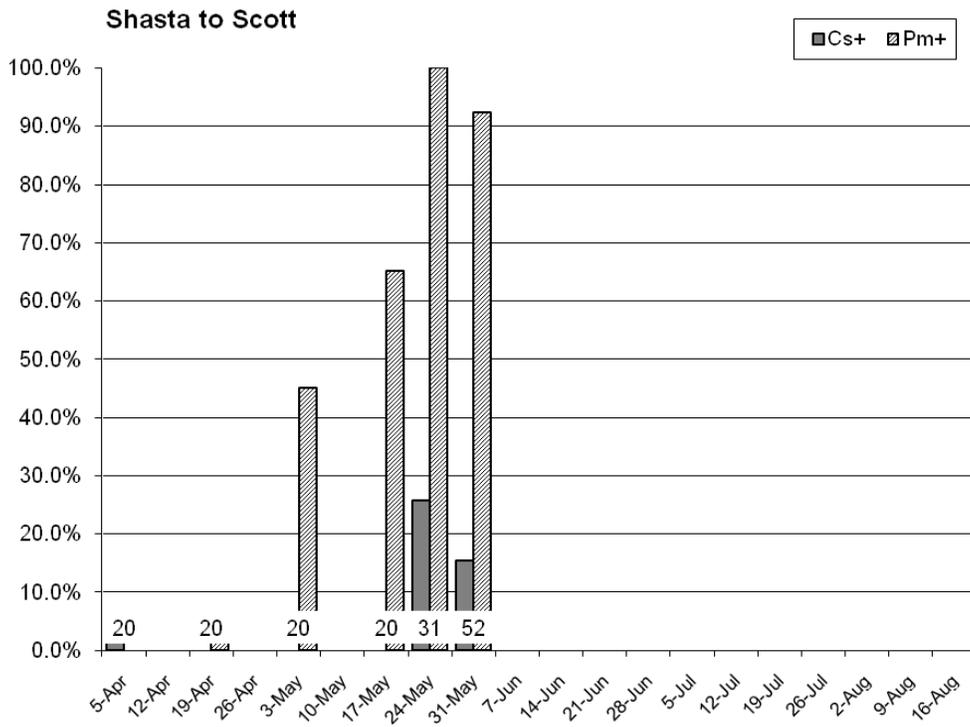
As a component of Klamath River fish health assessment, the California-Nevada Fish Health Center is examining juvenile Klamath River Chinook Salmon to monitor the incidence of *Ceratomyxa shasta* and *Parvicapsula minibicornis* infection. Fish are collected by biologists with the Karuk Tribe, Yurok Tribe, Hoopa Tribe and US Fish and Wildlife Service. The CA-NV Fish Health Center is coordinating disease monitoring efforts and providing laboratory support for the project.

Pathogen testing by QPCR has been performed for the majority of natural fish collected through the week of 31 May for all reaches: the first release from Iron Gate SFH occurred on 1 June. Data are summarized for all natural fish by reach in Figure 1, and then by weekly sample period for each reach in Figures 2-5. *Ceratomyxa shasta* has been detected in 6.6% (27/412) and *Parvicapsula minibicornis* has been detected in 33.5% (138/412) of Klamath Chinook juveniles tested thus far. All data are preliminary and subject to revision, with the next update planned for mid-July.



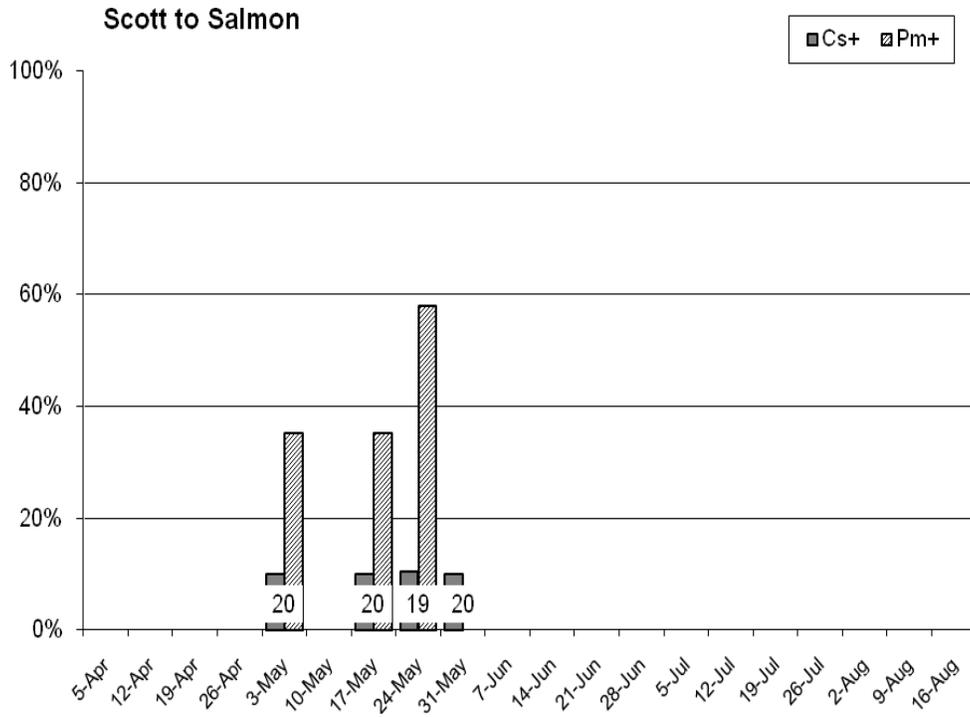
Reach	Total Number of Samples (N)	Number <i>Cs</i> Positive	Number <i>Pm</i> Positive
K4	163	16	71
K3	79	6	25
K2	100	1	18
K1	70	4	24

**Figure 1/Table 1. Incidence of *Ceratomyxa shasta* and *Parvicapsula minibicornis* infection in naturally produced juvenile Klamath River Chinook salmon by capture reach. Sample numbers collected in each reach are displayed at the bottom of each column. All data are preliminary and subject to revision.**

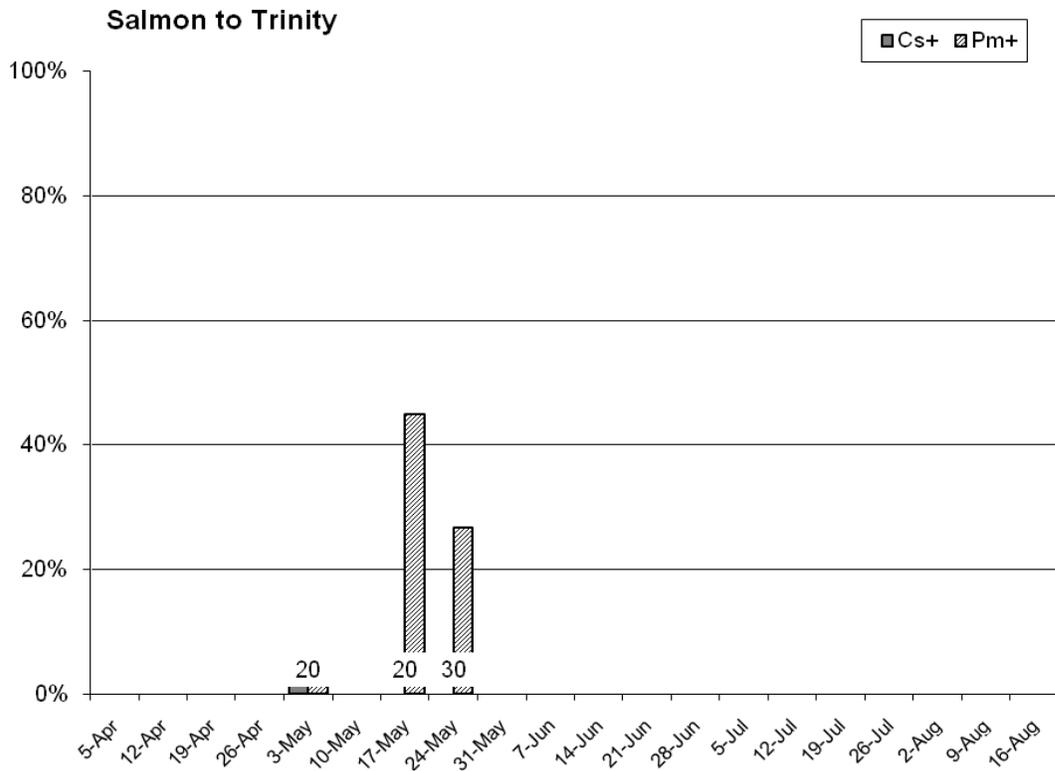


Weekly Date	Total Number of Samples (N)	Number Cs Positive	Number Pm Positive
5-Apr	20	1	0
19-Apr	20	0	1
3-May	20	0	9
17-May	20	0	13
24-May	31	8	31
31-May	52	8	48

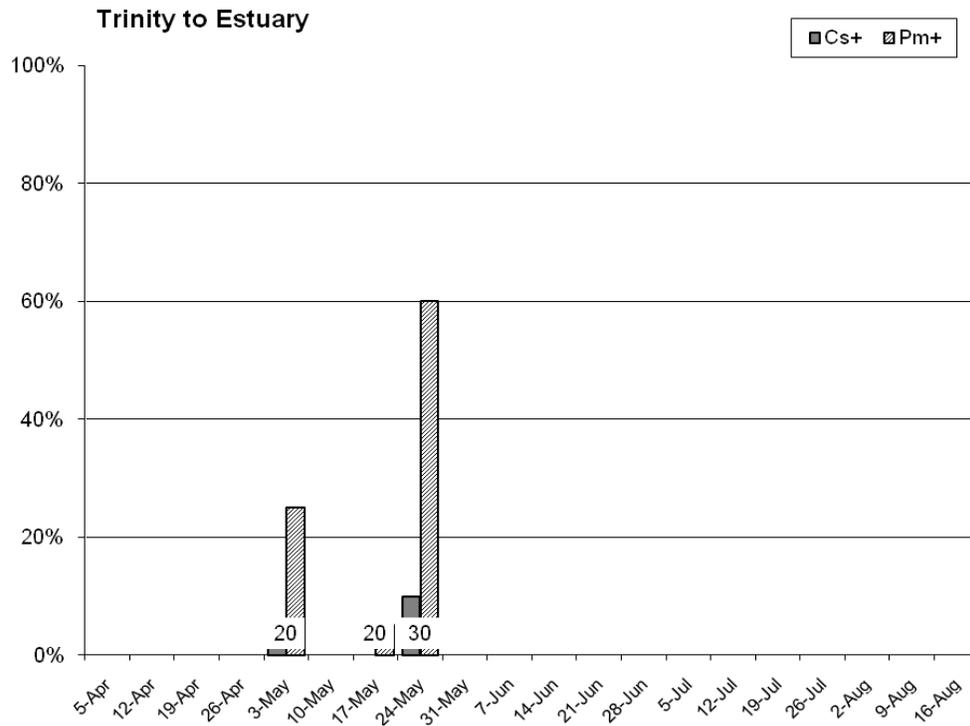
**Figure 2/Table 2. Weekly incidence of *Ceratomyxa shasta* and *Parvicapsula minibicornis* infection in juvenile Chinook salmon captured in the Shasta to Scott (K4) reach on the Klamath River. All data are preliminary and subject to revision.**



**Figure 3. Weekly incidence of *Ceratomyxa shasta* and *Parvicapsula minibicornis* infection in juvenile Fall Chinook salmon captured in the Scott to Salmon (K3) reach on the Klamath River. All data are preliminary and subject to revision.**



**Figure 4. Weekly incidence of *Ceratomyxa shasta* and *Parvicapsula minibicornis* infection in juvenile Fall Chinook salmon captured in the Salmon to Trinity confluence (K2) reach on the Klamath River. All data are preliminary and subject to revision.**



**Figure 5. Weekly incidence of *Ceratomyxa shasta* and *Parvicapsula minibicornis* infection in juvenile Fall Chinook salmon captured in the Trinity to Estuary (K1) reach on the Klamath River. All data are preliminary and subject to revision.**