



Klamath River Outmigrant Trapping Summary

2010

Synopsis: The 2010 downstream migrant monitoring season on the mainstem Klamath River was conducted jointly by the USFWS Arcata Fish and Wildlife Office (AFWO), Karuk Tribe of California (KTOC), and USGS Fort Collins Science Center. Monitoring began March 2010 at three sites on the mainstem Klamath River between Iron Gate Dam (Rkm 309.65) and the Scott River confluence (Rkm 232.95). The upstream-most site (Rkm 307.75) was on the right bank downstream of the Bogus Creek confluence on Blue Heron RV Park property. The second site (Rkm 293.55) was on the left bank downstream of the Carson Creek confluence and upstream of the I-5 bridge river crossing. The downstream-most site (Rkm 237.55) was on the left bank just upstream of the Kinsman Creek confluence. Trapping at the Bogus site was conducted using a single frame net. Two inline, upstream (UPS) and downstream (DNS), eight-foot diameter rotary screw traps (RST) and one frame net were situated at the I-5 site. Two inline, UPS and DNS, five-foot diameter RST's were situated at the Kinsman site. Traps were typically run four (Monday through Thursday) nights per week and checked once daily while in operation.

The table below summarizes average salmonid catch per day by week. Expansions have not been applied to the catches at this time. We also conduct weekly depletion seining at the Klamathon/Copco-Ager Bridge crossing (Rkm 300.70). Seine catches are not reported in this summary but fish health observations at this site are included.

The last table of this document is a summary of clinical signs of disease. We merely note external symptoms of infection, which may not always be revealed by infected fish. QPCR assays and histology analyses conducted by the USFWS California-Nevada Fish Health Center (CA-NV FHC) will provide more accurate infection rates. Percentages of live YOY Chinook salmon with distended bellies, gill fungus, and pale gills are summarized. Distended bellies may be a clinical sign of infection by the myxosporean parasites, *Ceratomyxa shasta* and *Parvicapsula minibicornis*. Gills of juvenile salmonids ≥ 45 mm FL are evaluated for color (red, pale/pink, white, or tan) and condition (normal, eroded, or fungal). Pale gills may be due to anemia associated with *Parvicapsula minibicornis* infection. Gill fungus is likely *Saprolegnia* growing upon a columnaris (*Flavobacterium columnare*) infection. The CA-NV FHC annually investigates infection rates of *C. shasta*, *P. minibicornis*, and other pathogens in juvenile salmonids in the Klamath River below Iron Gate Dam. Fish collections for these disease analyses began on April 8, 2010. Our field crew samples YOY Chinook salmon for this study on the mainstem Klamath River between Iron Gate Dam and the Scott River confluence. Fish health sampling will conclude once the YOY Chinook salmon have migrated downstream and samples are no longer obtainable.

Iron Gate Hatchery began releasing YOY Chinook salmon June 1, 2010. Note that 25% of hatchery fish are adipose fin-clipped, therefore not all 'No Clip' fish in our summary are naturally reared (wild). If you have any questions regarding this summary, please contact Steve Gough at (707) 825-5197.

USFWS 2010 Mainstem Klamath River Outmigrant Trap Juvenile Salmonid Catch-per-Day Summary

U.S. Fish & Wildlife Service, Arcata Fish & Wildlife Office, 1655 Heindon Road, Arcata, CA 95521, (707)822-7201

Preliminary Data - Subject to Revision

Trap	Calendar Week	Sample Dates	IGD Q (cfs)*		Water Temp. (F)**Trapping			Chinook (<i>O. tshawytscha</i>)			Coho (<i>O. kisutch</i>)			Steelhead (<i>O. mykiss</i>)		
								YOY			Age 1 +			Age 1 +		
								No Clip	AD Clip	Age 1+	YOY	No Clip	LM Clip	YOY	No Clip	AD Clip
Kinsman DNS RST	12	3/17-3/19	1420	1470	48.0	48.0	3	69.33	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00
	13	3/23-3/26	1300	1300	46.9	48.7	4	34.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00
	14	3/30-4/2	1310	1340	46.1	46.1	4	16.00	0.00	0.00	0.50	0.00	0.00	0.00	0.25	0.00
	15	4/6-4/9	1340	1340	45.3	51.0	4	12.75	0.00	0.00	0.25	0.00	0.00	0.00	0.25	0.00
	16	4/13-4/16	1340	1340	50.7	52.9	4	34.00	0.00	0.00	1.50	0.00	0.00	0.00	0.00	0.00
	17	4/20-4/23	1340	1340	47.4	52.6	3	19.67	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00
	18	4/27-4/30	1350	1390	49.5	51.3	4	13.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	19	5/4-5/7	1200	1290	50.1	54.9	4	11.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00
	20	5/11-5/14	1190	1210	51.6	59.0	4	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00
	21	5/18-5/21	1200	1200	53.3	56.1	4	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00
	22	5/25-5/28	1200	1210	54.5	56.4	4	0.75	0.00	0.00	0.00	0.00	0.25	0.00	0.50	0.00
	23	6/2-6/4	1050	1060	55.7	58.5	3	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00
	24	6/9-6/11	1060	1060			3	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	25	6/16-6/16	1040	1040	61.9	61.9	1	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kinsman UPS RST	11	3/10-3/12	1470	1470	45.2	45.5	3	324.67	0.00	0.00	0.33	0.67	0.00	0.00	2.67	0.00
	12	3/16-3/19	1420	1470	48.0	48.0	4	431.00	0.00	0.00	0.75	0.50	0.00	0.00	1.50	0.00
	13	3/23-3/26	1300	1300	46.9	48.7	4	265.25	0.00	0.00	1.00	0.75	0.00	0.00	1.50	0.00
	14	3/30-4/2	1310	1340	46.1	46.1	4	184.75	0.00	0.00	8.50	0.00	0.00	0.00	5.75	0.00
	15	4/6-4/9	1340	1340	45.3	51.0	4	159.25	0.00	0.00	5.25	0.50	0.00	0.00	2.00	0.00
	16	4/13-4/16	1340	1340	50.9	52.9	4	401.50	0.00	0.00	24.00	0.25	0.00	0.00	0.75	0.00
	17	4/20-4/23	1340	1340	47.4	52.6	4	446.25	0.00	0.00	2.00	0.25	0.25	0.50	2.75	0.00
	18	4/27-4/30	1350	1390	50.4	51.3	3	205.00	0.00	0.33	0.67	1.67	0.00	0.00	2.33	0.00
	19	5/4-5/7	1200	1290	50.1	54.9	4	192.50	0.00	1.00	2.25	0.75	0.50	0.00	1.75	0.00
	20	5/11-5/14	1190	1210	51.6	59.0	4	64.75	0.00	0.25	1.50	0.00	2.25	0.00	2.25	0.00
	21	5/18-5/21	1200	1200	53.3	56.1	4	43.50	0.00	0.00	0.00	0.25	0.75	0.00	2.75	0.00
	22	5/25-5/28	1200	1210	54.5	56.4	4	25.00	0.00	0.00	0.50	0.00	0.50	0.00	3.25	0.00
	23	6/2-6/4	1050	1060	55.7	58.5	3	110.00	0.00	0.00	2.00	0.00	0.00	0.00	8.33	0.00
	24	6/9-6/11	1060	1060			3	89.00	0.33	0.00	1.33	0.00	0.00	0.00	3.33	0.00
	25	6/16-6/17	1040	1050	61.1	61.9	2	41.50	3.00	0.00	2.50	0.00	0.00	0.00	2.50	0.00
I-5 Frame	11	3/11-3/12	1470	1470	44.1	44.1	2	46.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
	12	3/16-3/19	1420	1470	44.8	49.1	4	70.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	13	3/23-3/26	1300	1300	45.5	46.9	4	40.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	14	3/30-4/2	1310	1340	45.9	47.3	4	48.25	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00
	15	4/6-4/9	1340	1340	45.7	47.7	4	187.25	0.00	0.00	4.75	0.25	0.25	0.00	0.25	0.00
	16	4/13-4/16	1340	1340	47.2	50.2	4	230.25	0.00	0.00	8.50	0.00	1.00	0.25	0.00	0.00
	17	4/20-4/23	1340	1340	47.0	50.8	4	154.25	0.00	0.00	9.00	0.00	0.00	0.50	0.00	0.00
	18	4/27-4/30	1350	1390	48.5	51.4	4	101.00	0.00	0.00	1.25	0.00	0.00	0.00	0.00	0.00
	19	5/4-5/7	1200	1290	50.4	57.5	4	106.00	0.00	0.00	1.00	0.00	0.00	4.00	0.50	0.50
	20	5/11-5/14	1190	1210	51.3	56.5	4	9.00	0.00	0.00	0.00	0.00	0.00	0.25	0.25	0.00
	21	5/18-5/21	1200	1200	53.8	57.2	4	6.75	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.25
	22	5/25-5/28	1200	1210	54.0	55.2	4	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I-5 DNS RST	11	3/11-3/12	1470	1470	44.1	44.1	2	28.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	12	3/16-3/19	1420	1470	44.8	49.1	4	53.00	0.00	0.25	0.25	0.00	0.00	0.00	0.50	0.00
	13	3/23-3/26	1300	1300	45.5	46.9	4	35.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	14	3/30-4/2	1310	1340	45.9	47.3	4	39.25	0.00	0.00	0.00	0.25	0.00	0.00	0.25	0.00
	15	4/6-4/9	1340	1340	45.7	47.7	4	124.50	0.00	0.00	0.25	0.00	14.75	0.00	0.25	0.00
	16	4/13-4/16	1340	1340	47.2	50.2	4	212.50	0.00	0.00	0.00	0.00	25.25	0.00	0.25	0.00
	17	4/20-4/23	1340	1340	47.0	50.8	4	164.50	0.00	0.00	0.75	0.00	0.75	0.00	0.25	0.00
	18	4/27-4/30	1350	1390	48.5	51.4	4	128.00	0.00	0.00	0.00	0.25	0.00	0.00	1.00	0.00
	19	5/4-5/7	1200	1290	50.4	57.5	4	82.75	0.00	0.00	0.25	0.00	0.00	0.25	0.75	0.00
	20	5/11-5/14	1190	1210	51.3	56.5	4	18.50	0.00	0.00	0.00	0.00	0.00	0.50	0.25	0.00
	21	5/18-5/21	1200	1200	53.8	57.2	4	18.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00
	22	5/25-5/28	1200	1210	54.0	55.2	3	6.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
	23	6/2-6/4	1050	1060	57.6	58.0	3	20.00	2.67	0.00	0.00	0.00	0.00	0.00	0.67	0.00
	24	6/9-6/11	1060	1060			3	10.33	1.33	0.00	0.00	0.00	0.00	0.00	0.67	0.00
	25	6/16-6/16	1040	1040	62.1	62.1	1	64.00	11.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I-5 UPS RST	11	3/11-3/12	1470	1470	44.1	44.1	2	11.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	12	3/16-3/19	1420	1470	44.8	49.1	4	23.50	0.00	0.00	0.00	0.25	0.25	0.00	0.25	0.00
	13	3/23-3/26	1300	1300	45.5	46.9	3	25.67	0.00	0.00	0.00	0.33	0.00	0.00	0.67	0.00
	14	3/30-4/2	1310	1340	45.9	47.3	4	23.50	0.00	0.00	0.00	0.25	0.00	0.00	1.00	0.00
	15	4/6-4/9	1340	1340	45.7	47.7	4	58.25	0.00	0.25	0.00	0.00	22.50	0.00	0.25	0.25
	16	4/13-4/16	1340	1340	47.2	50.2	4	119.25	0.00	0.00	0.00	0.25	20.75	0.00	0.75	0.00
	17	4/20-4/23	1340	1340	47.0	50.8	4	204.00	0.00	0.00	0.50	0.50	0.25	0.00	1.00	0.00
	18	4/27-4/30	1350	1390	48.5	51.4	4	187.75	0.00	0.25	0.25	0.25	1.00	0.00	1.75	0.00
	19	5/4-5/7	1200	1290	50.4	57.5	3	90.00	0.00	0.00	0.00	0.00	0.33	0.33	0.67	0.33
	20	5/11-5/14	1190	1210	51.3	56.5	4	36.50	0.00	0.00	0.00	0.00	0.25	0.50	0.00	0.00
	21	5/18-5/21	1200	1200	53.8	57.2	4	30.00	0.00	0.00	0.00	0.00	0.25	0.00	0.25	0.25
	22	5/25-5/28	1200	1210	54.0	55.2	4	6.75	0.00	0.00	0.00	0.00	0.50	0.00	0.25	0.00
	23	6/2-6/4	1050	1060	57.6	58.0	3	55.67	11.67	0.00	0.00	0.00	0.00	0.00	0.33	0.00
	24	6/9-6/11	1060	1060			3	34.67	7.00	0.00	0.00	0.00	0.00	0.67	0.67	0.00
	25	6/16-6/16	1040	1040	62.1	62.1	1	83.00	26.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

USFWS 2010 Mainstem Klamath River Outmigrant Trap Juvenile Salmonid Catch-per-Day Summary (continued)

U.S. Fish & Wildlife Service, Arcata Fish & Wildlife Office, 1655 Heindon Road, Arcata, CA 95521, (707)822-7201

[Preliminary Data - Subject to Revision](#)

Trap	Calendar Week	Sample Dates	IGD Q (cfs)*		Water Temp. (F)**		Trapping Days	Chinook (<i>O. tshawytscha</i>)			Coho (<i>O. kisutch</i>)			Steelhead (<i>O. mykiss</i>)		
								YOY			Age 1 +			Age 1 +		
			Min	Max	Min	Max		No Clip	AD Clip	Age 1+	YOY	No Clip	LM Clip	YOY	No Clip	AD Clip
Bogus Frame	11	3/12-3/12	1470	1470	-	-	1	441.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	12	3/16-3/19	1420	1470	44.8	45.7	4	1364.25	0.00	0.25	0.25	0.25	0.00	0.00	0.50	0.00
	13	3/23-3/26	1300	1300	46.2	47.9	4	791.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	14	3/30-4/2	1310	1340	46.7	47.8	4	1067.00	0.00	0.00	2.75	0.00	0.00	0.00	0.00	0.00
	15	4/6-4/9	1340	1340	47.4	49.0	4	2110.75	0.00	0.00	3.25	0.25	5.00	0.00	0.75	1.00
	16	4/13-4/16	1340	1340	48.3	49.1	4	2556.00	0.00	0.00	21.00	0.25	0.75	1.25	0.50	0.25
	17	4/20-4/23	1340	1340	48.5	50.6	4	984.50	0.00	0.00	28.25	0.00	0.00	1.50	0.00	0.00
	18	4/27-4/30	1350	1390	50.0	50.8	4	100.75	0.00	0.00	1.75	0.00	0.00	1.25	0.00	0.00
	19	5/4-5/7	1200	1290	53.0	54.1	4	46.50	0.00	0.00	0.25	0.00	0.00	9.25	0.00	0.00
	20	5/11-5/14	1190	1210	53.1	56.1	4	20.25	0.00	0.00	0.00	0.00	0.00	18.75	0.00	0.00
	21	5/18-5/20	1200	1200	55.6	56.7	3	9.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.33
	22	5/25-5/27	1200	1210	55.7	55.7	3	1.67	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00

* mean discharge from day of sampling and previous day

** temperature recorded at time of trap check

USFWS 2010 Mainstem Klamath River YOY Chinook Salmon Clinical Signs of Disease Summary

U.S. Fish & Wildlife Service, Arcata Fish & Wildlife Office, 1655 Heindon Road, Arcata, CA 95521, (707)822-7201

Preliminary Data - Subject to Revision

Site	Calendar Week	Sampling Dates	IGD Flow (cfs)*		Water Temp. (F)**		Belly Condition			Gills				
							Sample Size	Distended		Sample Size	Color		Condition	
								n	%		n	Pale or Worse	%	n
Kinsman	11	Mar 11	1470	1470	45.5	45.5	30	0	0.0%	1	0	0.0%	0	0.0%
	12	Mar 16-18	1470	1470	-	-	89	0	0.0%	1	0	0.0%	0	0.0%
	13	Mar 23-25	1300	1300	46.9	48.7	96	1	1.0%	14	1	7.1%	0	0.0%
	14	Mar 30 - Apr 1	1310	1340	-	-	90	0	0.0%	14	1	7.1%	0	0.0%
	15	Apr 6-8	1340	1340	45.3	51.0	90	0	0.0%	27	4	14.8%	0	0.0%
	16	Apr 13-14	1340	1340	51.3	51.3	60	0	0.0%	31	0	0.0%	0	0.0%
	17	Apr 20-22	1340	1340	47.4	50.8	90	0	0.0%	73	1	1.4%	0	0.0%
	18	Apr 27-29	1360	1390	50.4	50.9	90	0	0.0%	85	13	15.3%	0	0.0%
	19	May 4-6	1200	1290	50.1	52.2	90	1	1.1%	81	8	9.9%	1	1.2%
	20	May 11-13	1190	1210	51.6	58.8	91	1	1.1%	79	20	25.3%	1	1.3%
	21	May 18-20	1200	1200	53.3	56.1	90	0	0.0%	76	20	26.3%	1	1.3%
	22	May 25-27	1200	1210	54.5	56.4	67	2	3.0%	55	11	20.0%	0	0.0%
	23	Jun 2-3	1050	1050	57.1	58.5	61	0	0.0%	50	5	10.0%	0	0.0%
	24	Jun 9-10	1060	1060			60	0	0.0%	46	5	10.9%	0	0.0%
I-5	11	Mar 11	1470	1470	44.1	44.1	60	1	1.7%	0	-	-	-	-
	12	Mar 16-18	1470	1470	45.4	49.1	180	0	0.0%	0	-	-	-	-
	13	Mar 23-25	1300	1300	45.5	46.9	180	0	0.0%	1	0	0.0%	0	0.0%
	14	Mar 30 - Apr1	1310	1340	45.9	47.3	170	0	0.0%	8	1	12.5%	0	0.0%
	15	Apr 6-8	1340	1340	45.7	47.7	180	0	0.0%	6	1	16.7%	0	0.0%
	16	Apr 13-15	1340	1340	47.2	50.2	180	0	0.0%	14	0	0.0%	0	0.0%
	17	Apr 20-22	1340	1340	47	50.8	180	0	0.0%	17	1	5.9%	1	5.9%
	18	Apr 27-29	1360	1390	48.5	51.4	180	0	0.0%	29	1	3.4%	1	3.4%
	19	May 4-6	1200	1290	50.4	57.5	180	0	0.0%	43	0	0.0%	0	0.0%
	20	May 11-13	1190	1210	51.3	56.5	129	1	0.8%	71	6	8.5%	2	2.8%
	21	May 18-20	1200	1200	53.8	57.2	99	0	0.0%	71	3	4.2%	0	0.0%
	22	May 25-27	1200	1210	54	55.2	28	0	0.0%	25	0	0.0%	0	0.0%
	23	Jun 2-3	1050	1050	57.6	57.7	60	0	0.0%	60	3	5.0%	1	1.7%
	24	Jun 9-10	1060	1060			38	0	0.0%	38	0	0.0%	0	0.0%
Klamathon	12	Mar 18	1470	1470	46.6	46.6	30	0	0.0%	0	-	-	-	-
	13	Mar 25	1300	1300	47.3	47.3	30	0	0.0%	1	0	0.0%	0	0.0%
	14	Apr 1	1340	1340	50.1	50.1	30	1	3.3%	2	1	50.0%	0	0.0%
	15	Apr 8	1340	1340	48.9	48.9	30	0	0.0%	0	-	-	-	-
	16	Apr 15	1340	1340	49.3	49.3	30	0	0.0%	5	0	0.0%	0	0.0%
	17	Apr 22	1340	1340	50.4	50.4	30	0	0.0%	2	0	0.0%	0	0.0%
	18	Apr 29	1360	1360	51.6	51.6	30	0	0.0%	14	0	0.0%	0	0.0%
	19	May 6	1210	1210	55.2	55.2	30	0	0.0%	12	3	25.0%	0	0.0%
	20	May 13	1190	1190	56.3	56.3	30	0	0.0%	18	7	38.9%	0	0.0%
	21	May 20	1200	1200	57.5	57.5	30	0	0.0%	25	2	8.0%	0	0.0%
	22	May 26	1210	1210	56.2	56.2	30	0	0.0%	30	0	0.0%	0	0.0%
	23	Jun 3	1050	1050	59.7	59.7	11	0	0.0%	11	0	0.0%	0	0.0%
Bogus	12	Mar 16-18	1470	1470	44.8	45.7	90	0	0.0%	0	-	-	-	-
	13	Mar 23-25	1300	1300	46.2	47.9	90	0	0.0%	0	-	-	-	-
	14	Mar 30 - Apr1	1310	1340	46.7	47.8	90	0	0.0%	1	0	0.0%	0	0.0%
	15	Apr 6-8	1340	1340	47.4	49.0	90	0	0.0%	0	-	-	-	-
	16	Apr 13-15	1340	1340	48.3	49	90	0	0.0%	3	0	0.0%	0	0.0%
	17	Apr 20-22	1340	1340	48.5	49.5	90	0	0.0%	0	-	-	-	-
	18	Apr 27-29	1360	1390	50	50.8	90	0	0.0%	15	0	0.0%	0	0.0%
	19	May 4-6	1200	1290	53	54.1	90	0	0.0%	18	0	0.0%	0	0.0%
	20	May 11-13	1190	1210	53.1	55	52	1	1.9%	19	1	5.3%	0	0.0%
	21	May 18-20	1200	1200	55.6	56.7	24	3	12.5%	10	0	0.0%	0	0.0%
	22	May 25-27	1200	1210	55.7	55.7	5	0	0.0%	5	1	20.0%	0	0.0%

* mean discharge from day of sampling and previous day

** temperature recorded at time of trap check