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Fall 2023 Fisheries Report
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SUMMARY OF KEY UPDATES

- Tanada Creek weir at Batzulnetas documented passage of 5,984 Sockeye Salmon (partial count estimate through August 31), which is a very weak return for these stocks and is on track to end up well below the historical season total count average of approximately 18,000.
- Copper River salmon research project continued this season; designed to evaluate the potential use of genetic stock identification (GSI) for in-season management decision making.
- Similar to recent years, the Copper River salmon run began weak, then increased in strength as the season progressed. Harvest opportunities continued throughout the 2023 season and sustainable escapement goals should be achieved.
- Miles Lake sonar estimated a season total passage of 991,740 salmon, which is 71% above the management objective of 581,172 salmon.
- Upper Copper River Federal subsistence fishery permits; issued were (preliminary numbers): 200 Chitina Subdistrict, 291 Glennallen Subdistict, and 2 Batzulnetas permits.
- Historical Federal subsistence harvests in the Upper Copper River through 2022 are provided in Tables 1-4.
- Federal subsistence fishery in the Lower Copper River opened June 1, 70 permits were issued, and total in-season reported harvest was 176 Sockeye Salmon and 4 Chinook Salmon.
- Federal Subsistence Board provided a revised Delegation of Authority Letter (DAL) to in-season fisheries managers.
- Federal Subsistence Board Request for Reconsideration of adoption of Lower Copper River subsistence fishery (RFR 22-01) was approved. A Full Analysis will be presented to Regional Advisory Councils this fall.

FISHERIES RESEARCH AND MONITORING PROJECTS

Tanada Creek Salmon Weir

The Wrangell-St. Elias National Park and Preserve (WRST) Fisheries Program operated the Tanada Creek salmon weir located at Batzulnetas (funded through the Fisheries Resource Monitoring Program (FRMP)). Weir installation was completed on June 22. The first salmon was documented passing the weir on June 23. As of August 31, there have been 5,984 Sockeye Salmon and 8 Chinook Salmon recorded in passage for the season. The Sockeye Salmon count is on track to end up well below the historical season total count average of approximately 18,000 fish. The abundance and timing of these stocks passing the weir was very similar to that of the predominant total-age parent year of 2018. The weir is scheduled to continue operating through September 21.

On Saturday August 26, the project and crew were pleased to host a visit by National Park Service Director Chuck Sams, Regional Director Sarah Creachbaum, and staff. During the visit, the weir crew delivered a presentation that described the project and its importance to management, the park, and local stakeholders.

NPS Director Sams and Regional Director Creachbaum visit Tanada Creek Salmon Weir and Crew, August 26, 2023

Upper Yukon Burbot Assessments

This was the final year of FRMP funding for Burbot population assessments in lakes of the Upper Yukon/Tanana/White River drainages. The completion of this project has been impacted by the loss of a key Fisheries Biologist position that occurred when changes in position management at the park were implemented in 2017, after the project began. Due to this staff shortage, we collaborated with staff of the Alaska Department of Fish and Game (ADFG) to complete a Burbot population assessment in Ptarmigan Lake and to record depth profile in nearby Rock Lake during 2023.

Tracing Mercury in Lake Trout Food Webs

As part of a collaborative project between NPS and the U.S. Geological Survey (USGS), researchers performed field sampling in Chelle Lake in late June; analysis is in process. This study intends to trace Mercury (Hg) in Lake Trout food webs and was prompted by findings of elevated Hg levels in muscle tissue of Lake Trout residing in certain lakes of Alaska parks.

Copper River Sockeye Salmon Research Projects

WRST recently collaborated with researchers of other agencies in the development of successfully funded proposals for Copper River salmon research. These projects seek to gain information which may be applied to management decision making for long-term sustainability. Some of this work continued in 2023 with the collection of genetic tissue samples from harvested Sockeye Salmon, which were analyzed for stock composition.

UPPER COPPER RIVER FISHERIES

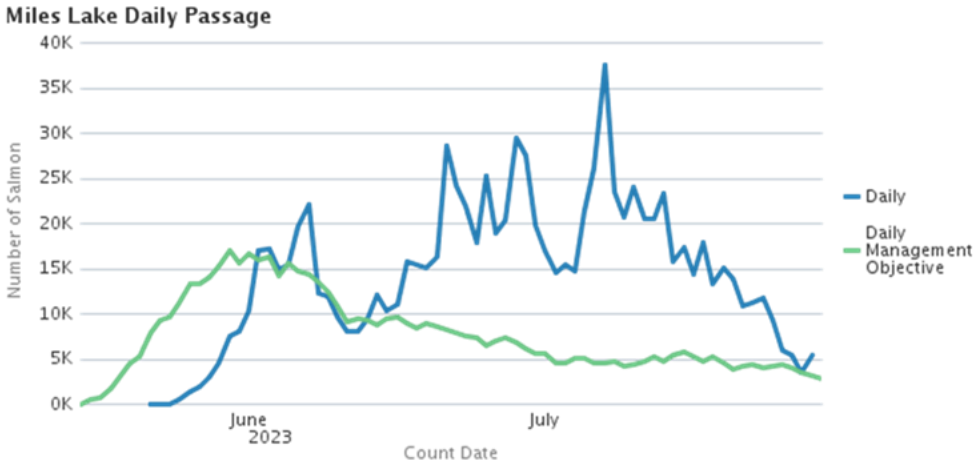
2023 Copper River Salmon Run Strength and Management Actions

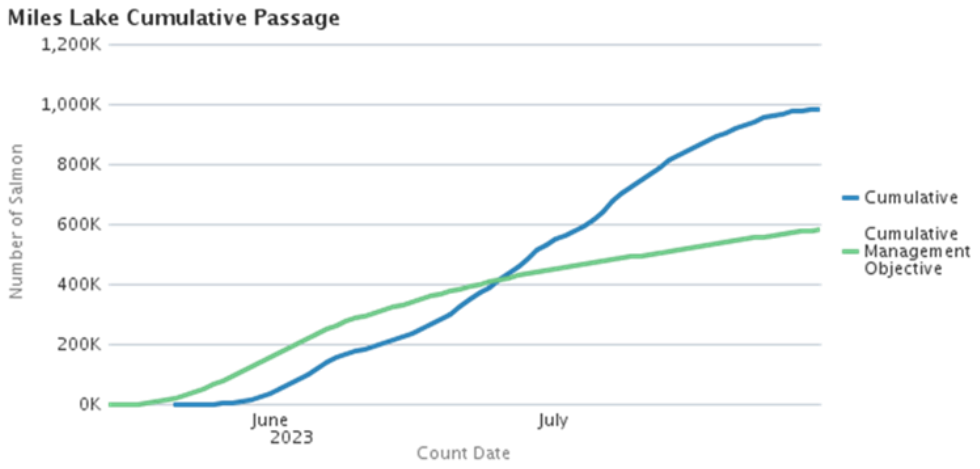
The 2023 Copper River salmon run began in low numbers relative to date in season. The return then increased in strength as the season progressed. A similar pattern of delayed run timing for these stocks has been observed in other recent years. The 2023 season and sustainable escapement goals should be achieved and harvest opportunities continued throughout the season.

Federal managers monitored run strength indices throughout the season to evaluate the need for appropriate fisheries management actions in the Federal waters of the Copper River Drainage. No Federal Special Action was issued by the in-season manager in the fisheries of the Upper Copper River.

The ADFG sonar at Miles Lake (located just downstream of the Million Dollar Bridge in the Copper River) estimated the passage of 991,740 salmon migrating upstream for the season, with the seasonal operation ending on July 28. The cumulative passage is 410,568 salmon more than (71% above) the management objective of 581,172 salmon for this date of the season.

2023 Copper River Salmon Passage at Miles Lake Sonar





*Management objectives are based on historical run-timing to achieve the in-river goal.

Source: http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareacopperriver.salmon_escapement

Commercial fishing opportunities in the Copper River District were limited during the early season in response to low numbers of returning salmon at the start of the season. As the run developed, fishing opportunities were expanded during the season. The season total commercial harvest for the Copper River District through August 29 is reported to include 855,100Sockeye Salmon and 10,400 Chinook Salmon

2023 Upper Copper River Federal Subsistence Fishing Season, Permits, and Historical Harvests

The Federal subsistence salmon fisheries of the Upper Copper River are open from May 15 through September 30. Through August 31, WRST has issued 200 Chitina Subdistrict permits, 291Glennallen Subdistrict permits, and 2 Batzulnetas permits (numbers of permits issued are preliminary until records from remote issuing stations are received). Tables 1 through 4 show historical reported and expanded harvests for the Federal subsistence fisheries in each subdistrict through the 2022 season.

2023 Lower Copper River Federal Subsistence Fishery

The Federal subsistence salmon fishery in the Lower Copper River near Cordova is open from June 1 through September 30. To date, there have been 70 permits issued through the OSM database. A total of 176 Sockeye Salmon and 4 Chinook Salmon have been reported in harvest through July 29. There has been no harvest reported since late-June.

2023 Federal Subsistence Board Request for Reconsideration, RFR 22-01

RFR22-01, the request for reconsideration of the Board 2022 adoption of the Lower Copper River salmon fishery was approved. A Full Analysis will be presented to the Southcentral and Eastern Interior Regional Advisory Councils during their Fall 2023 meetings.

2023 Federal Subsistence Board Delegation of Authority Revision

Federal Subsistence Board has revised the authorities delegated to in-season fisheries managers to include authority to issue both Emergency Special Actions (limited to 60 days) and Temporary Special Actions (may exceed 60 days, up to the end of current regulatory cycle).

In addition, the revised scope of authority provides new language that clarifies intent regarding the in-season managers' authority to specify permit conditions outside of the special action process; this revision will no longer allow the setting of permit conditions related to take of fish, or areas or periods open to fishing, a practice that has been historically done by in-season managers of different agencies in the Southcentral Region.

Table 1. Federal Subsistence Fish Harvest in All Upper Copper River Fisheries, including Harvest by Gear Type[1]

	Expanded Harvest Estimates[2]						All Species, Approximate Harvest by Gear Type					
Year	Sockeye	Chinook	Coho	Steelhead /Rainbow Trout	Other Species	Total Harvest	Fish Wheel %	Fish Wheel Total	Dip Net %	Dip Net Total	Rod and Reel %	Rod and Reel Total
2002	10,852	745	100	77	N.A.	11,775						
2003	17,384	687	268	16	N.A.	18,355						
2004	24,217	815	216	15	N.A.	25,264						
2005	24,781	412	55	7	37	25,292						
2006	20,737	507	55	17	37	21,353						
2007	19,108	704	85	7	25	19,929						
2008	14,865	892	268	21	54	16,100						
2009	14,821	590	52	22	36	15,521						
2010	17,156	362	111	46	25	17,700	90.3%	15,978	9.6%	1,697	0.1%	25
2011	18,214	814	70	6	283	19,387	88.4%	17,142	11.4%	2,206	0.2%	39
2012	17,297	410	93	45	113	17,958	90.4%	16,228	9.4%	1,684	0.3%	45
2013	20,850	396	36	8	93	21,382	85.9%	18,369	14.1%	3,013	0.0%	0
2014	25,659	456	97	14	57	26,284	89.3%	23,458	10.8%	2,825	0.0%	3
2015	29,157	430	29	15	218	29,849	90.1%	26,900	9.7%	2,883	0.2%	66
2016	21,106	465	52	6	406	22,035	90.0%	19,820	10.0%	2,197	0.1%	18
2017	20,497	485	10	8	549	21,550	96.2%	20,724	3.7%	804	0.1%	19
2018	20,634	2,763	31	4	45	23,476	83.4%	19,579	16.5%	3,878	0.1%	19
2019	22,302	1,025	22	3	59	23,411	79.0%	18,485	21.0%	4,909	0.1%	16
2020	16,337	837	26	7	60	17,266	75.9%	13,098	24.1%	4,159	0.1%	9
2021	20,481	610	3	6	32	21,132	70.8%	14,951	29.2%	6,175	0.0%	6
2022	14,530	890	2	16	60	15,498	80.2%	12,429	19.8%	3,062	0.0%	6
2023												
5-yr. Avg. 2018-2022	18,857	1,225	17	7	51	20,157	77.8%	15,709	22.1%	4,437	0.1%	11
10-yr. Avg. 2013-2022	21,155	836	31	9	158	22,188	84.1%	18,781	15.9%	3,391	0.1%	16

[1] This table reflects entries to the online database from 2011 through **08/28/2023**. Data prior to 2011 relies on NPS records. Data for all years subject to changes resulting from entry error corrections.

[2] Expanded Harvest estimate derived from a basic, direct ratio expansion based on the percentage of permits that reported.

Table 2. Glennallen Subdistrict Federal Reported and Expanded Subsistence Fishery Harvests[1]

			Sockeye		Chinook		Coho		Steelhead/Rainbow Trout		Other Species		All Species
Year	Permits Issued	Percentage of Permits Reported	Reported Harvest	Harvest Estimate[2]	Reported Harvest	Harvest Estimate[2]	Reported Harvest	Harvest Estimate[2]	Reported Harvest	Harvest Estimate[2]	Reported Harvest	Harvest Estimate[2]	Total Harvest Estimate[2]
2002	201	80.6	7,944	9,856	564	700	81	100	62	77	35	43	10,777
2003	221	83.3	13,616	16,346	554	665	152	182	13	16	20	24	17,233
2004	261	78.9	17,704	22,439	636	806	152	193	12	15	12	15	23,468
2005	267	85.8	19,973	23,279	331	386	47	55	6	7	32	37	23,763
2006	254	87.4	16,711	19,120	430	492	28	32	15	17	32	37	19,698
2007	281	84.3	15,225	18,060	569	675	34	40	6	7	21	25	18,808
2008	269	81.4	11,347	13,940	705	866	148	182	17	21	44	54	15,063
2009	274	85.0	11,836	13,925	494	581	34	40	19	22	31	36	14,605
2010	269	87.7	12,849	14,651	300	342	64	73	39	44	22	25	15,136
2011	277	87.7	14,163	16,145	701	799	53	60	5	6	248	283	17,293
2012	275	92.0	14,461	15,718	371	403	78	85	40	43	104	113	16,363
2013	273	89.0	15,834	17,789	331	372	24	27	6	7	62	70	18,264
2014	315	90.5	21,603	23,877	399	441	23	25	10	11	52	57	24,412
2015	325	92.3	24,695	26,753	384	416	13	14	7	8	201	218	27,408
2016	320	82.8	15,884	19,181	369	446	9	11	5	6	332	401	20,044
2017	338	85.2	15,691	18,415	399	468	1	1	7	8	468	549	19,442
2018	335	91.3	15,287	16,736	2,432	2,662	0	0	4	4	41	45	19,448
2019	343	90.1	15,873	17,620	849	942	0	0	3	3	53	59	18,624
2020	376	90.7	11,456	12,632	682	752	0	0	6	7	54	60	13,450
2021	355	86.5	13,117	15,168	434	502	0	0	5	6	28	32	15,708
2022	297	83.5	12,133	14,530	743	890	2	2	13	16	48	57	15,495
2023	290												
5-yr. Avg. 2018-2022	341	88	13,573	15,337	1,028	1,150	0	0	6	7	45	51	16,545
10-yr. Avg. 2013-2022	328	88	16,157	18,270	702	789	7	8	7	8	134	155	19,230

[1] This table reflects entries to the online database from 2011 through **05/03/2023**. Data prior to 2011 relies on NPS records. Data for all years subject to changes resulting from entry error corrections.

[2] Expanded Harvest estimate derived from a basic, direct ratio expansion based on the percentage of permits that reported.

Table 3. Chitina Subdistrict Federal Reported and Expanded Subsistence Fishery Harvests[1]

			Sockeye		Chinook		Coho		Steelhead/Rainbow Trout		Other Species		All Species
Year	Permits Issued	Percentage of Permits Reported	Reported Harvest	Harvest Estimate[2]	Reported Harvest	Harvest Estimate[2]	Reported Harvest	Harvest Estimate[2]	Reported Harvest	Harvest Estimate[2]	Reported Harvest	Harvest Estimate[2]	Total Harvest Estimate[2]
2002	122	73.0	575	788	33	45	0	0	0	0	N.A.	N.A.	833
2003	100	82.0	717	874	18	22	70	85	0	0	N.A.	N.A.	982
2004	109	76.1	1,215	1,597	7	9	18	24	0	0	N.A.	N.A.	1,629
2005	76	84.2	1,265	1,502	22	26	0	0	0	0	0	0	1,529
2006	75	85.3	1,379	1,617	13	15	20	23	0	0	0	0	1,655
2007	98	88.8	929	1,046	26	29	40	45	0	0	0	0	1,120
2008	82	85.4	789	924	22	26	74	87	0	0	0	0	1,036
2009	68	91.2	817	896	8	9	11	12	0	0	0	0	917
2010	92	85.9	2,061	2,399	17	20	33	38	1	1	0	0	2,459
2011	85	85.9	1,766	2,056	13	15	8	9	0	0	0	0	2,081
2012	89	93.3	1,332	1,427	6	6	8	9	1	1	0	0	1,443
2013	99	90.9	1,999	2,199	17	19	8	9	1	1	10	11	2,239
2014	113	94.7	1,549	1,636	14	15	68	72	3	3	0	0	1,726
2015	111	92.8	2,231	2,404	13	14	14	15	7	8	0	0	2,441
2016	128	80.5	1,549	1,925	16	20	33	41	0	0	4	5	1,991
2017	132	79.5	1,454	1,828	12	15	7	9	0	0	0	0	1,852
2018	132	91.7	3,144	3,430	92	100	28	31	0	0	0	0	3,561
2019	181	90.6	4,053	4,473	75	83	20	22	0	0	0	0	4,578
2020	215	89.3	3,249	3,638	76	85	23	26	0	0	0	0	3,749
2021	194	91.8	4,765	5,193	99	108	3	3	0	0	0	0	5,304
2022	177	87.6	2,555	2,918	91	104	37	42	0	0	2	2	3,066
2023	200												
5-yr. Avg. 2018-2022	180	90	3,553	3,930	87	96	22	25	0	0	0	0	4,052
10-yr. Avg. 2013-2022	148	89	2,655	2,964	51	56	24	27	1	1	2	2	3,051

[1] This table reflects entries to the online database from 2011 through **08/28/2023**. Data prior to 2011 relies on NPS records. Data for all years subject to changes resulting from entry error corrections.

[2] Expanded Harvest estimate derived from a basic, direct ratio expansion based on the percentage of permits that reported.

Table 4. Batzulnetas Federal Reported and Expanded Subsistence Fishery Harvests[1]

			Sockeye		Chinook		Other Species	
Year	Permits Issued	Percentage of Permits Reported	Reported Harvest	Harvest Estimate[2]	Reported Harvest	Harvest Estimate[2]	Reported Harvest	Harvest Estimate[2]
2002	1	100.0	208	208	0	0	0	0
2003	1	100.0	164	164	0	0	0	0
2004	1	100.0	182	182	0	0	0	0
2005	1	100.0	0	0	0	0	0	0
2006	0	N.A.	0	0	0	0	0	0
2007	1	100.0	1	1	0	0	0	0
2008	1	100.0	1	1	0	0	0	0
2009	0	N.A.	0	0	0	0	0	0
2010	3	100.0	106	106	0	0	0	0
2011	3	66.7	9	14	0	0	0	0
2012	3	66.7	101	152	0	0	0	0
2013	3	100.0	862	862	5	5	12	12
2014	2	100.0	146	146	0	0	0	0
2015	4	100.0	0	0	0	0	0	0
2016	0	N.A.	0	0	0	0	0	0
2017	1	100.0	254	254	2	2	0	0
2018	1	100.0	468	468	0	0	0	0
2019	1	100.0	209	209	0	0	0	0
2020	1	100.0	67	67	0	0	0	0
2021	1	100.0	120	120	0	0	0	0
2022	2	100.0	41	41	0	0	0	0
2023	2							
5-yr. Avg. 2018-2022	1	100.0	181	181	0	0	0	0
10-yr. Avg. 2013-2022	2	100.0	217	217	1	1	1	1

[1] This table reflects entries to the online database from 2011 through **08/28/2023**. Data prior to 2011 relies on NPS records. Data for all years subject to changes resulting from entry error corrections.
[2] Expanded Harvest estimate derived from a basic, direct ratio expansion based on the percentage of permits that reported.