

NEZ PERCE HARVEST MONITORING

Multi-year Report

December 1, 2006 - November 30, 2009

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**Conducted Fisheries and Implemented Harvest Monitoring Methodology
as Planned**

Snake River Tributaries

Spring/Summer Chinook Salmon

Harvest monitoring methodology was applied during the reporting period following the 2007, 2008 and 2009 Snake River Basin Spring and Summer Chinook Sampling Plans. Annual spring/summer Chinook fisheries were managed and implemented within the context of their respective Biological Assessments, Tribal Resource Management Plans, Fishery Implementation Plans, 1855 Treaty reserved fishing rights and the U.S. v. Oregon framework. Updated in-season escapement data were used annually to adjust harvest commensurate with actual returns, following established criteria for incidental and direct take of ESA listed species, hatchery escapement and natural escapement. Summaries are contained in Tables 1, 2 and 3.

Table 1. Summary of 2007 Nez Perce Tribe harvest targets and actual harvest estimates with 95% confidence intervals for Snake River spring/summer chinook salmon.

Subbasin/ Tributary	Target Hatch Non- listed	Actual Hatch Non- listed	Target Wild Non- listed	Actual Wild Non- listed	Target Hatch Listed	Actual Hatch Listed	Target Wild Listed	Actual Wild Listed	TOTAL Actual Estimated
Clearwater Sub									
North Fork	1/	840 (±140)	1/	25	n/a	n/a	n/a	n/a	865
Clear Creek	1/	194 (±58)	1/	9	n/a	n/a	n/a	n/a	203
Selway	1/	0	1/	53	n/a	n/a	n/a	n/a	53
Lochsa	1/	6	1/	0	n/a	n/a	n/a	n/a	6
South Fork	1/	25	1/	0	n/a	n/a	n/a	n/a	25
Mainstem	1/	99 (±57)	1/	0	n/a	n/a	n/a	n/a	99
Subtotal	550	1164	73	87	n/a	n/a	n/a	n/a	1,251
Imnaha^{3/}	n/a	n/a	n/a	n/a	42	62	3	2	64
Lostine^{3/}	n/a	n/a	n/a	n/a	4	0	11	0	0
Lookingglass Cr.	n/a	n/a	n/a	n/a	18	0	1	0	0
Salmon Sub									
Rapid River	1,673	1,164 (±230)	2	0	n/a	n/a	n/a	n/d	1,164
South Fork ^{3/}	n/a	n/a	n/a	n/a	229	145	54 ^{2/}	3	148
Snake									
Mainstem	192	0	0	0	0	0	0	0	0
TOTAL									2,627

^{1/} Aggregated in Clearwater Subbasin subtotal.
^{2/} Natural origin fish and hatchery origin fish with take restrictions (Idaho Supplementation Studies).
^{3/} Harvest monitoring was done using LSRCP funds. Post-season surveys and harvest estimation also done using a portion of LSRCP funds.

Table 2. Summary of 2008 Nez Perce Tribe harvest targets and actual harvest estimates with 95% confidence intervals for Snake River spring/summer chinook salmon.

Subbasin/ Tributary	Target Hatch Non- listed	Actual Hatch Non- listed	Target Wild Non- listed	Actual Wild Non- listed	Target Hatch Listed	Actual Hatch Listed	Target Wild Listed	Actual Wild Listed	TOTAL Actual Estimated
Clearwater Sub									
North Fork	^{1/}	1,549 (±356)	^{1/}	23 (±9)	n/a	n/a	n/a	n/a	1,572
Clear Creek	^{1/}	377 (±97)	^{1/}	13 (±8)	n/a	n/a	n/a	n/a	390
Selway	^{1/}	125 (±7)	^{1/}	4 (±0)	n/a	n/a	n/a	n/a	129
Lochsa	^{1/}	28 (±39)	^{1/}	2 (±2)	n/a	n/a	n/a	n/a	30
South Fork	^{1/}	343 (±92)	^{1/}	9 (±6)	n/a	n/a	n/a	n/a	352
Mainstem	^{1/}	203 (±61)	^{1/}	4 (±3)	n/a	n/a	n/a	n/a	207
Incidental Mort	^{1/}	5	^{1/}	5	n/a	n/a	n/a	n/a	10
Subtotal	3,937	2,631	0	59	n/a	n/a	n/a	n/a	2,690
Imnaha^{5/}	n/a	n/a	n/a	n/a	260	299	8	8	307
Lostine^{5/}	n/a	n/a	n/a	n/a	53	55	40	0	55
Lookingglass Cr.	n/a	n/a	n/a	n/a	35	0	1	0	0
Salmon Sub									
Rapid River	4,350	3,858 (±598)	0	n/d	n/a	n/a	n/a	n/a	3,858
South Fork ^{5/}	2,347 ^{2/}	731 (±36)	n/a	n/a	^{3/}	^{4/}	100 ^{3/}	31 (±6)	762
Snake									
Mainstem	625	n/d	0	n/d	0	n/d	0	n/d	n/d
TOTAL									7,672

^{1/} Aggregated in Clearwater Subbasin subtotal.
^{2/} Marked and unmarked hatchery fish.
^{3/} Listed wild and hatchery target combined.
^{4/} Aggregated in non-listed hatchery.
^{5/} Harvest monitoring was done using LSRCP funds. Post-season surveys and harvest estimation also done using a portion of LSRCP funds.

Table 3. Summary of 2009 Nez Perce Tribe harvest targets and actual harvest estimates with 95% confidence intervals for Snake River spring/summer chinook salmon.

Subbasin/ Tributary	Target Hatch Non- listed	Actual Hatch Non- listed	Target Wild Non- listed	Actual Wild Non- listed	Target Hatch Listed	Actual Hatch Listed	Target Wild Listed	Actual Wild Listed	TOTAL Actual Estimated
Clearwater Sub									
North Fork	^{1/}	300 (±146)	^{1/}	0	n/a	n/a	n/a	n/a	300
Clear Creek	^{1/}	112 (±84)	^{1/}	5 (±3)	n/a	n/a	n/a	n/a	117
Selway	^{1/}	n/d	^{1/}	n/d	n/a	n/a	n/a	n/a	n/d
Lochsa	^{1/}	n/d	^{1/}	n/d	n/a	n/a	n/a	n/a	n/d
South Fork	^{1/}	n/d	^{1/}	n/d	n/a	n/a	n/a	n/a	n/d
Mainstem	^{1/}	n/d	^{1/}	n/d	n/a	n/a	n/a	n/a	n/d
Subtotal	13,305	412	134	5	n/a	n/a	n/a	n/a	417
Imnaha^{5/}	n/a	n/a	n/a	n/a	849	530 (±130)	53	16 (±8)	546
Lostine^{5/}	n/a	n/a	n/a	n/a	367	229 (±63)	57	37 (±17)	266
Lookingglass	n/a	n/a	n/a	n/a	2	0	1	0	0
Salmon Sub									
Rapid River	9,446	2,677 (±383)	0	45 (±25)	n/a	n/a	n/a	n/a	2,722
South Fork ^{5/}	9,603 ^{2/}	689 (±183)	n/a	n/a	^{3/}	^{4/}	197 ^{3/}	25 (±11)	714
Snake									
Mainstem	1,365	n/d	0	n/d	0	n/d	0	n/d	n/d
TOTAL		3,778		5		759		123	4,665
^{1/} Aggregated in Clearwater Subbasin target subtotal.									
^{2/} Marked and unmarked hatchery fish.									
^{3/} Listed wild and hatchery target combined.									
^{4/} Aggregated in non-listed hatchery.									
^{5/} Harvest monitoring was done using LSRCP funds. Post-season surveys and harvest estimation also done using a portion of LSRCP funds.									

Disseminated Data

Harvest estimates were shared with co-managers on a weekly or bi-weekly basis to coordinate harvest activities and to manage cumulative harvest targets. Project personnel reported their catch data directly to TAC, pursuant to U.S. v. Oregon harvest sharing and inseason fishery management criteria. Post-season harvest data were provided to TAC and to pertinent co-management entities (e.g., the Dworshak National Fish Hatchery) for

run reconstruction, population and hatchery performance evaluations and for input to adult escapement predictor models.

The Nez Perce Tribe Harvest Monitoring Multi-year Report 2007-2009 will be posted on BPA's web site and made available for on-line distribution in PDF file format.

RESULTS AND DISCUSSION

Application of the step-wise methods previously described resulted in the estimated Nez Perce Tribe harvest of Snake River Basin spring/summer chinook shown in Table 4.

Table 4. Estimated Nez Perce Tribe harvest of spring/summer Chinook salmon, fall Chinook salmon and steelhead from 2007 through 2009.

	2007	2008	2009
Snake River Basin			
Spring/summer Chinook	2,627	7,672	4,665

The 2007 aggregate proposed and estimated actual Nez Perce harvest of listed spring/summer chinook salmon in the Snake River Basin were 364 and 212, respectively (Table 5).

Table 5. Proposed and estimated actual take of listed spring/summer chinook salmon by the Nez Perce Tribe in 2007.

Location	Proposed Listed Hatchery	Proposed Listed Wild/Natural	Total Proposed Listed	Actual Listed Hatchery	Actual Listed Wild/Natural	Total Actual Listed
Rapid River	n/a	2	2	n/a	n/d	n/d
South Fk Salmon R.	229	54	283	145	3	148
Imnaha River	42	3	45	62	2	64
Wallowa/Lostine	4	11	15	0	0	0
Lookingglass Creek	18	1	19	0	0	0
Total	293	71	364	207	5	212

The 2008 aggregate proposed and estimated actual Nez Perce harvest of listed spring/summer chinook salmon in the Snake River Basin were 497 and 393, respectively (Table 6).

Table 6. Proposed and estimated actual take of listed spring/summer chinook salmon by the Nez Perce Tribe in 2008.

Location	Proposed Listed Hatchery	Proposed Listed Wild/Natural	Total Proposed Listed	Actual Listed Hatchery	Actual Listed Wild/Natural	Total Actual Listed
Rapid River	n/a	0	0	n/a	n/d	n/d
South Fk Salmon R.	100 ¹	note ¹	100	n/d	31	31
Imnaha River	260	8	268	299	8	307
Wallowa/Lostine	53	40	93	55	0	55
Lookingglass Creek	35	1	36	0	0	0
Total	448	49	497	354	39	393

¹Listed wild and listed hatchery target combined.

The 2009 aggregate proposed and estimated actual Nez Perce harvest of listed spring/summer chinook salmon in the Snake River Basin were 1526 and 837, respectively (Table 7).

Table 7. Proposed and estimated actual take of listed spring/summer Chinook salmon by the Nez Perce Tribe in 2009.

Location	Proposed Listed Hatchery	Proposed Listed Wild/Natural	Total Proposed Listed	Actual Listed Hatchery	Actual Listed Wild/Natural	Total Actual Listed
Rapid River	n/a	0	0	n/a	n/d	n/d
South Fk Salmon R.	197 ¹	note ¹	197	n/d	25	25
Imnaha River	849	53	902	530	16	546
Wallowa/Lostine	367	57	424	229	37	266
Lookingglass Creek	2	1	3	0	0	0
Total	1,415	111	1,526	759	78	837

¹Listed wild and listed hatchery target combined.

As indicated in Tables 4 through 7, above, Nez Perce fisheries for Snake River spring/summer chinook salmon effectively addressed ESA take criteria while providing an opportunity for substantive harvests within traditional fishing areas of the Nez Perce Tribe.

Formidable challenges during 2007-2009 reporting period, such as those posed by late migrating spring/summer Chinook, were effectively addressed by rigorously monitoring the evolving in-season forecasts, and recommending adjustments to harvest strategies accordingly.

Annual post-season reviews were undertaken to evaluate sampling methodologies and strategies. The purpose of these evaluations is to refine harvest monitoring approaches to obtain the best data feasible with the resources available. The multi-year sliding scale

approaches to Tribal Resource Management Plans in the Grande Ronde and Imnaha Subbasins have improved the efficiency and timeliness of processing.

Implementation of the Nez Perce Tribe Harvest Monitoring Project during the 2007-2009 reporting period has again demonstrated the feasibility and utility of conducting directed, managed and coordinated harvests on specific populations, while assuring that hatchery and natural escapement targets are met to achieve mitigation goals and to rebuild weak stocks.

Nez Perce Tribe. 2007. Nez Perce Tribe Harvest Monitoring Program: 2007 Snake River Basin Spring and Summer Chinook Sampling Plan. Department of Fisheries Resources Management. Lapwai, Idaho. May 24, 2007.

Nez Perce Tribe. 2008. Nez Perce Tribe Harvest Monitoring Program: 2008 Snake River Basin Spring and Summer Chinook Sampling Plan. Department of Fisheries Resources Management. Lapwai, Idaho. June 6, 2008.

Nez Perce Tribe. 2009. Nez Perce Tribe Harvest Monitoring Program: 2009 Snake River Basin Spring and Summer Chinook Sampling Plan. Department of Fisheries Resources Management. Lapwai, Idaho. May 6, 2009.