

<u>PLEASE</u> realize that salmon may be actively spawning and take care to avoid disturbing them (Late August-September). Spawning fish are very sensitive to disturbance and may abandon redds when harassed.



Summer Chinook salmon on nest or "redd"



Johnson Creek Drainage

ellow Pine

ile Tra

East Fork South Fork Salmon River

Kilometers

Adult Vei

2-1-Line of Egg Packets 0-2-Deptosition Construction Construc

Additional information can be found by visiting the Department of Fisheries Resources Management's website at http://www.nptfisheries.org/Research.aspx Johnson Creek Artificial Propagation and Enhancement(JCAPE) Project Overview







Nez Perce Tribe Department of Fisheries Resources Management

> 14054 Burr Rd. McCall, Idaho 83638

Phone: 1-208-634-5290 Fax: 1-208-634-4097

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Johnson Creek Artificial Propagation and Enhancement Project

Background and Goal:

Declining population trends put the Johnson Creek run of summer Chinook salmon at risk of extirpation; in 1995 only 5 redds (nests) were observed in the spawning ground index area. In response to successive years of critically low abundance, the Nez Perce Tribe initiated hatchery supplementation efforts in Johnson Creek in 1997. The primary goal of the JCAPE program is to breed native stock and artificially rear offspring to provide for the restoration of summer Chinook salmon in Johnson Creek.

Supplementation versus Mitigation Production:

Supplementation programs act as a safety net for at-risk populations (i.e. Johnson Creek) by integrating artificial breeding and rearing to increase natural production. Conversely, general production programs utilize hatcheries exclusively to compensate for fish losses in order to provide for increased harvest opportunities.

Project/Field Activities:

- Collect 60 pair natural-origin adults for broodstock. These fish are held at the South Fork Salmon river satellite facility near Warm lake.
- Release all hatchery origin supplementation adults and surplus natural origin adults above the weir for natural spawning.
- Remove all adult adipose fin-clipped "strays" from Johnson Creek. Strays may be distributed to tribal members for subsistence purposes or will be euthanized and placed in Johnson Creek for nutrient enhancement.
- Rear juveniles at the McCall Fish Hatchery. Annual production target is 150,000 smolts that are direct released into Johnson Creek in the spring.
- Collect abundance and survival information on natural origin juvenile migrants.
- Conduct annual spawning ground and carcass surveys to obtain information on abundance, sex, age, and origin of the returning adults.

Rotary Screw Trap:

A rotary screw trap is located on Johnson Creek approximately 4 miles upstream of the confluence of the East Fork of the South Fork of the Salmon River (EFSFSR). Trapping operations generally run from March through November of each year. This represents the primary method to capture, measure, mark/tag juvenile Chinook salmon and allows us to estimate:

- Travel time of juveniles from Johnson Creek to Lower Granite Dam
- Survival rates to Lower Granite Dam
- Juvenile abundance estimates in Johnson Creek



Picket Weir:

Adult trapping activities occur daily at a temporary picket weir located in Johnson Creek, approximately 5 miles above the confluence of the EFSFSR. The weir, which resembles a fence, is installed in mid to late June and is removed upon conclusion of the adult run in mid September. All JCAPE supplementation origin adults and most natural origin adults are passed above the weir to naturally spawn. Along with collecting adults for broodstock, the weir provides information on;

- Abundance of the population
- Age, sex, size, and origin
- Origin (natural, hatchery, stray)



Spawning Ground Surveys:

During the months of August and September you may notice Nez Perce Tribe field staff performing "walks" along Johnson Creek or other areas throughout the South Fork Salmon Subbasin. Spawning ground surveys are a critical component to determining effectiveness of management efforts. Staff count the number of salmon nests, or redds. In addition, they also collect salmon carcasses to determine origin, sex, age, and the percent of adults that have successfully spawned.



Fun Facts:

- Largest Chinook measured was 109cm (42.9in.).
- Larger females can carry up to 6,200 eggs.
- Individual salmon travel 703 river miles to reach Johnson Creek from the Pacific Ocean.
- Fish spend from 1-4 years in the marine environment.

YEAR	TOTAL ESCAPEMENT	# REDDS
2007	438	74
2008	738	226
2009	929	253
2010	1,181	398
2011	1,148	236
2012	927	297
2013	1,146	235
2014	1,652	417
2015	1,037	277
2016	731	281