



Summary of 2020 Northern Pike Suppression Results on Boundary Reservoir, Pend Oreille River, WA.

In total, 616 NP have been removed since mechanical suppression effort began in Boundary Reservoir in 2016. In 2020, a total of 30 nets were deployed and 26 Northern Pike removed between March 9 and March 12, with a final catch-per-unit-effort (CPUE) of 0.87 NP/net-night. The 2020 suppression effort was expected to run through April 30 but was suspended for the season due to the COVID19 pandemic. The Kalispel Natural Resources Department collected 28 Northern Pike during the 2020 Spring Pike Index Netting (SPIN) Survey conducted May 18 through May 20. The resulting CPUE of 0.93 NP/ net-night in sloughs and mainstem river between Box Canyon Dam and Metaline Falls. Although this was higher than ≤ 0.50 NP/net-night it fell within the 95% CI (0.43 to 1.43) meeting the abundance target for the reservoir.

Mechanical Removal:

- Netting took place from March 9 to March 12
- Netting locations were concentrated from Box Canyon Dam to Metaline Falls
- Collected biological information such as weight, length, sex and maturity on all Northern Pike
- Total nets deployed: 30
- Overall CPUE: 0.87 NP/net-night

Northern Pike catch summary (Table 1):

- Total catch: 26 NP, 0.02 mT (47 lbs.)
- Overall size range: 400 mm to 880 mm TL (19-31 inches), weight: 376 g to 5,540 g (1.6 to 6.8 lbs.)
- Males averaged 449 mm TL (24 inches), 673 g (3.8 lbs.)
- Females averaged 500 mm TL (26 inches), 1,332 g (4.9 lbs.)
- Females made up an estimated 23% of the total catch, of which an estimated 17% were sexually mature (Table 2)
- Removed 1 mature and 5 immature females
- 81% (n=21) of the NP catch was <450 mm TL (18 inches)

Mechanical Suppression Bycatch Summary:

- 11 fish species, 44 individuals (Table 3)

Spring Pike Index Netting

- Netting took place between May 18 and May 20
- Net placement sites were selected using a spatially balanced random sampling design focused on the upper section of the reservoir (Metaline Falls to Box Canyon Dam)
- Two 2-person crews deployed 7-8 nets/day
- Collected biological information such as weight, length, sex and maturity on all Northern Pike
- Total nets deployed: 30
- Overall CPUE for Boundary Reservoir was 0.93 NP/net-night.

SPIN catch summary (Table 1)

- Total catch: 28 NP, 0.019 mT (41 lbs.)
- Overall size range: 368 mm to 597 mm TL (14.5-23.5 inches), 331 g to 1,425 g (0.73-3.1 lbs.)
- Males Averaged 461 mm TL (18 inches) and 673 g (1.5 lb)
- Females averaged 458 mm TL (18 inches) and 650 g (1.4 lb)
- Females made up 32% of the total catch, of which 11% were mature
- 43% of the NP total catch were less than 450 mm TL (18 inches)

Tables and Figures

Table 1. Data summary and statistics for the 2020 Northern Pike suppression effort and SPIN survey in Boundary Reservoir.

	Suppression	SPIN Survey
Sampling Dates:	March 9 to March 12	May 18 to May 20
Days per Week:	4	4
Nets/Day:	10	7-8
Total Nets:	30	30
NP Catch-Per-Unit-Effort (CPUE):		
Overall CPUE:	0.87	0.93
Percent Positive Catch:	47%	40%
Most Northern Pike in one net:	4	5
NP Catch Statistics:		
Total Number:	26	28
Total Weight:	0.02 mT (21.5 pounds)	0.019 mT (41 pounds)
Total Length Range:	400 mm to 880 mm	368 mm to 597 mm
Weight Range:	376 g to 5,540 g	331 g to 1,425 g
Mean TL Males:	449 mm	461 mm
Mean TL Females:	500 mm	458 mm
Sex Ratio (% female):	23%	32%
Juvenile Catch (<450 mm):	81%	43%

Table 2. Estimated maturity rates of all Northern Pike removed during 2020 mechanical suppression efforts in Boundary Reservoir.

Sex	Immature	Mature	Ripe	Spawned Out
Female	89%	11%	0%	0%
Male	26%	74%	0%	0%

Table 3. Summary of fish bycatch captured during the 2020 Northern Pike mechanical suppression effort in Boundary Reservoir.

Common Name	Species Name	Number	% of Total
Salmonidae			
Brown Trout	<i>Salmo trutta</i>	7	15.91
Lake Trout	<i>Salvelinus namaycush</i>	1	2.27
Rainbow Trout	<i>Oncorhynchus mykiss</i>	2	4.55
Westslope Cutthroat Trout	<i>Oncorhynchus clarki lewisi</i>	2	4.55
Cyprinidae			
Northern Pikeminnow	<i>Ptychocheilus oregonensis</i>	2	4.55
Tench	<i>Tinca tinca</i>	1	2.27
Catostomidae			
Largescale Sucker	<i>Catostomus macrocheilus</i>	3	6.82
Ictaluridae			
Brown Bullhead	<i>Ameiurus nebulosus</i>	1	2.27
Percidae			
Walleye	<i>Stizostedion vitreum</i>	5	11.36
Yellow Perch	<i>Perca flavescens</i>	19	43.18
Gadiformes			
Burbot	<i>Lota lota</i>	1	2.27
Grand Total (all species)		44	100