



Summary of 2022 Northern Pike Suppression Results on Boundary Reservoir, Pend Oreille River, WA.

In 2022, a total of 88 nets were deployed and 40 Northern Pike (NP) removed between March 7 and April 19, with a final catch-per-unit-effort (CPUE) of 0.45 NP/net-night. In total, 825 NP have been removed since mechanical suppression effort began in Boundary Reservoir in 2016. The Kalispel Natural Resources Department collected 6 Northern Pike during the 2022 Spring Pike Index Netting (SPIN) Survey conducted May 9 through May 11. The resulting CPUE of 0.20 (\pm 0.17) NP/net-night in sloughs and mainstem river between Box Canyon Dam and Metaline Falls met the \leq 0.50 NP/net-night target for the reservoir.

Mechanical Removal:

- Netting took place from March 7 to April 19
- Netting locations were concentrated from Box Canyon Dam to Metaline Falls, with lesser effort applied from Metaline Falls to Boundary Dam
- Collected biological information such as weight, length, sex, and maturity on all Northern Pike
- Total nets deployed: 88
- Overall CPUE: 0.42 NP/net-night

Northern Pike catch summary (Table 1):

- Total catch: 40 NP, 0.08 mT (175 lbs.)
- Overall size range: 525 mm to 740 mm TL (21 to 29 inches), weight: 1,159 g to 3,223 g (2.5 to 7.1 lbs.)
- Males averaged 645 mm TL (25 inches), 1,928 g (4.3 lbs.)
- Females averaged 661 mm TL (26 inches), 2,146 g (4.7 lbs.)
- Females made up an estimated 43% of the total catch (Table 1), of which an estimated 100% were sexually mature (Table 2)
- Removed 17 mature females
- No NP were <450 mm TL (18 inches)

Mechanical Suppression Bycatch Summary:

- 14 fish species, 289 individuals (Table 3)

Spring Pike Index Netting

- Netting took place between May 9 and May 11
- Net placement sites were selected using a spatially balanced random sampling design focused on the upper section of the reservoir (Box Canyon Dam to Metaline Falls)
- One 3-person crew deployed 15 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 0.20 NP/net-night.

SPIN catch summary (Table 1)

- Total catch: 6 NP, 0.01 mT (23 lbs.)
- Overall size range: 485 mm to 675 mm TL (19 to 26 inches), 829 g to 2,170 g (1.8 to 4.8 lbs.)
- Males Averaged 672 mm TL (26 inches) and 2,170 g (4.8 lbs.)
- Females averaged 598 mm TL (19 inches) and 1,613 g (3.5 lbs.)
- Females made up 83% of the total catch, of which 60% were mature, ripe or spawned out
- No NP were <450 mm TL (18 inches)

Tables and Figures

Table 1. Data summary and statistics for the 2022 Northern Pike suppression effort and SPIN survey in Boundary Reservoir.

	Suppression	SPIN Survey
Sampling Dates:	March 7 to April 19	May 9 to May 11
Days per Week:	4	4
Nets/Day:	11-14	15
Total Nets:	88	30
NP Catch-Per-Unit-Effort (CPUE):		
Overall CPUE:	0.45	0.20
Percent Positive Catch:	22%	17%
Most Northern Pike in one net:	6	2
NP Catch Statistics:		
Total Number:	40	6
Total Weight:	0.08 mT	0.01 mT
Total Length Range:	525 mm to 740 mm	485 mm to 675 mm
Weight Range:	1,159 g to 3,223 g	829 g to 2,170 g
Mean TL Males:	645 mm	672 mm
Mean TL Females:	661 mm	598 mm
Sex Ratio (% female):	43%	83%
Juvenile Catch (<450 mm):	0%	0%

Table 2. Estimated maturity rates of all Northern Pike removed during 2022 mechanical suppression efforts in Boundary Reservoir.

Sex	Immature	Mature	Ripe	Spawned Out
Female	0%	100%	0%	0%
Male	0%	95%	5%	0%

Table 3. Summary of fish bycatch captured during the 2022 Northern Pike mechanical suppression effort in Boundary Reservoir.

Common Name	Species Name	Number	% of Total
Salmonidae			
Brown Trout	<i>Salmo trutta</i>	8	2.77
Lake Trout	<i>Salvelinus namaycush</i>	2	0.69
Rainbow Trout	<i>Oncorhynchus mykiss</i>	5	1.73
Westslope Cutthroat Trout	<i>Oncorhynchus clarki lewisi</i>	3	1.04
Cyprinidae			
Northern Pikeminnow	<i>Ptychocheilus oregonensis</i>	5	1.73
Tench	<i>Tinca tinca</i>	6	2.08
Catostomidae			
Largescale Sucker	<i>Catostomus macrocheilus</i>	7	2.42
Longnose Sucker	<i>Catostomus catostomus</i>	2	0.69
Centrarchidae			
Black Crappie	<i>Pomoxis nigromaculatus</i>	4	1.38
Pumpkinseed	<i>Lepomis gibbosus</i>	11	3.81
Smallmouth Bass	<i>Micropterus dolomieu</i>	2	0.69
Percidae			
Walleye	<i>Stizostedion vitreum</i>	16	5.54
Yellow Perch	<i>Perca flavescens</i>	217	75.09
Gadiformes			
Burbot	<i>Lota lota</i>	1	0.35
Grand Total (all species)		289	