



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

Mechanical suppression of Northern Pike (NP) in Box Canyon Reservoir occurred between February 28 and April 21 with crews deploying 626 nets and removing 814 Northern Pike. The final catch-per-unit-effort (CPUE) was 1.3 NP/net-night for the 2022 suppression effort (Figure 1). The Kalispel Natural Resources Department and Washington Department of Fish and Wildlife collected 15 Northern Pike during the 2022 Spring Pike Index Netting (SPIN) Survey conducted May 02 through May 05. The resulting CPUE of 0.26 NP/net-night (95% CI: ± 0.16), in sloughs and the mainstem river between the Riverbend (RM 60-61) and Pioneer Park Campground (RM 86-87) met the abundance target of ≤ 1.73 NP/net-night for these sections of the reservoir (see [BCR Target Abundance](#) document for specifics on the target development). The mean CPUE north of Riverbend was 0.10 (± 0.20) NP/net, meeting the ≤ 0.50 NP/net-night target for this reach.

In total, 19,430 Northern Pike have been removed through the suppression project in Box Canyon Reservoir, which began in 2012.

Mechanical Removal February 28-April 21:

- Netting took place in known spawning locations throughout the reservoir
- Two 3-man crews worked 4 days per week deploying up to 40 nets per day
- Collected biological information such as weight, length, sex, and maturity on all Northern Pike
- Total nets deployed: 626
- Overall CPUE: 1.3 NP/ net-night

Northern Pike catch summary (Table 1):

- Total catch: 814 NP, 1.20 mT (2,663 lbs.)
- Overall size range: 330 mm to 1,045 mm (13-41 inches), weight: 144 g to 9,900 g (0.3 to 22.0 lbs.)
- Males averaged 587 mm TL (23 inches), 1,430 g (3.1 lbs.)
- Females averaged 627 mm TL (25 inches), 1,800 g (4.0 lbs.)
- Females made up 50% of the total catch (Table 1), of which 85% were mature, ripe, or spawned out (Table 2)
- Removed 337 mature pre-spawn females and 49 immature females

Mechanical Suppression Bycatch Summary:

- 19 fish species, 5,799 individuals, >90% survival (Table 3)

Spring Pike Index Netting May 02-May 05

- Net placement sites were selected using a reservoir-wide spatially balanced random sampling design
- Collected biological information such as weight, length, sex, and maturity on all Northern Pike
- Total nets deployed: 63
- CPUE for the mainstem river north of Riverbend was 0.1 NP/net-night (target ≤ 0.5); CPUE for all sloughs and mainstem river south of Riverbend was 0.26 NP/net-night (target ≤ 1.73)

SPIN catch summary (Table 1)

- Total catch: 15 NP, 0.03 mT (55.2 lbs.)
- Overall size range: 347 mm to 880 mm TL (14-35 inches), 210 g to 4,708 g (0.5-10.4 lbs.)
- Males averaged 571 mm TL (22 inches), 1450 g (3.2 lbs.)
- Females averaged 640 mm TL (25 inches), 1,920 g (4.2 lbs.)
- A total of 7 females were captured (3 Spawned out, 2 ripe, 1 mature and 1 immature).

Tables and Figures

Table 1. Data summary and statistics for the 2022 Box Canyon Reservoir Northern Pike mechanical suppression effort and SPIN survey.

	Suppression	SPIN Survey
Sampling Dates:	February 28 to April 21	May 02 to May 05
Days per Week:	4	4
Nets/Day:	13-40	20-22
Total Nets:	626	63
NP Catch-Per-Unit-Effort (CPUE):		
CPUE:	1.30	North: 0.10 Slough and South: 0.26
Percent Positive Catch:	45%	19%
Most Northern Pike in one net:	22	3
NP Catch Statistics:		
Total Number:	814	15
Total Weight:	1.20 mT	0.03 mT
Total Length Range:	330 mm to 1,045 mm	347 mm to 880 mm
Weight Range:	144 g to 9,900 g	210 g to 4,708 g
Mean TL Males:	587 mm	571 mm
Mean TL Females:	627 mm	640 mm
Sex Ratio (% female):	50%	50%
Juvenile Catch (<450 mm):	8%	3%

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

Sex	Immature	Mature	Ripe	Spawned Out
Female	12%	84%	2%	2%
Male	10%	61%	29%	0%

Table 3. Summary of fish bycatch captured during the 2022 Northern Pike mechanical suppression effort in Box Canyon Reservoir. Observed bycatch survival rates were >90% for the project.

Common Name	Species Name	Number	% of Total
Salmonidae			
Brown Trout	<i>Salmo trutta</i>	35	0.60
Eastern Brook Trout	<i>Salvelinus fontinalis</i>	18	0.31
Lake Trout	<i>Salvelinus namaycush</i>	1	0.02
Lake Whitefish	<i>Coregonus clupeaformis</i>	2	0.03
Rainbow Trout	<i>Oncorhynchus mykiss</i>	36	0.62
Westslope Cutthroat Trout	<i>Oncorhynchus clarki lewisi</i>	9	0.16
Esocidae			
Grass Pickerel	<i>Esox americanus vermiculatus</i>	29	0.50
Cyprinidae			
Northern Pikeminnow	<i>Ptychocheilus oregonensis</i>	42	0.72
Peamouth	<i>Mylocheilus caurinus</i>	17	0.29
Tench	<i>Tinca tinca</i>	1141	19.68
Catostomidae			
Largescale Sucker	<i>Catostomus macrocheilus</i>	8	0.14
Longnose Sucker	<i>Catostomus catostomus</i>	5	0.09
Ictaluridae			
Brown Bullhead	<i>Ameiurus nebulosus</i>	260	4.48
Centrarchidae			
Black Crappie	<i>Pomoxis nigromaculatus</i>	561	9.67
Largemouth Bass	<i>Micropterus salmoides</i>	243	4.19
Pumpkinseed	<i>Lepomis gibbosis</i>	657	11.33
Smallmouth Bass	<i>Micropterus dolomieu</i>	3	0.05
Percidae			
Yellow Perch	<i>Perca flavescens</i>	2,700	46.56
Walleye	<i>Stizostedion vitreum</i>	32	0.55
Grand Total (all species)		5,799	100

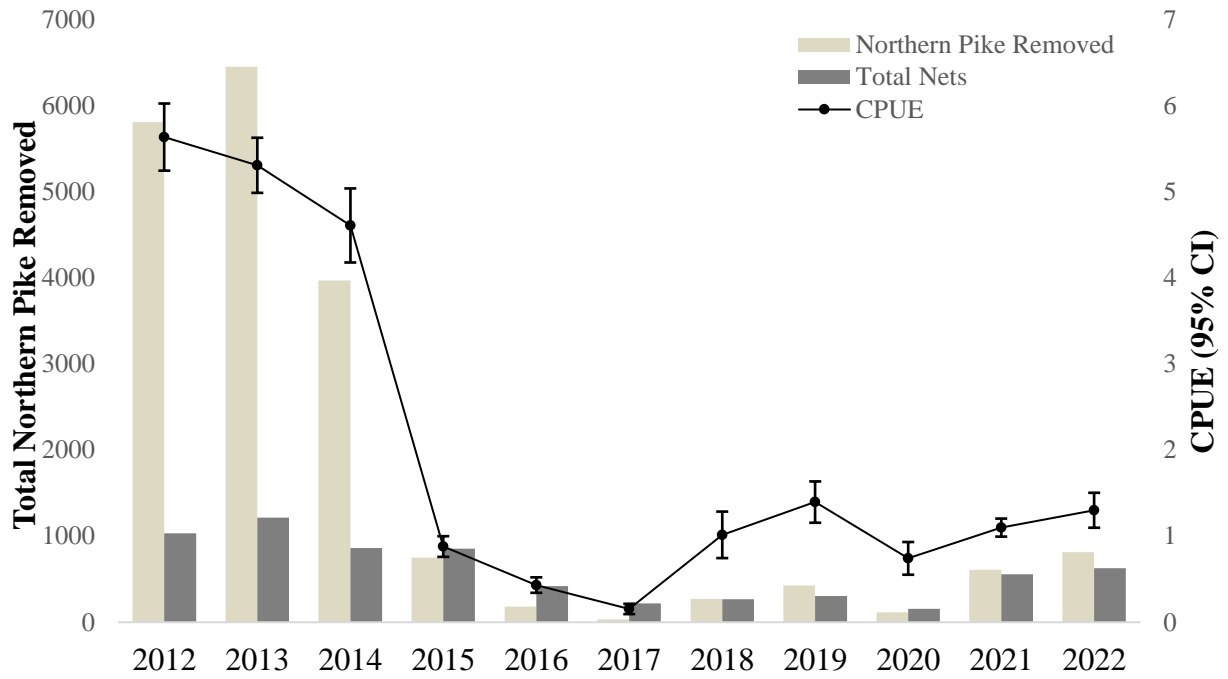


Figure 1. Box Canyon Reservoir total catch, gill net effort, and mean gill net catch-per-unit-effort (CPUE) of Northern Pike collected during suppression efforts since 2012.