



## Summary of 2024 Northern Pike Suppression Results on Box Canyon Reservoir, Pend Oreille River, WA.

Mechanical suppression of Northern Pike (NP) in Box Canyon Reservoir occurred between March 04 and April 23 with crews deploying 590 nets and removing 291 Northern Pike. The final catch-per-unit-effort (CPUE) was 0.49 NP/net-night for the 2024 suppression effort (Figure 1). The Kalispel Natural Resources Department and Washington Department of Fish and Wildlife collected 12 Northern Pike during the 2024 Spring Pike Index Netting (SPIN) Survey conducted May 06 through May 09. The resulting CPUE of 0.23 NP/net-night (95% CI:  $\pm 0.10$ ), in sloughs and the mainstem river between Pioneer Park Campground (RM 86-87) and Riverbend (RM 60-61), met the relative abundance target of  $\leq 1.73$  NP/net-night for these sections of the reservoir (see [BCR Target Abundance](#) document for specifics on the target development). No NP were caught the mainstem river north of Riverbend during the SPIN survey (CPUE 0.00 NP/net-night), meeting the  $\leq 0.50$  NP/net-night abundance target for this reach.

In total, 19,905 Northern Pike have been removed through the suppression project in Box Canyon Reservoir, which began in 2012.

### **Mechanical Removal March 04-April 23:**

- Netting took place in known aggregation locations throughout the reservoir
- Two 3-person crews worked 4 days per week, deploying up to 35 nets per day
- Collected biological information such as weight, length, sex, and maturity on all Northern Pike
- Total nets deployed: 590
- Overall CPUE: 0.49 NP/net-night

### **Northern Pike catch summary (Table 1):**

- Total catch: 291 NP
- Overall size range: 221 mm to 891 mm (9-35 inches), weight: 150 g to 5,879 g (0.3 to 13.0 lbs.)
- Males averaged 487 mm TL (19 inches), 982 g (2.2 lbs.)
- Females averaged 535 mm TL (21 inches), 1,309 g (2.9 lbs.)
- Females made up 45% of the total catch (Table 1), of which 41% were mature, ripe, or spawned out (Table 2)
- Removed 52 mature pre-spawn females and 77 immature females

## Mechanical Suppression Bycatch Summary:

- 19 fish species, 13,307 individuals, >90% survival (Table 3)
- Bluegill (n=2) were documented for the first time in the reservoir

## Spring Pike Index Netting May 06-May 09

- 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 NP
- Total nets deployed: 62
- No NP were caught in the mainstem river north of Riverbend (target  $\leq 0.5$ ); CPUE for all sloughs and mainstem river south of Riverbend was 0.23 NP/net-night (target  $\leq 1.73$ )

### SPIN catch summary (Table 1)

- Total catch: 12 NP
- Overall size range: 419 mm to 845 mm TL (16-33 inches), 332 g to 2,600 g (0.7-5.7 lbs.)
- Males averaged 575 mm TL (22 inches), 1,459 g (3.2 lbs.)
- Females averaged 531 mm TL (21 inches), 856 g (1.9 lbs.)
- A total of 7 females were removed (1 spawned out, 1 ripe and 5 immature).

## Tables and Figures

**Table 1.** Data summary and statistics for the 2024 Box Canyon Reservoir Northern Pike mechanical suppression effort and SPIN survey.

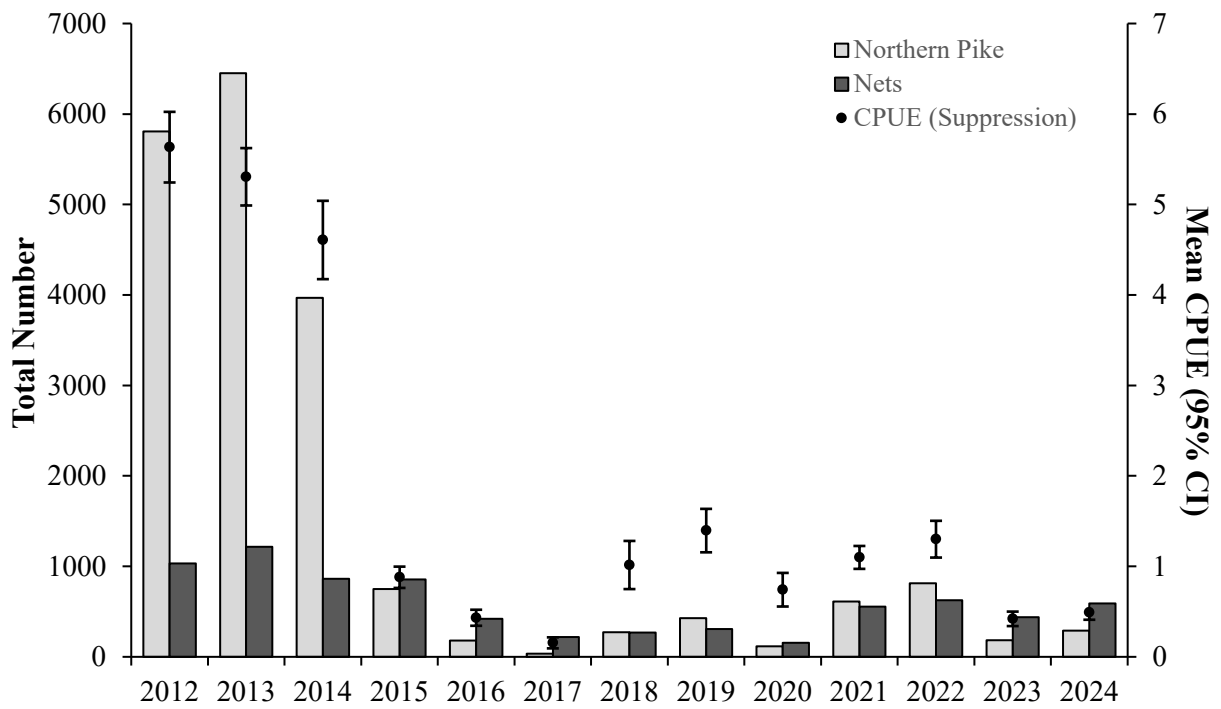
	Suppression	SPIN Survey
Sampling Dates:	March 4 to April 23	May 06 to May 09
Days per Week:	4	4
Nets/Day:	10-35	17-18
Total Nets:	590	62
<b>NP Catch-Per-Unit-Effort (CPUE):</b>		
CPUE:	0.49	North: 0.0 Slough and South: 0.23
Percent Positive Catch:	29%	15%
Most Northern Pike in one net:	7	2
<b>NP Catch Statistics:</b>		
Total Number:	291	12
Total Length Range:	221 mm to 891 mm	419 mm to 845 mm
Weight Range:	150 g to 5,879 g	332 g to 2,600 g
Mean TL Males:	487 mm	575 mm
Mean TL Females:	535 mm	531 mm
Sex Ratio (% female):	45%	58%
Juvenile Catch (<450 mm):	55%	50%

**Table 2.** Maturity rates of all Northern Pike removed during 2024 mechanical suppression efforts in Box Canyon Reservoir.

Sex	Immature	Mature	Ripe	Spawned Out
Female	58%	41%	1%	0%
Male	31%	36%	33%	0%

**Table 3.** Summary of fish bycatch captured during the 2024 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
<b>Salmonidae</b>			
Brown Trout	<i>Salmo trutta</i>	139	1.04
Eastern Brook Trout	<i>Salvelinus fontinalis</i>	49	0.37
Lake Whitefish	<i>Coregonus clupeaformis</i>	4	0.03
Rainbow Trout	<i>Oncorhynchus mykiss</i>	42	0.32
Westslope Cutthroat Trout	<i>Oncorhynchus clarki lewisi</i>	18	0.14
<b>Esocidae</b>			
Grass Pickerel	<i>Esox americanus vermiculatus</i>	25	0.19
<b>Cyprinidae</b>			
Northern Pikeminnow	<i>Ptychocheilus oregonensis</i>	91	0.68
Peamouth	<i>Mylocheilus caurinus</i>	31	0.23
Tench	<i>Tinca tinca</i>	2,704	20.32
<b>Catostomidae</b>			
Largescale Sucker	<i>Catostomus macrocheilus</i>	15	0.11
Longnose Sucker	<i>Catostomus catostomus</i>	11	0.08
<b>Ictaluridae</b>			
Brown Bullhead	<i>Ameiurus nebulosus</i>	1,397	10.50
<b>Centrarchidae</b>			
Black Crappie	<i>Pomoxis nigromaculatus</i>	1,081	8.12
Bluegill	<i>Lepomis macrochirus</i>	2	0.02
Largemouth Bass	<i>Micropterus salmoides</i>	671	5.04
Pumpkinseed	<i>Lepomis gibbosus</i>	1,621	12.18
Smallmouth Bass	<i>Micropterus dolomieu</i>	25	0.19
<b>Percidae</b>			
Yellow Perch	<i>Perca flavescens</i>	5,284	39.71
Walleye	<i>Sander vitreus</i>	97	0.73
<b>Grand Total (all species)</b>		<b>13,307</b>	<b>100</b>



**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.