

Lake Spokane (Long Lake): Monitoring Changes in the Fish Community



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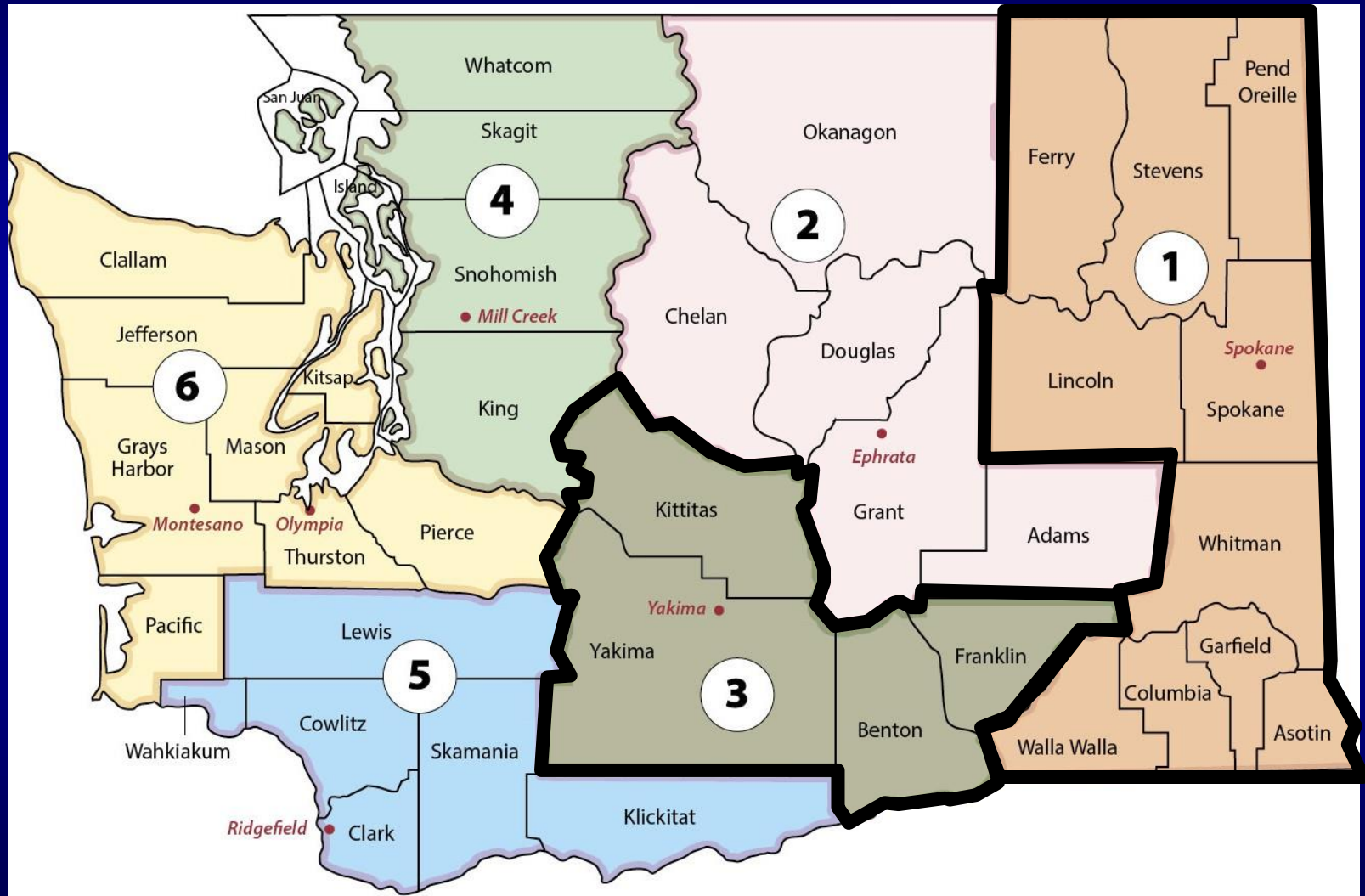
Started with 1996 legislation (SB 5951):

“Increase and improve opportunities to fish for warmwater fish while maintaining native fish protection.”

- Eight biologists
- Lake and reservoir sampling
- Fish stocking and translocation
- Outreach
- Access Development
- Future Habitat Work



The Warmwater Team for Regions 1 & 3



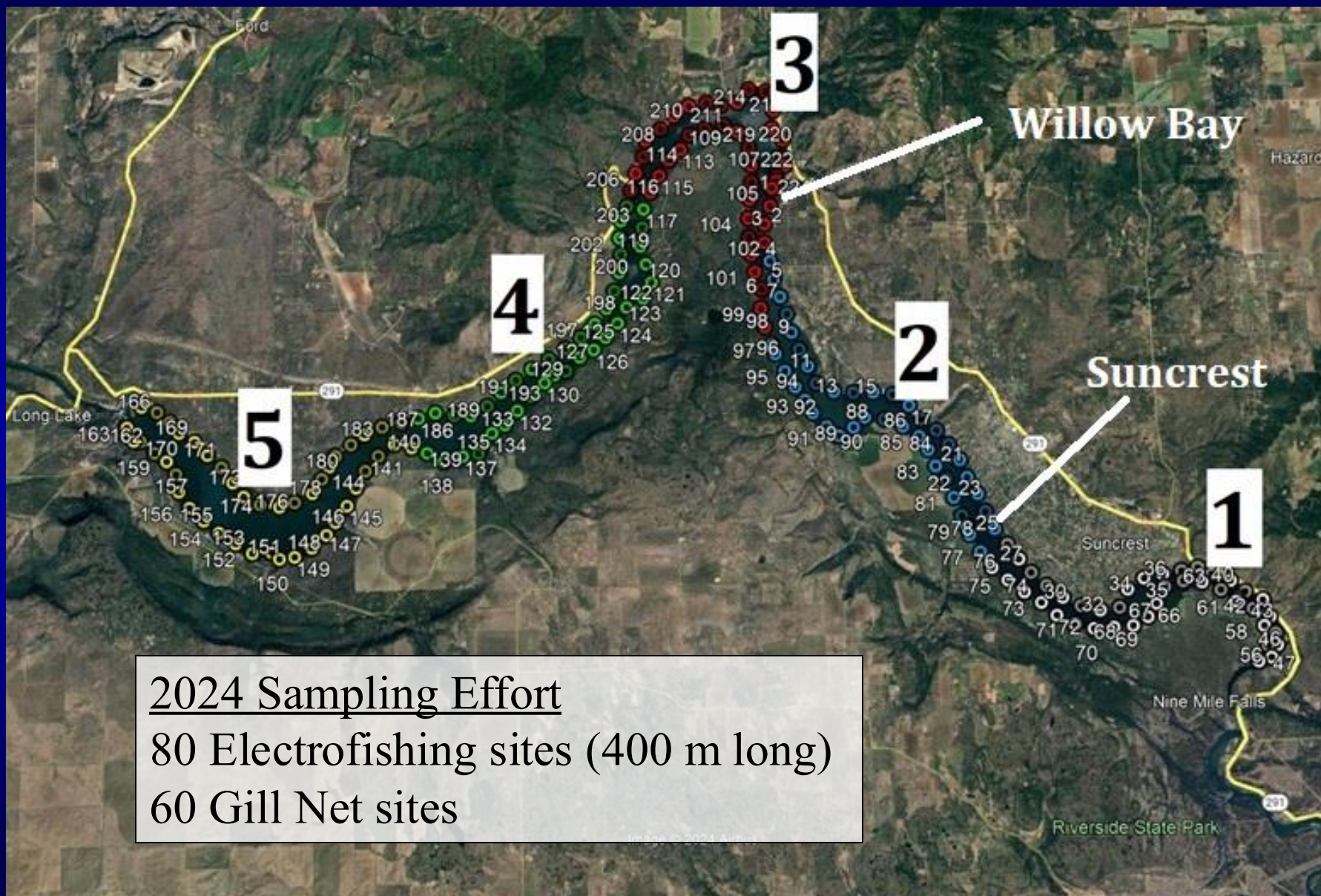
Lake Spokane Fish Management

- Managed as a mixed-species fishery
- Harvest regulations for Rainbow Trout and warmwater gamefish
- Mitigation agreement with Avista to stock ~150K Rainbow Trout annually

Lake Spokane Fish Monitoring

- Standardized warmwater fish surveys conducted in 2001, 2015, and 2024
- Sampling gears: electrofishing, gill netting, fyke netting
- Statistical analysis of catch rates over time to track changes in abundance
- Ability to track change hinges on variability in catch rates among sampling sites

2024 Lake Spokane Survey- Sampling Map



Electrofishing Standard
600 seconds (10 minutes)



Standardized
Sampling
Techniques

Gill Net Standard
150' X 8'
25'- ½ inch mesh
25'- ¾ inch mesh
50'- 1 inch mesh
50'- 2 inch mesh

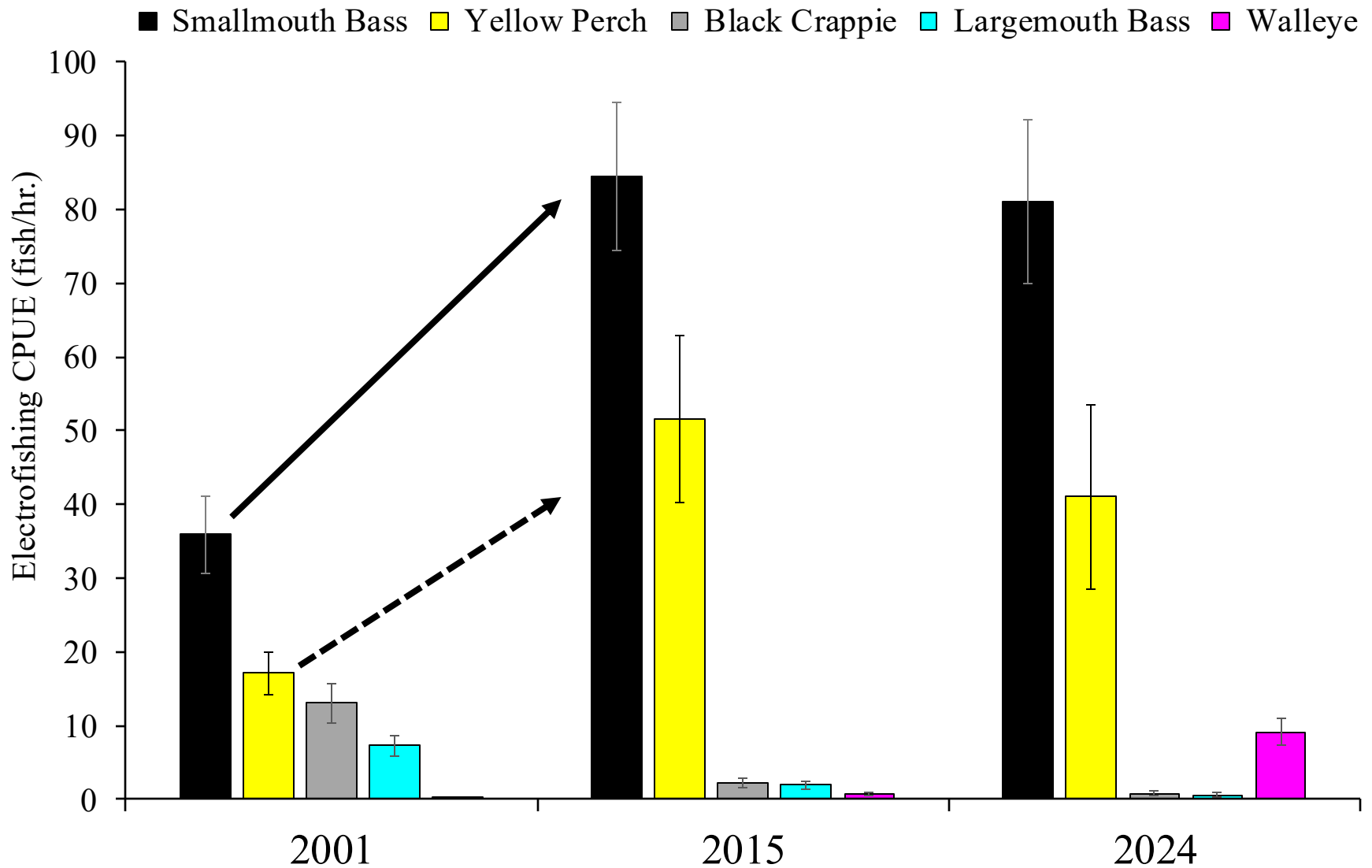


Gill Netting

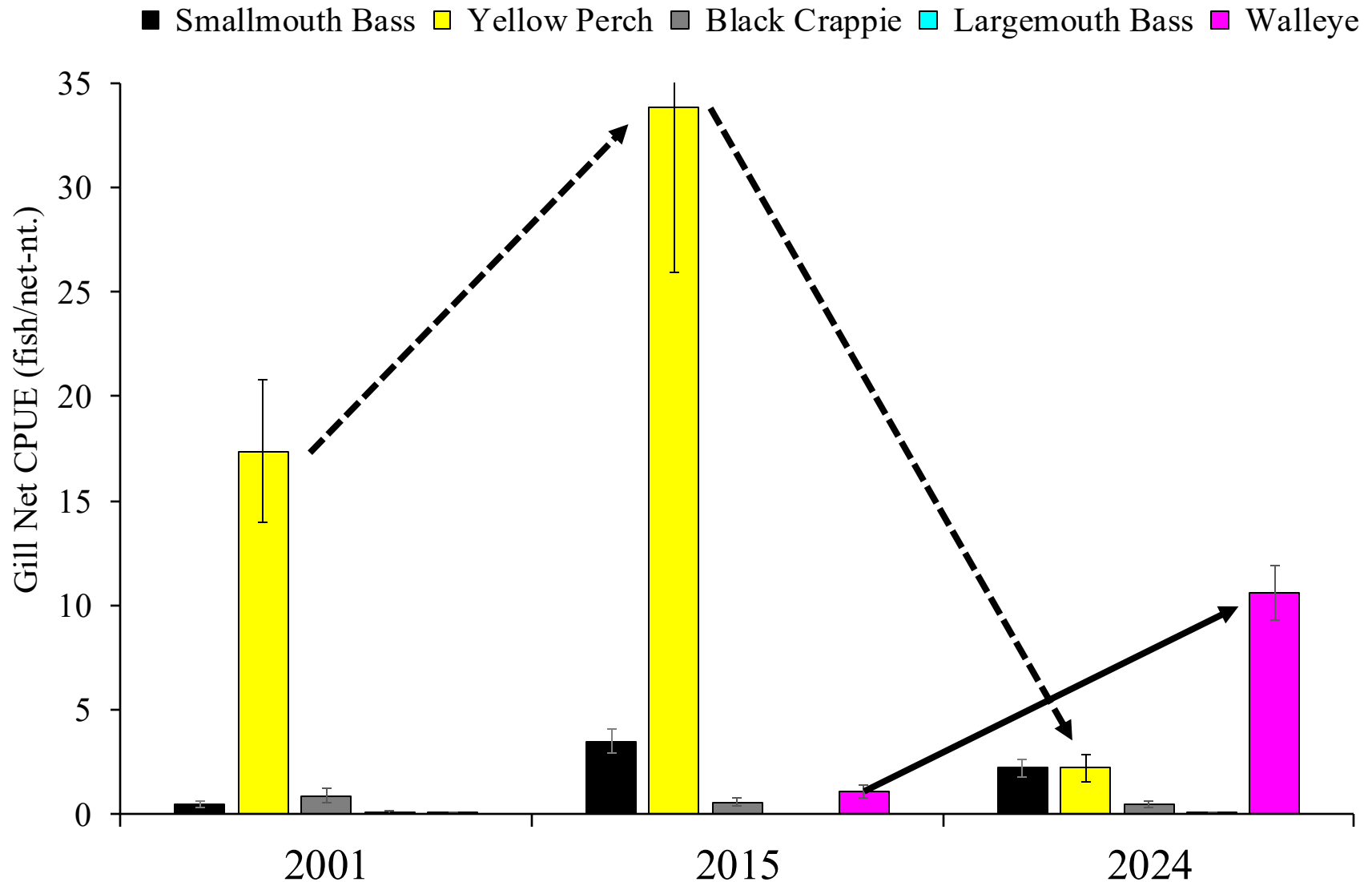
Lake Spokane Warmwater Survey Catch Data

Species	2001		2015		2024	
	Electrofishing	Gill Net	Electrofishing	Gill Net	Electrofishing	Gill Net
Black Crappie	227	48	40	30	11	28
Bridgelip Sucker	37	6	57	9	6	2
Brown Bullhead	71	13	84	51	10	22
Brown Trout	9	7	0	0	0	0
Channel Catfish	1	0	0	0	0	0
Chinook Salmon	0	0	0	0	0	9
Chiselmouth	47	50	11	42	3	5
Lake Whitefish	0	0	0	0	4	3
Largemouth Bass	126	4	36	0	8	1
Largescale Sucker	1,144	495	813	384	388	239
Longnose Sucker	22	11	37	0	0	0
Mountain Whitefish	22	52	6	33	0	0
Northern Pike	0	1	0	2	0	0
Northern Pikeminnow	270	435	189	409	43	174
Peamouth Chub	1	2	0	0	0	0
Pumpkinseed Sunfish	11	1	27	2	31	5
Rainbow Trout	4	0	89	268	21	29
Redside Shiner	0	0	0	0	2	1
Smallmouth Bass	626	25	1,577	188	1,065	131
Sucker: General	47	0	0	0	0	0
Tench	16	16	21	31	2	12
Walleye	0	1	13	58	119	636
Yellow Bullhead	72	35	93	113	9	14
Yellow Perch	297	973	964	1,830	537	131
Grand Total	5,225		7,507		3,701	

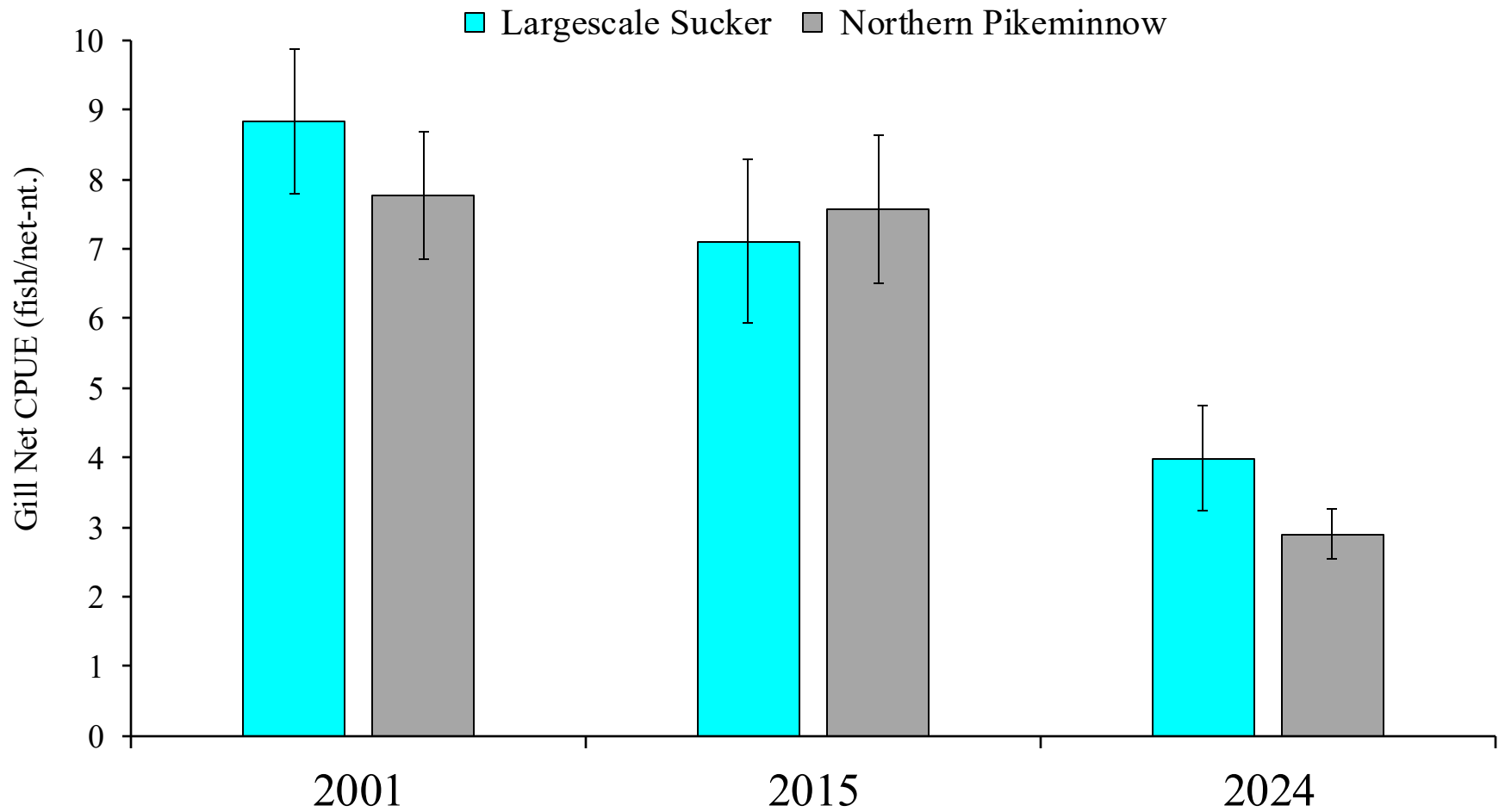
Electrofishing Catch Rates (best gear for tracking small bass, perch, crappie)



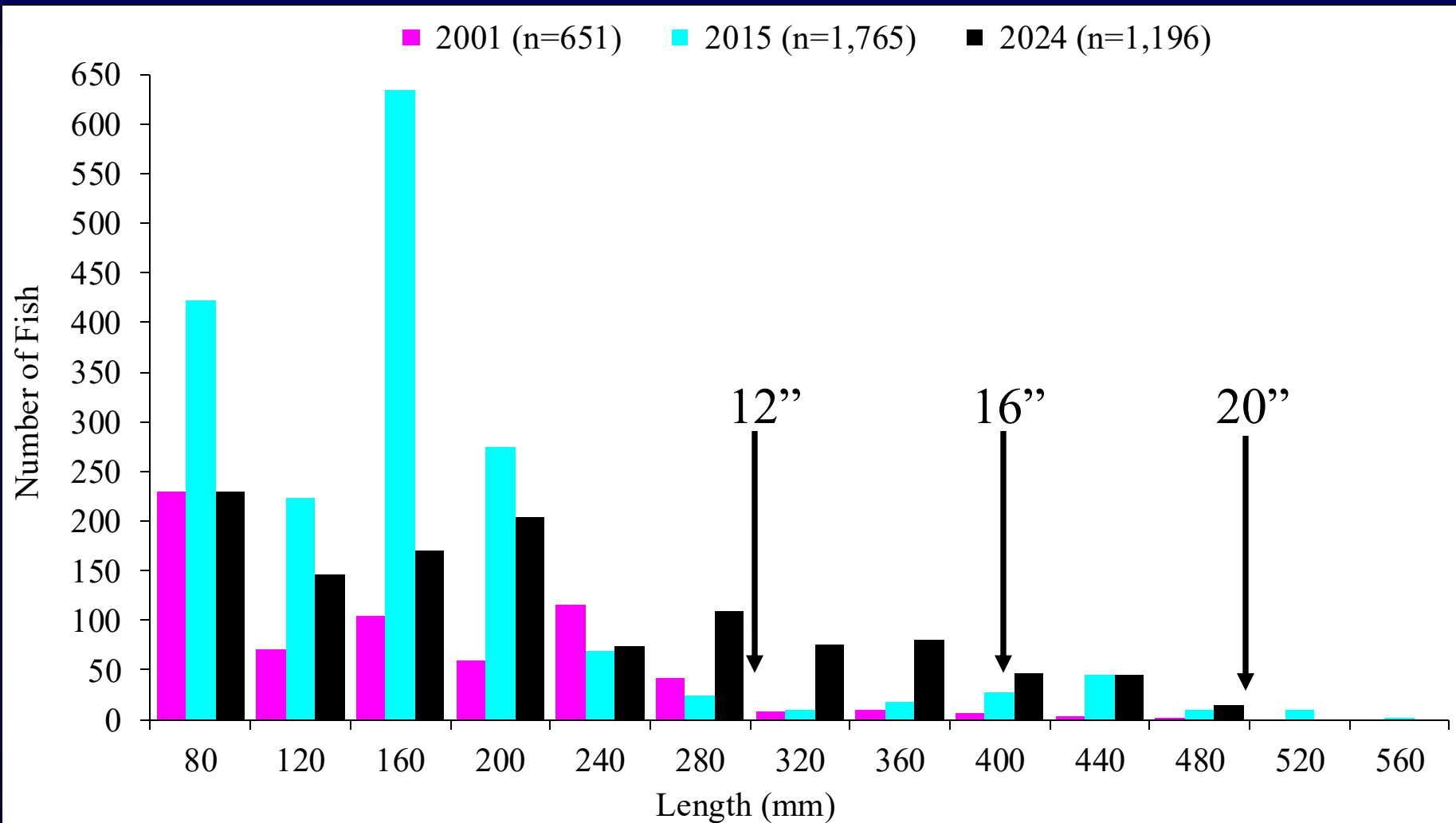
Gill Netting Catch Rates (best gear for tracking Walleye and larger fish)



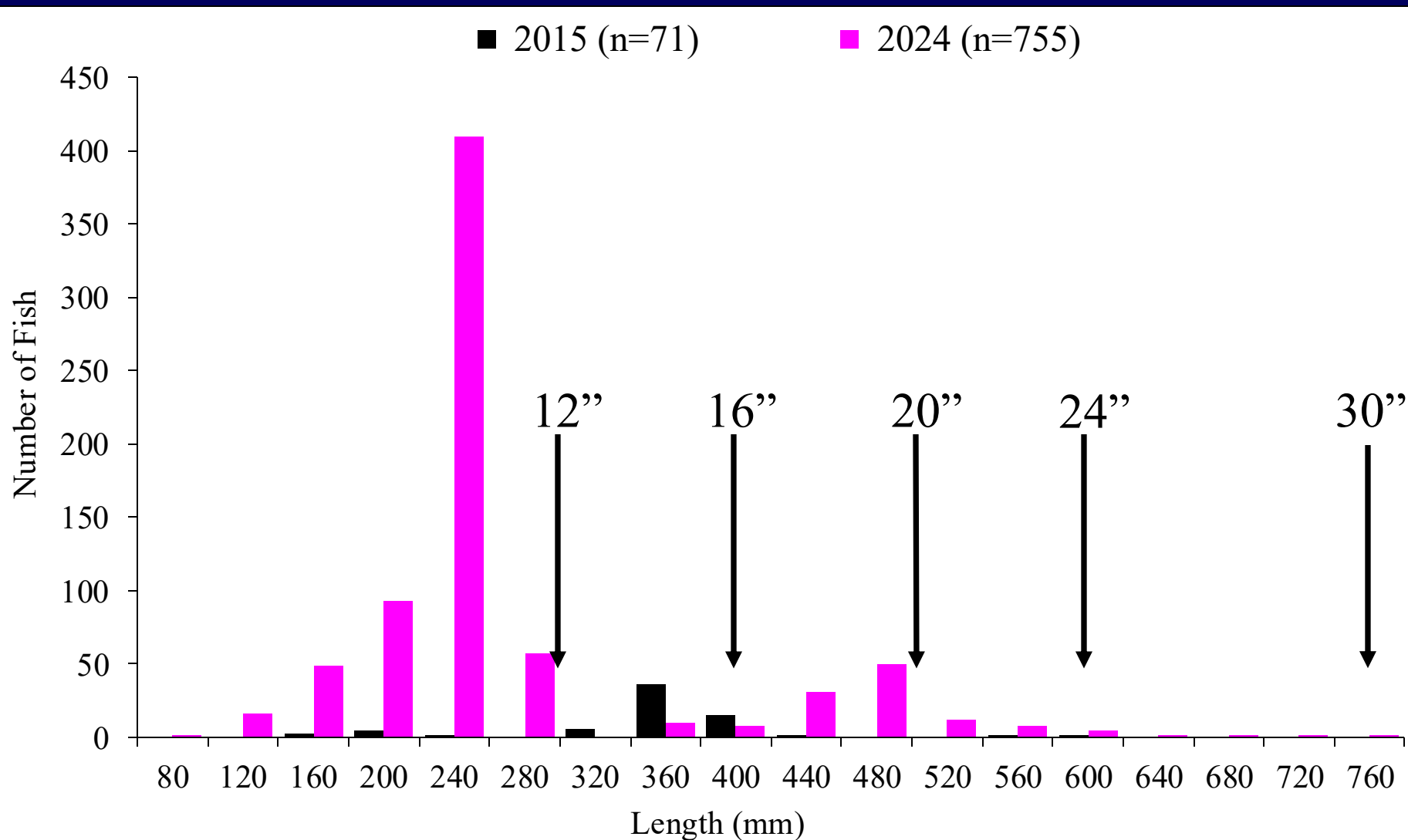
Gill Netting Catch Rates- Native Species



Length Distribution of Smallmouth Bass

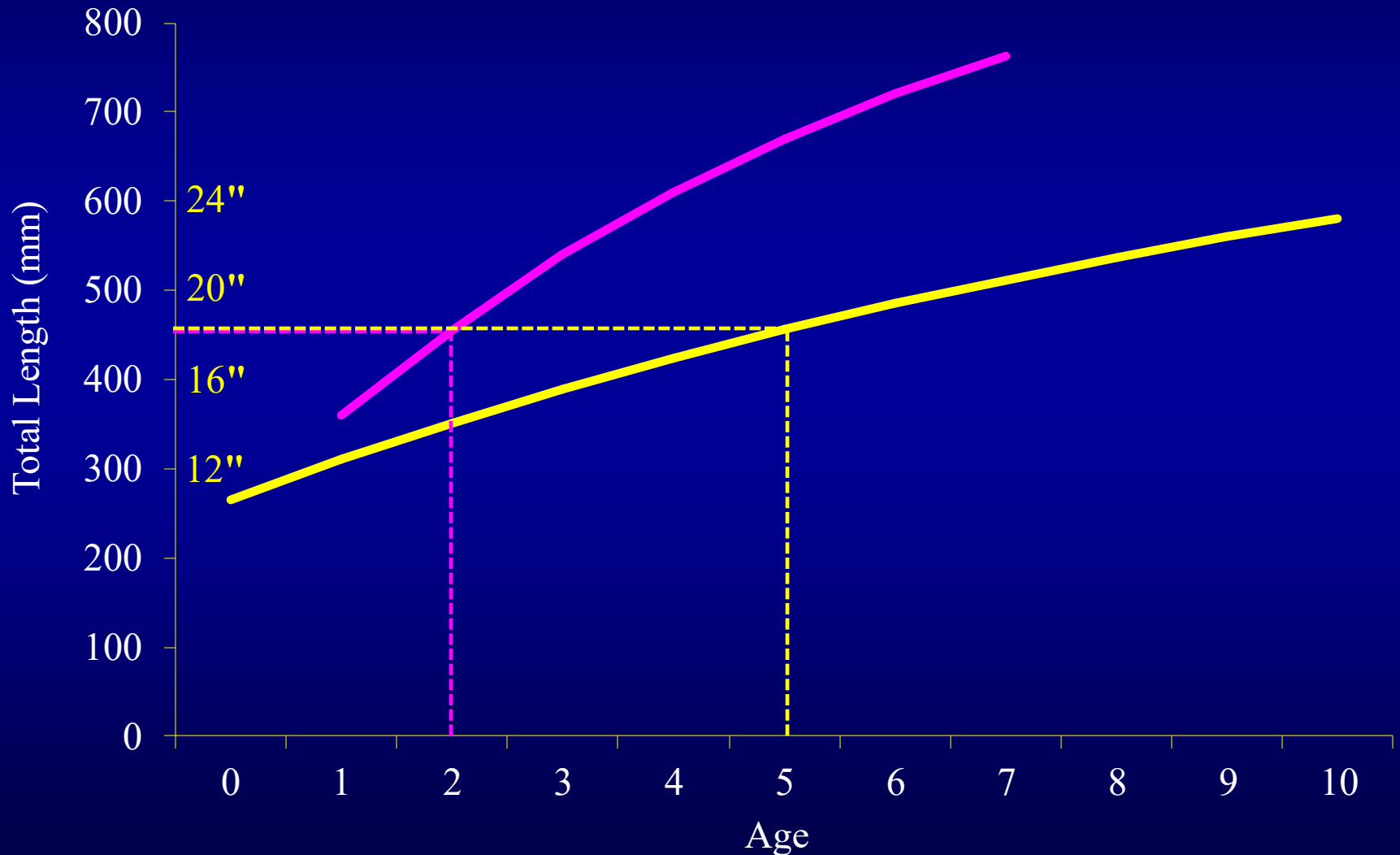


Length Distribution of Walleye



Female Walleye Growth: Lake Spokane vs. Lake Roosevelt

— Lake Spokane (2021) — Lake Roosevelt (2002-2023)



Overview

- Smallmouth Bass and Walleye are the dominant species in Lake Spokane
- Large increase in Smallmouth Bass between 2001-2015 coincided with decline of Largemouth Bass
- Large increase in Walleye between 2015-2024 coincided with decline of Yellow Perch and Northern Pike/minnow

So why are Smallmouth Bass and Walleye so competitive in Lake Spokane?

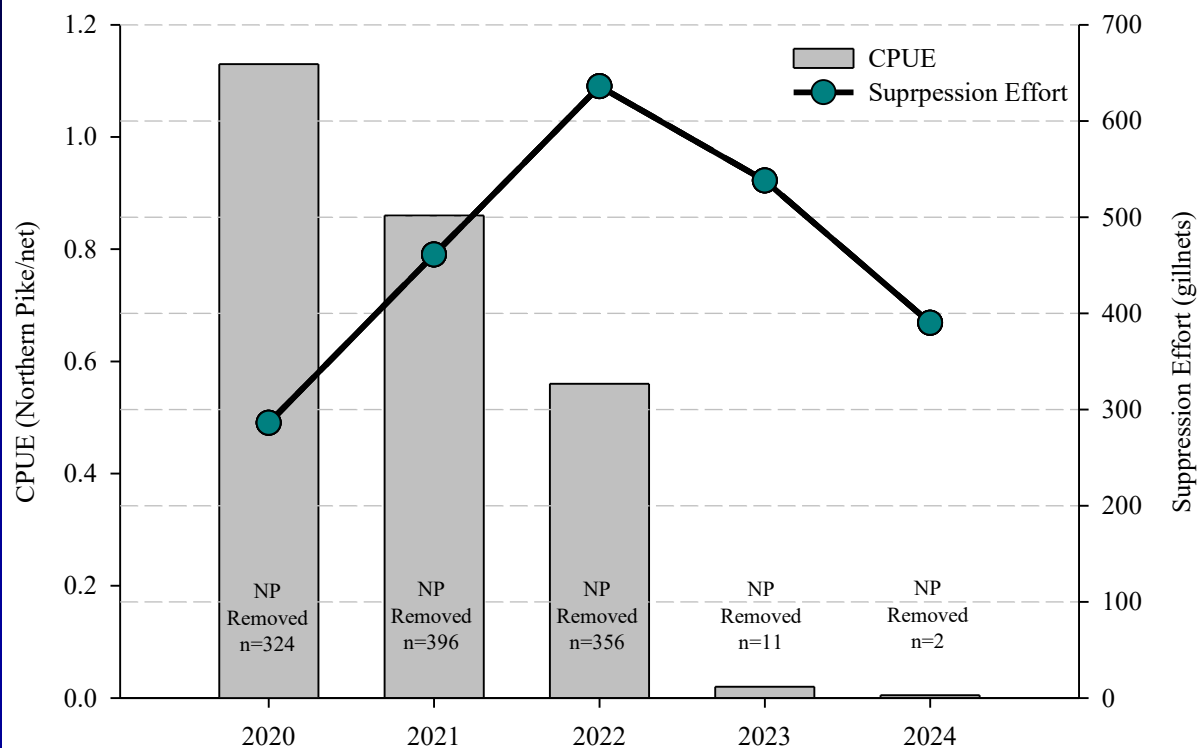
- Smallmouth Bass
 - spawn earlier than Largemouth Bass ($>60^{\circ}$ F)
 - body style designed for current
 - crawfish specialists
 - thrive in rocky habitat with flow
- Walleye
 - broadcast spawn early ($>44^{\circ}$ F) over cobble substrate with flow
 - high fecundity
 - grow fast and large
 - prey on most available fish species, often Yellow Perch

Carp Suppression History
2017-2019 Spokane Tribe
2020-2024 WDFW (Avista)

AVISTA®



Northern Pike Suppression



Data provided by Chuck
Lee and Tyler Parsons,
WDFW



Lake Spokane Fish Pictures









Questions?



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Sampled Walleye and a regurgitated Rainbow Trout