2023 Lewis and Clark Lake

Lewis and Clark Lake is located between Fort Randall Dam near Pickstown, SD and Gavin's Point Dam near Yankton, SD. The Lewis and Clark Lake system consists of the 39-mile national recreational river section which extends from Fort Randall Dam downstream to the town of Running Water followed by a delta portion near the confluence of the Niobrara River, which leads into a 15-mile-long reservoir. Lewis and Clark Lake is the furthest downstream reservoir on the Missouri river reservoir system. Lewis and Clark Lake has various access locations consisting of 24 boat ramps, 18 shore fishing accesses, five state parks and 10 campgrounds. The three distinct habitats (i.e., riverine, delta, and lake) in the Lewis and Clark system have their own survey summaries since management is not consistent across all three due to sampling limitations within habitats.

The riverine section is the upper most management area that stretches 34.3-miles from Fort Randall Dam near Pickstown, SD, to the upper most part of the Niobrara River confluence. Within this management area Smallmouth Bass and age-0 Walleye are sampled yearly by electrofishing in the fall.

- **Smallmouth Bass:** The catch rate of Smallmouth Bass in 2023 was 30.0 fish per hour of electrofishing. Of the Smallmouth Bass sampled, 47% were 11 inches or longer, with 13% being 14 inches or longer. Smallmouth Bass have a relative weight (Wr) of 92%*.

The delta section ranges from the Niobrara River confluence downstream 18.5-miles to the last major sandbars downstream of Springfield, SD. Due to the sedimentation of the Missouri and Niobrara rivers, the delta section of the reservoir has slowly expanded downstream. Management in this area consists of Largemouth Bass, Age-0 Walleye and prey species presence and absence. Yearly electrofishing occurs late spring or early summer for Largemouth Bass and during the fall for age-0 Walleye. Small seine sampling occurs yearly during the summer.

- **Largemouth Bass:** The catch rate of Largemouth Bass in 2023 was 4.5 fish per hour of electrofishing. Of the Largemouth Bass sampled, 67% were 12 inches or longer, with 42% being 15 inches or longer. Largemouth Bass have a relative weight (Wr) of 102*.

The lake section ranges from the last major sandbars downstream of Springfield, SD for 15.5-miles to Gavin's Point Dam. Management activities in this area are for Walleye, Sauger, Channel Catfish, Smallmouth Bass and prey species presence and absence. Sampling in the lake section occurs on a yearly basis. Smallmouth Bass electrofishing occurs in late spring. Gillnet sampling occurs in the fall for Walleye, Sauger and Channel Catfish. Age-0 Walleye sampling occurs in the summer with large seines and during the fall with gill netting and electrofishing.

- **Walleye:** The catch rate of Walleye in 2023 was 1.3 fish per gillnet. Of the Walleye sampled, 33% were 15 inches or longer, with 13% being 20 inches or longer. Walleye have a relative weight (Wr) of 84*.

- **Sauger:** The catch rate of Sauger in 2023 was 1.1 fish per gillnet. Of the Sauger sampled, 76% were 12 inches or longer, with 39% being 15 inches or longer. Sauger have a relative weight (Wr) of 87*.

- **Channel Catfish:** The catch rate of Channel Catfish in 2023 was 4.5 fish per gillnet. Of the Channel Catfish sampled, 59% were 16 inches or longer, with 12% being 24 inches or longer. Channel Catfish have a relative weight (Wr) of 88*.

- **Smallmouth Bass:** The catch rate of Smallmouth Bass in 2023 was 62 fish per hour of electrofishing. Of the Smallmouth Bass sampled, 19% were 11 inches or longer, with 3% being 15 inches or longer. Smallmouth Bass have a relative weight (Wr) of 101*.

In 2023, 1,006,819 juvenile Walleye and 10,602 adult Rainbow Trout were stocked in the Lewis and Clark Lake system.

* Relative weight (Wr) is used to quantify fish plumpness. Relative weight is the ratio of what a fish weighs (W) compared to a length-specific standard weight (Ws) multiplied by 100. Relative weight values of 95-105 are commonly cited as optimum values, but values in the 80s are common during summer sampling in South Dakota.

Created 01/19/2024 BV

SOUTH DAKOTA STATEWIDE FISHERIES SURVEY
Lewis and Clark, Yankton County
LCL-Lake-73-000
2023

Lake Information

Name: Lewis and Clark

County: Yankton

Surface Area: 19,279 Acres

Surveys and Investigations

Survey methods used by gear type, date, and effort.

Gear	Date	Effort
AFS gill net (1/2 inch)	Sep 18, 2023	18 net-nights
AFS gill net (1/2 inch)	Sep 19, 2023	18 net-nights
AFS std gill net	Sep 18, 2023	18 net-nights
AFS std gill net	Sep 19, 2023	18 net-nights
boat shocker (night)	May 23, 2023	3600 seconds
fall night EF-WAE	Oct 16, 2023	7200 seconds
large seine	Jul 24, 2023	16 hauls

Common Fish Species Present

Walleye

Smallmouth Bass

Sauger

Channel Catfish

Freshwater Drum

River Carpsucker

Shorthead Redhorse

White Bass

Gizzard Shad

Smallmouth Buffalo

Terminology

Catch per unit effort (**CPUE**) refers to the relative abundance of a species. It is defined as the number of fish captured per unit of effort (i.e., number of fish captured per net-night or number of fish captured per hour electrofishing). In this report CPUE is typically given for only stock-length fish (see length categories table for stock lengths).

A statewide effort to help make netting efforts comparable to all waters sampled across the state, occurred in 2017, with a switch to American Fisheries Society gill nets. Past gill netting efforts were completed with different style/types of nets and are not comparable side by side.

- **AFS std gill net** – 80 ft experimental gill net containing eight panels (10 ft each) of varying monofilament meshes of 0.75, 1.00, 1.25, 1.50, 1.75, 2.00, 2.25 and 2.50 inches.
- **std experimental gill net for non-Missouri River waters** - 150 ft experimental gill net containing six panels (25 ft each) of varying monofilament meshes of 0.5, 0.75, 1.00, 1.25, 1.50 and 2.00 inches.
- s**td experimental gill net for Missouri River reservoirs** – 300 ft experimental gill net containing six panels (50 ft each) of varying multifilament meshes of 0.5, 0.75, 1.00, 1.25, 1.50 and 2.00 inches.

$$CPUE = \frac{number\ of\ fish}{effort}$$

Population size structure is quantified using the indices proportional size distribution of quality-length fish (**PSD**) and proportional size distribution of preferred-length fish (**PSD-P**). These indices indicate the proportion of stock-length fish that are equal to or greater than a given length. Minimum lengths for stock, quality and preferred length fish are given in the length categories table.

$$PSD = \left(\frac{number\ of\ fish \geq quality\ length}{number\ of\ fish \geq stock\ length}\right) \text{x } 100$$

$$PSD - P = \left(\frac{number\ of\ fish \geq preferred\ length}{number\ of\ fish \geq stock\ length}\right) \text{x } 100$$

Relative weight (**Wr**) is used to quantify fish plumpness. Relative weight is the ratio of what a fish weighs (W) compared to a length-specific standard weight (Ws) multiplied by 100. Relative weight values of 95-105 are commonly cited as optimum values, but values in the 80s are common during summer sampling in South Dakota.

$$Wr = \left(\frac{W}{Ws}\right) \text{x } 100$$

Confidence intervals (**CI**) are provided for many of the estimates calculated in this report. The confidence interval provides a range in which the true mean is expected to fall. For example, with an 80% CI we are 80% confident that the interval contains the true value.

Length categories include stock (**S**), quality (**Q**), preferred (**P**), memorable (**M**) and trophy (**T**). Length categories for most species have been defined based on a percentage of the world record length for that species. Some species mentioned in this report do not have defined length categories. Length categories for species used in this report are provided in the following table. Measurements are the minimum total length for each category and are reported in inches (in) and centimeters (cm).

	Stock		Quality		Preferred		Memorable		Trophy	
Species Name	(in)	(cm)	(in)	(cm)	(in)	(cm)	(in)	(cm)	(in)	(cm)
Black Bullhead	6	15	9	23	12	30	15	38	18	46
Black Crappie	5	13	8	20	10	25	12	30	15	38
Bluegill	3	8	6	15	8	20	10	25	12	30
Brown Trout	8	20	12	30	16	40	20	50	18	46
Channel Catfish	11	28	16	41	24	61	28	71	36	91
Freshwater Drum	8	20	12	30	15	38	20	51	25	63
Lake Trout	12	30	20	50	26	65	31	80	39	100
Largemouth Bass	8	20	12	30	15	38	20	51	25	63
Muskellunge	20	51	30	76	38	97	42	107	50	127
Northern Pike	14	35	21	53	28	71	34	86	44	112
Pumpkinseed	3	8	6	15	8	20	10	25	12	30
Rainbow Trout	10	25	16	40	20	50	26	65	31	80
Rudd	6	15	10	25	12	30	15	38	19	48
Sauger	8	20	12	30	15	38	20	51	25	63
Smallmouth Bass	7	18	11	28	14	35	17	43	20	51
Walleye	10	25	15	38	20	51	25	63	30	76
White Bass	6	15	9	23	12	30	15	38	18	46
White Crappie	5	13	8	20	10	25	12	30	15	38
Yellow Bullhead	4	10	7	18	9	23	11	28	14	36
Yellow Perch	5	13	8	20	10	25	12	30	15	38

Catch Summary of Stock Length Fish

Catch per unit effort (CPUE), proportional size distribution (PSD), proportional size distribution of preferred length fish (PSD-P), and relative weight (Wr) for species sampled in survey with 80% confidence interval (CI-80).

*** Methods/Species that ignore stock length**

			Abundance		Stock Density Indices				Condition	
Gear	Species	Sample Size (n)	CPUE	CI-80	PSD	CI-80	PSD-P	CI-80	Wr	CI-80
AFS std gill net	Bigmouth Buffalo	1	0.0	0.0	100		100		80	
	Channel Catfish	165	4.5	0.6	59	5	12	4	88	1
	Common Carp	2	0.0	0.0	100		100		129	
	Flathead Catfish	5	0.1	0.1	60		0		87	3
	Freshwater Drum	112	2.0	0.3	82	7	66	8	103	2
	Gizzard Shad	10	0.3	0.2	0				123	4
	River Carpsucker	32	0.9	0.3	78	12	53	13	104	3
	Sauger	42	1.1	0.3	76	10	39	11	87	6
	Shorthead Redhorse	22	0.6	0.4	100		95		100	2
	Shortnose Gar	1	0.0	0.0						
	Smallmouth Buffalo	12	0.3	0.1	89		78		93	6
	Walleye	47	1.3	0.3	33	10	13	8	84	1
	White Bass	13	0.4	0.3	100		92		93	3
	Yellow Perch	12	0.3	0.2	58	24	33		94	2
boat shocker (night)	Smallmouth Bass	65	62.0	16.3	19	7	3		101	2
large seine*	Walleye	4	0.3	0.2						

10-Year Catch Per Unit Effort by Gear and Species

Catch per unit effort (CPUE) and average (Avg) of species across 10 years using different gear types.

*** Methods/Species that ignore stock length**

		CPUE										
Gear	Species	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Avg
AFS gill net (1/2 inch)*	Channel Catfish				0.1	0.2	0.0	0.1	0.0	0.1	0.1	0.09
	Common Carp				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Emerald Shiner				0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.03
	Freshwater Drum				0.1	0.7	0.4	1.1	0.7	1.4	1.5	0.84
	Gizzard Shad				0.1	2.8	0.6	0.0	0.0	1.0	0.0	0.64
	Sauger				0.1	0.2	0.0	0.5	0.1	1.4	0.2	0.36
	Shorthead Redhorse				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Smallmouth Buffalo				0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.01
	Walleye				0.0	0.2	0.2	0.0	0.1	0.7	0.1	0.19
	White Bass				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
	White Crappie				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Yellow Perch				0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.04
AFS std gill net	Bigmouth Buffalo				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Bluegill				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Channel Catfish				4.2	2.5	1.1	3.9	4.1	5.9	4.5	3.74
	Common Carp				0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.09
	Flathead Catfish				0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10
	Freshwater Drum				1.9	3.2	2.9	1.6	2.4	2.8	2.0	2.40
	Gizzard Shad				0.3	1.0	0.0	0.0	0.8	0.2	0.3	0.37
	Goldeye				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Largemouth Bass				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Northern Pike				0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.01
	Paddlefish				0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.01
	River Carpsucker				0.6	0.1	0.1	0.4	0.5	0.2	0.9	0.40
	Rock Bass				0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.01
	Sauger				0.2	0.6	0.4	0.4	0.5	0.6	1.1	0.54
	Shorthead Redhorse				0.1	0.2	0.1	0.1	0.3	0.2	0.6	0.23
	Shortnose Gar				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Smallmouth Bass				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Smallmouth Buffalo				0.3	0.0	0.0	0.2	0.2	0.3	0.3	0.19
	Walleye				0.6	0.9	0.4	0.6	0.3	1.0	1.3	0.73
	White Bass				0.1	0.0	0.0	0.1	0.1	0.1	0.4	0.11
	White Crappie				0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.01
	Yellow Perch				0.1	0.0	0.0	0.1	0.0	0.3	0.3	0.11

		CPUE										
Gear	Species	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Avg
boat shocker (night)	Largemouth Bass	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.40
	Sauger*	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.83
	Smallmouth Bass	53.0	30.0	7.1	25.0	26.0	11.0	43.0	19.0	42.0	62.0	31.81
	Walleye*	0.0	0.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
fall night EF-WAE*	Sauger	5.0	0.5	0.0	1.7	20.0	0.0	17.0	4.5	11.0	19.0	7.87
	Walleye	30.0	12.0	56.0	18.0	34.0	38.5	51.5	79.0	20.0	99.0	43.80
large seine*	Bigmouth Buffalo	0.8	0.1	0.1	0.0	0.0		0.0	0.0		0.0	0.13
	Black Crappie	0.8	1.5	0.4	0.1	0.0		0.0	0.0		0.0	0.35
	Bluegill	0.1	0.3	1.6	3.3	0.0		0.0	0.0		0.0	0.66
	Channel Catfish	0.0	0.7	0.5	0.2	0.0		0.0	0.0		0.0	0.18
	Common Carp	0.0	0.0	0.1	0.0	0.0		0.0	0.0		0.0	0.01
	Emerald Shiner	0.3	5.8	0.0	0.2	0.0		0.0	0.0		0.0	0.79
	Fathead Minnow	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.00
	Flathead Catfish	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.00
	Freshwater Drum	0.6	2.0	5.0	2.6	0.0		0.0	0.0		0.0	1.28
	Gizzard Shad	16.8	5.3	2.5	169.1	0.0		0.0	0.0		0.0	24.21
	Golden Shiner	0.1	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.01
	Green Sunfish	0.0	0.0	0.1	0.0	0.0		0.0	0.0		0.0	0.01
	Johnny Darter	6.2	2.3	3.4	0.3	0.0		0.0	0.0		0.0	1.53
	Largemouth Bass	3.8	2.9	1.5	0.9	0.0		0.0	0.0		0.0	1.14
	Red Shiner	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.00
	River Carpsucker	0.3	0.2	1.4	3.8	0.0		0.0	0.0		0.0	0.71
	Rock Bass	0.0	0.0	0.0	0.1	0.0		0.0	0.0		0.0	0.01
	Sand Shiner	0.1	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.01
	Sauger	0.3	0.0	0.0	0.0	0.2		0.0	0.0		0.0	0.06
	Shorthead Redhorse	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.00
	Smallmouth Bass	0.1	0.0	0.0	0.1	0.0		0.0	0.0		0.0	0.03
	Smallmouth Buffalo	0.8	0.0	0.3	0.1	0.0		0.0	0.0		0.0	0.15
	Spotfin Shiner	0.0	0.2	0.8	0.0	0.0		0.0	0.0		0.0	0.13
	Spottail Shiner	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.00
	Walleye	0.3	0.0	0.1	0.0	0.0		0.1	0.1		0.3	0.11
	White Bass	46.8	30.8	3.1	0.5	0.0		0.0	0.0		0.0	10.15
	White Crappie	0.7	0.1	0.0	0.3	0.0		0.0	0.0		0.0	0.14
	Yellow Perch	0.3	0.0	7.0	0.4	0.0		0.0	0.0		0.0	0.96
std exp gill net	Black Crappie	0.0	0.0	0.0								0.00
	Channel Catfish	3.2	6.3	4.0								4.50
	Common Carp	0.2	0.3	0.2								0.23

		CPUE										
Gear	Species	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Avg
std exp gill net	Flathead Catfish	0.1	0.0	0.1								0.07
	Freshwater Drum	0.8	0.3	1.3								0.80
	Gizzard Shad	0.3	1.0	8.0								3.10
	Goldeye	0.0	0.0	0.0								0.00
	Northern Pike	0.0	0.0	0.0								0.00
	River Carpsucker	0.6	2.9	0.3								1.27
	Sauger	2.1	1.9	2.5								2.17
	Shorthead Redhorse	2.5	1.3	0.8								1.53
	Shortnose Gar	0.0	0.0	0.0								0.00
	Smallmouth Bass	0.0	0.1	0.0								0.03
	Smallmouth Buffalo	0.0	0.3	0.0								0.10
	Walleye	2.1	2.1	3.3								2.50
	White Bass	0.4	0.3	0.8								0.50
	White Crappie	0.0	0.0	0.0								0.00
	Yellow Perch	1.2	0.4	0.3								0.63

10-Year Size Structure and Condition Statistics by Gear and Species

Species proportional size distribution (PSD), proportional size distribution of preferred length fish (PSD-P), and relative weight (Wr) collected by different gear types across 10 years.

			Year									
Gear	Species	Index	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
AFS std gill net	Channel Catfish	PSD				84	65	60	40	41	43	59
		PSD-P				29	35	33	11	12	9	12
		Wr				92	91	96	93	91	85	88
	Gizzard Shad	PSD				27	6	0		4	29	0
		Wr				98	103			112	94	123
	River Carpsucker	PSD				100	100	100	100	83	67	78
		PSD-P				95	100	75	100	61	33	53
		Wr				92	92	90	92	104	93	104
	Sauger	PSD				100	96	85	93	72	73	76
		PSD-P				100	70	77	93	44	41	39
		Wr				80	77	77	83	77	80	87
	Shorthead Redhorse	PSD				75	100	100	75	100	100	100
		PSD-P				50	100	100	75	67	75	95
		Wr				98	99	93	106	94	101	100
	Smallmouth Bass	PSD				0						
		PSD-P				0						
		Wr				99						
	Smallmouth Buffalo	PSD				100	100	100	83	88	45	89
		PSD-P				89	100	100	67	88	36	78
		Wr				79	87	88	85	94	87	93
	Walleye	PSD				57	71	73	90	17	64	33
		PSD-P				30	23	20	35	0	17	13
		Wr				84	85	87	92	83	87	84
	White Bass	PSD				100	100	100	100	100	100	100
		PSD-P				75	100	100	100	33	100	92
		Wr				102	102	82	101	91	107	93
boat shocker (night)	Sauger	PSD			76							
		PSD-P			24							
	Smallmouth Bass	PSD	45	17	26	20	31	36	40	68	52	19
		PSD-P	11	0	8	0	12	9	14	32	21	3
		Wr	93	97	96	102	94	92	96	98	95	101
	Walleye	PSD			74							

			Year									
Gear	Species	Index	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
boat shocker (night)	Walleye	PSD-P			21							
std exp gill net	Channel Catfish	PSD	61	78	77							
		PSD-P	13	7	8							
		Wr	86	88	92							
	Gizzard Shad	PSD	0	0	15							
		Wr	123	112	100							
	River Carpsucker	PSD	86	100	100							
		PSD-P	86	100	100							
		Wr	93	87	94							
	Sauger	PSD	80	70	77							
		PSD-P	56	39	57							
		Wr	82	78	86							
	Shorthead Redhorse	PSD	100	93	100							
		PSD-P	83	93	90							
		Wr	99	103	101							
	Smallmouth Bass	PSD		0								
		PSD-P		0								
		Wr		88								
	Smallmouth Buffalo	PSD		100	0							
		PSD-P		100	0							
		Wr		85								
	Walleye	PSD	48	44	68							
		PSD-P	0	0	15							
		Wr	90	85	96							
	White Bass	PSD	100	67	22							
		PSD-P	0	67	11							
		Wr	96	97	95							

Back-Calculated Lengths

Mean species back-calculated total length (mm) at age, standard error (SE), and sample size (N).

Species: Smallmouth Bass

Year Class	Age	N	Mean back-calculated length (SE) at age									
			1	2	3	4	5	6	7	8	9	10
2022	1	1	96									
2021	2	7	95 (6.5)	176 (15.7)								
2020	3	28	103 (2.6)	173 (4.9)	223 (4.4)							
2019	4	7	93 (5.7)	159 (11.9)	222 (10.7)	281 (9.2)						
2018	5	2	86 (11.4)	146 (.7)	219 (1.4)	263 (3.8)	315 (16.1)					
2017	6	1	79	127	182	223	274	319				
2016	7	1	80	169	221	281	339	427	452			
Weighted Mean		47	98	169	222	272	311	373	452			

Year Class	Age	N	11	12	13	14	15	16	17	18	19	20
2022	1	1										
2021	2	7										
2020	3	28										
2019	4	7										
2018	5	2										
2017	6	1										
2016	7	1										
Weighted Mean		47										

Length at Capture

Mean length at capture by age across years sampled, sample size (N).

Species: Channel Catfish

		Mean Length (expanded sample number) at capture by age									
Year	N	1	2	3	4	5	6	7	8	9	10+
2023	165		281 (4)	330 (10)	376 (32)	412 (49)	460 (30)	499 (11)	511 (7)	622 (4)	696 (18)
2017	164	216 (8)	299 (22)	398 (13)	455 (12)	493 (8)	563 (21)	582 (33)	609 (21)	655 (13)	719 (15)

Species: Sauger

		Mean Length (expanded sample number) at capture by age									
Year	N	1	2	3	4	5	6	7	8	9	10+
2023	41	296 (14)	348 (14)	425 (9)		509 (1)		524 (1)		558 (1)	476 (1)
2022	20	290 (4)	378 (13)		498 (3)						
2021	18	286 (7)	358 (1)	415 (5)		501 (1)		546 (1)	497 (2)	546 (1)	
2020	13		394 (3)		441 (7)	449 (2)		455 (1)			
2019	13	283 (2)		405 (7)	414 (2)	497 (2)					
2018	23	272 (1)	371 (9)	435 (3)	487 (5)	513 (1)	472 (3)				448 (1)
2017	6			477 (4)	530 (1)					462 (1)	
2016	24	347 (7)	408 (11)	415 (1)	493 (4)			478 (1)			
2015	23	293 (10)	363 (4)	406 (7)			447 (1)				447 (1)
2014	24	302 (5)	380 (15)			408 (2)		516 (1)	495 (1)		

Species: Smallmouth Bass

		Mean Length (expanded sample number) at capture by age									
Year	N	1	2	3	4	5	6	7	8	9	10+
2023	65	122 (1)	206 (8)	246 (44)	305 (7)	341 (2)	344 (1)	467 (1)			
2022	48	150 (4)	205 (16)	280 (14)	354 (13)	405 (1)					
2021	20	116 (1)	236 (7)	276 (2)	290 (3)	357 (5)	392 (2)				
2020	48	221 (4)	206 (14)	234 (12)	281 (8)	339 (6)	348 (2)	417 (2)			
2019	18	115 (5)	164 (4)	237 (5)	313 (3)	401 (1)					
2018	27		200 (16)	282 (8)	362 (2)			460 (1)			
2017	28	127 (3)	225 (20)	293 (3)	317 (2)						

		Mean Length (expanded sample number) at capture by age									
Year	N	1	2	3	4	5	6	7	8	9	10+
2016	40	119 (2)	208 (17)	272 (15)	314 (3)	357 (2)	417 (1)				
2015	30		205 (8)	260 (19)	309 (3)						
2014	56	91 (1)	205 (18)	279 (21)	323 (12)	350 (3)	368 (1)				

Species: Walleye

		Mean Length (expanded sample number) at capture by age									
Year	N	1	2	3	4	5	6	7	8	9	10+
2023	47	285 (23)	373 (15)	443 (3)		519 (3)		608 (1)			513 (2)
2022	36	301 (10)	388 (10)	446 (5)	452 (1)	446 (1)	501 (2)	477 (1)		562 (2)	567 (4)
2021	13	279 (10)	365 (1)		454 (1)		486 (1)				
2020	20	282 (1)	379 (1)	434 (1)	469 (8)	434 (1)	464 (1)	576 (2)	612 (1)		515 (4)
2019	15	269 (1)	354 (1)	398 (8)	437 (2)			592 (2)	672 (1)		
2018	31	270 (1)	377 (12)	438 (7)	501 (2)	541 (2)		657 (1)	465 (1)	518 (4)	499 (1)
2017	26	284 (12)	401 (3)	475 (1)	493 (1)	530 (5)		603 (1)	531 (2)		524 (1)
2016	40	350 (12)	415 (10)	495 (4)	445 (7)	537 (1)		584 (2)	471 (3)	523 (1)	
2015	27	287 (12)	369 (5)	418 (4)	467 (2)	434 (1)	460 (1)	470 (2)			
2014	25	301 (6)	377 (12)	417 (3)		422 (1)	495 (1)	443 (1)	433 (1)		

Fish Condition

Mean relative weight (Wr) by sample size (N), length category stock to quality (S-Q), quality to preferred (Q-P), preferred to memorable (P-M), and memorable (M) for species collected across survey years with standard error (SE).

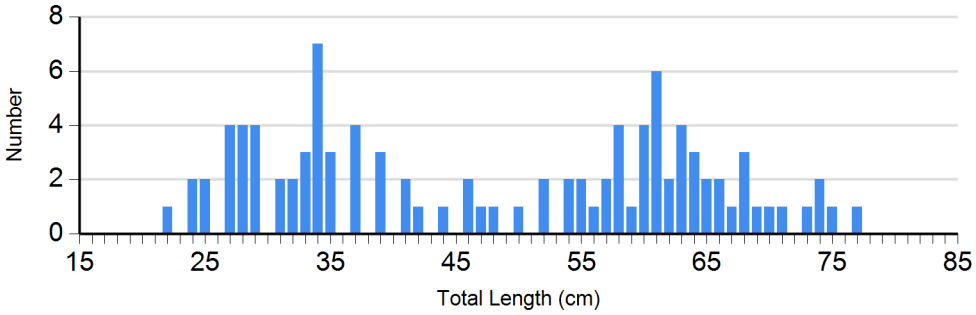
		Length Groups							
		S-Q		Q-P		P-M		M	
Species	Year	N	Wr (SE)	N	Wr (SE)	N	Wr (SE)	N	Wr (SE)
Channel Catfish Gill Net	2019	16	94 (1.5)	11	95 (2.0)	10	96 (3.4)	3	109 (2.2)
	2020	84	92 (0.9)	41	92 (1.4)	14	96 (2.4)	1	86
	2021	86	91 (0.8)	43	91 (1.3)	8	94 (4.2)	9	92 (4.4)
	2022	121	84 (0.6)	71	86 (1.3)	7	84 (8.0)	13	86 (2.3)
	2023	66	87 (0.9)	76	87 (0.9)	11	91 (3.2)	9	93 (2.8)
Sauger Gill Net	2019	2	81 (9.3)	1	81	10	76 (1.6)	0	
	2020	1	83	0		13	83 (1.4)	0	
	2021	5	81 (2.1)	5	77 (1.6)	5	75 (5.0)	3	73 (2.9)
	2022	6	81 (2.3)	7	80 (1.2)	8	79 (2.3)	1	78
	2023	10	100 (17.6)	15	87 (4.5)	14	82 (1.5)	2	69 (3.7)
Smallmouth Bass Electro Fishing	2019	7	87 (2.7)	3	99 (4.0)	1	101	0	
	2020	26	97 (1.3)	11	96 (1.2)	5	92 (2.1)	1	76
	2021	6	102 (1.9)	7	98 (2.5)	6	95 (3.4)	0	
	2022	20	97 (1.2)	13	93 (1.9)	9	96 (1.9)	0	
	2023	50	101 (1.7)	10	100 (1.6)	1	93	1	100
Walleye Gill Net	2019	4	90 (4.9)	8	89 (2.2)	2	82 (9.3)	1	70
	2020	2	88 (4.3)	11	95 (3.0)	7	87 (2.7)	0	
	2021	10	80 (1.0)	2	98 (6.5)	0		0	
	2022	13	87 (3.5)	17	87 (1.5)	4	92 (3.5)	2	78 (0.8)
	2023	31	83 (1.0)	9	89 (1.8)	6	84 (1.8)	0	
White Bass Gill Net	2019	0		0		0		1	82
	2020	0		0		1	104	1	98
	2021	0		2	104 (17.5)	0		1	65

		Length Groups							
		S-Q		Q-P		P-M		M	
Species	Year	N	Wr (SE)	N	Wr (SE)	N	Wr (SE)	N	Wr (SE)
White Bass Gill Net	2022	0		0		1	101	3	109 (1.8)
	2023	0		1	97	8	98 (1.9)	4	84 (3.8)

Length Frequency Distribution

Length frequency histogram of species sampled by year.

Species: Channel Catfish
Gear: AFS std gill net



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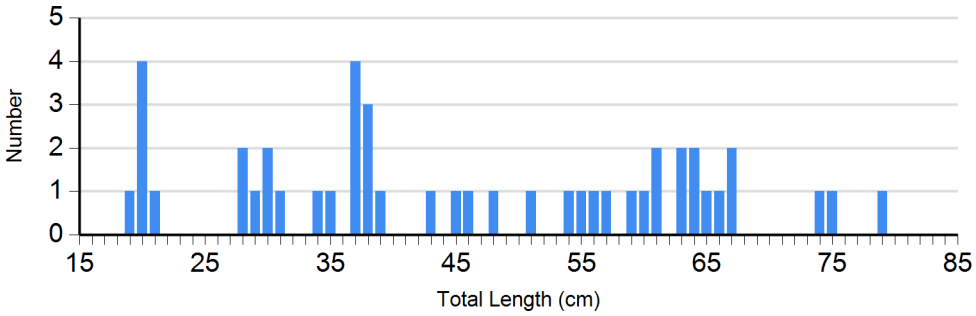

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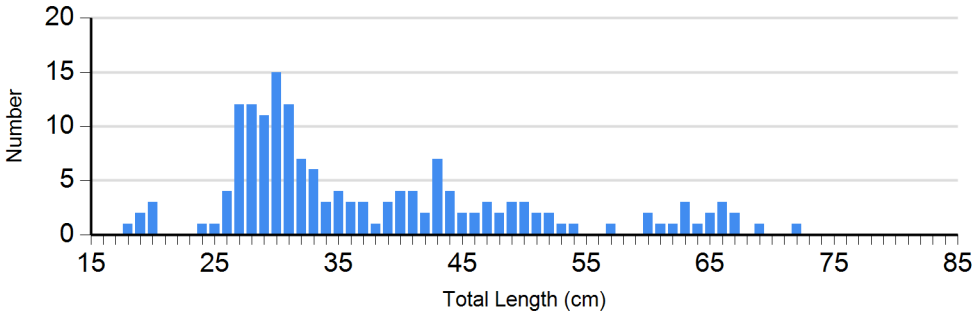

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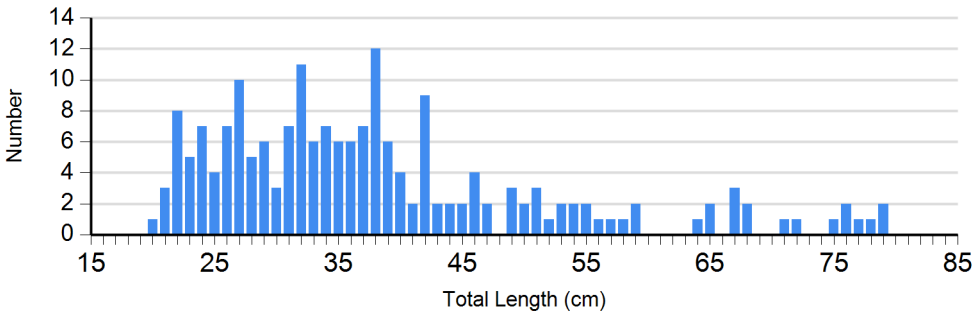

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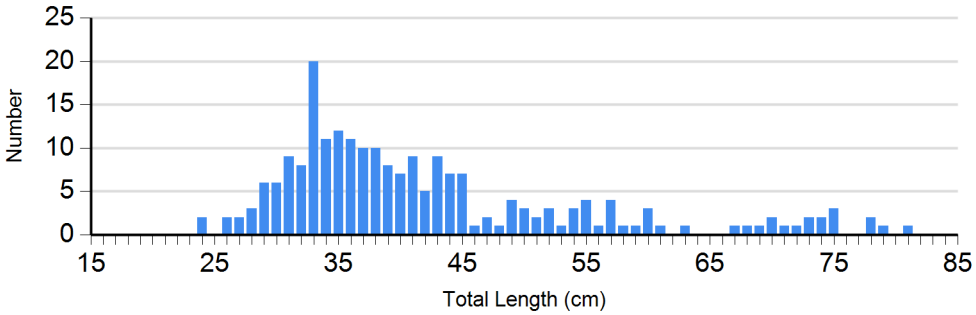

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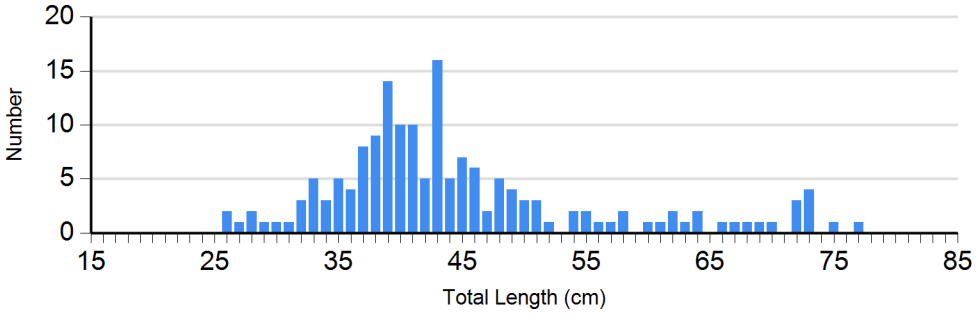
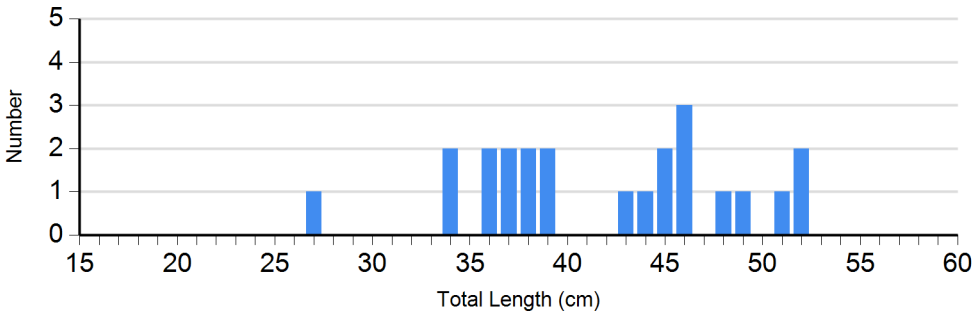
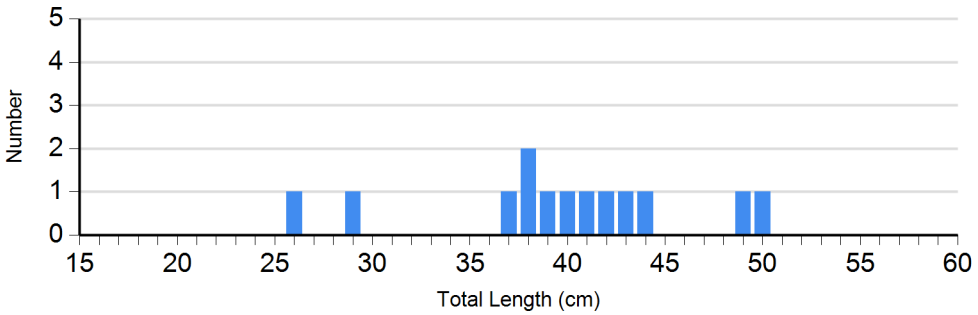
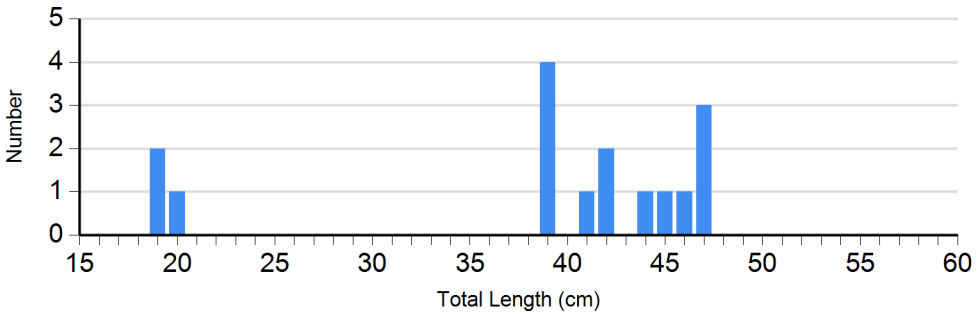
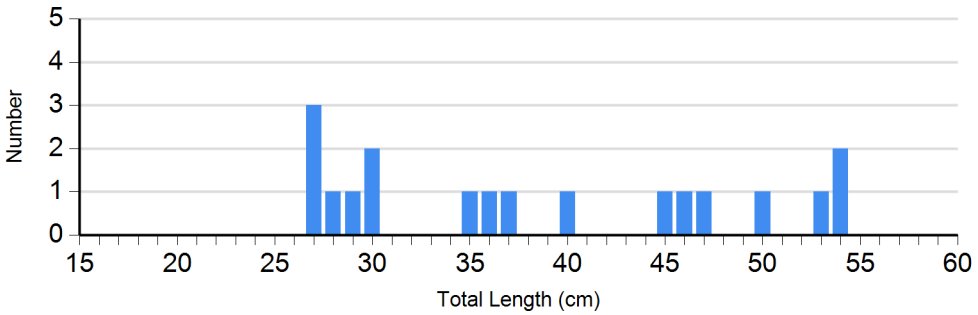


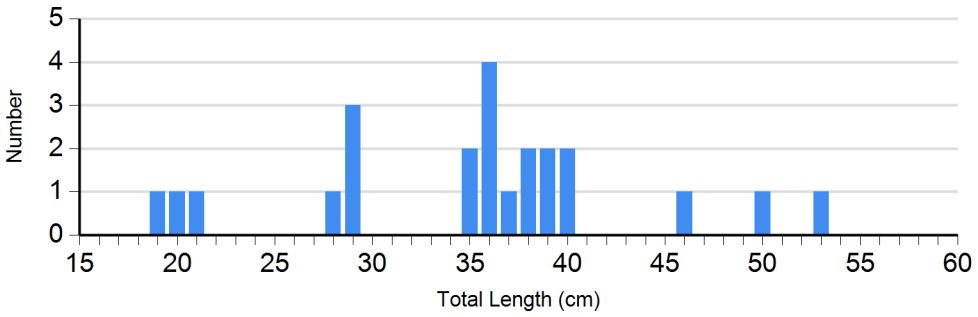
Species: Sauger
Gear: AFS std gill net











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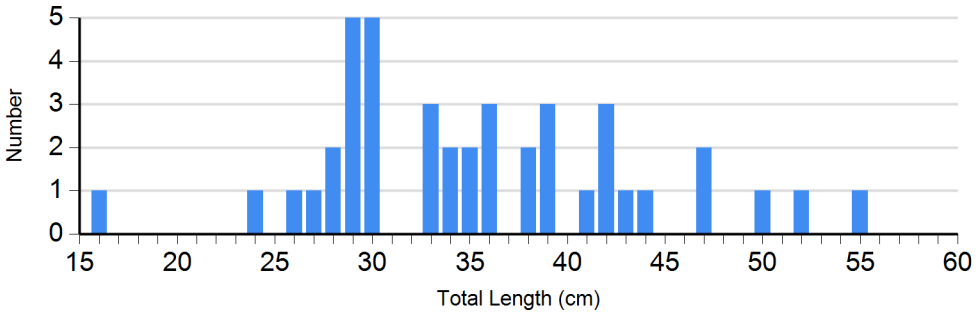
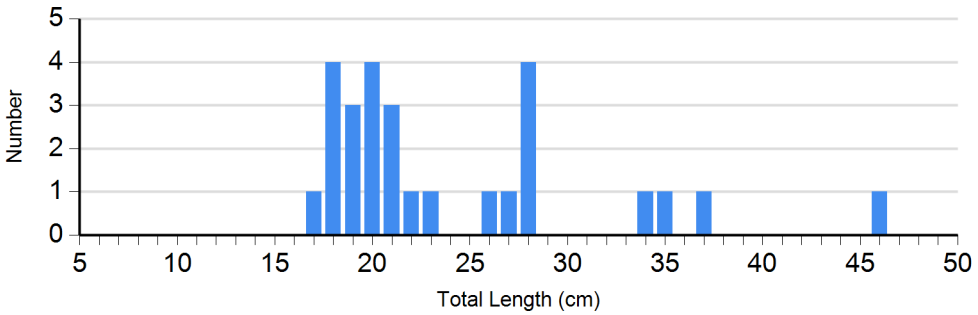
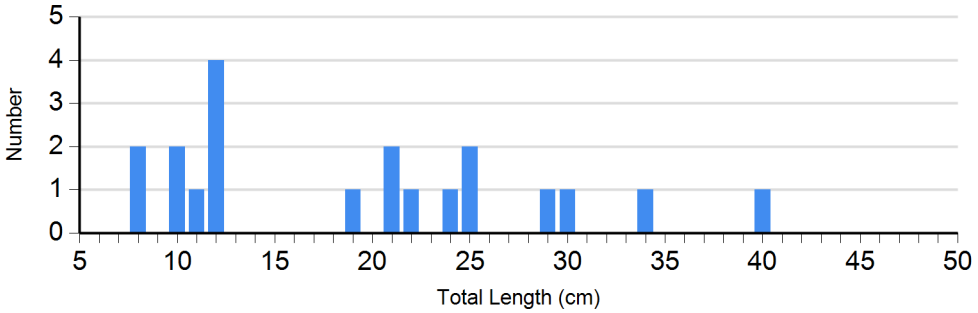


2023

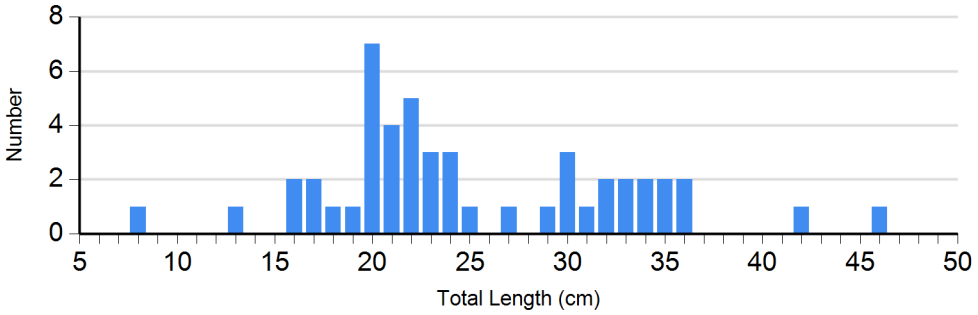
Species: Smallmouth Bass
Gear: boat shocker (night)



2018



2019



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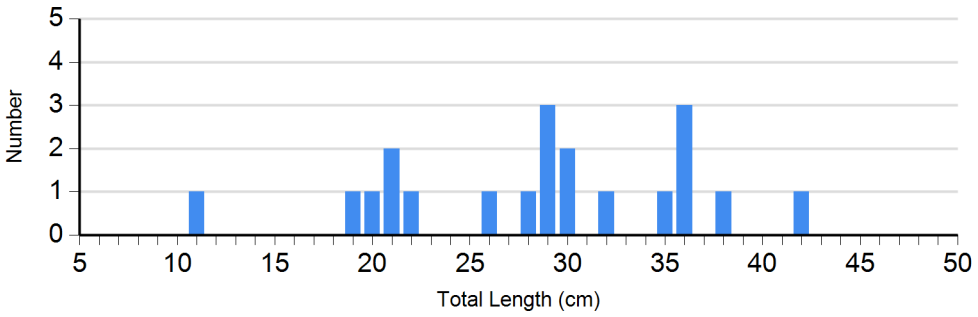
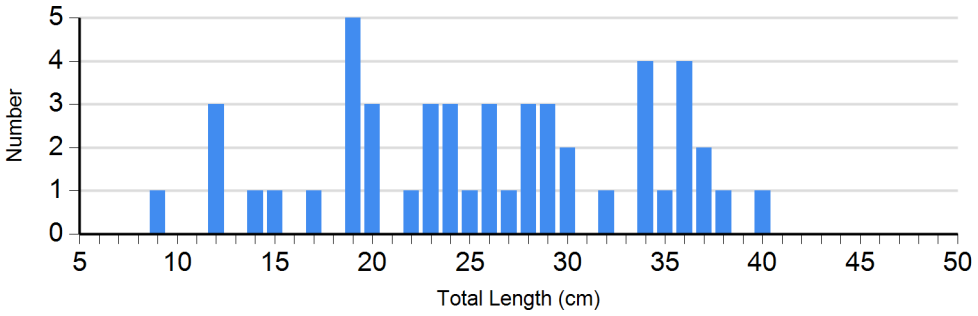


2021



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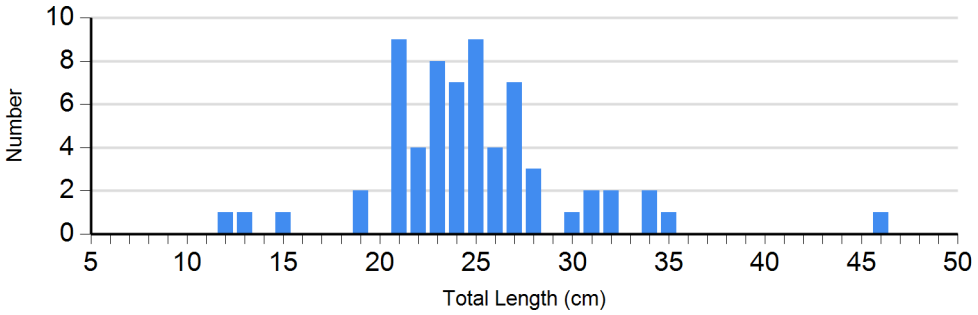
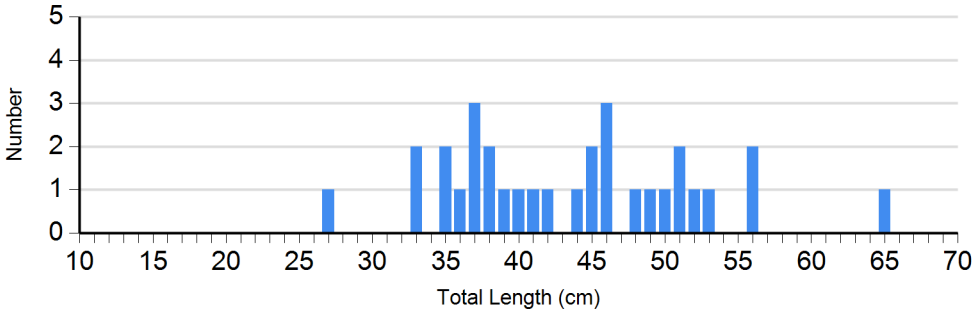


2023

Species: Walleye
Gear: AFS std gill net



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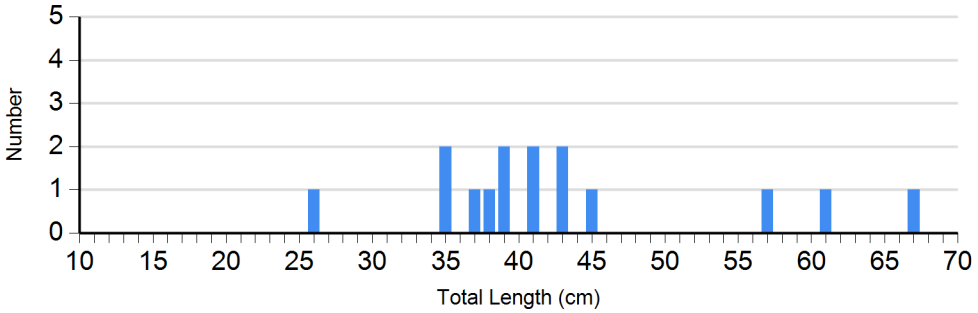

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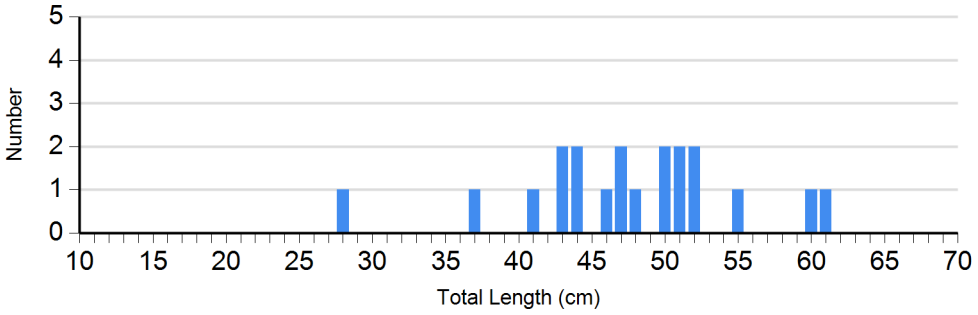

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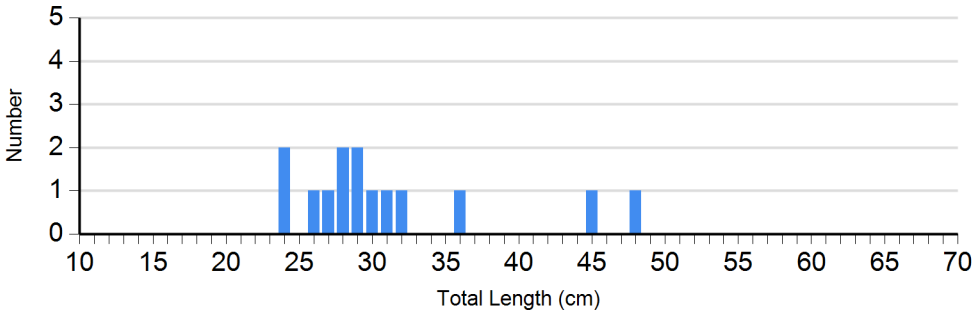

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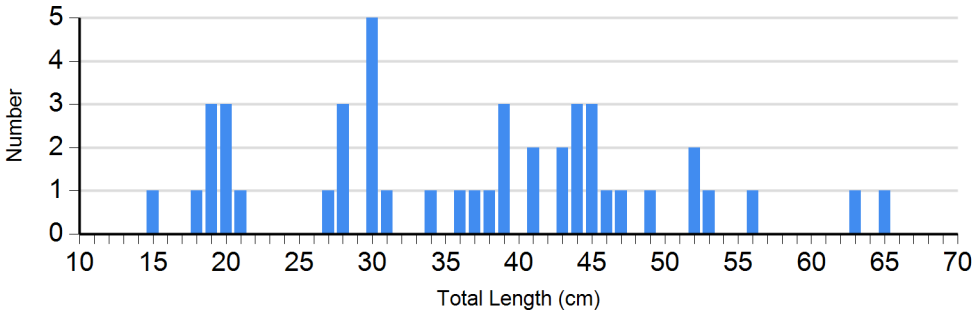

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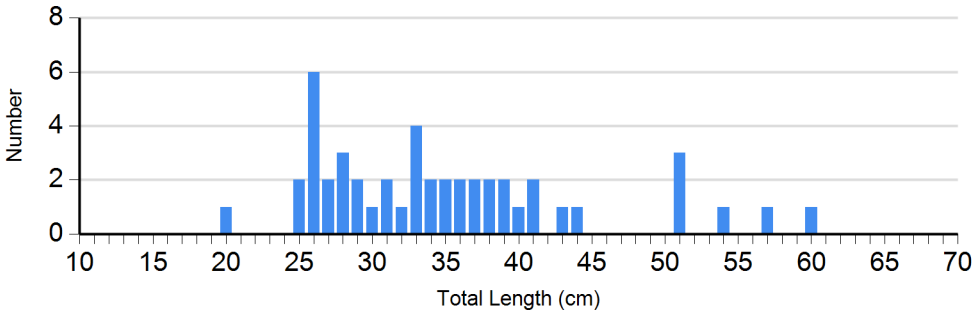
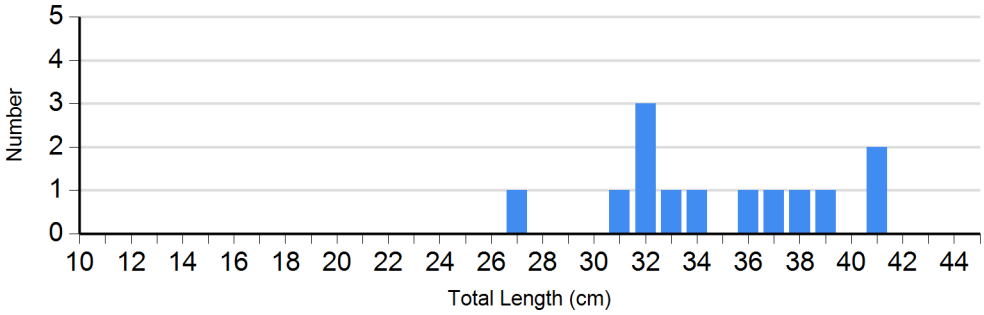


2023

Species: White Bass
Gear: AFS std gill net

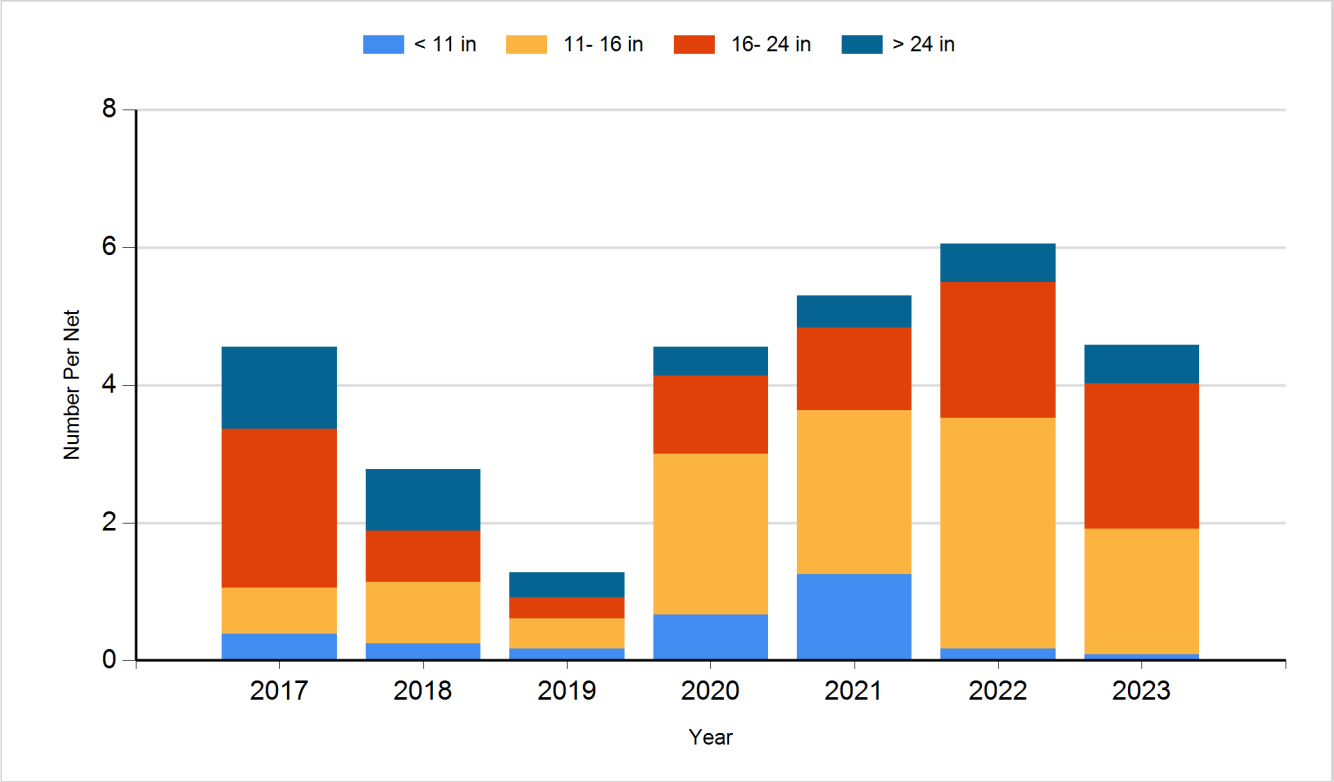


2023

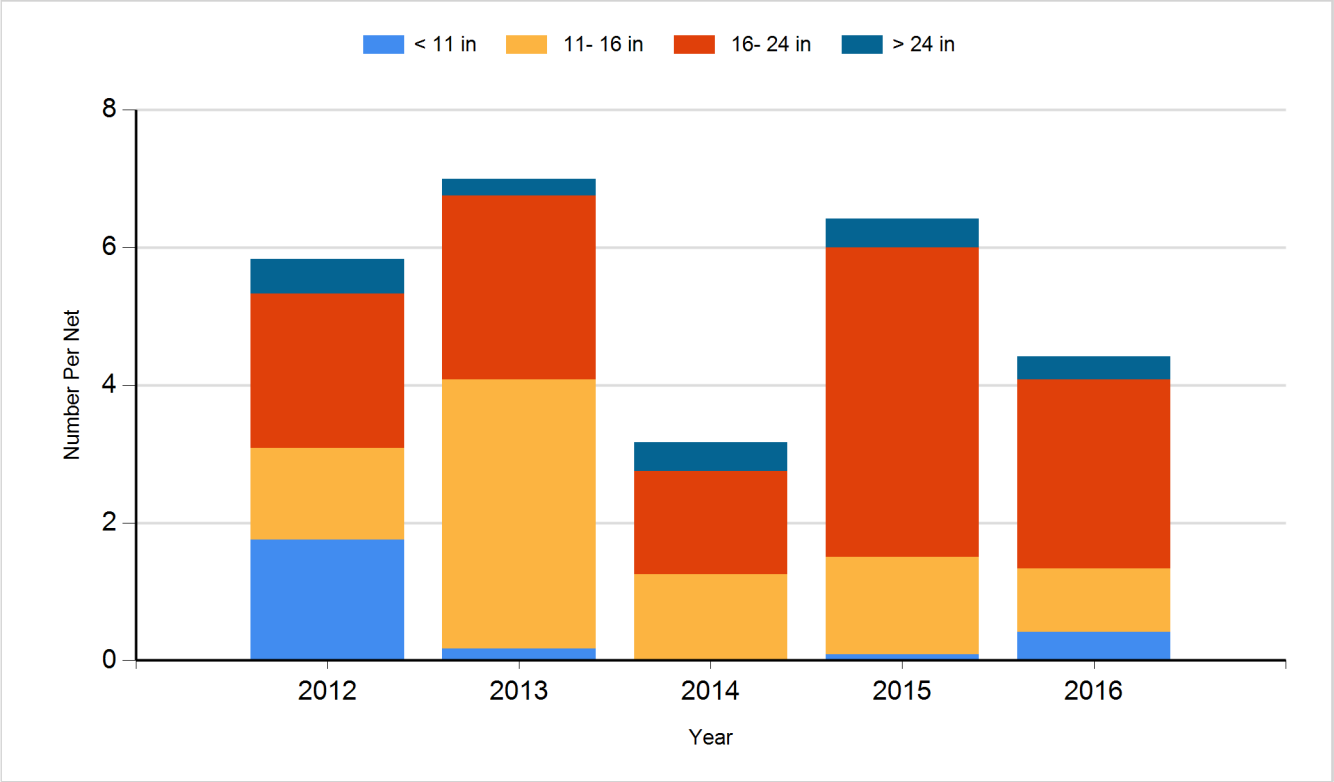
Historic Fish Sizes and Relative Abundance

Size distribution per net by color for species sampled by year.

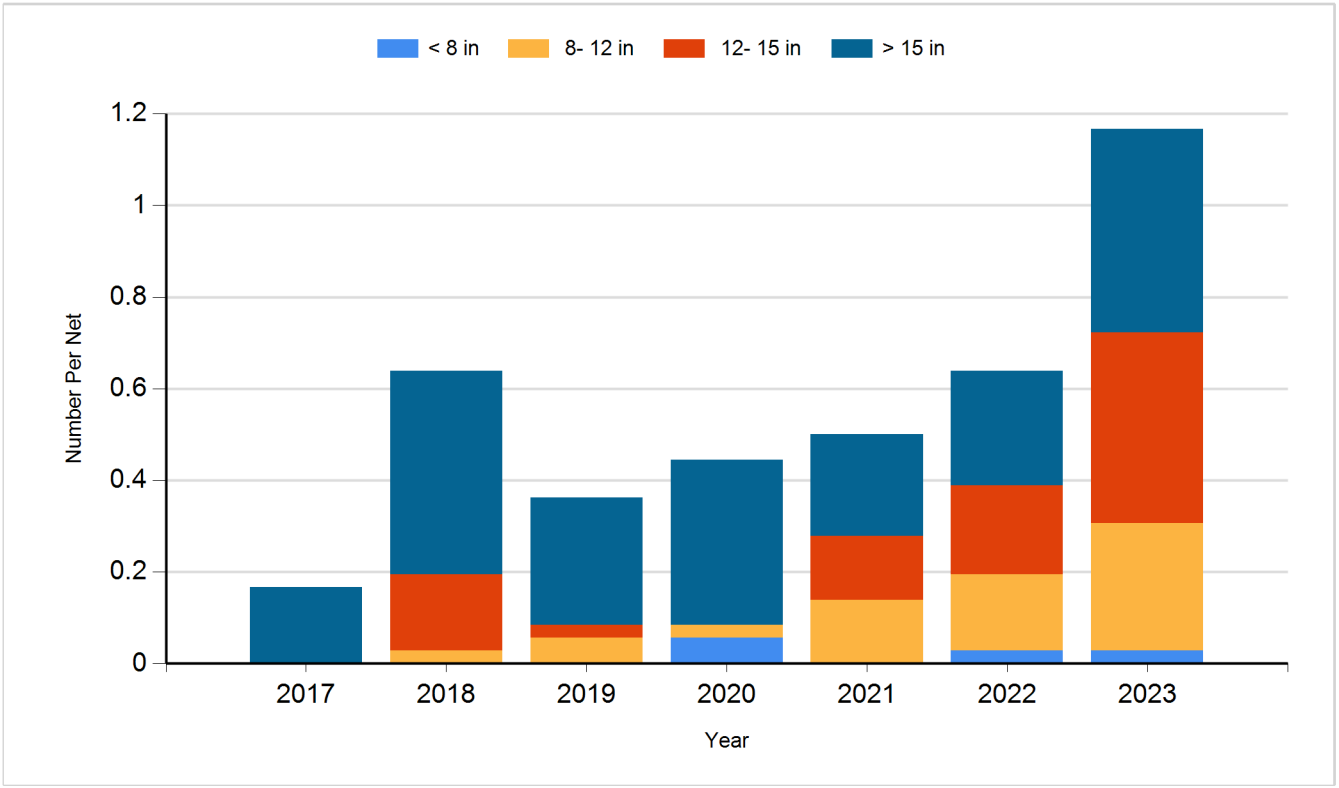
Species: Channel Catfish
Gear: AFS std gill net



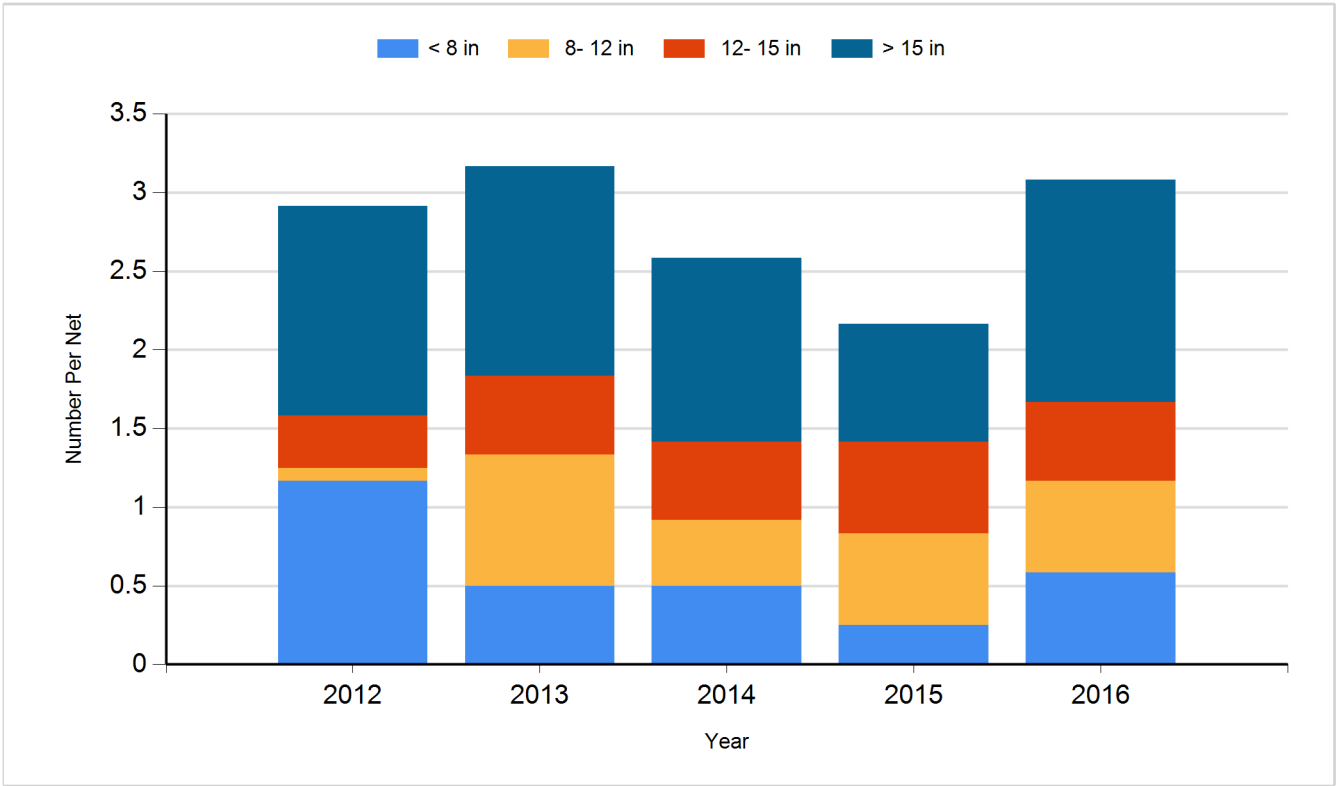
Species: Channel Catfish
Gear: std exp gill net



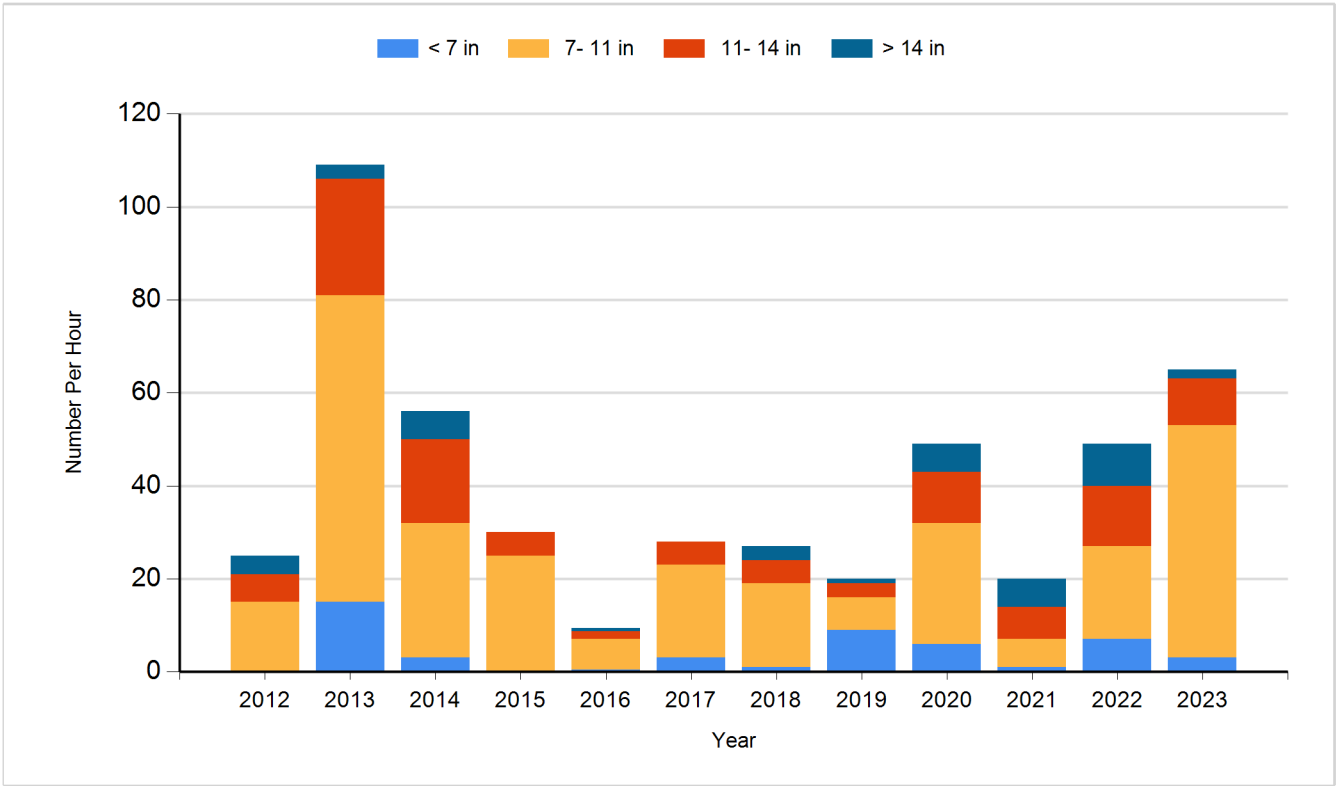
Species: Sauger
Gear: AFS std gill net



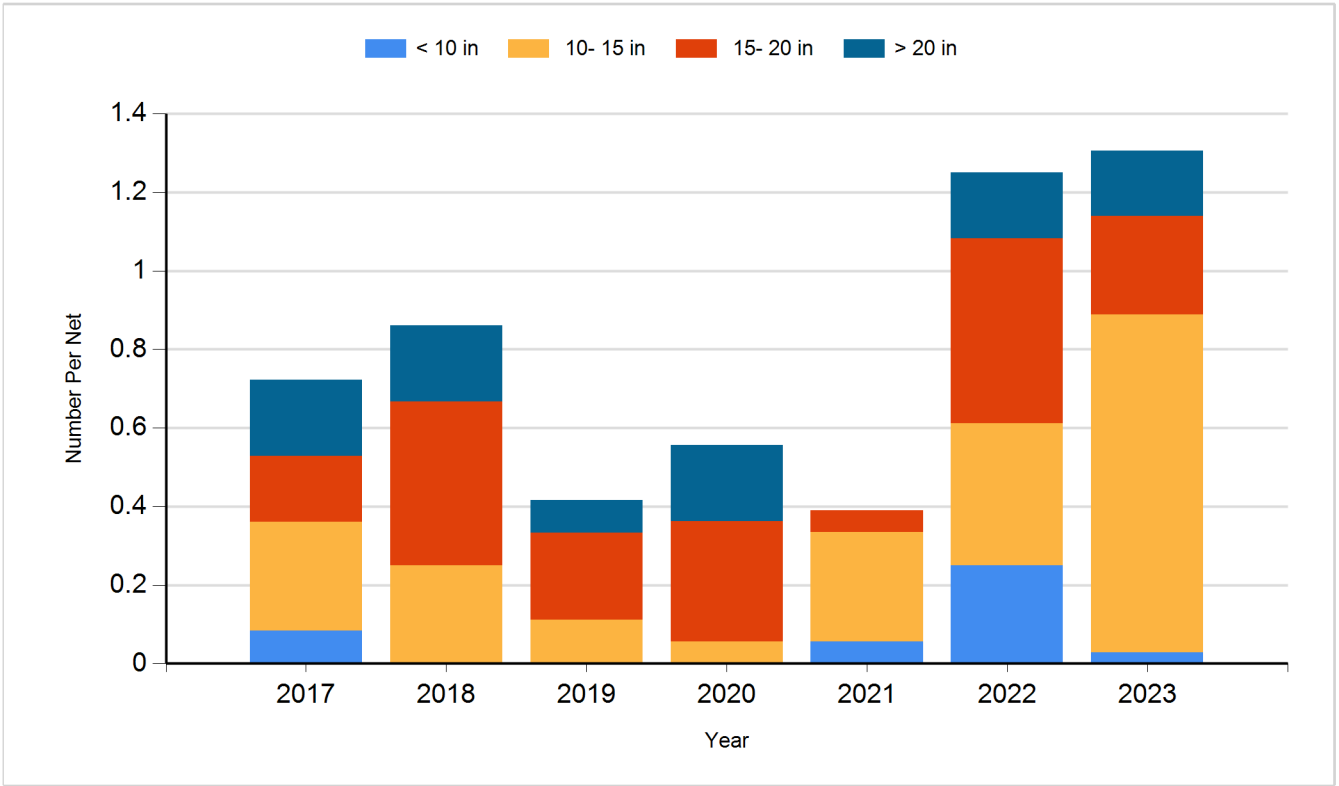
Species: Sauger
Gear: std exp gill net



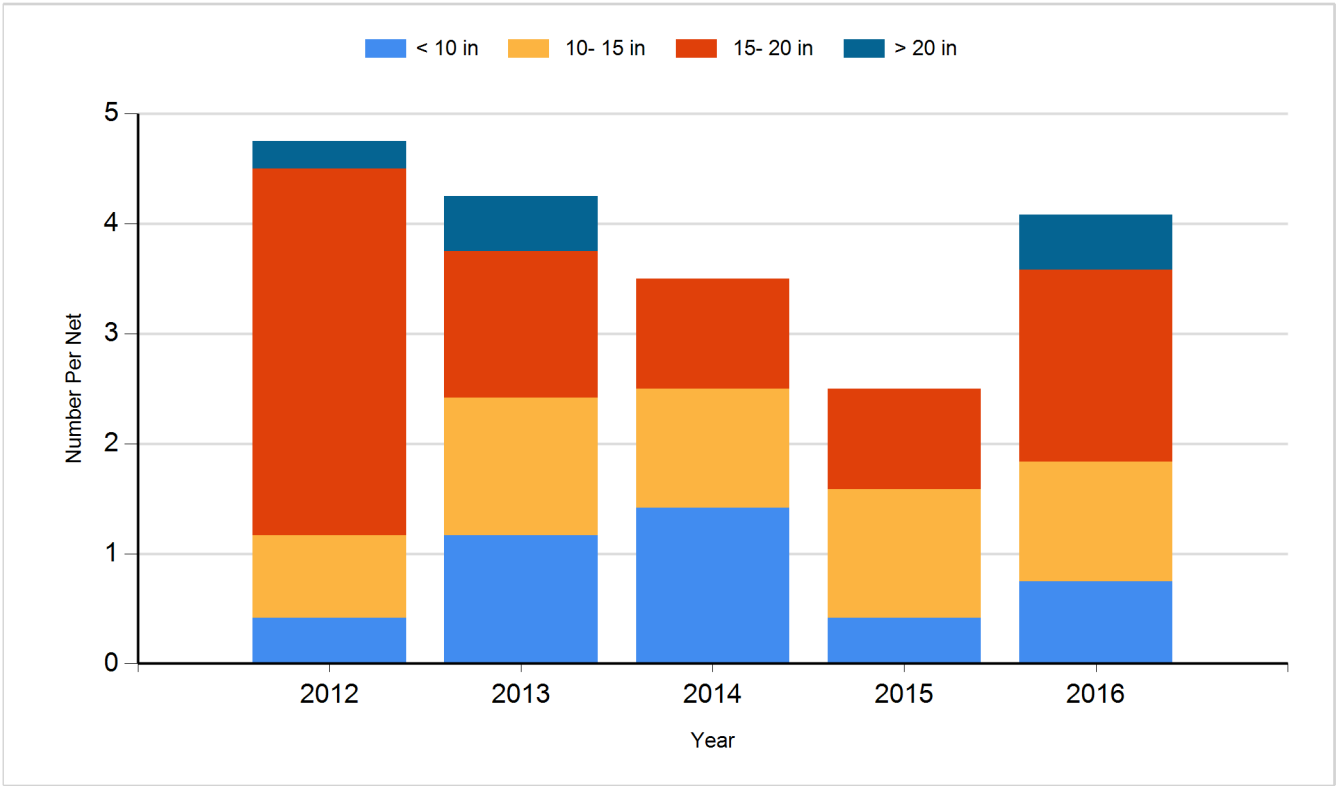
Species: Smallmouth Bass
Gear: boat shocker (night)



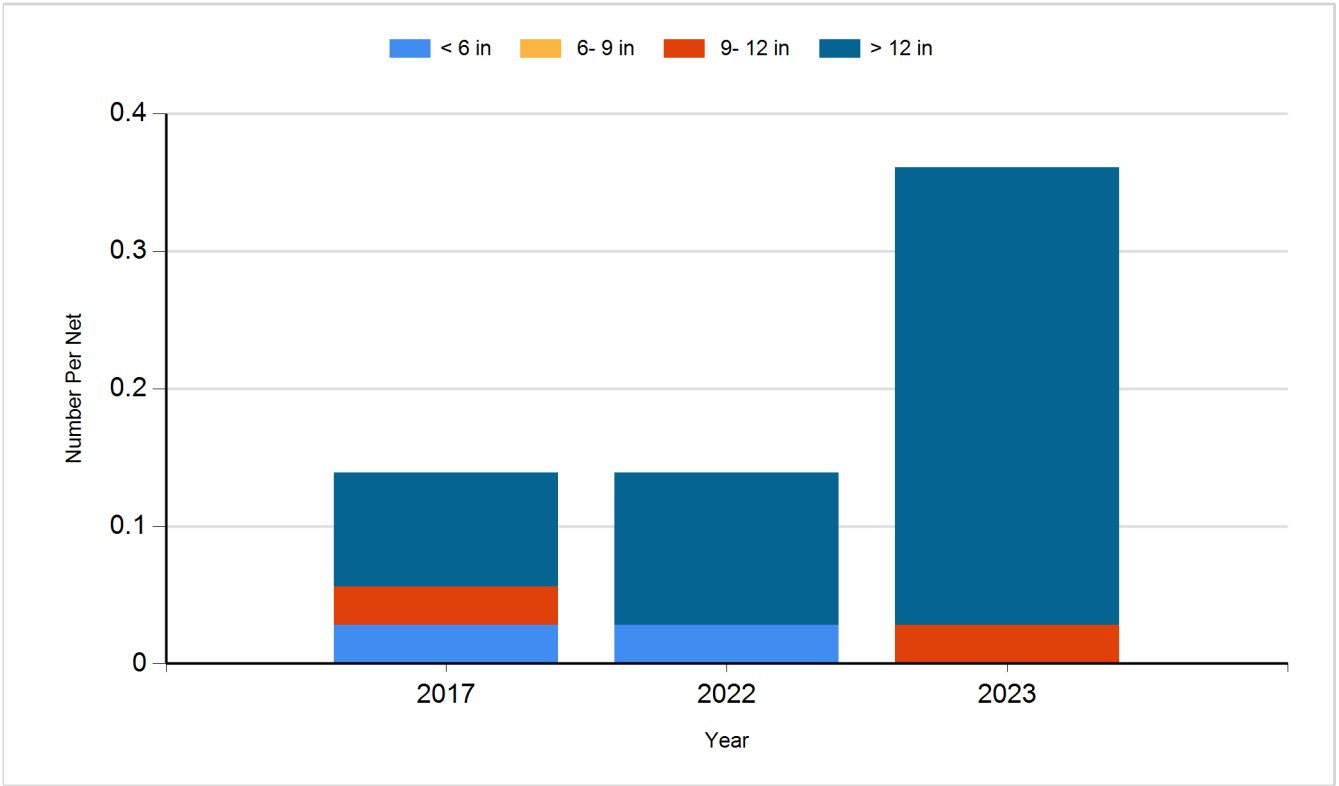
Species: Walleye
Gear: AFS std gill net



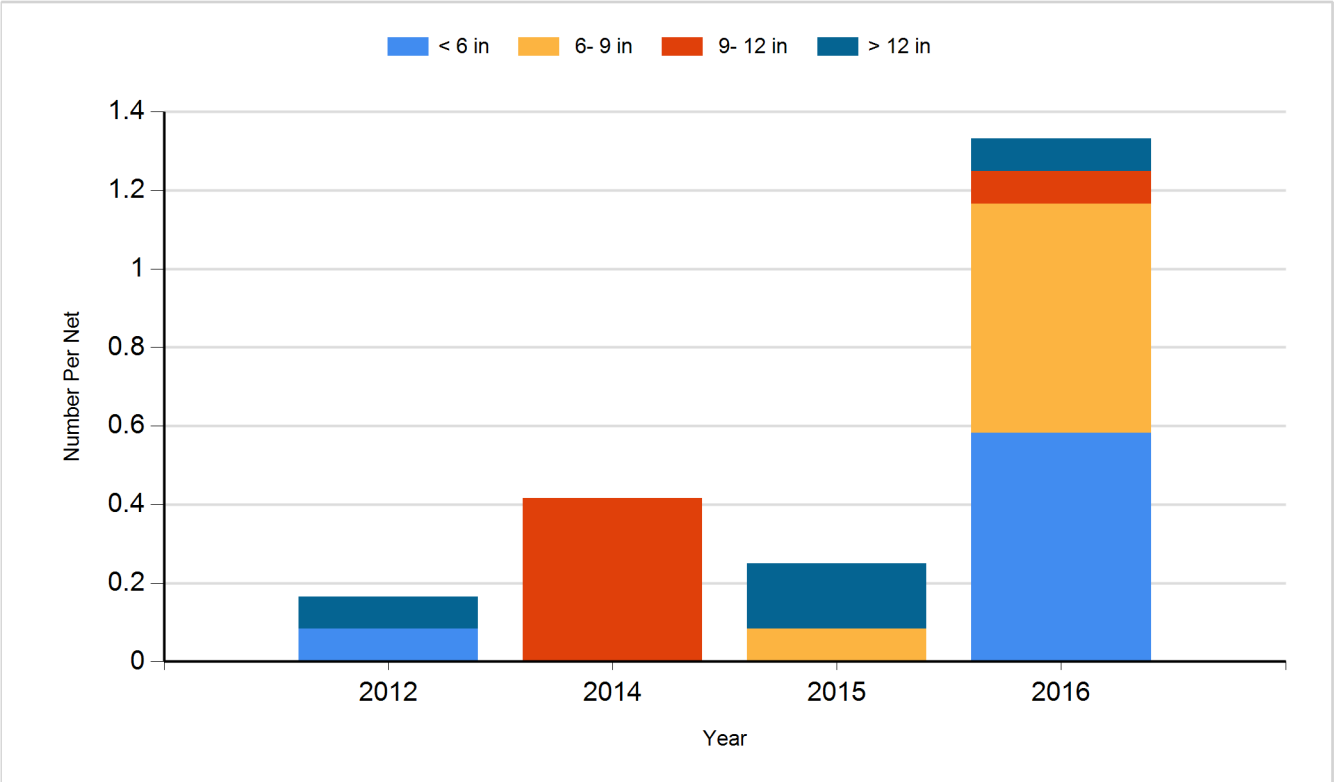
Species: Walleye
Gear: std exp gill net



Species: White Bass
Gear: AFS std gill net



Species: White Bass
Gear: std exp gill net



Fish Stocking

Number of fish stocked by year, species, and size.

Year	Species	Size	Number
2015	Walleye	Fry	12,800,000
2019	Walleye	Fingerling	1,819,269
2023	Walleye	Juvenile	838,554