

SOUTH DAKOTA STATEWIDE FISHERIES SURVEY

Durkee, Meade County

CHE-Lake-516-000

2025

Lake Information

Name: Durkee
County: Meade
Surface Area: 108 Acres

Surveys and Investigations

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

Gear	Date	Effort
AFS std gill net	Jun 26, 2025	2 net-nights
boat shocker (day)	Sep 02, 2025	3600 seconds
frame net (std 3/4 in)	Jun 26, 2025	5 net-nights

Common Fish Species Present

Yellow Perch

Northern Pike

Largemouth Bass

Bluegill

Black Crappie

Black Bullhead

White Bass

Golden Shiner

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.
- **std 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.

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

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.

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

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

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.

$$Wr = \left(\frac{W}{W_s} \right) \times 100$$

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).

Species Name	Stock		Quality		Preferred		Memorable		Trophy	
	(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	Black Bullhead	51	25.5	1.5	39	10	6		105	2
	Black Crappie	1	0.5	1.5	0		0		124	
	Golden Shiner	1	0.0	0.0						
	Northern Pike	8	4.0	3.1	100		0		93	3
	Yellow Perch	16	8.0	6.2	0		0		98	3
boat shocker (day)	Largemouth Bass	58	27.0	10.7	15		7		111	2
frame net (std 3/4 in)	Black Bullhead	91	18.0	7.8	63	7	1		102	1
	Black Crappie	79	15.8	10.4	46	8	1		111	1
	Bluegill	82	16.4	9.8	38	8	2		109	1
	Largemouth Bass	8	0.2	0.3	100		0		106	
	Northern Pike	4	0.4	0.6	50		0		86	5
	White Bass	1	0.2	0.3	100		100		83	
	Yellow Perch	17	3.4	4.1	0		0		95	3

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

Gear	Species	CPUE										Avg
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
AFS std frame net	Black Bullhead		27.0									27.00
	Black Crappie		9.4									9.40
	Bluegill		9.7									9.70
	Golden Shiner		0.0									0.00
	Largemouth Bass		0.3									0.30
	Northern Pike		0.6									0.60
	Yellow Perch		1.9									1.90
AFS std gill net	Black Bullhead		10.0	25.5	1.7						25.5	15.68
	Black Crappie		0.3	0.5	0.0						0.5	0.33
	Bluegill		0.0	0.5	0.0						0.0	0.13
	Channel Catfish		0.0	0.5	0.0						0.0	0.13
	Common Carp		0.0	0.0	1.3						0.0	0.33
	Freshwater Drum		0.0	0.0	0.7						0.0	0.18
	Golden Shiner		0.0	0.0	0.0						0.0	0.00
	Northern Pike		2.3	3.5	0.7						4.0	2.63
	Walleye		0.0	0.0	3.3						0.0	0.83
	White Bass		0.5	0.0	1.3						0.0	0.45
	Yellow Perch		5.0	13.5	2.7						8.0	7.30
boat shocker (day)	Largemouth Bass								12,824.2	38.0	27.0	4296.40
boat shocker (night)	Largemouth Bass	47.1	59.0	39.6	9.0							38.68
frame net (std 3/4 in)	Black Bullhead	42.8		19.6	35.0	6.5	1.4	2.4	4.6	32.4	18.0	18.08
	Black Crappie	23.9		11.4	14.9	12.3	31.0	3.4	0.6	7.2	15.8	13.39
	Bluegill	85.5		34.4	0.1	24.5	44.4	19.2	45.1	13.0	16.4	31.40
	Channel Catfish	0.0		0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.01
	Golden Shiner	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Green Sunfish	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Largemouth Bass	0.0		0.0	0.3	0.0	0.0	2.0	0.3	0.6	0.2	0.38
	Northern Pike	1.5		1.6	1.0	0.5	5.2	3.2	2.0	0.4	0.4	1.76
	Sunfish Hybrid	0.0		0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.02
	White Bass	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.02
	Yellow Perch	3.4		6.2	4.5	2.0	2.4	0.2	1.6	0.4	3.4	2.68
std exp gill net	Black Bullhead	17.0										17.00
	Black Crappie	7.0										7.00

		CPUE										
Gear	Species	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Avg
std exp gill net	Bluegill	0.0										0.00
	Channel Catfish	0.0										0.00
	Golden Shiner	0.0										0.00
	Northern Pike	6.0										6.00
	Yellow Perch	30.0										30.00

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.

Gear	Species	Index	Year									
			2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
AFS std frame net	Black Bullhead	PSD		89								
		PSD-P		0								
		Wr		89								
	Black Crappie	PSD		55								
		PSD-P		0								
		Wr		107								
	Bluegill	PSD		78								
		PSD-P		7								
		Wr		106								
	Largemouth Bass	PSD		100								
		PSD-P		0								
		Wr		110								
	Northern Pike	PSD		50								
		PSD-P		50								
		Wr		95								
	Yellow Perch	PSD		85								
		PSD-P		0								
		Wr		88								
AFS std gill net	Black Bullhead	PSD		88	100	60						39
		PSD-P		0	0	0						6
		Wr		92	90	101						105
	Black Crappie	PSD		0	100							0
		PSD-P		0	0							0
		Wr		103	97							124
	Bluegill	PSD			100							
		PSD-P			100							
		Wr			64							
	Northern Pike	PSD		89	100	0						100
		PSD-P		33	14	0						0
		Wr		91	84	92						93
	White Bass	PSD		100		100						
		PSD-P		100		100						
		Wr		96		88						

Gear	Species	Index	Year									
			2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
AFS std gill net	Yellow Perch	PSD		40	11	0						0
		PSD-P		0	0	0						0
		Wr		91	98	90						98
boat shocker (day)	Largemouth Bass	PSD								87	71	15
		PSD-P								66	66	7
		Wr								129	121	111
boat shocker (night)	Largemouth Bass	PSD	56	81	85	100						
		PSD-P	33	31	18	56						
		Wr	128	106	102	105						
frame net (std 3/4 in)	Black Bullhead	PSD	80		95	98	92	100	92	95	20	63
		PSD-P	0		0	0	0	14	25	78	14	1
		Wr	85		97	98	90	88	94	97	94	102
	Black Crappie	PSD	38		40	26	18	13	18	60	39	46
		PSD-P	1		2	6	4	0	0	0	3	1
		Wr	105		103	97	101	101	95	104	107	111
	Bluegill	PSD	94		80	100	35	42	23	30	94	38
		PSD-P	8		9	0	5	7	6	3	9	2
		Wr	106		105	125	109	102	110	120	116	109
	Largemouth Bass	PSD				100			100	100	0	100
		PSD-P				100			50	50	0	0
		Wr				101			122	120	116	106
	Northern Pike	PSD	58		100	88	33	88	100	88	100	50
		PSD-P	8		38	25	33	12	25	19	0	0
		Wr	84		87	86	98	89	87	88	86	86
	White Bass	PSD										100
		PSD-P										100
		Wr										83
	Yellow Perch	PSD	48		52	17	33	42	100	23	0	0
		PSD-P	4		13	6	8	0	100	0	0	0
		Wr	89		87	86	91	94	79	101	104	95
std exp gill net	Black Bullhead	PSD	88									
		PSD-P	0									
		Wr	88									
	Black Crappie	PSD	14									
		PSD-P	0									

			Year									
Gear	Species	Index	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
std exp gill net	Black Crappie	Wr	109									
	Northern Pike	PSD	67									
		PSD-P	17									
		Wr	94									
	Yellow Perch	PSD	23									
		PSD-P	0									
		Wr	92									

Length at Capture

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

Species: Black Crappie

Mean Length (expanded sample number) at capture by age											
Year	N	1	2	3	4	5	6	7	8	9	10+
2016	380		162 (74)	197 (251)	185 (8)	214 (13)	225 (35)				

Species: Yellow Perch

Mean Length (expanded sample number) at capture by age											
Year	N	1	2	3	4	5	6	7	8	9	10+
2016	60		131 (2)	175 (40)	204 (4)	215 (8)	216 (6)				

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).

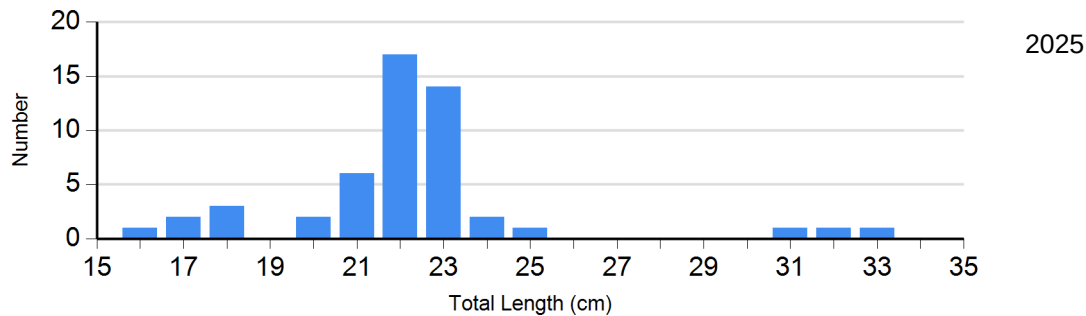
Species	Year	Length Groups							
		S-Q		Q-P		P-M		M	
		N	Wr (SE)	N	Wr (SE)	N	Wr (SE)	N	Wr (SE)
Black Bullhead Gill Net	2025	31	108 (2.0)	17	104 (2.5)	3	84 (3.4)	0	
Black Crappie Frame Net	2021	135	102 (0.8)	20	91 (0.8)	0		0	
	2022	14	95 (2.6)	3	95 (3.8)	0		0	
	2023	2	100 (9.9)	3	107 (3.2)	0		0	
	2024	22	111 (2.0)	13	101 (1.5)	1	101	0	
	2025	43	116 (0.9)	35	107 (1.2)	1	96	0	
Bluegill Frame Net	2021	128	104 (1.2)	78	102 (1.3)	16	98 (1.3)	0	
	2022	74	110 (1.1)	16	108 (2.9)	6	111 (11.8)	0	
	2023	251	122 (1.3)	98	114 (1.8)	12		0	
	2024	4	92	55	118 (1.4)	6	108 (3.3)	0	
	2025	51	108 (1.6)	29	110 (1.5)	2	100	0	
Largemouth Bass Electro Fishing	2023	12	121 (2.2)	19	125 (3.5)	61	132 (2.0)	0	
	2024	11	117 (1.6)	2	114 (7.7)	25	124 (1.3)	0	
	2025	23	110 (2.1)	2	116 (3.2)	1	121	1	100
Northern Pike Gill Net	2025	0		8	93 (2.5)	0		0	
Yellow Perch Gill Net	2025	16	98 (2.1)	0		0		0	

Length Frequency Distribution

Length frequency histogram of species sampled by year.

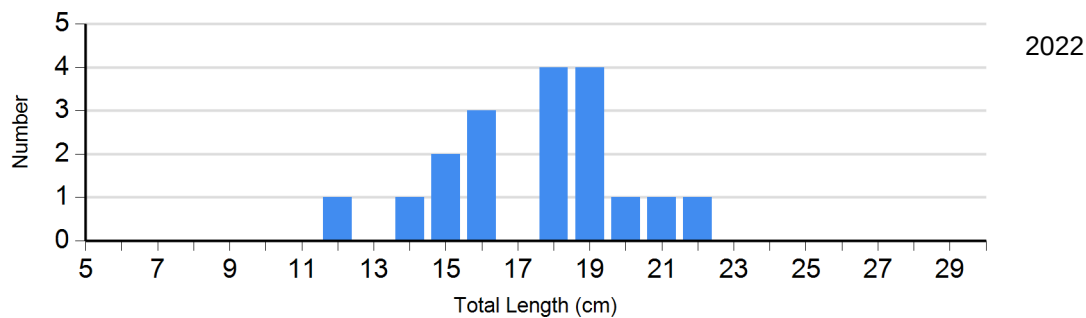
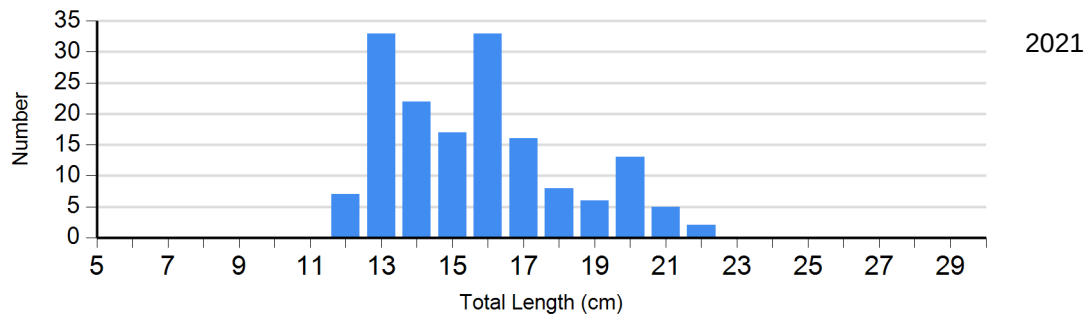
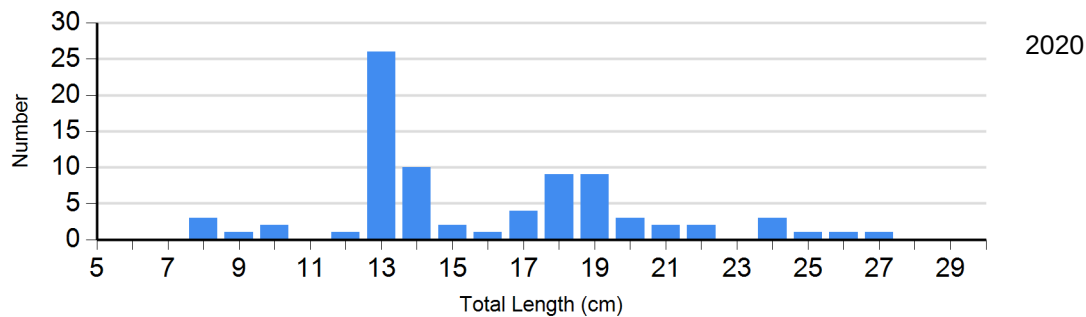
Species: Black Bullhead

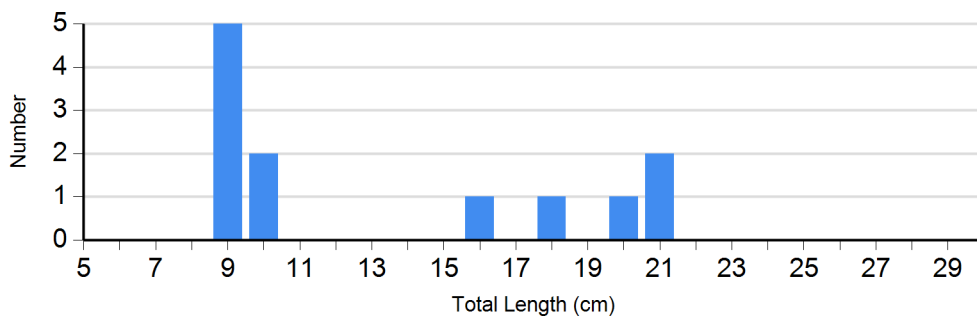
Gear: AFS std gill net



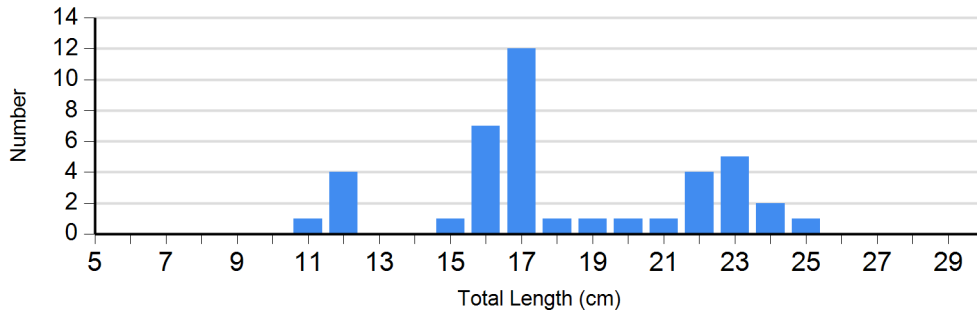
Species: Black Crappie

Gear: frame net (std 3/4 in)

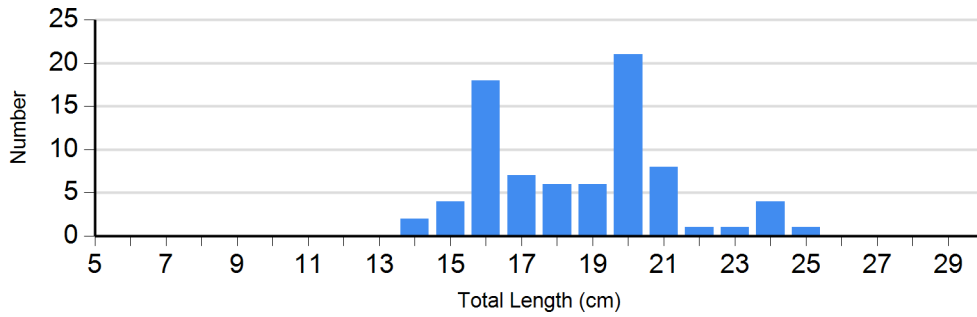




2023

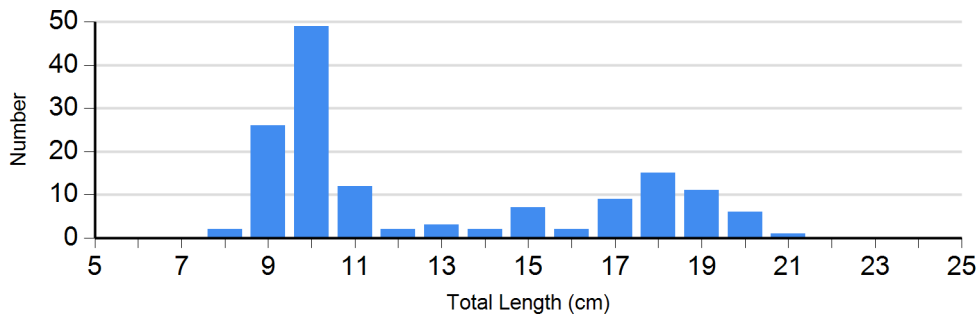


2024

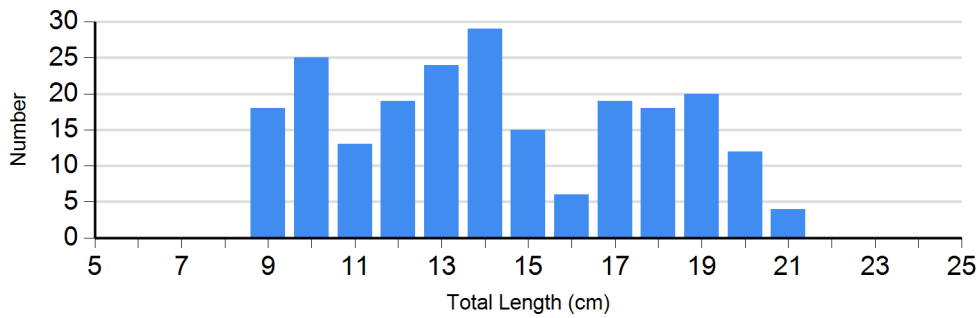


2025

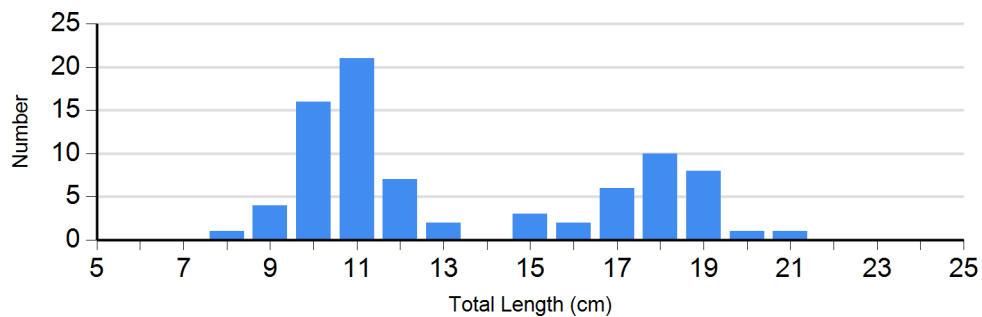
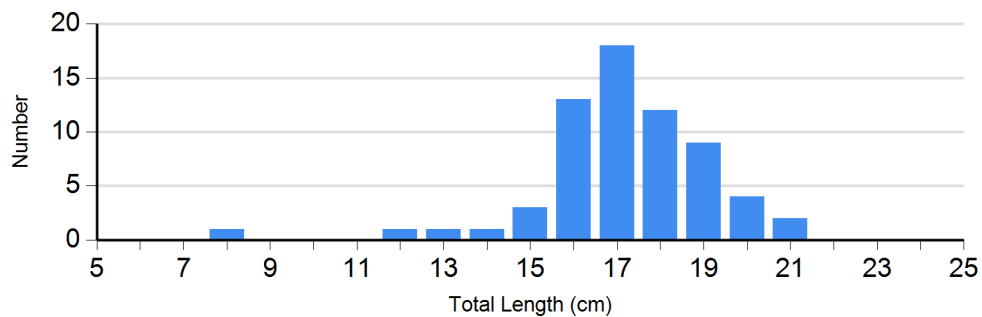
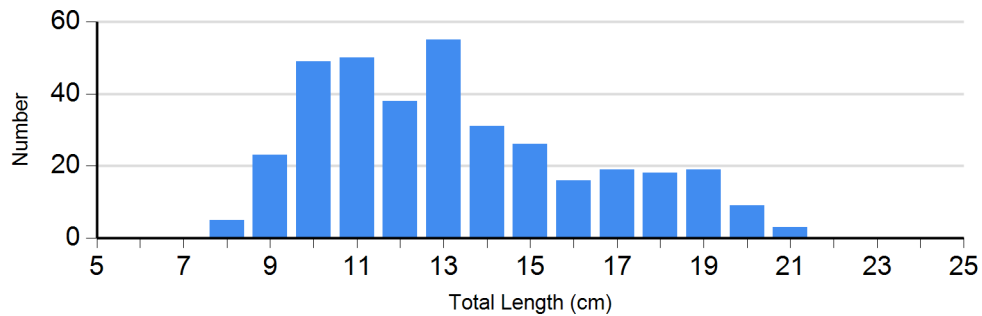
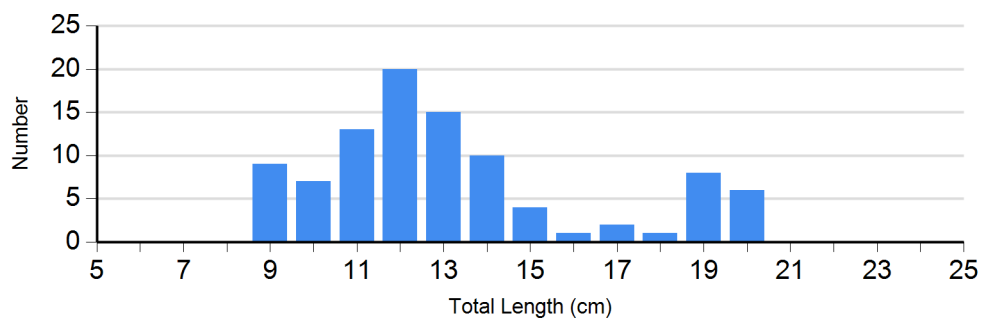
Species: Bluegill
Gear: frame net (std 3/4 in)



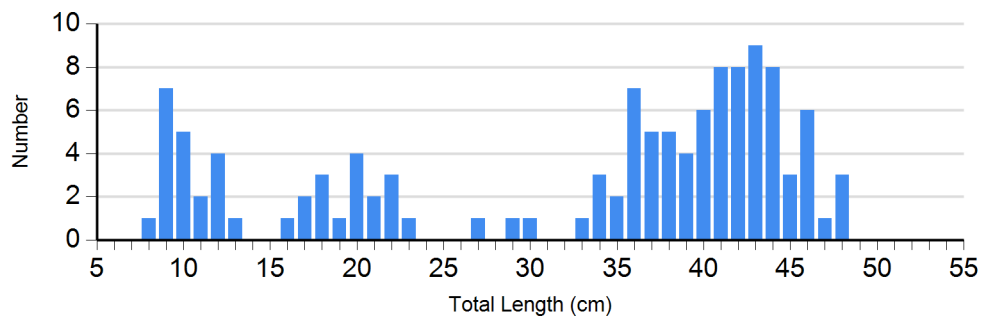
2020

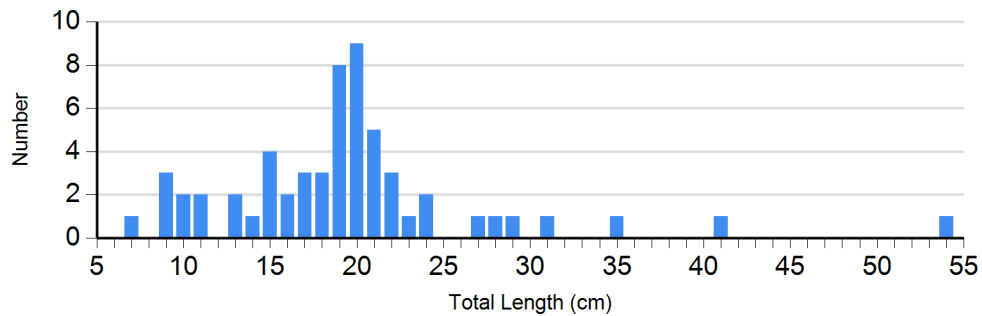
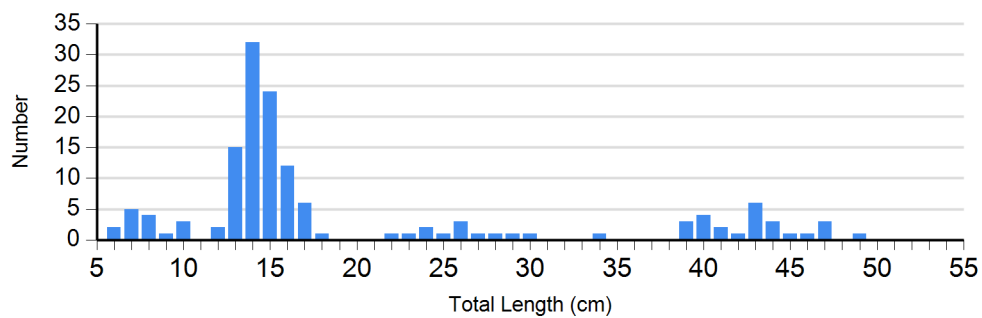


2021

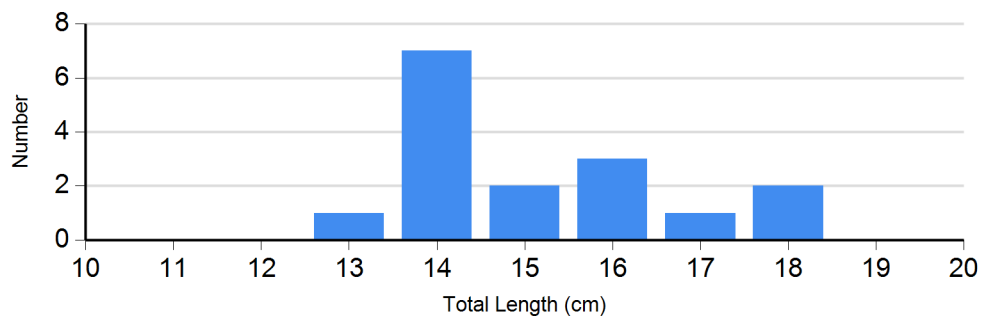


Species: Largemouth Bass
Gear: boat shocker (day)





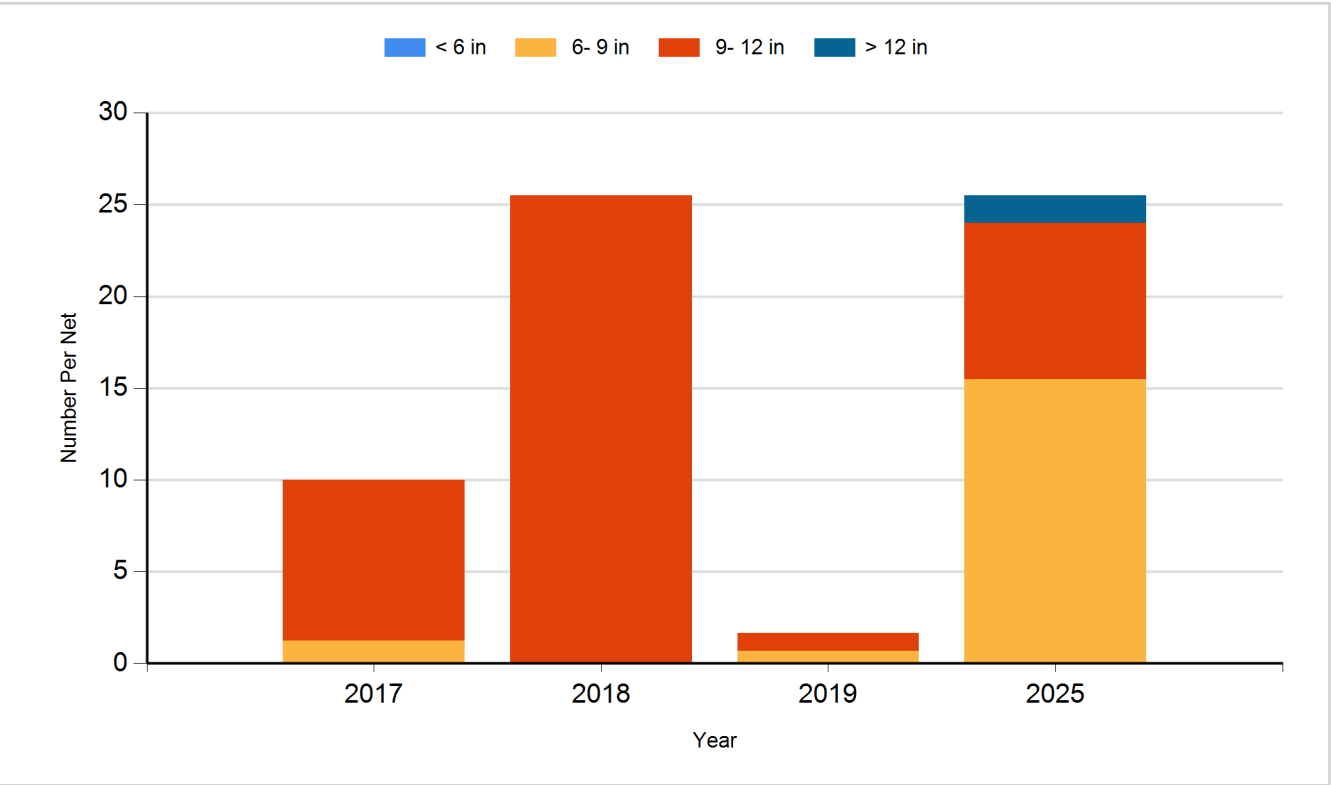
Species: Yellow Perch
Gear: AFS std gill net



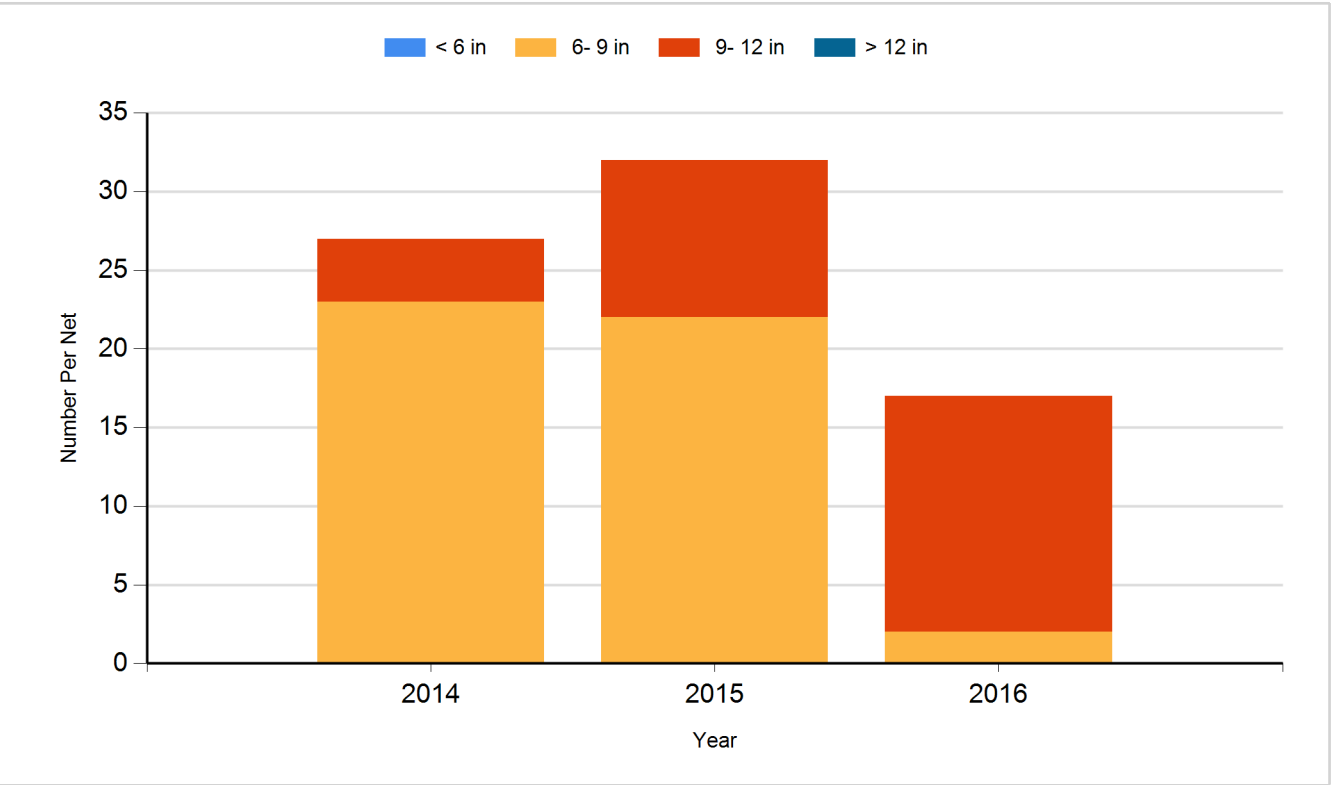
Historic Fish Sizes and Relative Abundance

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

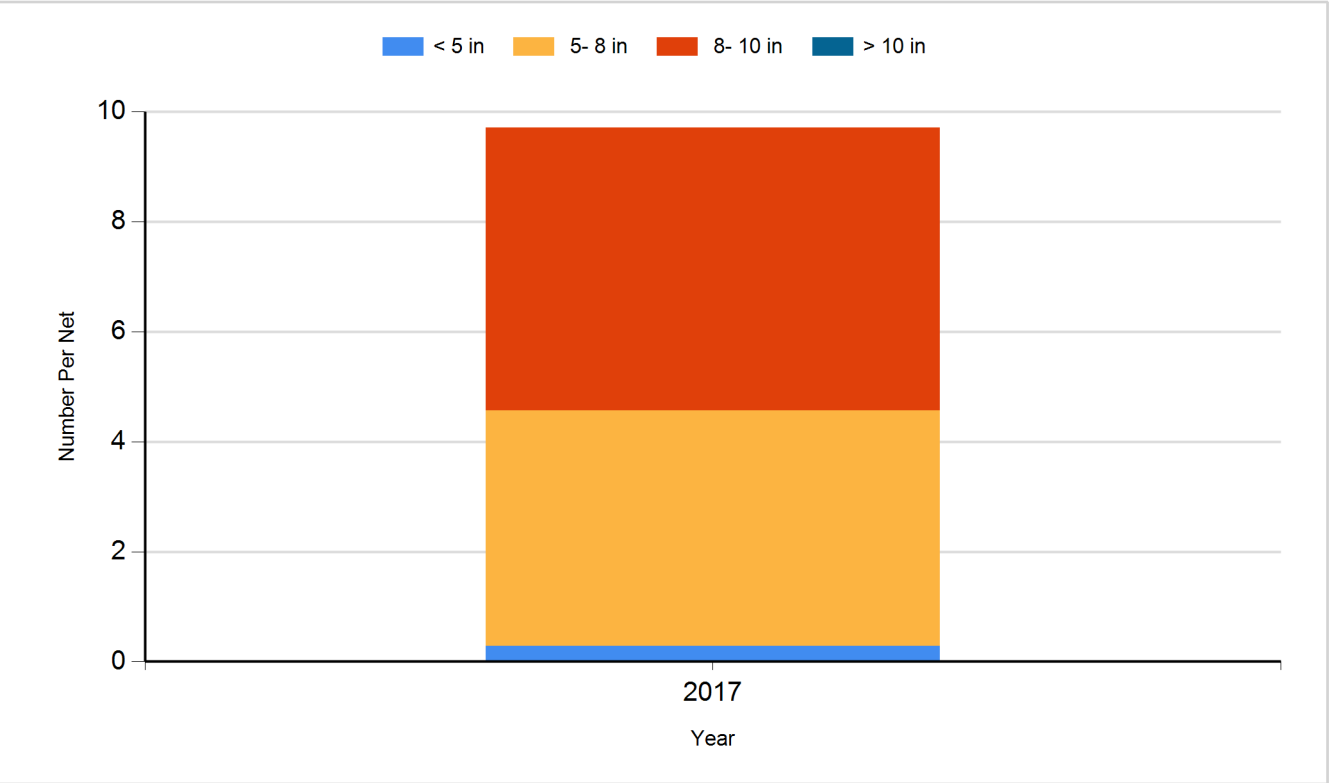
Species: Black Bullhead
Gear: AFS std gill net



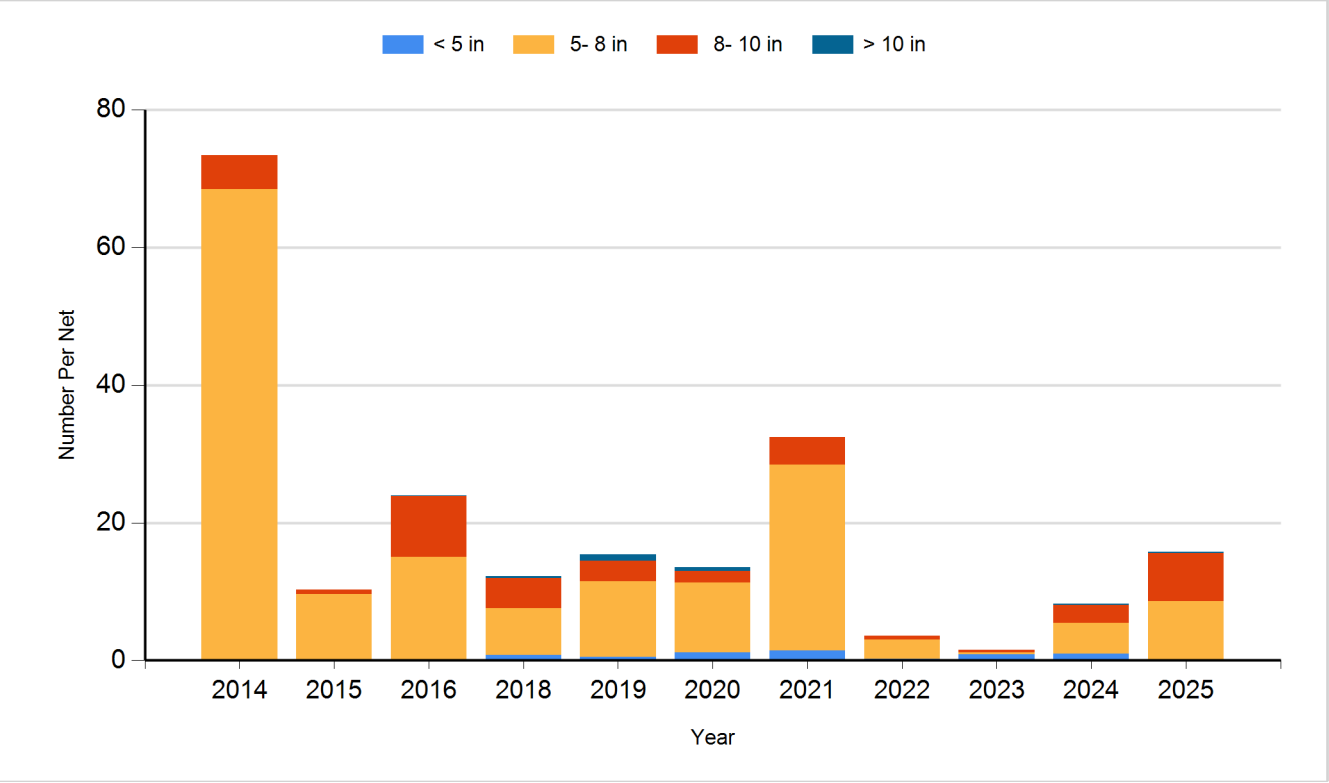
Species: Black Bullhead
Gear: std exp gill net



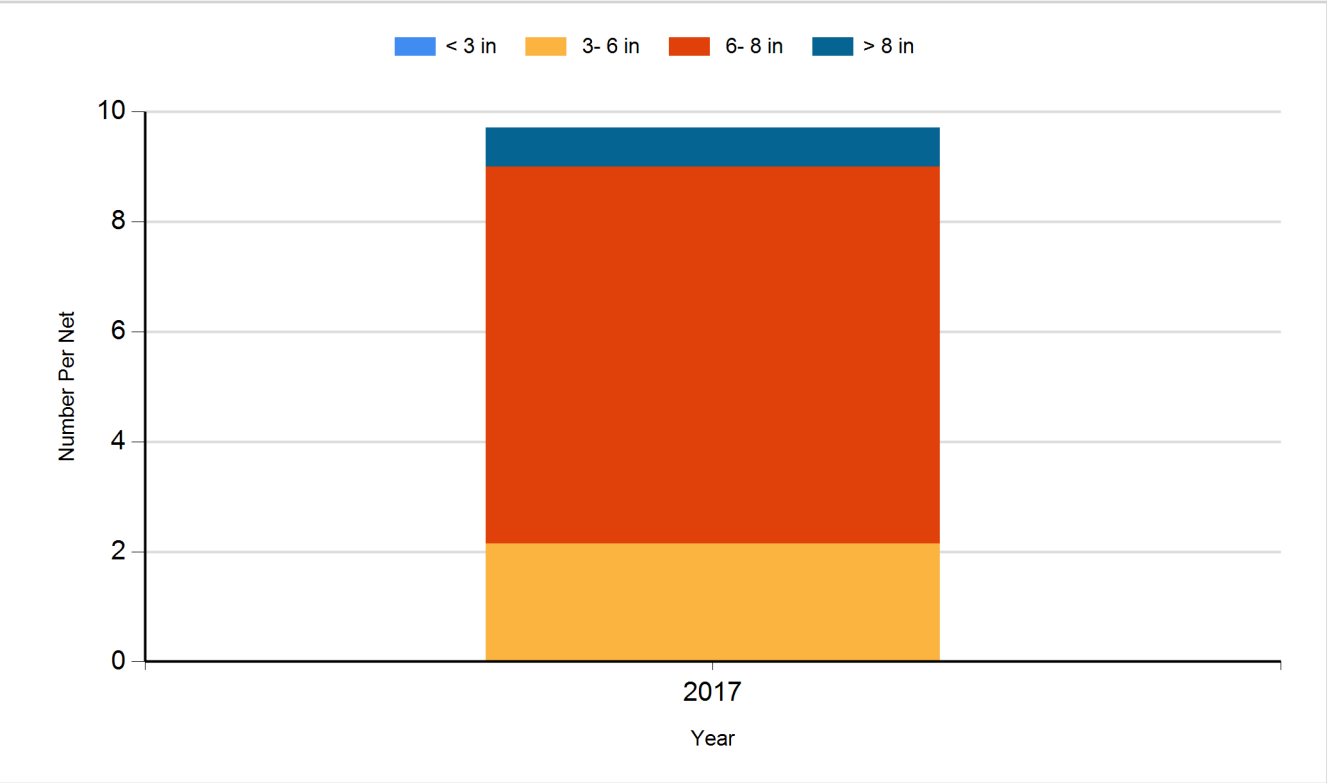
Species: Black Crappie
Gear: AFS std frame net



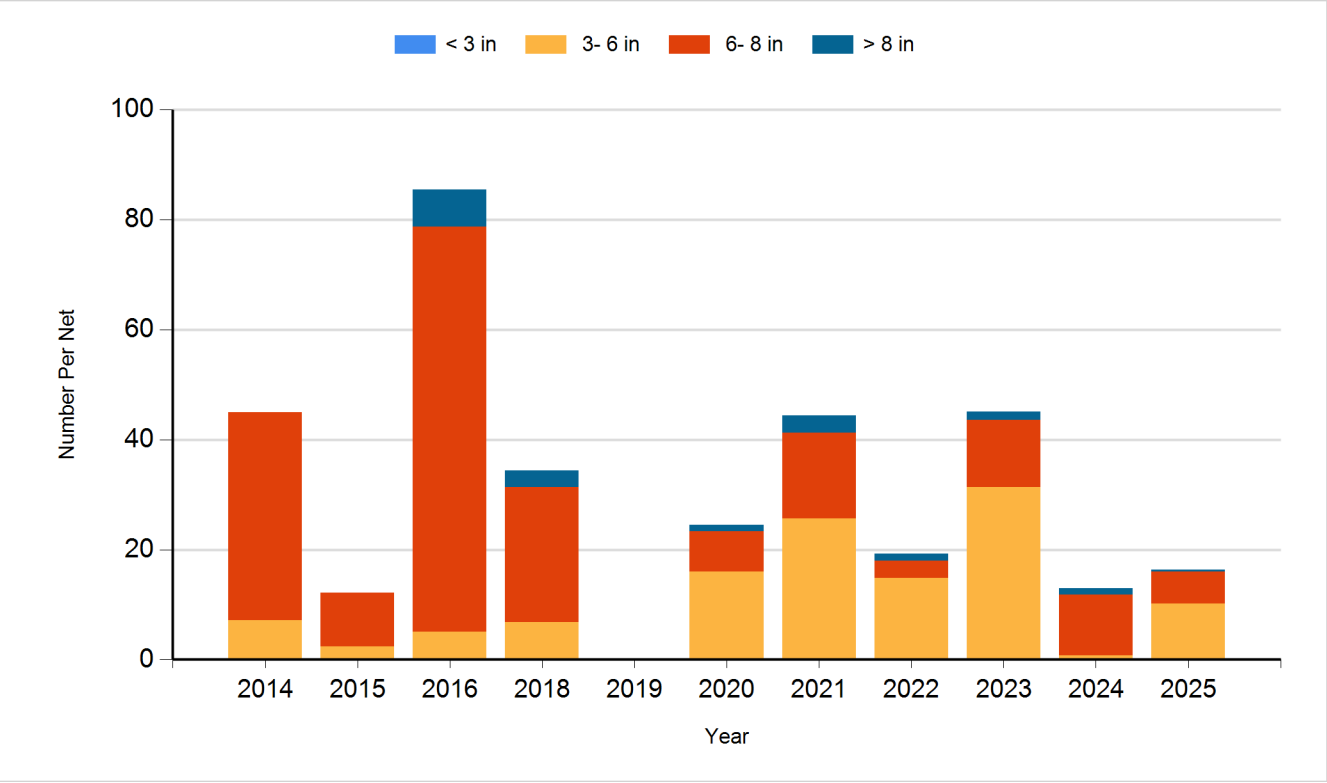
Species: Black Crappie
Gear: frame net (std 3/4 in)



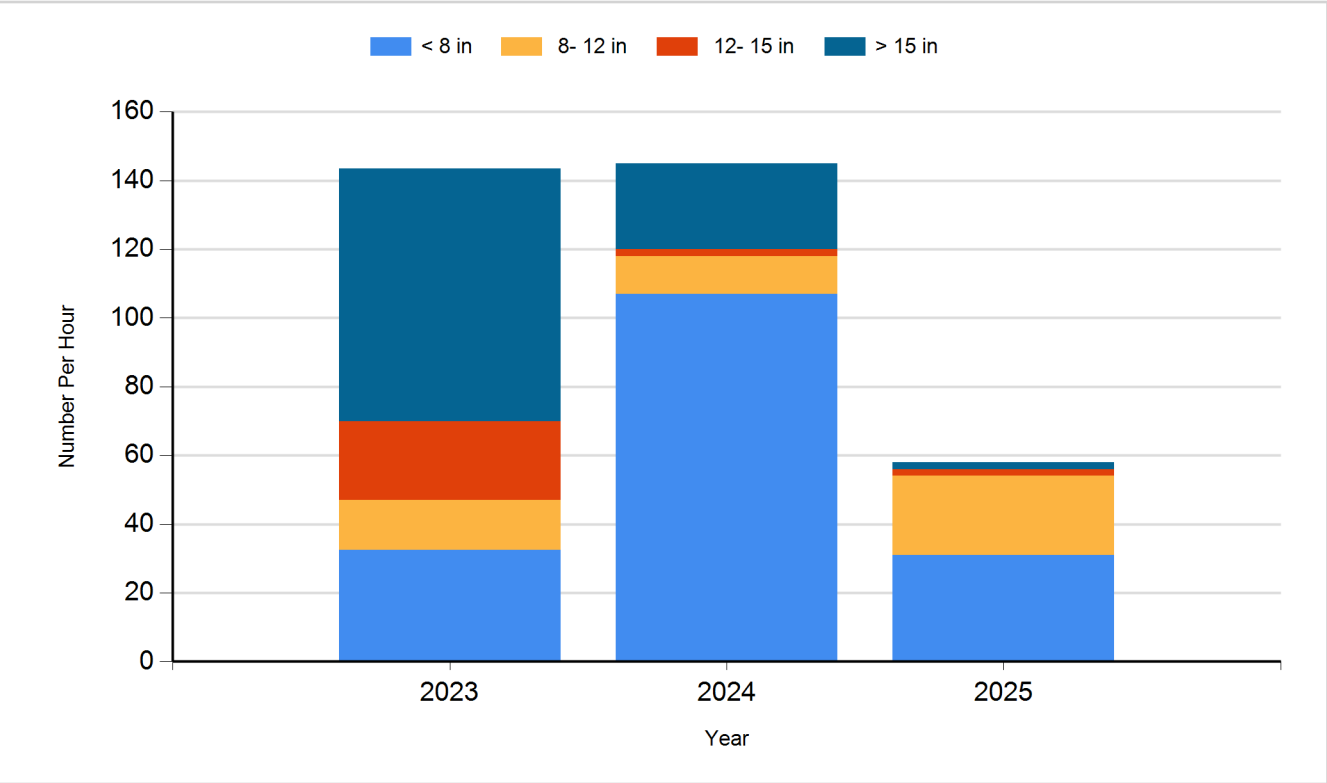
Species: Bluegill
Gear: AFS std frame net



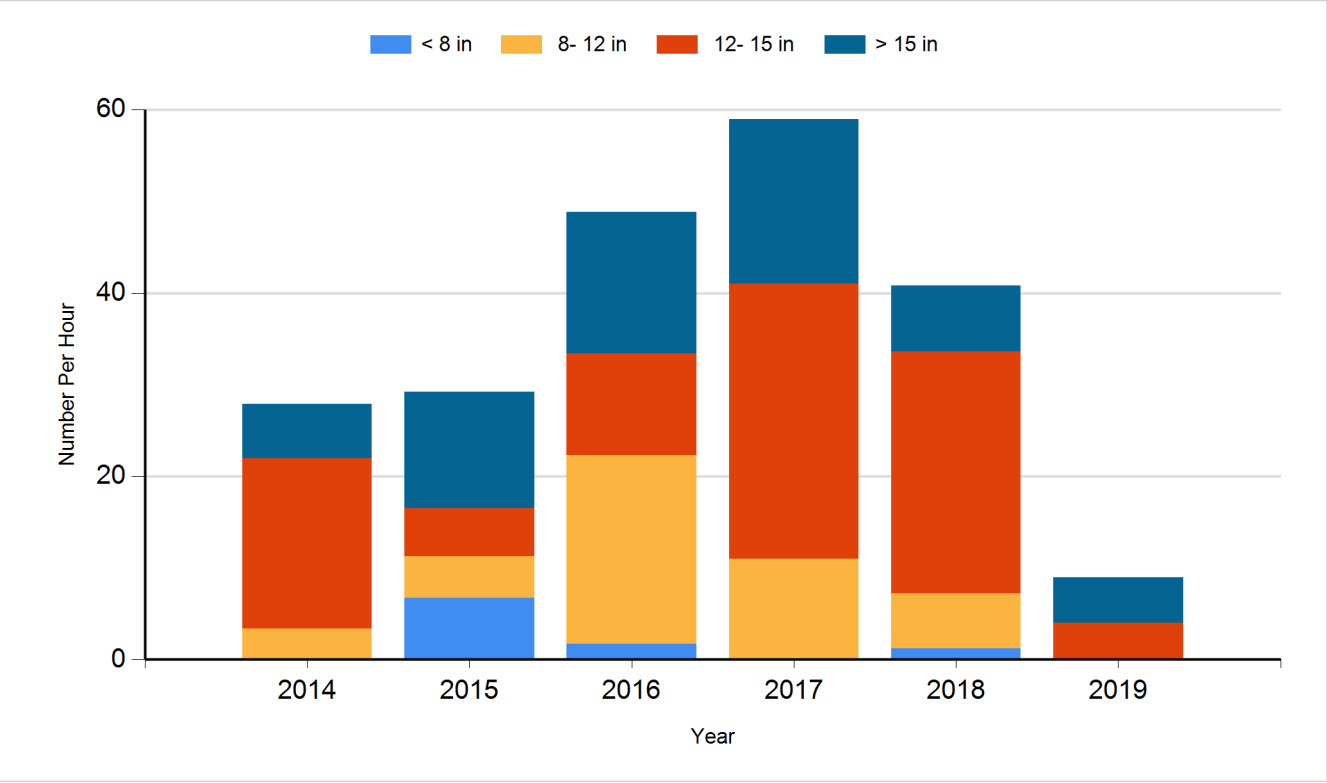
Species: Bluegill
Gear: frame net (std 3/4 in)



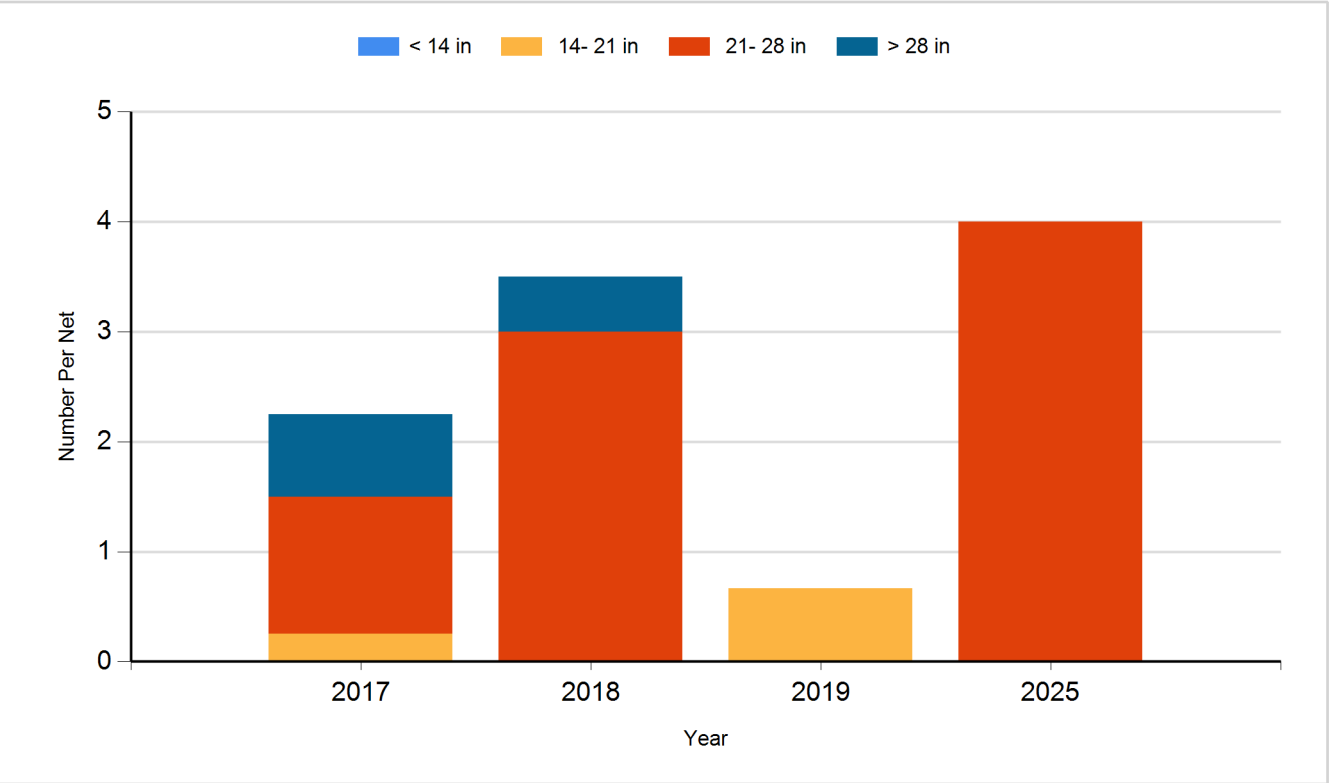
Species: Largemouth Bass
Gear: boat shocker (day)



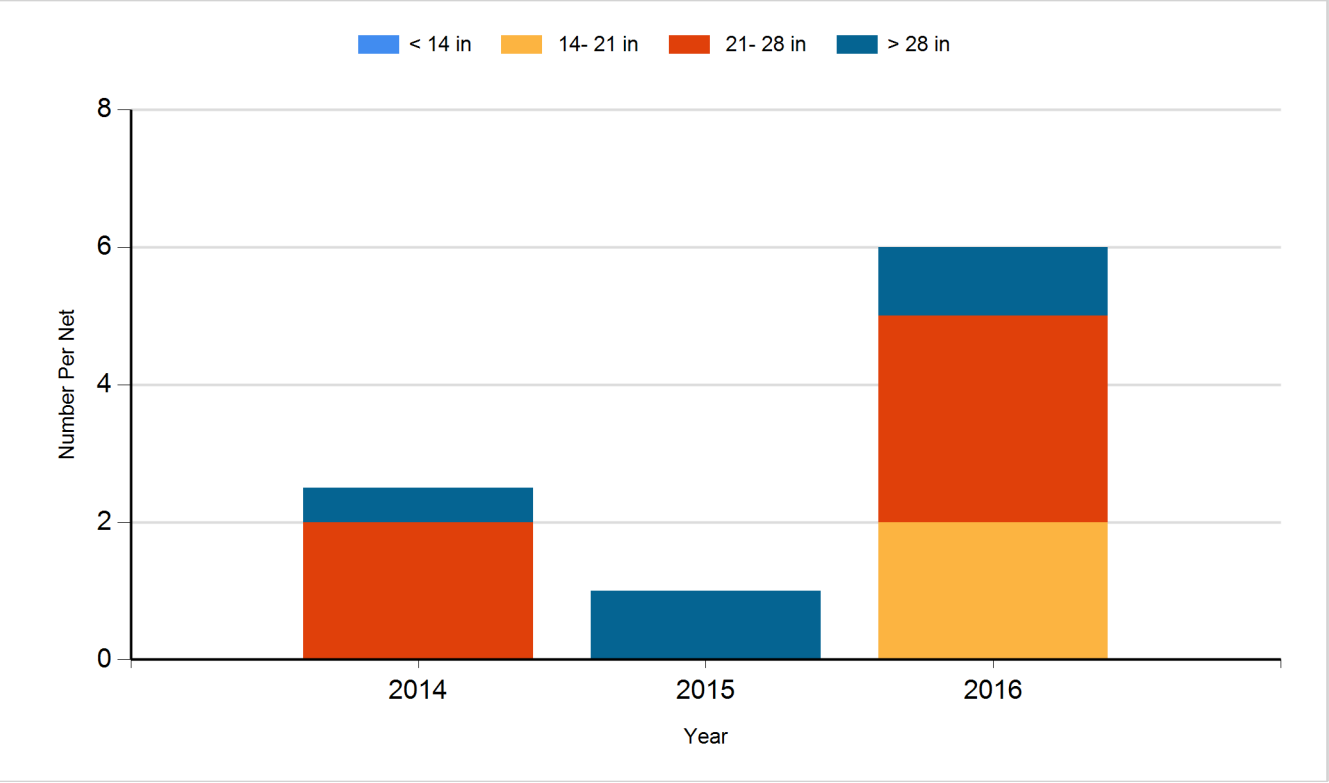
Species: Largemouth Bass
Gear: boat shocker (night)



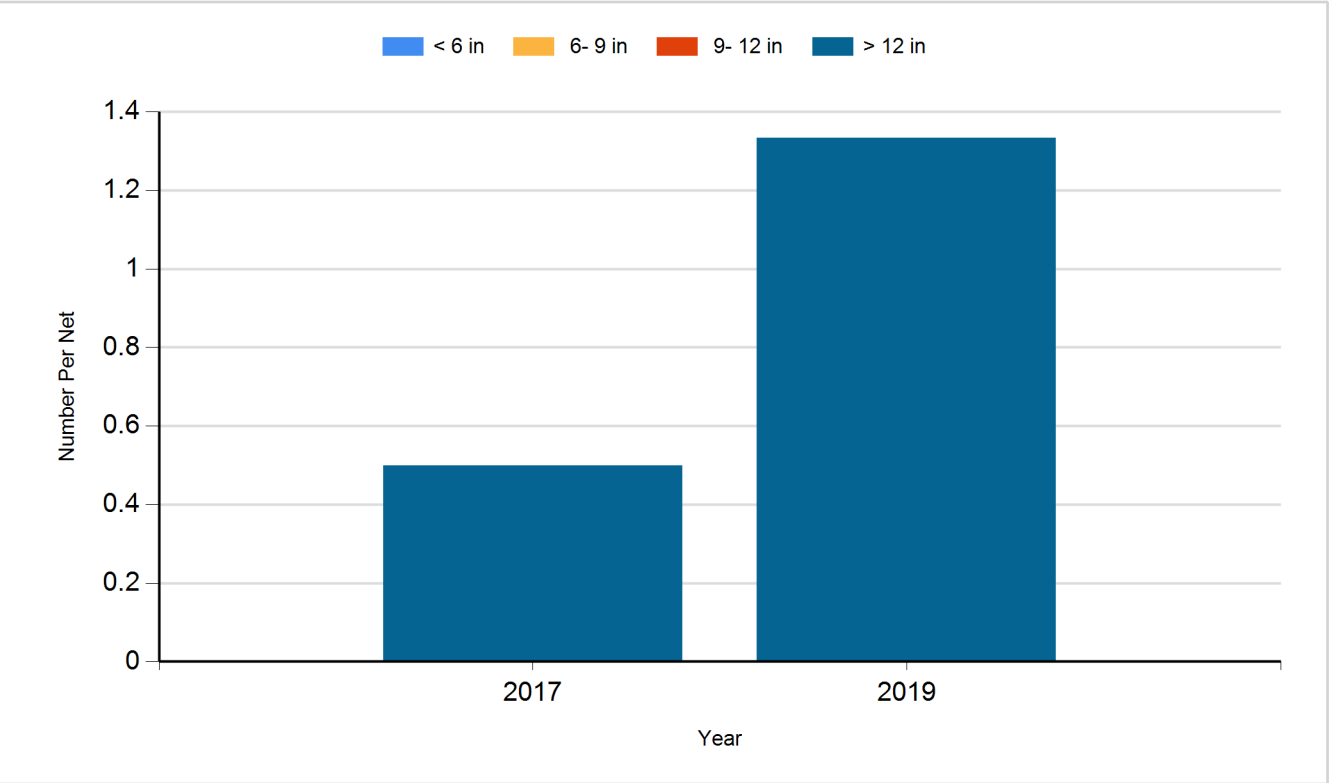
Species: Northern Pike
Gear: AFS std gill net



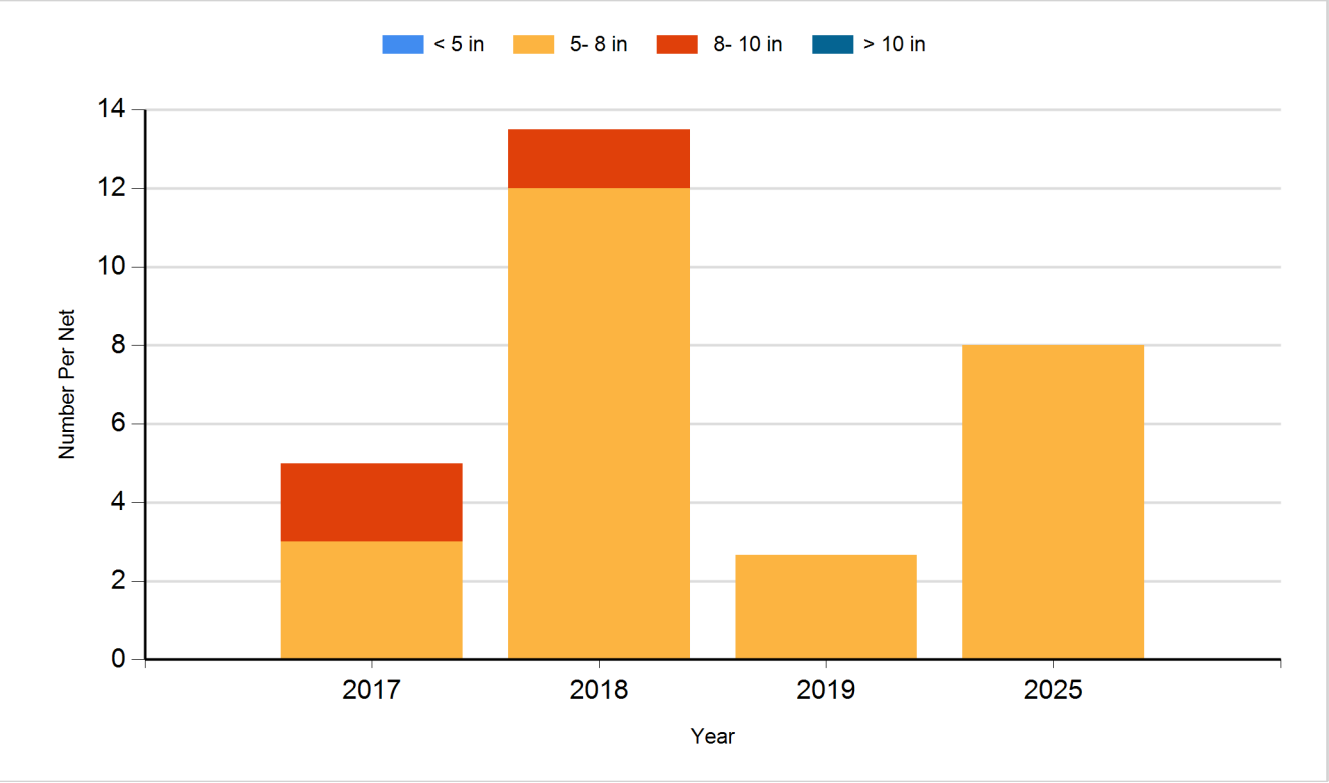
Species: Northern Pike
Gear: std exp gill net



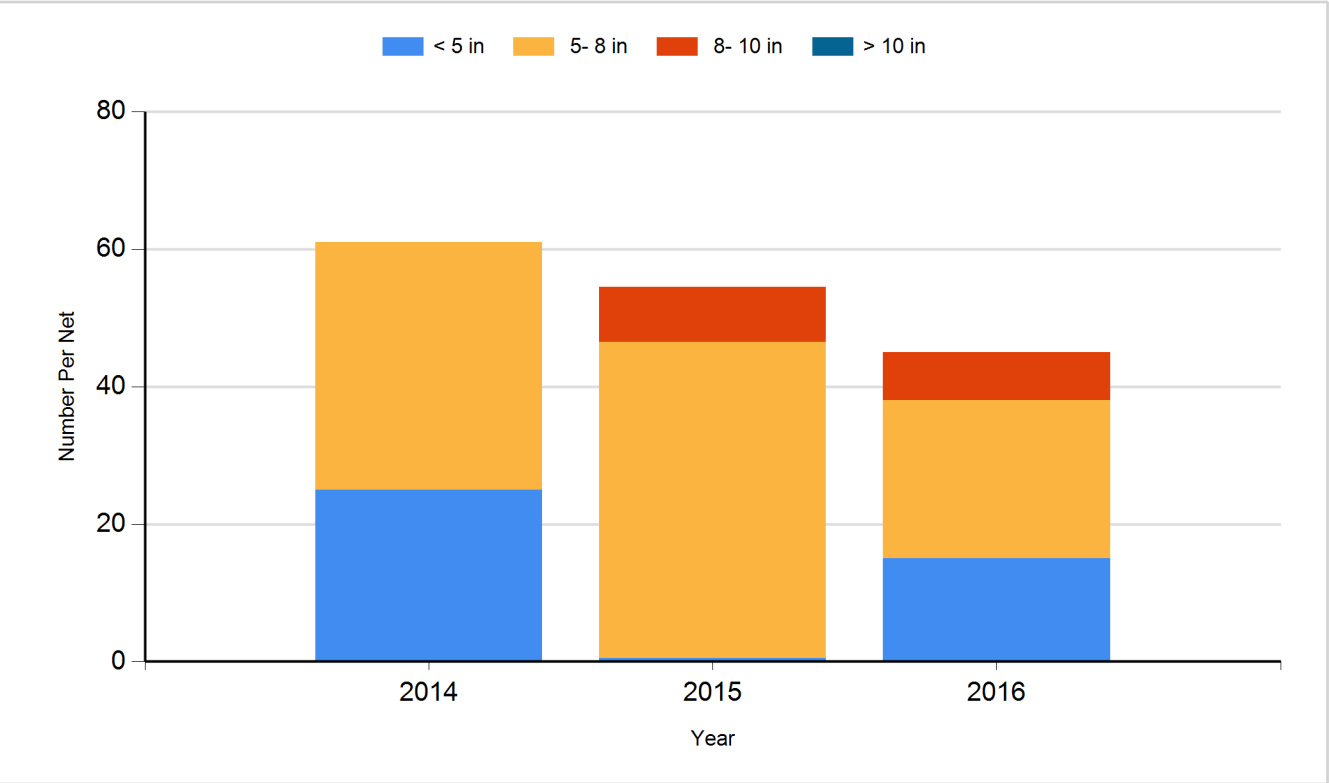
Species: White Bass
Gear: AFS std gill net



Species: Yellow Perch
Gear: AFS std gill net



Species: Yellow Perch
Gear: std exp gill net



Fish Stocking

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

Year	Species	Size	Number
2014	Largemouth Bass	Adult	175
2014	Largemouth Bass	Juvenile	200
2015	Largemouth Bass	Adult	112
2018	Largemouth Bass	Juvenile	601
2023	Largemouth Bass	Adult	134