

SOUTH DAKOTA STATEWIDE FISHERIES SURVEY

Dimock, Hutchinson County

LJA-Lake-34-000

2025

Lake Information

Name:	Dimock	Maximum Depth:	18 Feet
County:	Hutchinson	Mean Depth:	6 Feet
Legal Description:	T100N-R60W-Sec. 15		
Surface Area:	93 Acres		

Surveys and Investigations

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

Gear	Date	Effort
AFS std gill net	Jun 12, 2025	4 net-nights
frame net (std 3/4 in)	Jun 12, 2025	5 net-nights

Common Fish Species Present

Walleye

Black Bullhead

Common Carp

Black Crappie

Channel Catfish

Green Sunfish

Saugeye

Orangespotted Sunfish

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	97	6.0	2.9	0		0			
	Channel Catfish	1	0.3	0.4	100		0		115	
	Common Carp	56	11.5	2.8	15	8	0			
	Saugeye	2	0.5	0.5	100		0		111	8
frame net (std 3/4 in)	Black Bullhead	1151	139.6	139.1	2	1	0			
	Black Crappie	26	4.4	5.6	0		0		138	6
	Channel Catfish	18	3.6	3.4	67	18	0		104	4
	Common Carp	42	7.8	4.5	10		0			
	Green Sunfish	6	1.2	1.8	0		0			
	Orangespotted Sunfish	4	0.0	0.0						

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		32.6									32.60
	Black Crappie		0.8									0.80
	Common Carp		1.0									1.00
	Green Sunfish		0.8									0.80
	Orangespotted Sunfish		0.0									0.00
	Yellow Perch		0.6									0.60
AFS std gill net	Black Bullhead		53.3	39.2	24.5			38.0			6.0	32.20
	Black Crappie		0.3	0.2	0.0			0.3			0.0	0.16
	Channel Catfish		1.0	0.0	0.5			0.0			0.3	0.36
	Common Carp		11.0	6.3	5.3			33.0			11.5	13.42
	Gizzard Shad		1.0	0.0	0.0			0.0			0.0	0.20
	Green Sunfish		0.0	0.5	0.0			0.0			0.0	0.10
	Saugeye		0.0	0.0	0.0			0.0			0.5	0.10
	Walleye		5.3	2.0	0.5			0.3			0.0	1.62
	Yellow Perch		0.3	0.2	0.3			0.5			0.0	0.26
frame net (std 3/4 in)	Black Bullhead	65.8		299.6	166.0			175.8	84.7		139.6	155.25
	Black Crappie	1.0		6.8	7.4			23.6	0.0		4.4	7.20
	Bluegill	0.0		0.0	0.0			0.2	0.0		0.0	0.03
	Channel Catfish	0.4		0.0	0.4			0.6	0.0		3.6	0.83
	Common Carp	4.2		2.2	0.8			11.4	23.0		7.8	8.23
	Green Sunfish	0.6		2.0	0.6			7.0	0.0		1.2	1.90
	Orangespotted Sunfish	0.0		0.0	0.0			0.0	0.0		0.0	0.00
	Sunfish Hybrid	0.0		0.0	0.0			0.0	0.0		0.0	0.00
	Walleye	0.2		0.0	0.0			0.2	0.0		0.0	0.07
	Yellow Perch	0.4		0.2	1.0			0.4	0.0		0.0	0.33
std exp gill net	Black Bullhead	1.7										1.70
	Black Crappie	0.0										0.00
	Channel Catfish	0.0										0.00
	Common Carp	0.3										0.30
	Gizzard Shad	0.3										0.30
	Green Sunfish	0.3										0.30
	Orangespotted Sunfish	0.0										0.00
	Walleye	3.7										3.70

		CPUE										
Gear	Species	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Avg
std exp gill net	Yellow Perch	1.7										1.70

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		0								
		PSD-P		0								
	Black Crappie	PSD		25								
		PSD-P		25								
		Wr		215								
	Common Carp	PSD		40								
		PSD-P		20								
	Green Sunfish	PSD		25								
		PSD-P		0								
AFS std gill net	Black Bullhead	PSD		0	0	0			1			0
		PSD-P		0	0	0			0			0
	Black Crappie	PSD		100	100				100			
		PSD-P		100	0				0			
		Wr		107	103				90			
	Channel Catfish	PSD		100		0						100
		PSD-P		25		0						0
		Wr		99		97						115
	Common Carp	PSD		16	24	72			16			15
		PSD-P		2	3	3			0			0
	Green Sunfish	PSD			0							
		PSD-P			0							
	Saugeye	PSD										100
		PSD-P										0
		Wr										111
	Walleye	PSD		43	100	0			100			
		PSD-P		14	0	0			0			
		Wr		92	97	100			98			
frame net (std 3/4 in)	Black Bullhead	PSD	2		1	1			1	2		2
		PSD-P	0		0	0			0	0		0
	Black Crappie	PSD	100		56	38			24			0
		PSD-P	20		3	24			2			0
		Wr	102		98	97			101			138

Gear	Species	Index	Year									
			2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
frame net (std 3/4 in)	Channel Catfish	PSD	50			0			100			67
		PSD-P	0			0			67			0
		Wr	89			89			113			104
	Common Carp	PSD	29		55	75			12	9		10
		PSD-P	5		27	0			0	0		0
	Green Sunfish	PSD	33		10	33			11			0
		PSD-P	0		0	0			0			0
		Wr	115			89			91			
	Walleye	PSD	0						100			
		PSD-P	0						0			
		Wr	86						96			
std exp gill net	Black Bullhead	PSD	0									
		PSD-P	0									
	Common Carp	PSD	0									
		PSD-P	0									
	Green Sunfish	PSD	100									
		PSD-P	0									
		Wr	108									
	Walleye	PSD	27									
		PSD-P	0									
		Wr	91									

Length at Capture

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

Species: Walleye

Mean Length (expanded sample number) at capture by age											
Year	N	1	2	3	4	5	6	7	8	9	10+
2019	3	275 (3)									
2018	12			451 (3)	442 (9)						

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).

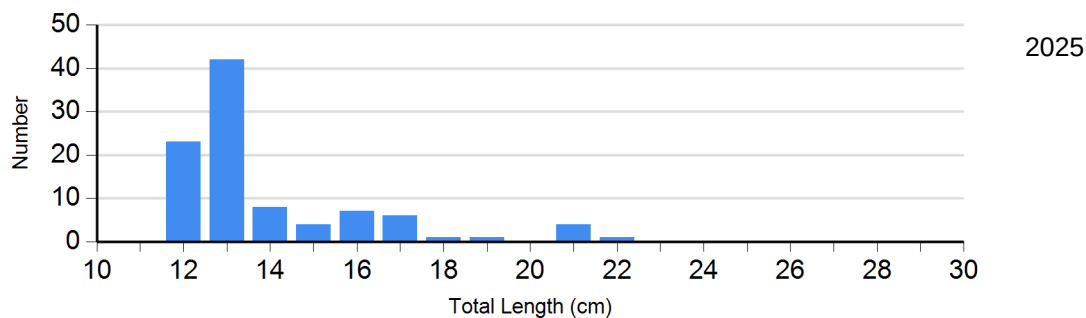
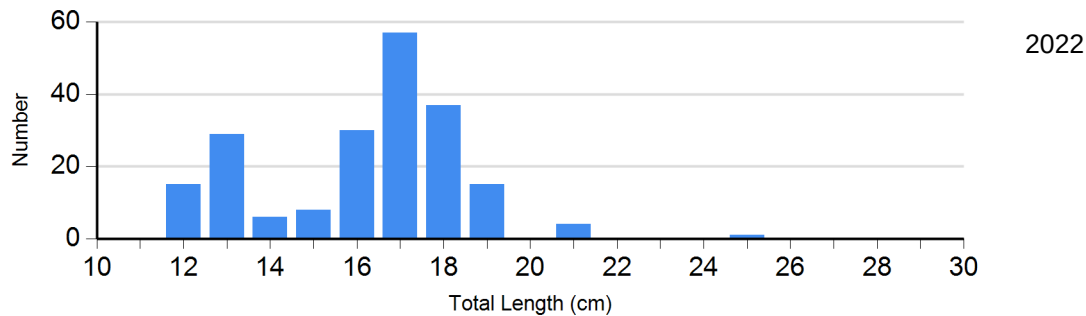
Species	Year	Length Groups							
		S-Q		Q-P		P-M		M	
		N	Wr (SE)	N	Wr (SE)	N	Wr (SE)	N	Wr (SE)
Black Crappie Frame Net	2022	90	103 (1.6)	26	95 (1.8)	2		0	
	2025	22	138 (4.8)	0		0		0	
Channel Catfish Gill Net	2025	0		1	115	0		0	
Saugeye Gill Net	2025	0		2	111 (6.5)	0		0	
Walleye Gill Net	2022	0		1	98	0		0	

Length Frequency Distribution

Length frequency histogram of species sampled by year.

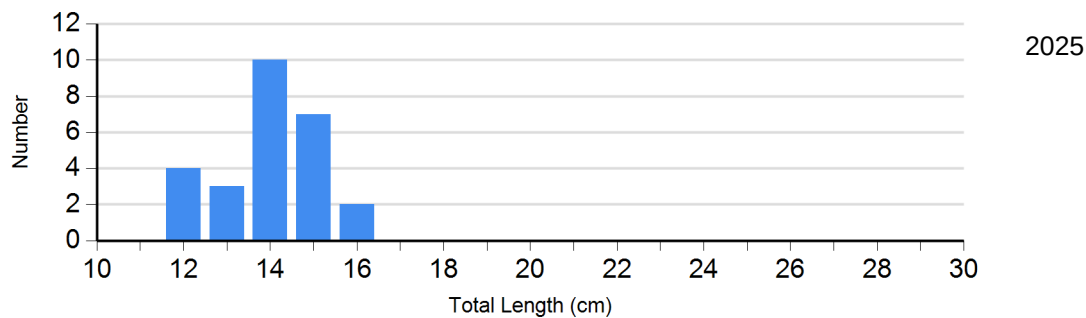
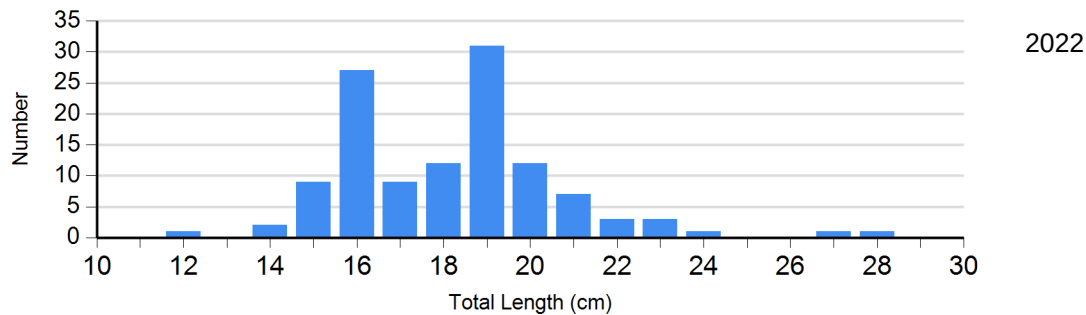
Species: Black Bullhead

Gear: AFS std gill net

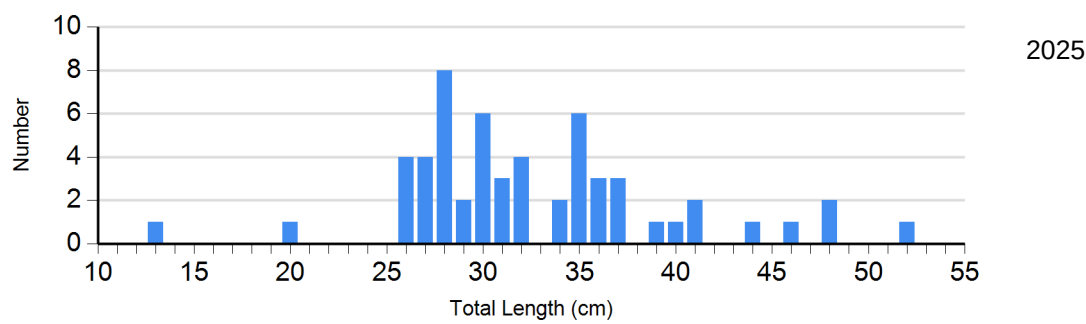
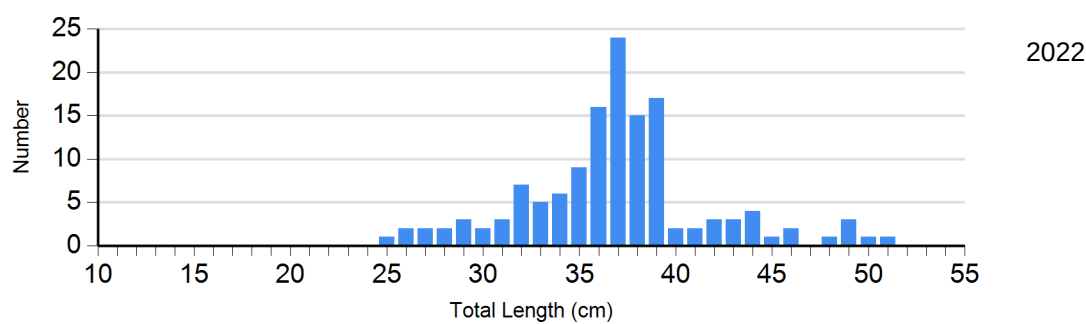


Species: Black Crappie

Gear: frame net (std 3/4 in)



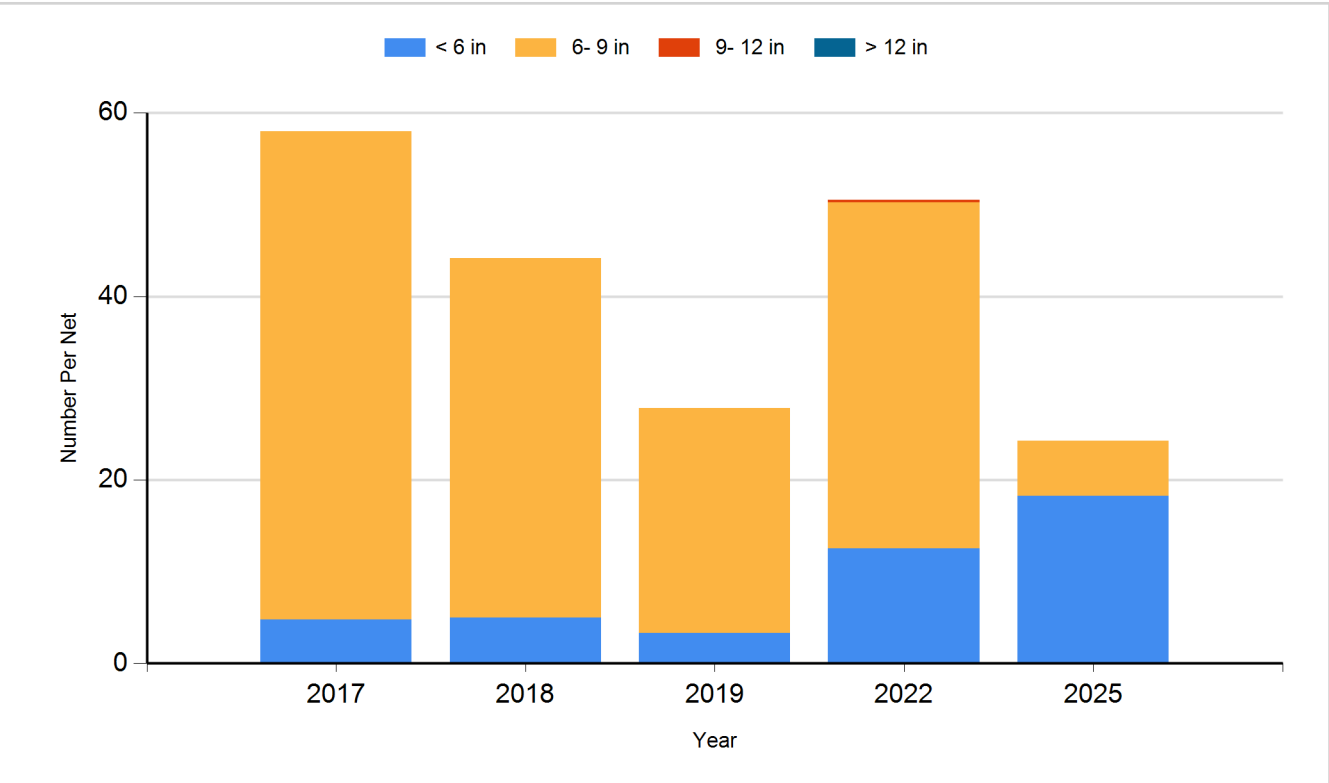
Species: Common Carp
Gear: AFS std gill net



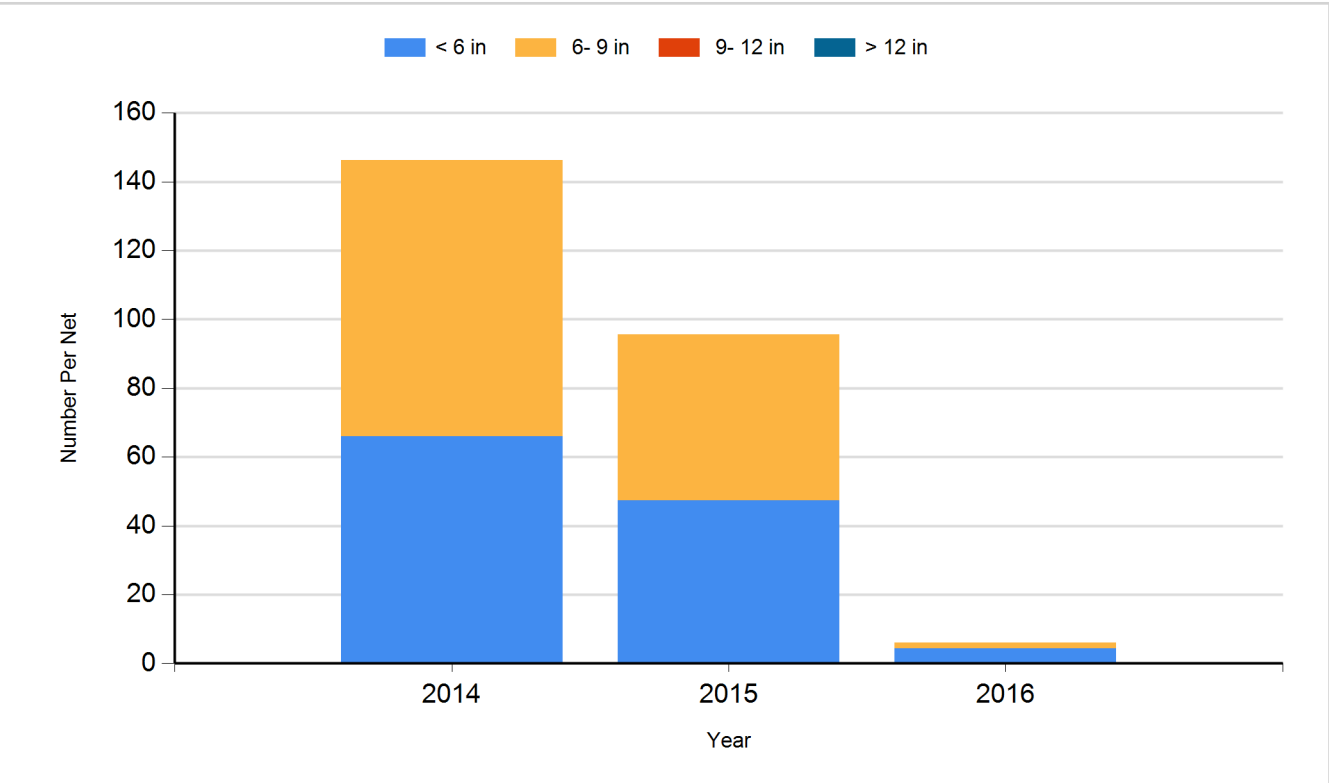
Historic Fish Sizes and Relative Abundance

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

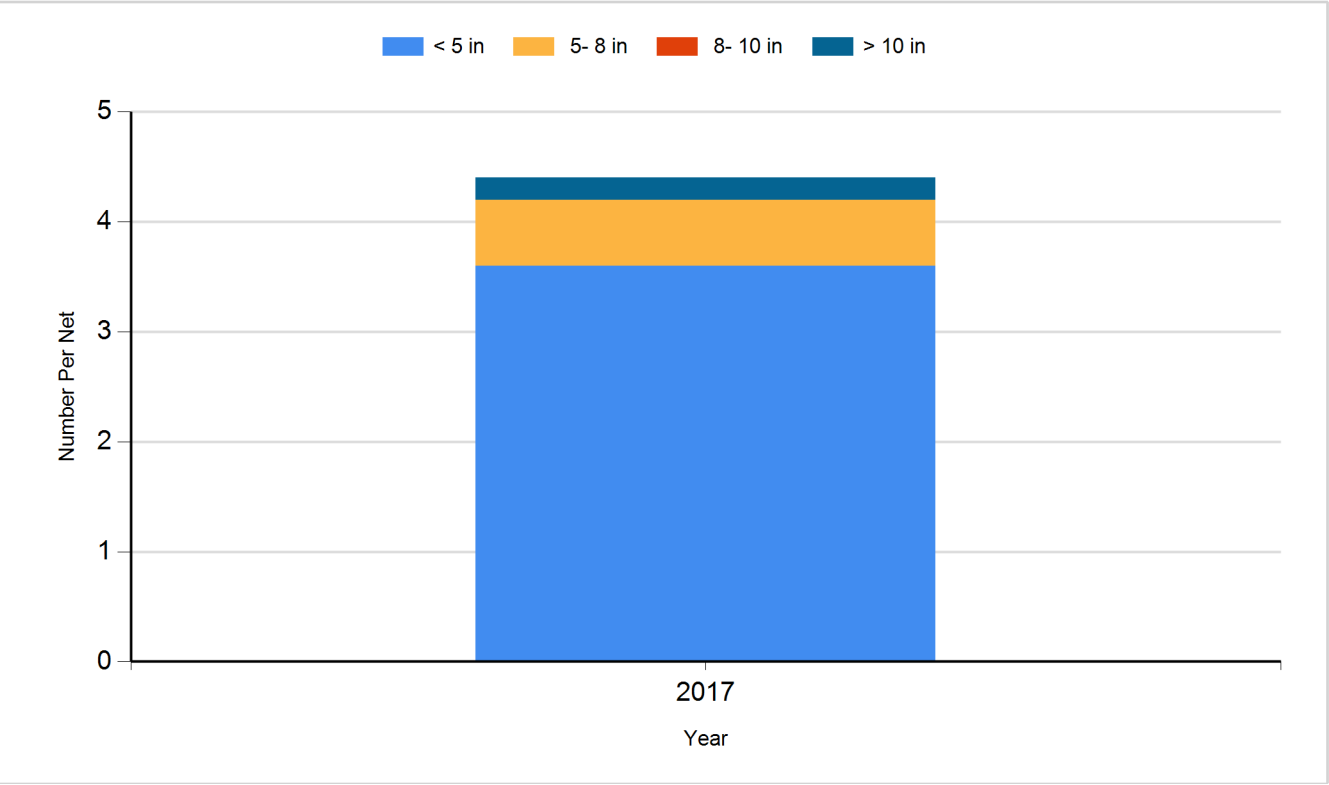
Species: Black Bullhead
Gear: AFS std gill net



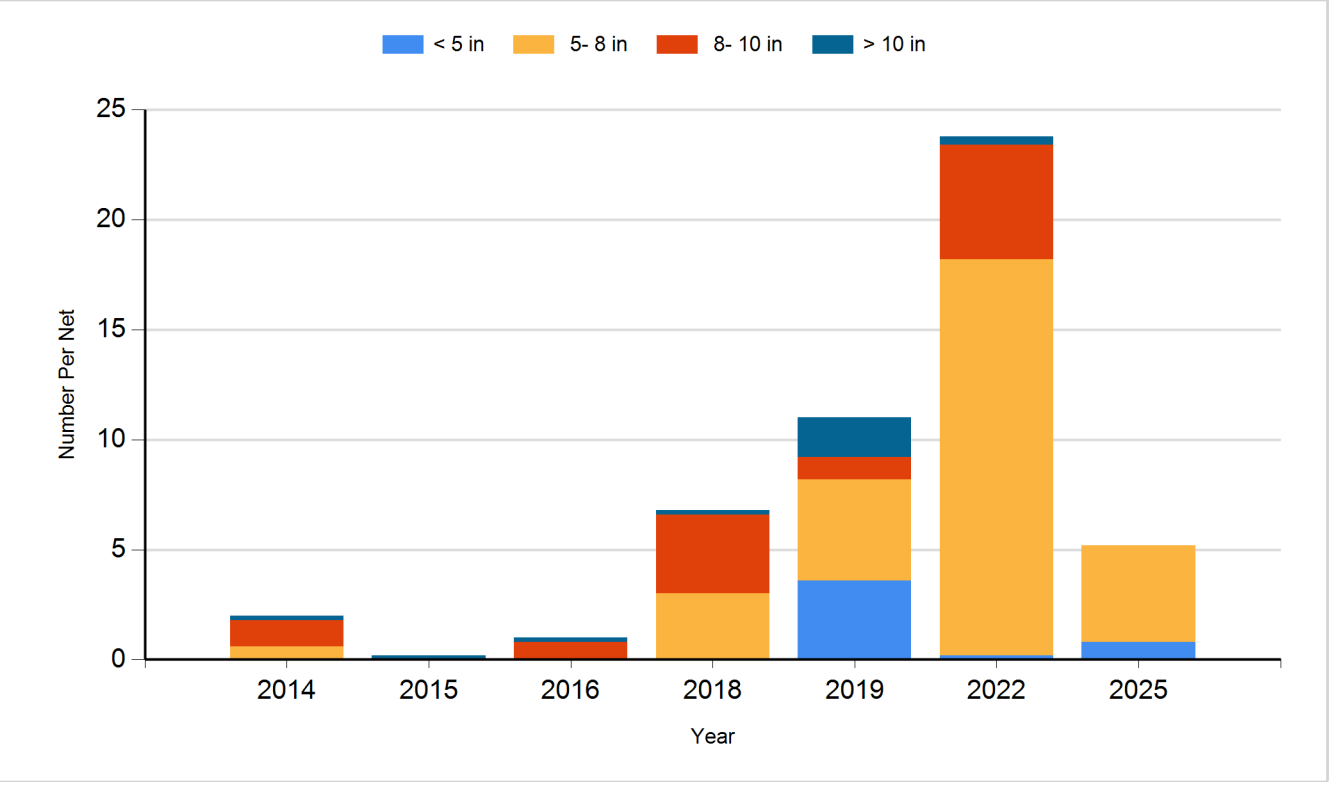
Species: Black Bullhead
Gear: std exp gill net



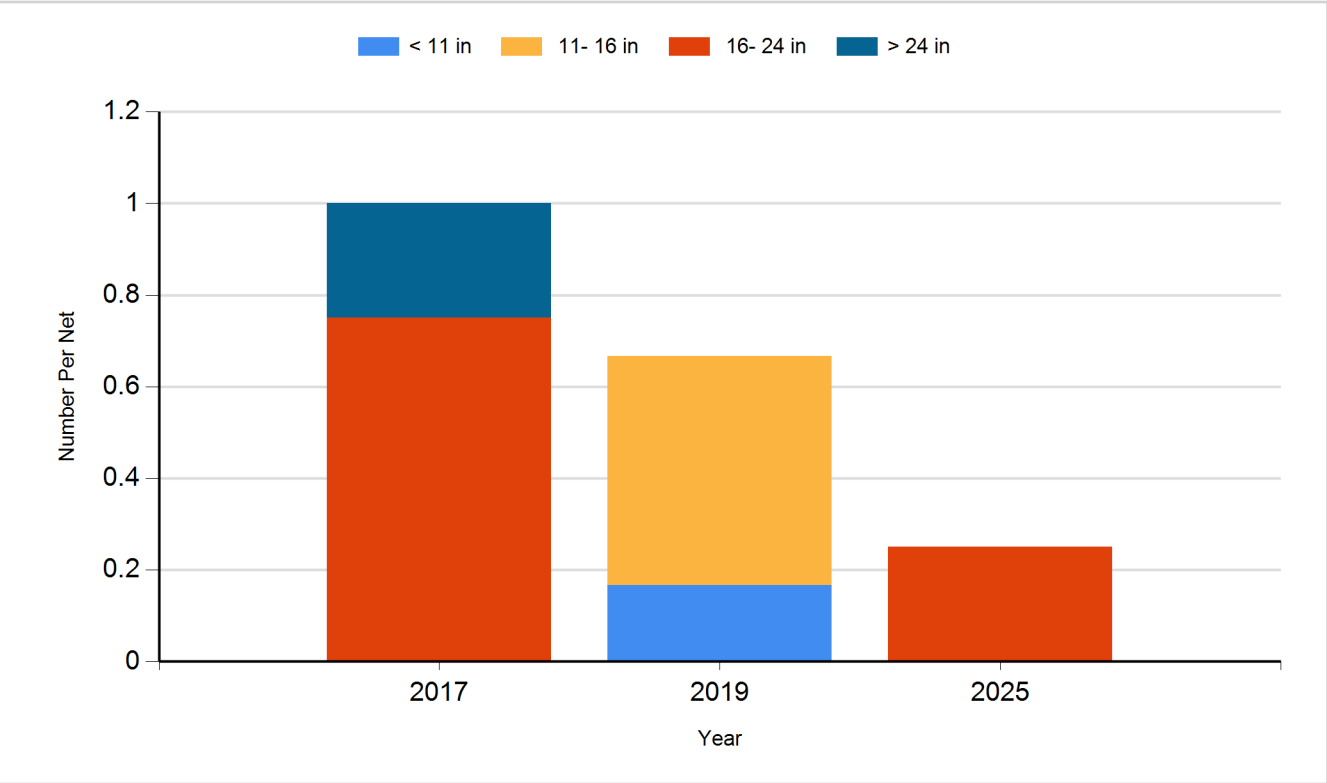
Species: Black Crappie
Gear: AFS std frame net



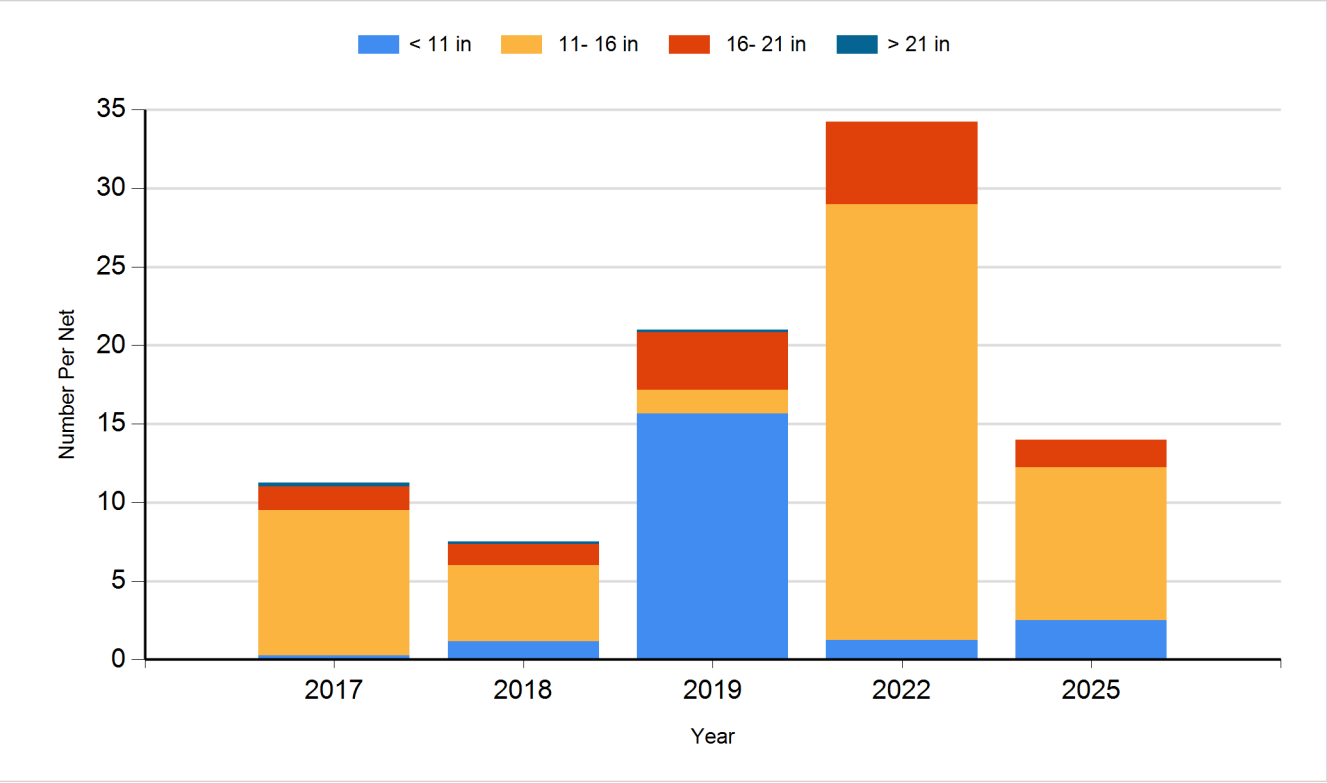
Species: Black Crappie
Gear: frame net (std 3/4 in)



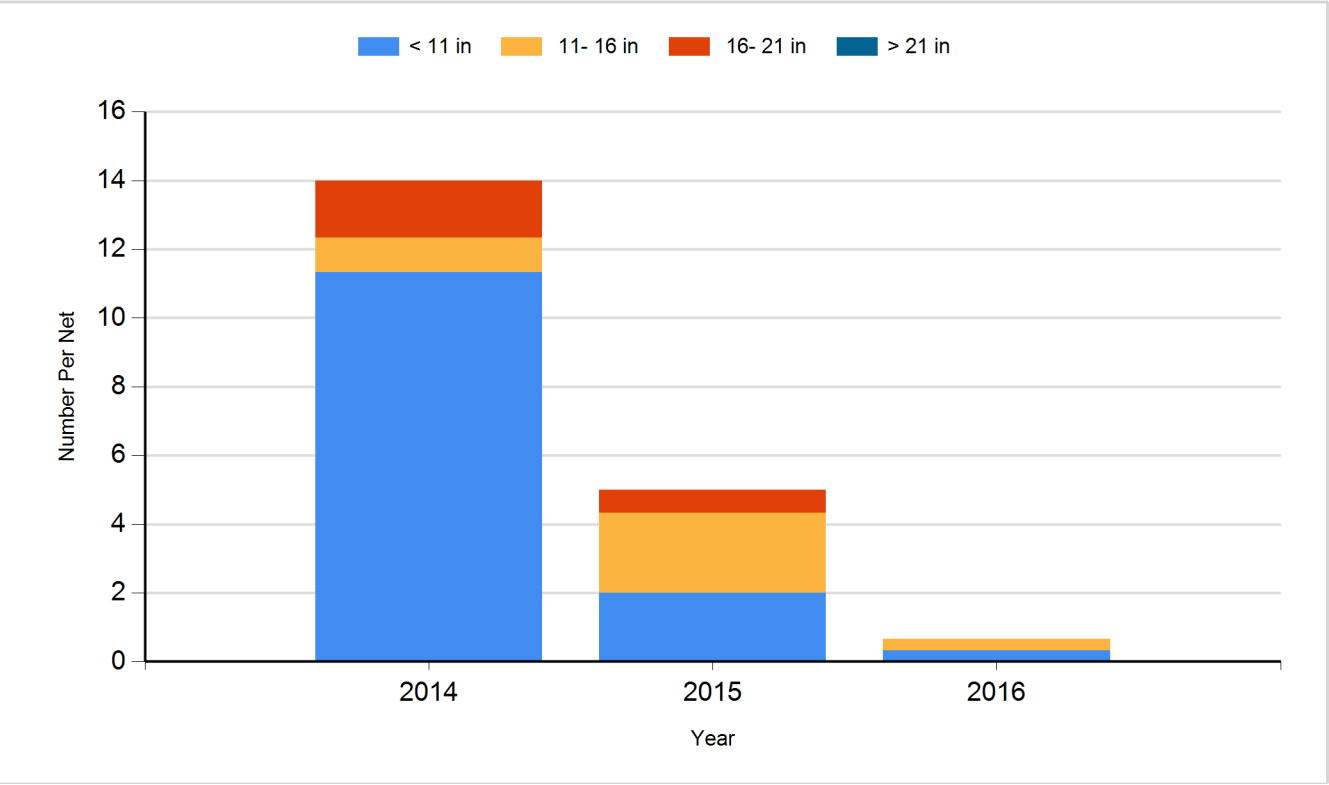
Species: Channel Catfish
Gear: AFS std gill net



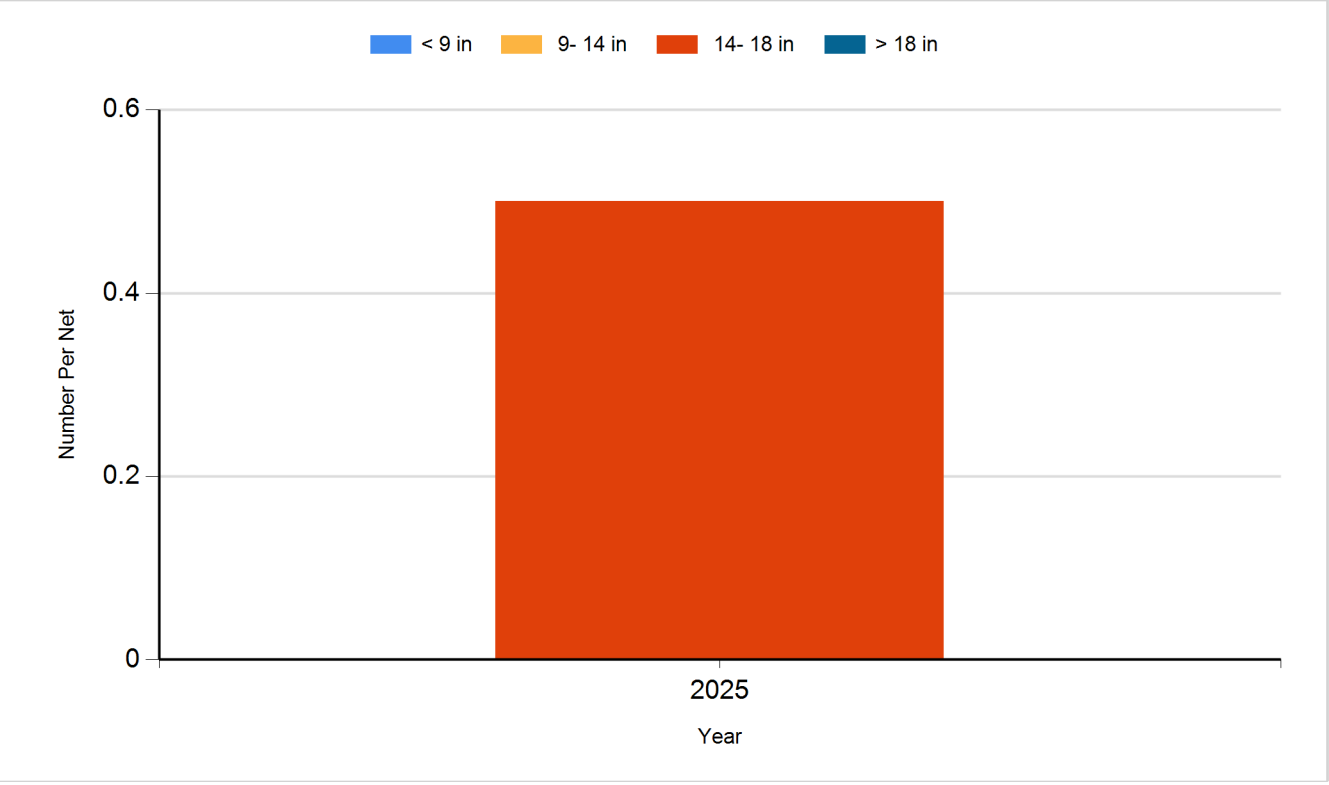
Species: Common Carp
Gear: AFS std gill net



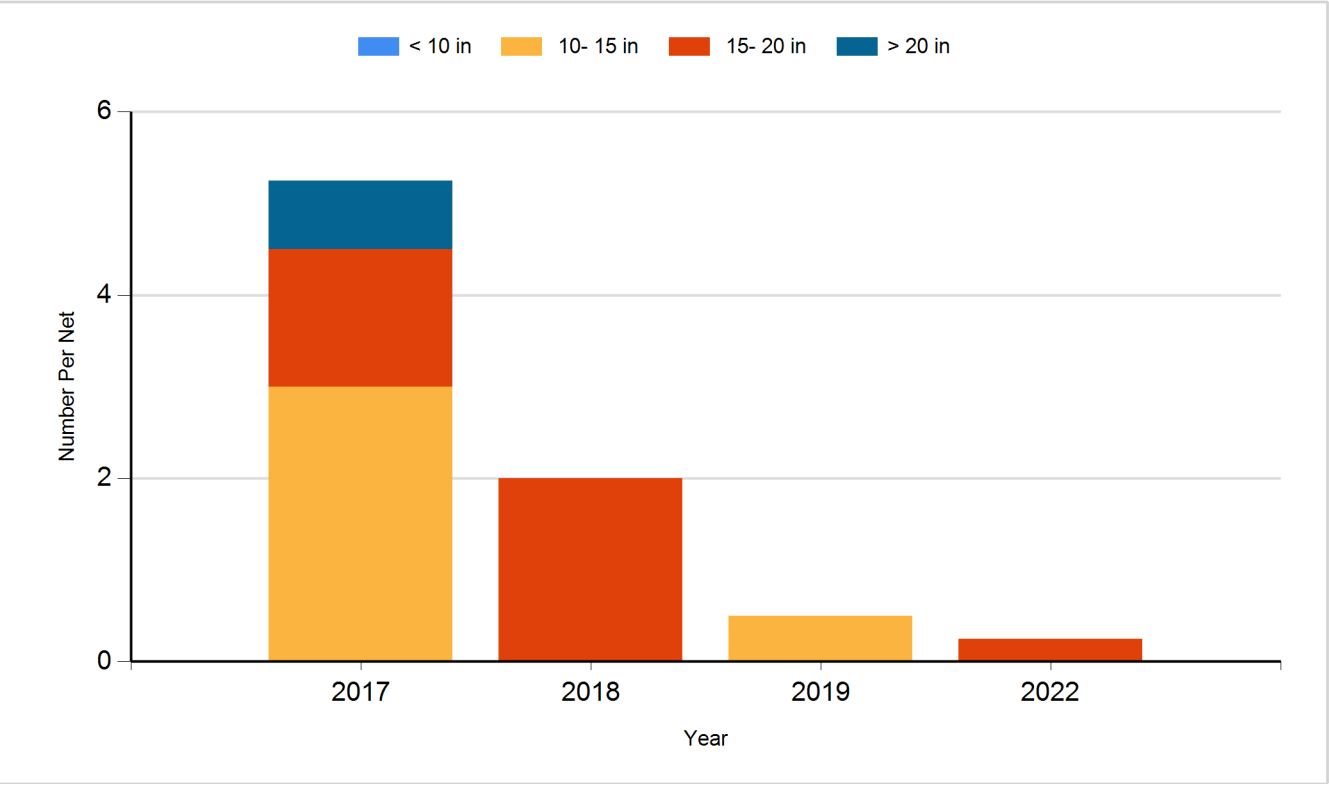
Species: Common Carp
Gear: std exp gill net



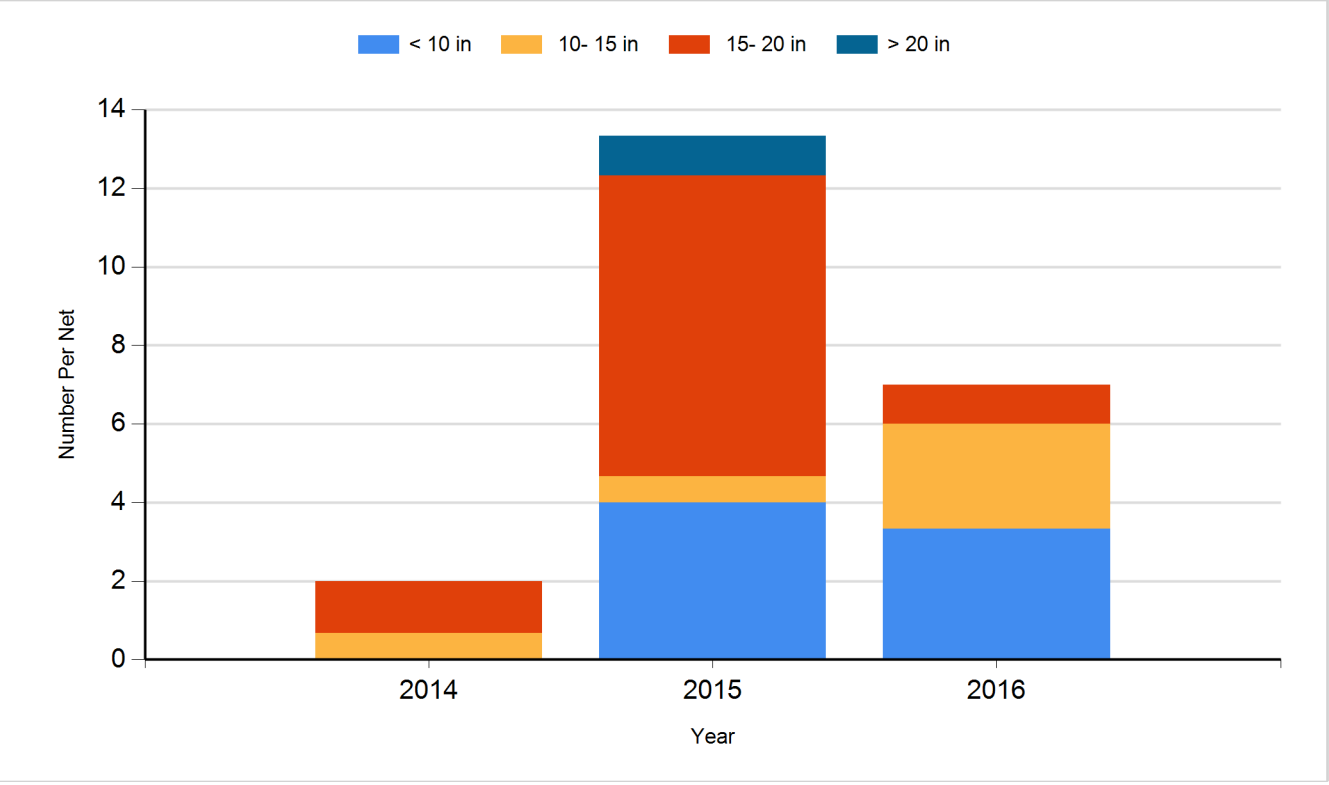
Species: Saugeye
Gear: AFS std gill net



Species: Walleye
Gear: AFS std gill net



Species: Walleye
Gear: std exp gill net



Fish Stocking

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

Year	Species	Size	Number
2014	Walleye	Fry	75,000
2015	Walleye	Small Fingerling	5,120
2016	Gizzard Shad	Adult	235
2016	Walleye	Juvenile	647
2017	Yellow Perch	Small Fingerling	50,640
2019	Walleye	Small Fingerling	6,000
2022	Saugeye	Juvenile	7,315
2023	Channel Catfish	Juvenile	1,554
2023	Saugeye	Juvenile	5,236
2024	White Crappie	Adult	620
2025	Black Crappie	Adult	84
2025	Bluegill	Adult	700
2025	Walleye	Juvenile	5,460