#### **Lake Alvin Survey Summary**

Lake Alvin, located 5 miles east and ½ a mile north of Harrisburg, SD, is managed as a walleye and yellow perch fishery; other fish species (e.g., black crappie, bluegill, channel catfish, largemouth bass, and white crappie) provide additional angling opportunities.

- Walleye. Gill netting efforts failed to produce any walleye in 2023. Relative abundance has remained quite low over the past decade despite numerous stocking events (CPUE's ranging from 0.0 to 0.5 fish per net). Fisheries personnel began stocking saugeye instead of walleye into Lake Alvin in 2023 in an attempt to improve catch rates. This walleye-sauger hybrid is more tolerant of the turbid (murky) water conditions that currently exist in the lake. The area Conservation Officer, Josh Vanden Bosch, reported that anglers were catching a lot of small (5-7 inch) saugeyes right before ice-up suggesting that this latest stocking might produce some good fishing.
- Yellow perch. Gill netting efforts failed to produce any yellow perch in 2023. Catches have ranged from 0 to 1.5 fish per net in the past 7 years (average CPUE = 0.3 fish per net). Approximately 5,500 adult and 54,800 juvenile yellow perch were stocked in 2017 to improve abundances. Catches did improve slightly the following year (CPUE increased from 0.2 to 1.5 fish per net in 2018) before they quickly fell back to pre-stocking abundances.
- Black crappie. Black crappie abundance decreased to 7.9 fish per frame net in 2023. Relative abundance has been decreasing since the recent high observed in 2021 (147.6 fish per net). The large drop in catches was likely the result of a fish kill which occurred late in the summer of 2021. Sampled fish ranged from 3.5 to 12.6 inches in length with a significant proportion (62%) measuring >8 inches. Ten inch and larger fish accounted for approximately 22% of the sample. These larger size ranges (> 10 inches) were completely absent from the sample the previous year. Growth was good with a mean length at capture of 8.5 inches by age four and 10 inches by age five.
- **Bluegill.** Frame netting efforts produced 6.9 bluegill per net in 2023, which is similar to the previous year (7.2 fish per net in 2022) but lower than the long term mean (19.9 fish per net). Sampled fish ranged in length from 3.5 to 7.5 inches with approximately 40% measuring >6 inches. Four cohorts of fish contributed to the sample (2021, 2020, 2019, 2018) but the 2021 (age 2) and 2020 (age 3) year classes dominated catches comprising 90% of all fish sampled. Growth was close to the statewide average for small impoundments with fish achieving a mean length at capture of 6.2 inches by age 3.

For more detailed results see the computer-generated South Dakota Statewide Fisheries Survey for Lake Alvin (below).

## SOUTH DAKOTA STATEWIDE FISHERIES SURVEY

Alvin, Lincoln County LBS-Lake-180-000 2023

#### **Lake Information**

Name: Alvin Maximum Depth: 26 Feet

County: Lincoln Mean Depth: 9 Feet

Legal Description: T100N-R49W-Sec. 33,34

Surface Area: 105 Acres

# **Surveys and Investigations**

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

Gear	Date	Effort	
AFS std gill net	May 22, 2023	3 net-nights	
frame net (std 3/4 in)	May 22, 2023	5 net-nights	
frame net (std 3/4 in)	May 23, 2023	5 net-nights	

# **Common Fish Species Present**

Channel Catfish
Bluegill
Black Crappie
_argemouth Bass
Walleye
River Carpsucker
Black Bullhead
White Sucker
Common Carp

Green 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.

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

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.

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

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

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.

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

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).

	St	ock	Qu	ality	Preferred		Mem	orable	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		St	ock Der	sity Indic	es	Cor	ndition
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	0.3	0.6	100		0			
	Black Bullhead	21	6.3	6.2	16		0			
	Channel Catfish	5	1.7	3.1	60		0		82	5
	Common Carp	11	3.3	3.1	10		10			
	Freshwater Drum	2	0.7	1.3	50		0			
	River Carpsucker	48	15.7	15.0	100		81	9		
	White Sucker	13	4.3	4.4	92		54	23		
frame net (std 3/4	Bigmouth Buffalo	7	0.7	0.5	100		0			
in)	Black Bullhead	148	14.5	7.4	77	5	1			
	Black Crappie	84	7.9	4.5	62	8	22	7	96	1
	Bluegill	69	6.9	6.4	41	9	0		107	2
	Common Carp	25	2.5	1.5	8		4			
	Green Sunfish	9	0.9	0.5	11		0			
	River Carpsucker	38	3.7	2.9	100		89			
	Walleye	1	0.1	0.1	100		100		80	
	White Sucker	99	9.9	3.6	94	4	79	6		

# 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.

<sup>\*</sup> Methods/Species that ignore stock length

							CPUE					
Gear	Species	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Avg
AFS std frame	Black Bullhead				5.7	,	,	,				5.70
net	Black Crappie				23.2							23.20
	Bluegill				2.0							2.00
	Channel Catfish				0.0							0.00
	Common Carp				0.1							0.10
	Gizzard Shad				2.7							2.70
	Green Sunfish				0.2							0.20
	Orangespotted Sunfish				0.0							0.00
	Pumpkinseed				0.1							0.10
	River Carpsucker				0.2							0.20
	Sunfish Hybrid				0.3							0.30
	Walleye				0.2							0.20
	White Crappie				3.6							3.60
	White Sucker				1.3							1.30
AFS std gill net	Bigmouth Buffalo				0.0	0.2			0.5	0.0	0.3	0.20
	Black Bullhead				9.5	12.7			10.8	9.0	6.3	9.66
	Black Crappie				2.2	0.3			2.3	3.8	0.0	1.72
	Bluegill				0.0	0.2			0.0	1.0	0.0	0.24
	Channel Catfish				3.2	3.0			3.3	3.3	1.7	2.90
	Common Carp				0.0	2.0			8.0	0.5	3.3	1.32
	Freshwater Drum				1.2	2.2			0.0	1.3	0.7	1.08
	Gizzard Shad				16.7	0.7			0.0	2.3	0.0	3.94
	Northern Pike				0.2	0.0			0.0	0.0	0.0	0.04
	River Carpsucker				4.3	12.3			20.8	10.8	15.7	12.78
	Walleye				0.3	0.3			0.5	0.3	0.0	0.28
	White Bass				0.0	0.2			0.0	0.0	0.0	0.04
	White Crappie				0.5	0.2			8.0	0.0	0.0	1.74
	White Sucker				1.0	3.0			12.8	10.0	4.3	6.22
	Yellow Perch				0.2	1.5			0.0	0.0	0.0	0.34
frame net (std	Bigmouth Buffalo	0.5	0.1	0.1		0.0			0.2	0.4	0.7	0.29
3/4 in)	Black Bullhead	70.1	133.1	321.9		69.2			9.8	19.8	14.5	91.20
	Black Crappie	6.2	35.9	17.2		6.9			114.0	13.0	7.9	28.73
	Bluegill	3.2	60.5	49.0		1.8			10.6	7.2	6.9	19.89
	Channel Catfish	1.9	1.0	1.6		0.1			0.0	0.6	0.0	0.74

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							CPUE					
Gear	Species	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Avg
frame net (std	Common Carp	0.9	0.1	0.2		0.3			0.2	0.0	2.5	0.60
3/4 in)	Freshwater Drum	0.0	0.0	0.2		0.0			0.0	0.0	0.0	0.03
	Gizzard Shad	0.0	0.0	2.1		0.0			0.4	0.0	0.0	0.36
	Golden Shiner	0.0	0.0	0.0		0.0			0.0	0.0	0.0	0.00
	Green Sunfish	0.0	1.5	8.0		0.0			0.2	0.4	0.9	0.54
	Largemouth Bass	0.0	0.0	0.0		0.2			0.0	0.0	0.0	0.03
	Northern Pike	0.3	0.1	0.0		0.1			0.0	0.0	0.0	0.07
	Orangespotted Sunfish	0.0	0.0	0.0		0.0			0.0	0.0	0.0	0.00
	Pumpkinseed	0.0	0.0	0.1		0.0			0.0	0.0	0.0	0.01
	River Carpsucker	0.3	0.2	0.9		0.1			0.2	0.0	3.7	0.77
	Sunfish Hybrid	0.0	2.2	2.2		0.1			0.2	1.8	0.0	0.93
	Walleye	0.0	0.0	0.0		0.0			0.2	0.0	0.1	0.04
	White Crappie	0.8	3.6	3.3		2.3			112.8	0.0	0.0	17.54
	White Sucker	3.3	3.1	12.9		3.6			11.2	2.6	9.9	6.66
	Yellow Bullhead	0.6	0.0	0.0		0.0			0.4	0.4	0.0	0.20
	Yellow Perch	0.2	0.0	0.1		1.3			0.0	0.2	0.0	0.26
hoop net	Black Bullhead			28.0								28.00
	Black Crappie			0.7								0.70
	Bluegill			0.3								0.30
	Common Carp			1.7								1.70
spring day EF*	Largemouth Bass								6.0			6.00
std exp gill net	Black Bullhead	2.0	142.3	83.0								75.77
	Black Crappie	0.0	1.0	2.0								1.00
	Channel Catfish	5.3	12.7	4.3								7.43
	Common Carp	1.0	6.3	0.0								2.43
	Freshwater Drum	1.7	0.7	3.0								1.80
	Gizzard Shad	0.0	0.3	11.3								3.87
	Largemouth Bass	0.0	0.0	0.3								0.10
	Northern Pike	0.7	0.0	0.0								0.23
	River Carpsucker	1.3	1.3	10.3								4.30
	Walleye	0.0	0.3	0.0								0.10
	White Crappie	0.0	0.0	0.7								0.23
	White Sucker	2.0	4.0	6.0								4.00

# 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.

							Υe	ar				
Gear	Species	Index	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
AFS std frame	Black Bullhead	PSD				0						
net		PSD-P				0						
	Black Crappie	PSD				84						
		PSD-P				8						
		Wr				92						
	Bluegill	PSD				60						
		PSD-P				0						
		Wr				94						
	Channel Catfish	PSD				0						
		PSD-P				0						
	Common Carp	PSD				100						
		PSD-P				0						
	Green Sunfish	PSD				0						
		PSD-P				0						
	River Carpsucker	PSD				100						
		PSD-P				100						
	Walleye	PSD				0						
		PSD-P				0						
		Wr				85						
	White Sucker	PSD				100						
		PSD-P				85						
AFS std gill net	Black Bullhead	PSD				0	0			60	78	16
		PSD-P				0	0			0	0	0
	Black Crappie	PSD				69	100			11	13	
		PSD-P				15	50			0	0	
		Wr				87	96			126	116	
	Bluegill	PSD					100				25	
		PSD-P					0				0	
		Wr					93				107	
	Channel Catfish	PSD				47	61			85	62	60
		PSD-P				5	17			15	0	0
		Wr				95	93			88	96	82
	Common Carp	PSD					50			100	100	10
							11/12	/2024	ſ	Page 8		

							Ye	ar				
Gear	Species	Index	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
AFS std gill net	Common Carp	PSD-P					17			0	50	10
	River Carpsucker	PSD				100	100			100	95	100
		PSD-P				100	91			66	77	81
	Walleye	PSD				50	100			0	100	
		PSD-P				50	0			0	0	
		Wr				92	87			91	95	
	White Sucker	PSD				83	83			94	80	92
		PSD-P				83	56			33	48	54
frame net (std	Black Bullhead	PSD	16	2	0		0			65	93	77
3/4 in)		PSD-P	0	0	0		0			0	0	1
	Black Crappie	PSD	77	8	12		100			32	29	62
		PSD-P	2	0	2		78			6	0	22
		Wr	93	100	95		93			113	105	96
	Bluegill	PSD	78	34	51		44			51	39	41
		PSD-P	3	0	0		0			0	0	0
		Wr	102	94	97		105			100	104	107
	Channel Catfish	PSD	42	20	44		100				33	
		PSD-P	0	0	0		0				0	
		Wr	88	82	103		88				106	
	Common Carp	PSD	22	0	50		0			100		8
		PSD-P	22	0	50		0			100		4
	Green Sunfish	PSD		7	38					0	0	11
		PSD-P		0	0					0	0	0
		Wr		103	93						115	
	Largemouth Bass	PSD	0				100					
		PSD-P	0				50					
		Wr					89					
	River Carpsucker	PSD	0	100	100		100			100		100
		PSD-P	0	50	100		100			100		89
	Walleye	PSD			0		0			0		100
		PSD-P			0		0			0		100
		Wr								76		80
	White Sucker	PSD	82	97	100		94			98	92	94
		PSD-P	67	65	77		75			39	54	79
hoop net	Black Bullhead	PSD			0							
		PSD-P			0							

			Year									
Gear	Species	Index	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
hoop net	Black Crappie	PSD			0							
		PSD-P			0							
		Wr			95							
	Bluegill	PSD			0							
		PSD-P			0							
		Wr			95							
	Common Carp	PSD			100							
		PSD-P			100							
spring day EF	Largemouth Bass	PSD								83		
		PSD-P								17		
		Wr								104		
std exp gill net	Black Bullhead	PSD	50	0	0							
		PSD-P	0	0	0							
	Black Crappie	PSD		0	17							
		PSD-P		0	0							
		Wr			99							
	Channel Catfish	PSD	75	84	69							
		PSD-P	6	0	0							
		Wr	89	85	89							
	Common Carp	PSD	67	5								
		PSD-P	67	5								
	Largemouth Bass	PSD			0							
		PSD-P			0							
		Wr			101							
	River Carpsucker	PSD	0	100	94							
		PSD-P	0	75	68							
	Walleye	PSD		100								
		PSD-P		0								
		Wr		93								
	White Sucker	PSD	67	100	94							
		PSD-P	33	33	39							

# **Length at Capture**

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

Species: Black Crappie

Mean Length (expanded sample number) at Year         N         1         2         3         4         5         6         7           2023         69         120         158         170         193           (38)         (24)         (4)         (3)           2022         38         79         132         167         180         174           (3)         (21)         (10)         (3)         (1)           2021         50         116         153         162           (21)         (28)         (2)           2018         18         115         147         152         155           (3)         (3)         (6)         (5)           2017         22         72         124         149         158         170         174           (2)         (6)         (2)         (7)         (3)         (2)           2015         605         136         155         172         177	
(5) (27) (20) (28) (4)  2022 65	
2022 65	
(19) (30) (16)  2021 464	
2021 464	
Company	
2018 72 96 209 229 262 268 288 28 2017 235 90 184 215 234 252 251 2016 172 162 193 258 254 (85) (81) (5) (2) 2015 409 124 176 224 (70) (316) (23) 2014 70 125 207 248 239 (11) (56) (2) (1) 3 49 124 176 224 2014 70 125 207 248 239 (11) (56) (2) (1) 3 49 124 176 224 (70) (316) (23) 2014 70 125 207 248 239 (11) (56) (2) (1) 4 50 202 38 79 132 167 180 174 (3) (21) (10) (3) (1) 2021 50 116 153 162 (21) (28) (2) 2018 18 115 147 152 155 (3) (3) (3) (6) (5) 2017 22 72 124 149 158 170 174 (2) (6) (2) (7) (3) (2) 2015 605 136 155 172 177	
(3) (4) (6) (32) (26) (1  2017 235 90 184 215 234 252 251  2016 172 162 193 258 254  (85) (81) (5) (2)  2015 409 124 176 224  (70) (316) (23)  2014 70 125 207 248 239  (11) (56) (2) (1)  Species: Bluegill     Mean Length (expanded sample number) at a second sec	
2017 235 90 184 215 234 252 251 2016 172 162 193 258 254 (85) (81) (5) (2) 2015 409 124 176 224 (70) (316) (23) 2014 70 125 207 248 239 (11) (56) (2) (1)  Species: Bluegill  Mean Length (expanded sample number) at a second sec	
Company	
2016 172	
(85) (81) (5) (2)  2015 409 124 176 224 (70) (316) (23)  2014 70 125 207 248 239 (11) (56) (2) (1)  Species: Bluegill   Mean Length (expanded sample number) at Year N 1 2 3 4 5 6 7  2023 69 120 158 170 193 (38) (24) (4) (3)  2022 38 79 132 167 180 174 (3) (21) (10) (3) (1)  2021 50 116 153 162 (21) (28) (2)  2018 18 115 147 152 155 (3) (3) (3) (6) (5)  2017 22 72 124 149 158 170 174 (2) (6) (2) (7) (3) (2)  2015 605 136 155 172 177	
(70) (316) (23)  2014 70 125 207 248 239 (11) (56) (2) (1)  Species: Bluegill  Mean Length (expanded sample number) at 1  Year N 1 2 3 4 5 6 7  2023 69 120 158 170 193 (38) (24) (4) (3)  2022 38 79 132 167 180 174 (3) (21) (10) (3) (1)  2021 50 116 153 162 (21) (28) (2)  2018 18 115 147 152 155 (3) (3) (3) (6) (5)  2017 22 72 124 149 158 170 174 (2) (6) (2) (7) (3) (2)  2015 605 136 155 172 177	
2014 70 125 207 248 239 (2) (1)  Species: Bluegill  Mean Length (expanded sample number) at a sample number) at a sample number and a sample number at a sample number and a sample number at a sample number and a sample number at a sample num	
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Mean Length (expanded sample number) at Year         N         1         2         3         4         5         6         7           2023         69         120         158         170         193           (38)         (24)         (4)         (3)           2022         38         79         132         167         180         174           (3)         (21)         (10)         (3)         (1)           2021         50         116         153         162           (21)         (28)         (2)           2018         18         115         147         152         155           (3)         (3)         (6)         (5)           2017         22         72         124         149         158         170         174           (2)         (6)         (2)         (7)         (3)         (2)           2015         605         136         155         172         177	
Year         N         1         2         3         4         5         6         7           2023         69         120         158         170         193           2022         38         79         132         167         180         174           2021         50         116         153         162           (21)         (28)         (2)           2018         18         115         147         152         155           (3)         (3)         (6)         (5)           2017         22         72         124         149         158         170         174           (2)         (6)         (2)         (7)         (3)         (2)           2015         605         136         155         172         177	
2023       69       120       158       170       193         (38)       (24)       (4)       (3)         2022       38       79       132       167       180       174         (3)       (21)       (10)       (3)       (1)         2021       50       116       153       162         (21)       (28)       (2)         2018       18       115       147       152       155         (3)       (3)       (6)       (5)         2017       22       72       124       149       158       170       174         (2)       (6)       (2)       (7)       (3)       (2)         2015       605       136       155       172       177	apture by age
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2022     38     79     132     167     180     174       2021     50     116     153     162       (21)     (28)     (2)       2018     18     115     147     152     155       (3)     (3)     (6)     (5)       2017     22     72     124     149     158     170     174       (2)     (6)     (2)     (7)     (3)     (2)       2015     605     136     155     172     177	
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2018     18     115     147     152     155       (3)     (3)     (6)     (5)       2017     22     72     124     149     158     170     174       (2)     (6)     (2)     (7)     (3)     (2)       2015     605     136     155     172     177	
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(4) (7) (16) (4) (1)	
pecies: Walleye	
Mean Length (expanded sample number) at	
Year N 1 2 3 4 5 6 7	apture by age
2018 2 427	

## **Fish Condition**

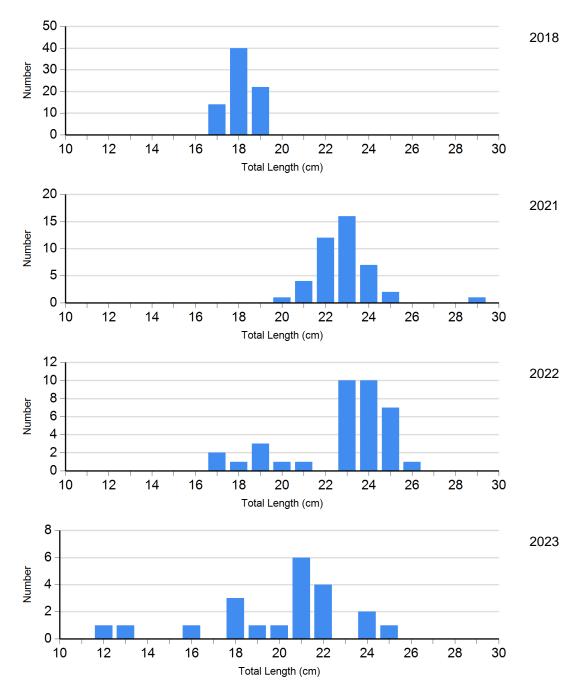
Mean relative weight (Wr) by sample size (N), length category stock to quality (S-Q), quality to preferred (Q-P), preferred to memorable (P-M), and memorable (M) for species collected across survey years with standard error (SE).

		Length Groups							
			S-Q		Q-P		P-M		М
Species	Year	N	Wr (SE)	N	Wr (SE)	N	Wr (SE)	N	Wr (SE)
Black Crappie Frame Net	2021	389	116 (1.5)	144	101 (0.8)	24	90	13	
	2022	46	109 (1.2)	19	98 (1.5)	0		0	
	2023	30	101 (1.1)	32	94 (1.2)	11	92 (1.4)	6	88 (3.1)
Bluegill Frame Net	2021	26	99 (3.5)	27	101 (1.4)	0		0	
	2022	22	104 (2.1)	14	103 (1.8)	0		0	
	2023	41	110 (2.4)	28	103 (1.6)	0		0	
Channel Catfish Gill Net	2021	2	76	9	86 (2.0)	2	98 (16.6)	0	
	2022	5	94 (3.1)	8	98 (3.7)	0		0	
	2023	2	75 (0.7)	3	87 (5.0)	0		0	
Largemouth Bass Electro Fishing	2021	1	96	4	106 (4.2)	1	105	0	
Walleye Gill Net	2021	2	91 (6.8)	0		0		0	
	2022	0		1	95	0		0	

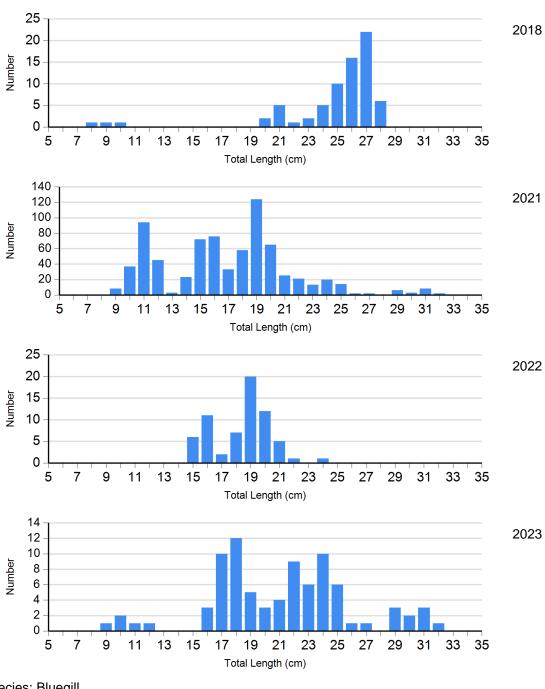
## **Length Frequency Distribution**

Length frequency histogram of species sampled by year.

Species: Black Bullhead Gear: AFS std gill net

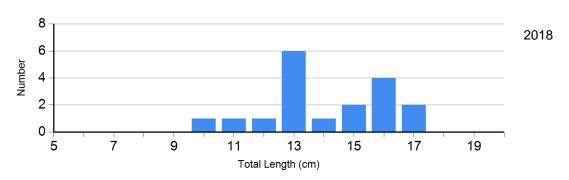


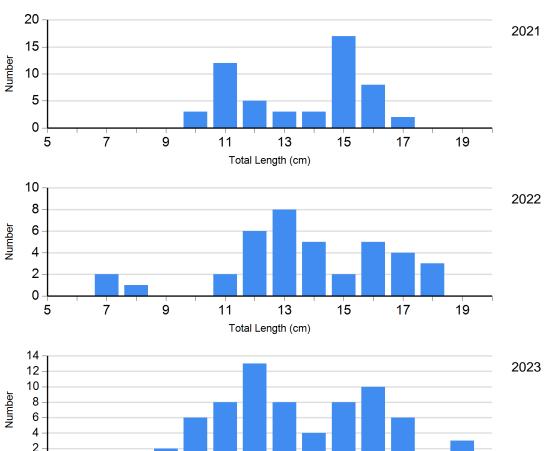
Species: Black Crappie Gear: frame net (std 3/4 in)

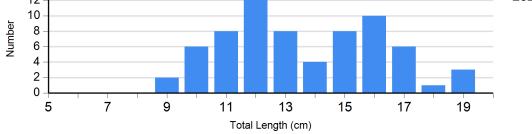


Species: Bluegill

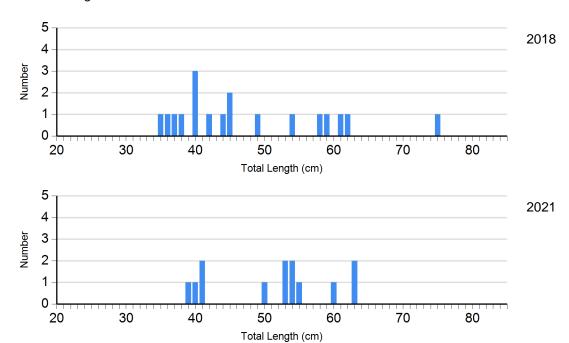
Gear: frame net (std 3/4 in)

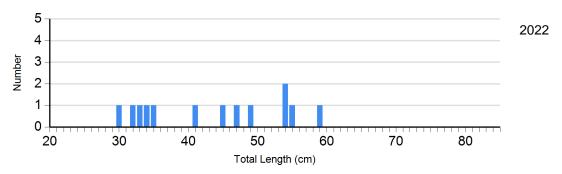




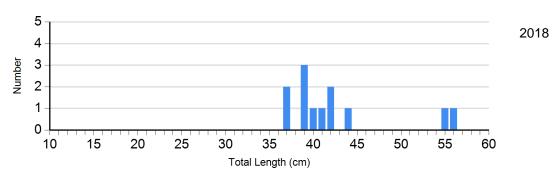


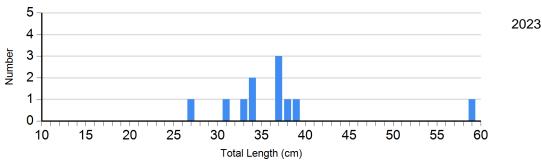
Species: Channel Catfish Gear: AFS std gill net



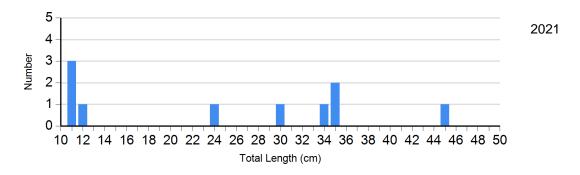


Species: Common Carp Gear: AFS std gill net

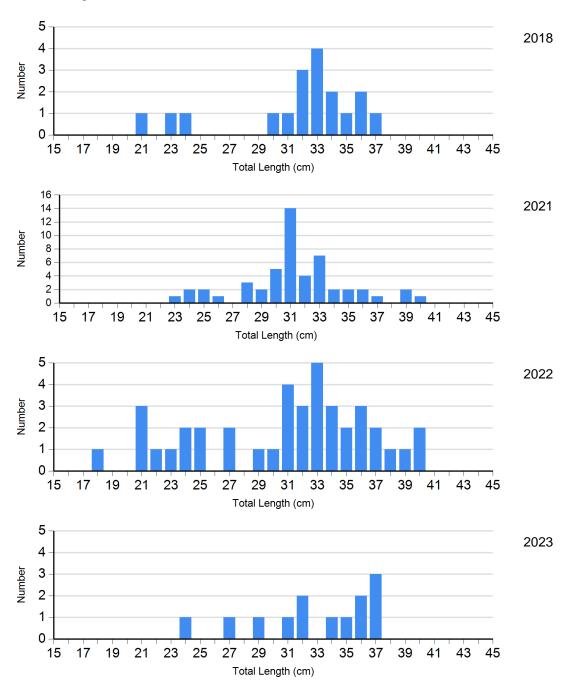




Species: Largemouth Bass Gear: spring day EF



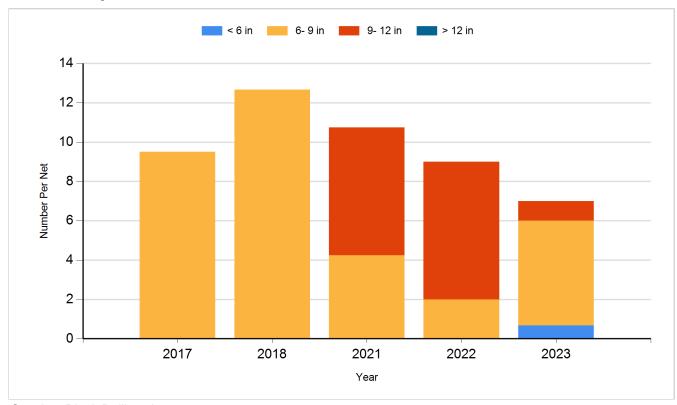
Species: White Sucker Gear: AFS std gill net



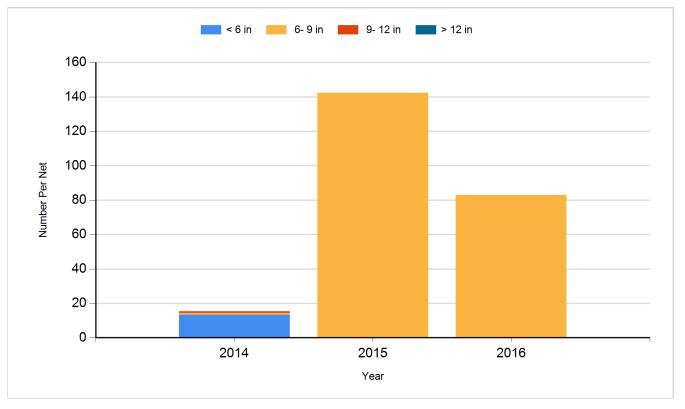
### **Historic Fish Sizes and Relative Abundance**

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

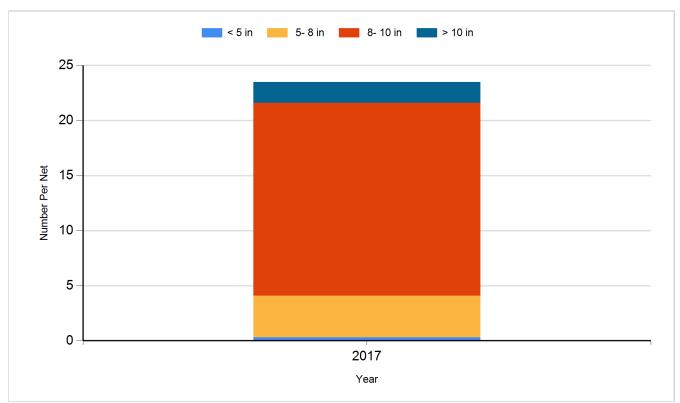
Species: Black Bullhead Gear: AFS std gill net



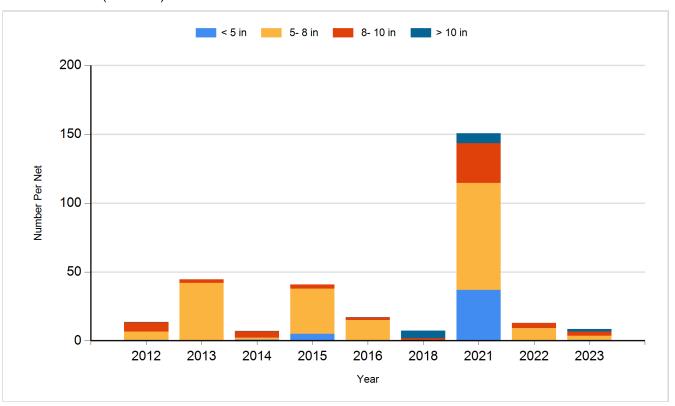
Species: Black Bullhead Gear: std exp gill net



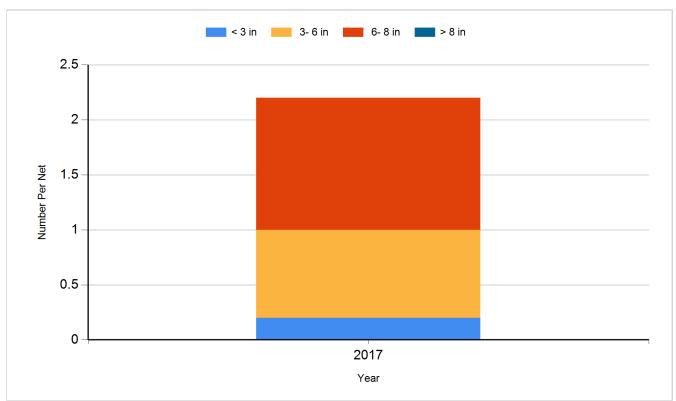
Species: Black Crappie Gear: AFS std frame net



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

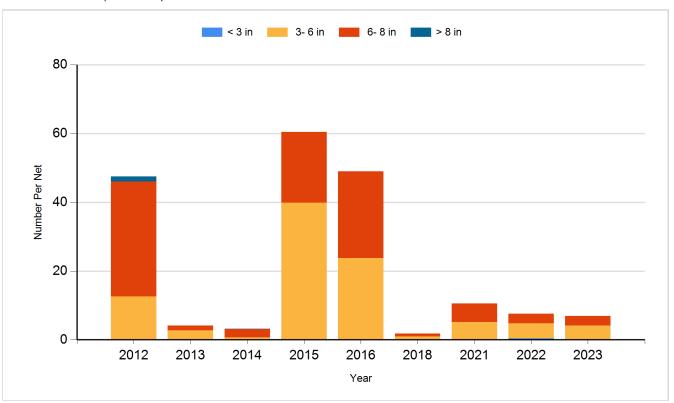


Species: Bluegill Gear: AFS std frame net

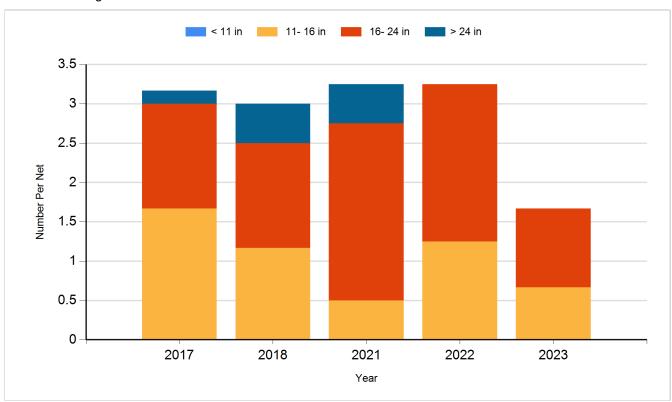


Species: Bluegill

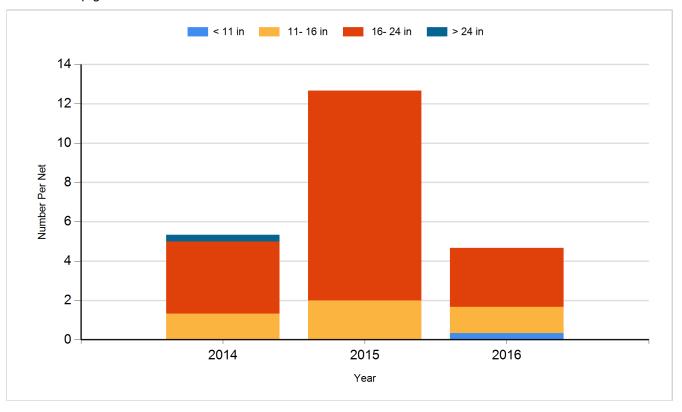
Gear: frame net (std 3/4 in)



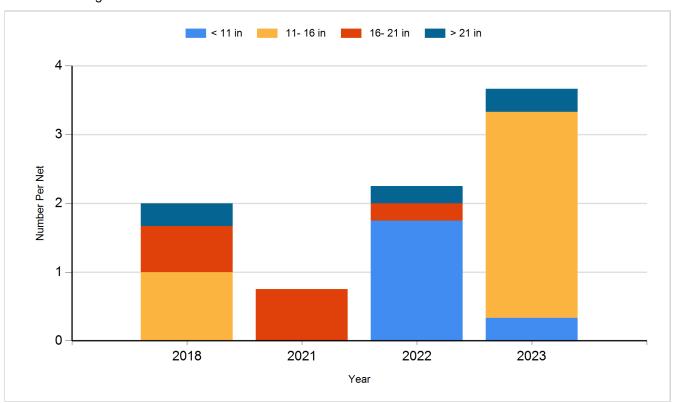
Species: Channel Catfish Gear: AFS std gill net



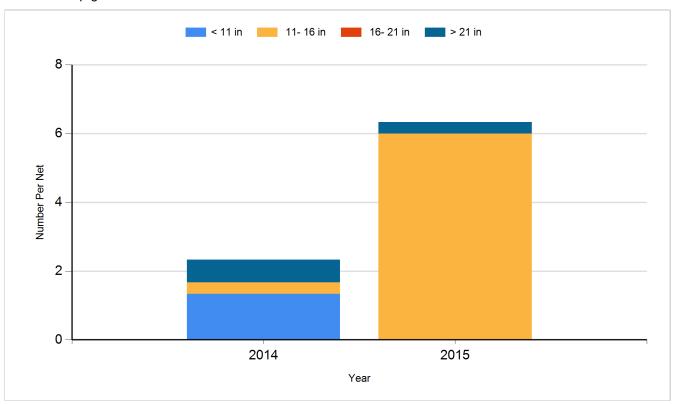
Species: Channel Catfish Gear: std exp gill net



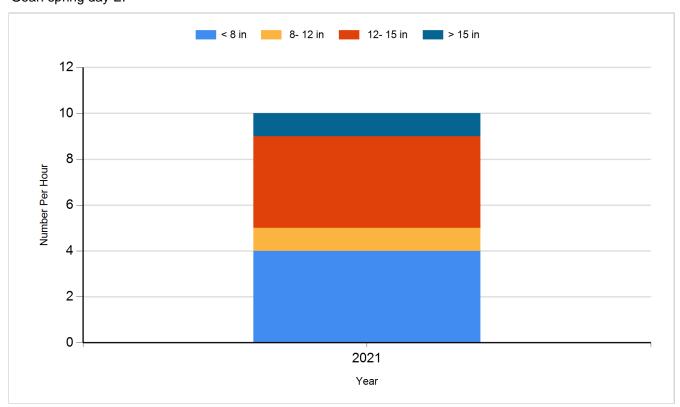
Species: Common Carp Gear: AFS std gill net



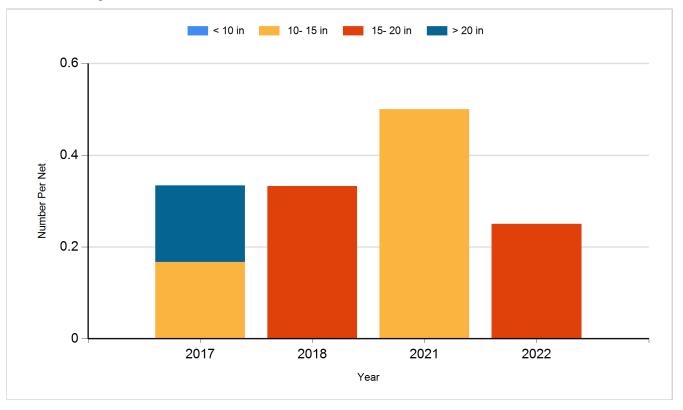
Species: Common Carp Gear: std exp gill net



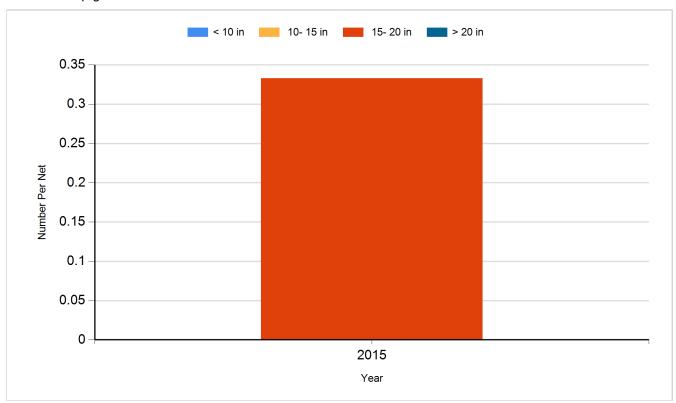
Species: Largemouth Bass Gear: spring day EF



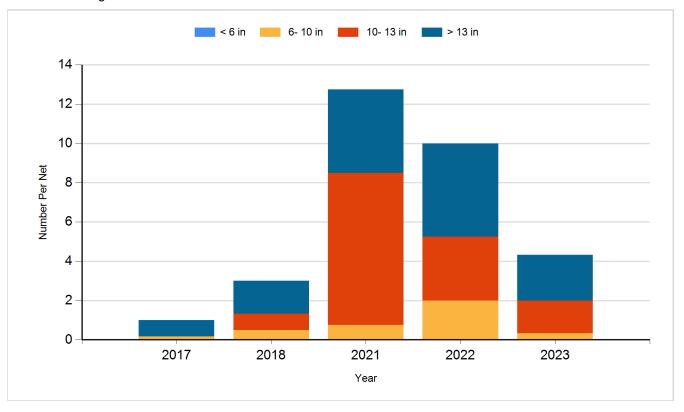
Species: Walleye Gear: AFS std gill net



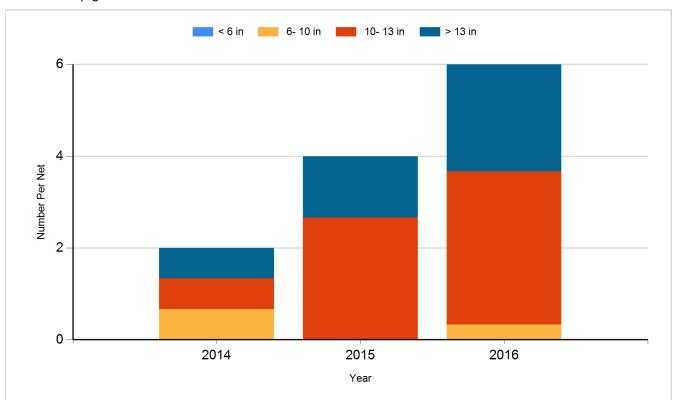
Species: Walleye Gear: std exp gill net



Species: White Sucker Gear: AFS std gill net



Species: White Sucker Gear: std exp gill net



# Fish Stocking

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

Year	Species	Size	Number
2012	Largemouth Bass	Adult	259
2013	Largemouth Bass	Large Fingerling	1,056
2013	Walleye	Adult	300
2014	Walleye	Fry	90,000
2015	Gizzard Shad	Adult	50
2015	Walleye	Small Fingerling	7,560
2016	Walleye	Juvenile	889
2017	Walleye	Juvenile	1,152
2017	Yellow Perch	Adult	5,525
2017	Yellow Perch	Small Fingerling	54,860
2018	Gizzard Shad	Adult	60
2019	Walleye	Small Fingerling	8,400
2021	Walleye	Fingerling	7,600
2023	Saugeye	Juvenile	11,968