

SOUTH DAKOTA STATEWIDE FISHERIES SURVEY
Francis Case, Charles Mix County
FTR-Lake-6327-000
2022

Lake Information

Name: Francis Case
County: Charles Mix
Surface Area: 88,007 Acres

Surveys and Investigations

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

Gear	Date	Effort
AFS gill net (1/2 inch)	Aug 31, 2022	19 net-nights
AFS gill net (1/2 inch)	Sep 06, 2022	15 net-nights
AFS gill net (1/2 inch)	Sep 08, 2022	21 net-nights
AFS gill net (1/2 inch)	Sep 12, 2022	20 net-nights
AFS std gill net	Aug 31, 2022	19 net-nights
AFS std gill net	Sep 06, 2022	15 net-nights
AFS std gill net	Sep 08, 2022	21 net-nights
AFS std gill net	Sep 12, 2022	20 net-nights
boat shocker (night)	Jun 01, 2022	2700 seconds
boat shocker (night)	Jun 02, 2022	2700 seconds
boat shocker (night)	Jun 06, 2022	1800 seconds
boat shocker (night)	Jun 07, 2022	900 seconds
boat shocker (night)	Jun 08, 2022	1800 seconds
boat shocker (night)	Jun 09, 2022	2700 seconds
fall night EF-WAE	Nov 02, 2022	3600 seconds
fall night EF-WAE	Oct 25, 2022	3600 seconds
fall night EF-WAE	Oct 26, 2022	3600 seconds
large seine	Jul 18, 2022	16 hauls
large seine	Jul 20, 2022	12 hauls

Common Fish Species Present

Walleye

Smallmouth Bass

Sauger

Channel Catfish

Common Carp

White Bass

Freshwater Drum

Gizzard Shad

Yellow Perch

River Carpsucker

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**

Gear	Species	Sample Size (n)	Abundance		Stock Density Indices			Condition		
			CPUE	CI-80	PSD	CI-80	PSD-P	CI-80	Wr	CI-80
AFS std gill net	Channel Catfish	312	4.0	0.4	67	4	10	2	76	1
	Common Carp	91	1.2	0.3	91	5	5		87	1
	Flathead Catfish	2	0.0	0.0	50		0		77	4
	Freshwater Drum	43	0.6	0.2	86	8	30	11	87	3
	Gizzard Shad	65	0.0	0.0	50				33	36
	Goldeye	136	0.0	0.0						
	Northern Pike	1	0.0	0.0	100		0		92	
	River Carpsucker	14	0.2	0.1	100		71		98	5
	Sauger	72	0.9	0.2	82	7	41	8	76	1
	Shorthead Redhorse	17	0.2	0.1	94		94		89	4
	Shortnose Gar	9	0.0	0.0						
	Shovelnose Sturgeon	1	0.0	0.0						
	Smallmouth Bass	49	0.6	0.2	79	9	40	10	104	3
	Smallmouth Buffalo	6	0.1	0.0	100		100		81	2
	Walleye	358	4.7	0.5	50	4	3	1	81	1
	White Bass	53	0.7	0.4	96		96		98	1
White Crappie	1	0.0	0.0	0		0		82		
Yellow Perch	19	0.3	0.2	53	18	11		91	2	
boat shocker (night)	Smallmouth Bass	468	130.9	17.3	62	2	18	2	93	1
large seine*	Sauger	2	0.1	0.1						
	Walleye	34	1.2	0.7						

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
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
AFS gill net (1/2 inch)*	Bigmouth Buffalo					0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Black Crappie					0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Channel Catfish					0.1	0.0	0.1	0.2	0.1	0.0	0.08
	Common Carp					0.2	0.0	0.0	0.0	0.1	0.1	0.07
	Emerald Shiner					0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Freshwater Drum					0.2	0.3	0.4	0.2	0.2	0.1	0.23
	Gizzard Shad					1.2	0.4	1.6	2.6	0.5	0.3	1.10
	Goldeye					0.2	0.0	0.2	0.1	0.0	0.0	0.08
	Goldfish					0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Lake Herring					0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Northern Pike					0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Sand Shiner					0.0	0.0	0.0	0.0	0.0	0.1	0.02
	Sauger					0.2	0.4	0.1	0.2	0.1	0.1	0.18
	Shorthead Redhorse					0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Shortnose Gar					0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Silverband Shiner					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	0.1	0.02
	Spottail Shiner					0.1	0.2	0.0	0.2	0.0	0.0	0.08
	Walleye					0.8	1.3	0.5	0.8	0.6	0.3	0.72
	White Bass					0.1	0.1	0.0	0.1	0.0	0.0	0.05
White Crappie					0.0	0.0	0.0	0.0	0.0	0.0	0.00	
Yellow Perch					0.1	0.5	1.0	0.4	0.2	0.1	0.38	
AFS std gill net	Bigmouth Buffalo					0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Black Bullhead					0.0	0.0	0.0	0.4	0.0	0.0	0.07
	Black Crappie					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	0.00
	Channel Catfish					3.7	3.1	4.2	3.9	4.1	4.0	3.83
	Common Carp					1.1	0.8	0.5	0.7	1.2	1.2	0.92
	Flathead Catfish					0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Freshwater Drum					1.4	1.1	1.4	0.6	0.7	0.6	0.97
	Gizzard Shad					0.8	0.1	0.2	0.0	0.0	0.0	0.18
	Goldeye					0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Lake Herring					0.0	0.0	0.1	0.0	0.0	0.0	0.02
	Largemouth Bass					0.0	0.0	0.0	0.0	0.0	0.0	0.00

Gear	Species	CPUE										
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Avg
AFS std gill net	Northern Pike					0.0	0.0	0.0	0.1	0.0	0.0	0.02
	Paddlefish					0.0	0.0	0.0	0.0	0.0	0.0	0.00
	River Carpsucker					0.1	0.2	0.1	0.3	0.3	0.2	0.20
	Sauger					1.7	1.4	1.1	1.4	1.4	0.9	1.32
	Saugeye					0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Shorthead Redhorse					0.0	0.0	0.0	0.1	0.3	0.2	0.10
	Shortnose Gar					0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Shovelnose Sturgeon					0.0	0.0	0.0	0.0	0.0	0.0	0.00
	Smallmouth Bass					1.2	0.4	0.9	1.8	0.9	0.6	0.97
	Smallmouth Buffalo					0.3	0.1	0.1	0.1	0.1	0.1	0.13
	Walleye					4.3	3.6	5.4	8.0	5.1	4.7	5.18
	White Bass					1.4	0.6	0.4	0.8	0.3	0.7	0.70
	White Crappie					0.0	0.0	0.0	0.1	0.0	0.0	0.02
Yellow Perch					0.4	0.2	0.7	0.7	0.3	0.3	0.43	
boat shocker (night)	Smallmouth Bass	66.7	86.0	68.9	118.4	109.9	89.9	79.0	152.8	138.4	130.9	104.0 9
fall night EF- WAE*	Sauger						34.2	7.0	0.0	14.2	15.0	14.08
	Walleye						117.1	97.3	130.7	145.0	159.7	129.9 6
large seine*	Sauger	0.2	0.2	0.3	0.1	0.1	0.4	0.0	0.1	0.1	0.1	0.16
	Walleye	1.4	2.3	0.3	0.8	1.4	0.6	4.4	1.2	2.1	1.2	1.57
std exp gill net	Bigmouth Buffalo	0.0	0.1	0.0	0.0							0.03
	Black Bullhead	0.0	0.0	0.0	0.0							0.00
	Black Crappie	0.0	0.0	0.0	0.0							0.00
	Bluegill	0.0	0.0	0.0	0.0							0.00
	Brown Trout	0.0	0.0	0.0	0.0							0.00
	Channel Catfish	3.1	3.2	4.7	5.3							4.08
	Chinook Salmon	0.0	0.0	0.0	0.0							0.00
	Common Carp	1.3	1.0	1.8	2.0							1.53
	Freshwater Drum	0.7	0.4	0.2	0.3							0.40
	Gizzard Shad	0.6	0.0	0.3	4.4							1.33
	Goldeye	0.0	0.0	0.0	0.0							0.00
	Lake Herring	0.0	0.0	0.0	0.0							0.00
	Northern Pike	0.1	0.0	0.1	0.0							0.05
	River Carpsucker	0.0	0.1	0.1	0.1							0.08
	Sauger	5.9	5.4	3.7	4.1							4.78
	Shorthead Redhorse	0.3	0.2	0.3	0.2							0.25
Shortnose Gar	0.0	0.0	0.0	0.0							0.00	

CPUE

Gear	Species	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Avg
std exp gill net	Shovelnose Sturgeon	0.0	0.0	0.0	0.0							0.00
	Smallmouth Bass	0.2	0.2	1.0	0.1							0.38
	Smallmouth Buffalo	0.0	0.1	0.1	0.1							0.08
	Spottail Shiner	0.0	0.0	0.0	0.0							0.00
	Walleye	5.8	6.2	3.9	5.0							5.23
	Western Silvery Minnow	0.0	0.0	0.0	0.0							0.00
	White Bass	0.3	0.1	0.2	0.8							0.35
	White Crappie	0.0	0.0	0.0	0.1							0.03
	Yellow Perch	0.4	0.8	0.9	1.2							0.83

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									
			2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
AFS std gill net	Channel Catfish	PSD					59	60	55	67	77	67
		PSD-P					5	7	6	9	10	10
		Wr					80	81	89	82	80	76
	Common Carp	PSD					60	92	88	55	58	91
		PSD-P					3	5	7	5	5	5
		Wr					83	83	84	85	87	87
	Gizzard Shad	PSD					99	100	100	0	0	50
		Wr					96	100	108	68		33
	River Carpsucker	PSD					89	100	100	95	100	100
		PSD-P					89	94	89	90	65	71
		Wr					96	100	106	106	100	98
	Sauger	PSD					86	74	65	83	73	82
		PSD-P					49	36	24	43	30	41
		Wr					77	78	86	86	77	76
	Smallmouth Bass	PSD					70	73	76	86	85	79
		PSD-P					18	33	33	37	38	40
		Wr					104	106	107	104	104	104
	Walleye	PSD					63	38	47	53	48	50
		PSD-P					5	3	4	2	3	3
		Wr					81	83	91	86	83	81
	White Bass	PSD					99	88	100	100	100	96
PSD-P						80	86	78	78	81	96	
Wr						97	100	106	101	98	98	
Yellow Perch	PSD					51	17	28	38	19	53	
	PSD-P					3	0	2	2	5	11	
	Wr					83	90	85	83	89	91	
boat shocker (night)	Smallmouth Bass	PSD	44	41	37	46	45	59	58	53	47	62
		PSD-P	12	12	12	16	14	18	35	18	16	18
		Wr		91	92	97	91	94	96	100	93	93
std exp gill net	Channel Catfish	PSD	51	43	46	52						
		PSD-P	0	3	2	3						
		Wr	84	81	79	83						

Gear	Species	Index	Year									
			2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
std exp gill net	Common Carp	PSD	89	97	86	68						
		PSD-P	6	3	2	6						
		Wr	87	84	83	84						
	Gizzard Shad	PSD	0	0	88	32						
		Wr	103		94	89						
	River Carpsucker	PSD	100	100	50	100						
		PSD-P	0	67	50	33						
		Wr	101	68	101	95						
	Sauger	PSD	65	73	74	78						
		PSD-P	16	19	32	29						
		Wr	73	76	76	80						
	Smallmouth Bass	PSD	40	29	62	67						
		PSD-P	0	0	12	0						
		Wr	97	109	100	110						
	Walleye	PSD	20	33	60	46						
		PSD-P	4	2	9	4						
		Wr	82	84	84	86						
	White Bass	PSD	100	100	100	50						
		PSD-P	89	100	100	27						
		Wr	102	103	97	107						
	Yellow Perch	PSD	8	22	8	21						
		PSD-P	8	0	0	3						
		Wr	82	84	79	80						

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		
2021	1	10	125 (9)											
2020	2	54	115 (4.8)	203 (4.8)										
2019	3	106	103 (2.5)	183 (3.3)	254 (3.6)									
2018	4	105	101 (2.4)	173 (4)	255 (3.9)	311 (3)								
2017	5	41	93 (3.1)	162 (5.5)	243 (6)	311 (5.2)	354 (4.8)							
2016	6	6	109 (13.6)	189 (27.7)	254 (27.3)	315 (20.1)	370 (15)	397 (15.1)						
2015	7	2	105 (22)	188 (54.9)	268 (69.2)	326 (53.8)	370 (36.2)	403 (35)	418 (33.9)					
Weighted Mean		324	104	181	253	311	357	399	418					
Year Class	Age	N	11	12	13	14	15	16	17	18	19	20		
2021	1	10												
2020	2	54												
2019	3	106												
2018	4	105												
2017	5	41												
2016	6	6												
2015	7	2												
Weighted Mean		324												

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+
2022	312		262 (3)	297 (27)	313 (37)	361 (16)	395 (21)	406 (29)	418 (13)	460 (32)	546 (132)
2016	152	100 (1)	226 (5)	302 (12)	324 (7)	351 (14)	395 (21)	416 (26)	425 (11)	487 (12)	535 (41)

Species: Sauger

Mean Length (expanded sample number) at capture by age											
Year	N	1	2	3	4	5	6	7	8	9	10+
2022	71	272 (12)	341 (22)	391 (27)	428 (9)	383 (1)					
2021	105	269 (28)	355 (45)	404 (26)	448 (5)	454 (1)	401 (1)				
2020	110	292 (28)	374 (55)	421 (18)	408 (4)	457 (4)					473 (1)
2019	90	289 (44)	367 (33)	428 (9)	402 (1)	413 (2)			441 (1)		
2018	109	305 (39)	367 (29)	390 (19)	409 (14)	465 (4)		384 (3)		541 (1)	
2017	140	305 (41)	368 (40)	403 (42)	451 (8)	450 (6)	450 (2)	404 (2)			
2016	110	295 (37)	355 (38)	405 (13)	388 (9)	406 (10)	435 (2)	479 (1)			
2015	98	258 (25)	360 (33)	363 (5)	396 (26)	430 (4)	443 (4)				365 (1)
2014	177	261 (21)	293 (36)	350 (89)	390 (10)	400 (21)					
2013	159	237 (16)	300 (86)	371 (36)	402 (20)	433 (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+
2022	468	154 (11)	221 (87)	272 (161)	329 (150)	375 (50)	411 (6)	433 (2)			
2021	583	150 (22)	204 (169)	272 (217)	328 (123)	371 (44)	386 (9)	434 (1)	452 (1)		
2020	1119	133 (174)	203 (467)	293 (281)	336 (138)	386 (36)	399 (18)	411 (5)			
2019	323	167 (21)	219 (108)	303 (76)	365 (87)	402 (20)	438 (8)	461 (4)	459 (1)	543 (1)	
2018	378	127 (27)	218 (110)	297 (148)	341 (77)	382 (12)	389 (4)				
2017	490	129 (14)	213 (273)	301 (137)	360 (42)	392 (17)	443 (6)	425 (1)			
2016	590	121 (66)	199 (253)	289 (176)	348 (58)	390 (17)	414 (15)	424 (3)	413 (1)	484 (1)	

Mean Length (expanded sample number) at capture by age

Year	N	1	2	3	4	5	6	7	8	9	10+
2015	432	108 (84)	187 (210)	277 (63)	314 (44)	353 (22)	406 (8)	447 (1)			
2014	333	110 (43)	194 (98)	269 (104)	303 (71)	360 (14)	369 (2)				
2013	307	128 (10)	182 (56)	234 (145)	316 (74)	344 (15)	404 (3)	417 (2)	440 (1)		

Species: Walleye

Mean Length (expanded sample number) at capture by age

Year	N	1	2	3	4	5	6	7	8	9	10+
2022	358	256 (28)	337 (66)	384 (202)	415 (35)	445 (14)	469 (4)	495 (2)	508 (3)		681 (5)
2021	387	298 (36)	349 (175)	419 (122)	448 (33)	483 (10)	478 (4)	523 (3)		481 (1)	594 (4)
2020	662	290 (203)	381 (250)	419 (149)	447 (31)	443 (10)	512 (8)		475 (1)	584 (5)	579 (5)
2019	443	297 (158)	383 (197)	423 (47)	461 (8)	479 (11)	501 (2)	531 (3)	498 (4)	504 (6)	565 (6)
2018	299	297 (143)	377 (80)	407 (30)	423 (26)		576 (2)	468 (9)	534 (2)	492 (3)	521 (4)
2017	346	295 (76)	378 (83)	405 (91)	448 (6)	445 (13)	472 (37)	464 (16)	470 (15)	443 (1)	538 (4)
2016	142	273 (38)	353 (47)	411 (7)	450 (13)	463 (26)	488 (7)	467 (3)			446 (1)
2015	135	237 (46)	334 (9)	394 (13)	398 (37)	466 (7)	474 (6)	484 (3)	496 (3)		509 (11)
2014	208	255 (11)	316 (36)	353 (89)	392 (27)	405 (31)	441 (3)	482 (1)	519 (2)	509 (5)	505 (3)
2013	175	232 (21)	312 (107)	376 (31)	430 (8)	469 (2)	533 (3)	526 (1)	526 (1)		504 (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).

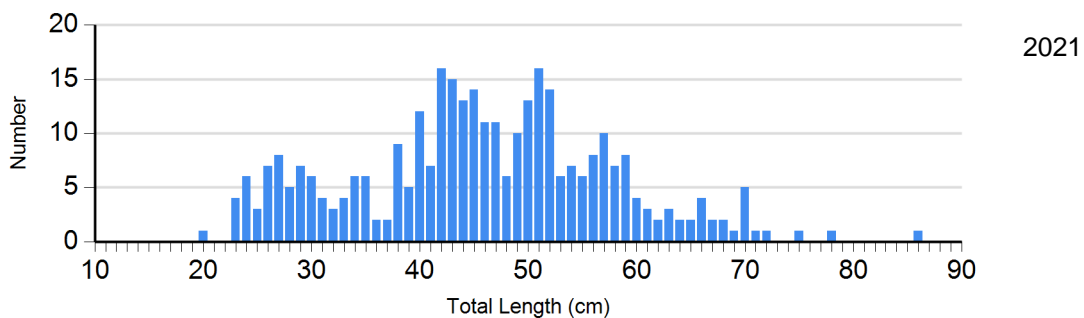
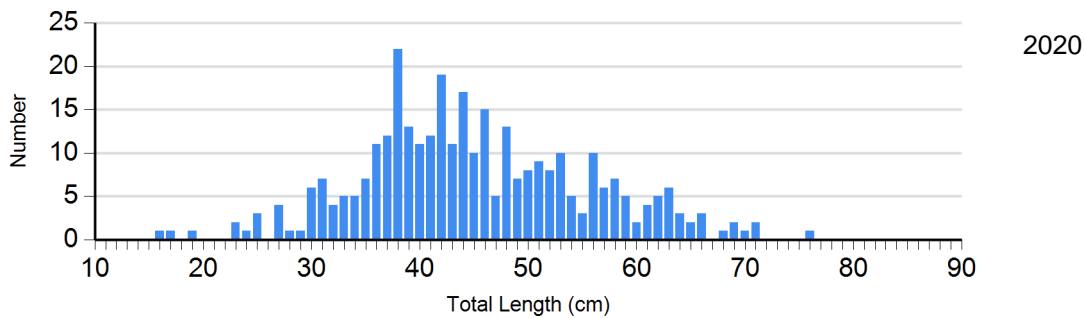
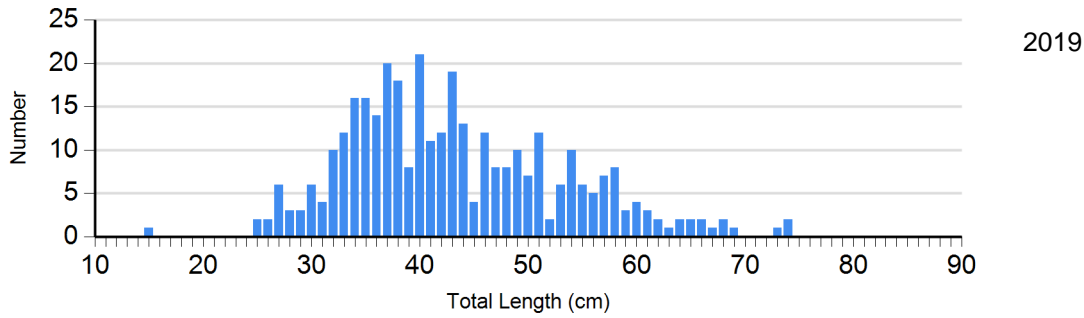
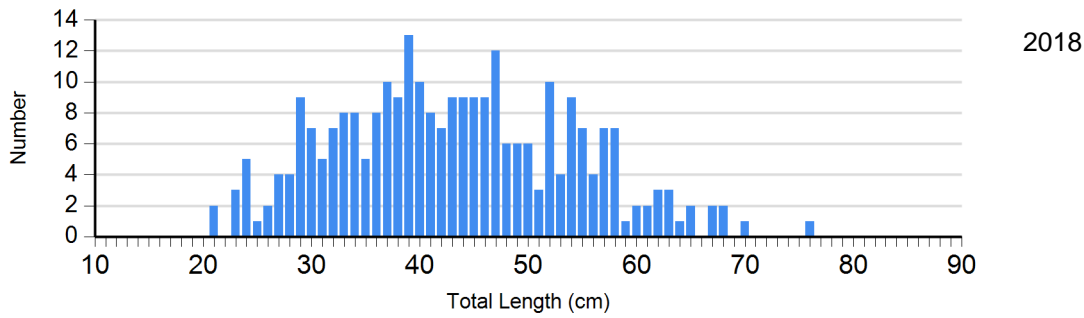
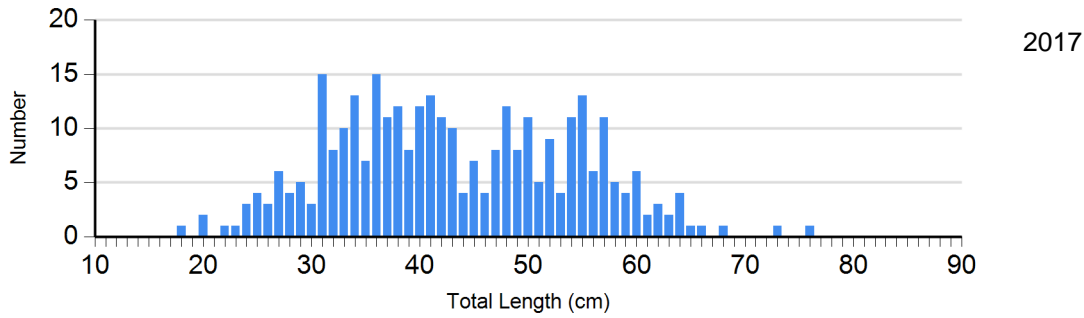
Species	Year	Length Groups							
		S-Q		Q-P		P-M		M	
		N	Wr (SE)	N	Wr (SE)	N	Wr (SE)	N	Wr (SE)
Channel Catfish Gill Net	2018	103	81 (0.7)	135	81 (0.7)	16	87 (3.0)	1	90
	2019	151	88 (0.7)	167	89 (0.7)	16	95 (3.1)	3	103 (6.0)
	2020	105	78 (0.9)	182	83 (0.8)	27	93 (2.6)	3	98 (3.8)
	2021	71	78 (1.1)	202	81 (0.6)	26	85 (2.3)	5	85 (5.9)
	2022	98	77 (0.9)	170	75 (0.6)	26	81 (1.6)	4	86 (4.7)
Common Carp Gill Net	2018	5	94 (2.7)	56	82 (1.2)	3	80 (2.9)	0	
	2019	5	83 (2.1)	34	85 (1.5)	3	79 (3.7)	0	
	2020	25	86 (1.2)	27	86 (3.0)	3	83 (5.6)	0	
	2021	38	84 (1.2)	48	89 (1.1)	5	83 (3.1)	0	
	2022	8	86 (1.9)	78	87 (0.8)	5	96 (3.9)	0	
Sauger Gill Net	2018	31	81 (1.0)	44	79 (0.8)	41	76 (0.8)	1	71
	2019	32	86 (2.7)	37	86 (1.0)	22	85 (1.4)	0	
	2020	19	77 (1.6)	44	91 (8.3)	47	84 (1.0)	0	
	2021	28	77 (1.5)	46	76 (1.0)	31	78 (1.1)	0	
	2022	13	77 (1.9)	29	77 (1.0)	29	75 (1.0)	0	
Smallmouth Bass Electro Fishing	2018	139	97 (1.7)	137	93 (0.6)	58	90 (1.3)	3	82 (1.8)
	2019	126	93 (0.8)	72	96 (1.0)	92	99 (1.1)	13	96 (2.2)
	2020	361	101 (0.6)	265	100 (0.5)	123	98 (0.8)	15	95 (2.1)
	2021	273	93 (0.5)	164	94 (0.6)	74	95 (1.1)	8	95 (1.5)
	2022	173	92 (0.5)	201	94 (0.6)	78	91 (1.3)	6	95 (3.3)
Walleye Gill Net	2018	183	83 (0.3)	101	83 (0.7)	10	75 (3.4)	0	
	2019	233	92 (0.4)	188	91 (0.5)	17	87 (1.7)	0	

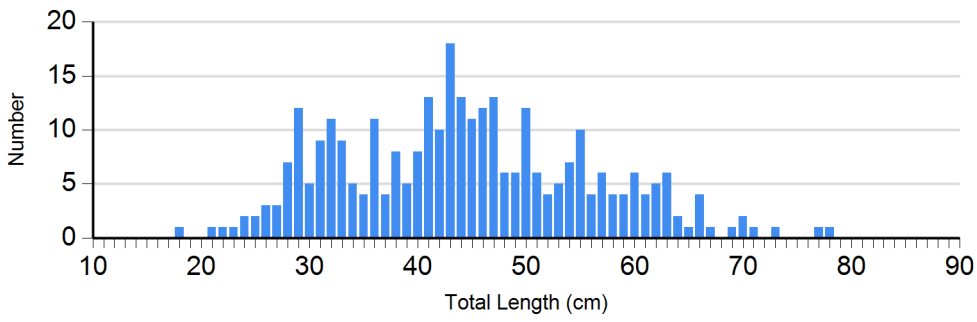
Species	Year	Length Groups							
		S-Q		Q-P		P-M		M	
		N	Wr (SE)	N	Wr (SE)	N	Wr (SE)	N	Wr (SE)
Walleye Gill Net	2020	307	87 (0.4)	327	86 (0.4)	9	83 (2.5)	4	86 (14.8)
	2021	201	84 (0.4)	175	82 (0.5)	9	75 (1.6)	1	77
	2022	176	83 (0.5)	163	79 (0.5)	6	72 (2.3)	5	70 (6.6)
White Bass Gill Net	2018	6	99 (4.0)	1	101	22	103 (1.5)	20	96 (2.9)
	2019	0		8	107 (2.5)	19	107 (1.4)	9	103 (3.2)
	2020	0		14	107 (1.0)	27	102 (1.5)	24	98 (1.7)
	2021	0		5	103 (1.9)	13	102 (2.0)	8	87 (6.9)
	2022	2	104 (5.3)	0		29	97 (1.2)	22	97 (1.3)
Yellow Perch Gill Net	2018	15	90 (2.8)	3	86 (6.8)	0		0	
	2019	38	85 (1.1)	14	86 (1.8)	1	79	0	
	2020	37	85 (1.2)	22	81 (1.1)	1	63	0	
	2021	17	93 (3.2)	3	82 (2.7)	1	48	0	
	2022	9	90 (2.1)	8	92 (3.8)	2	93 (2.4)	0	

Length Frequency Distribution

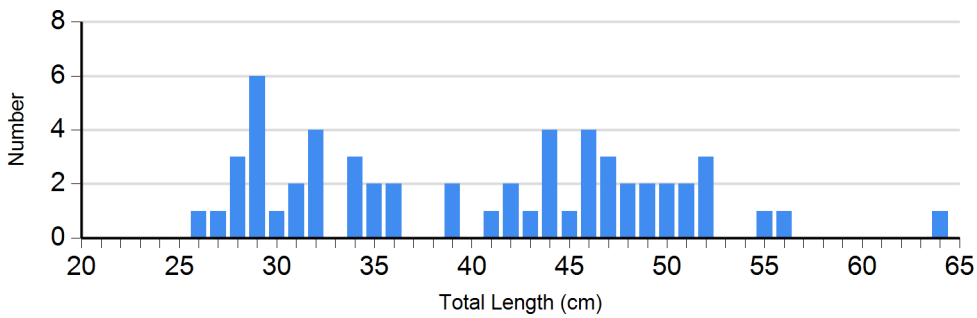
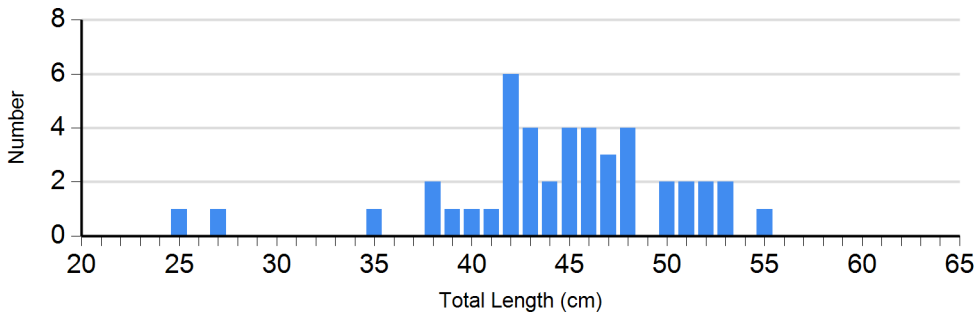
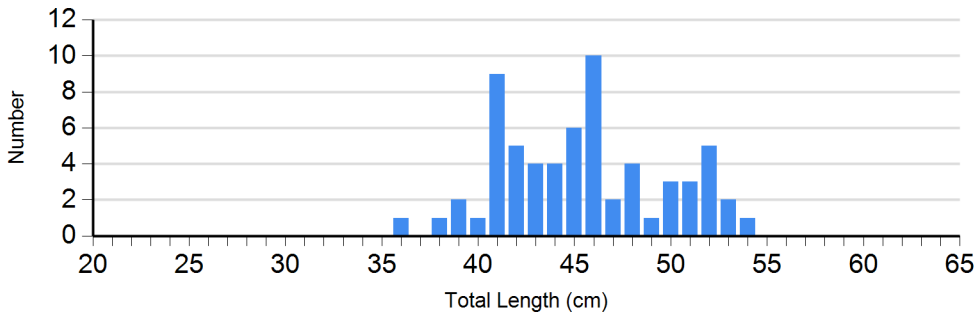
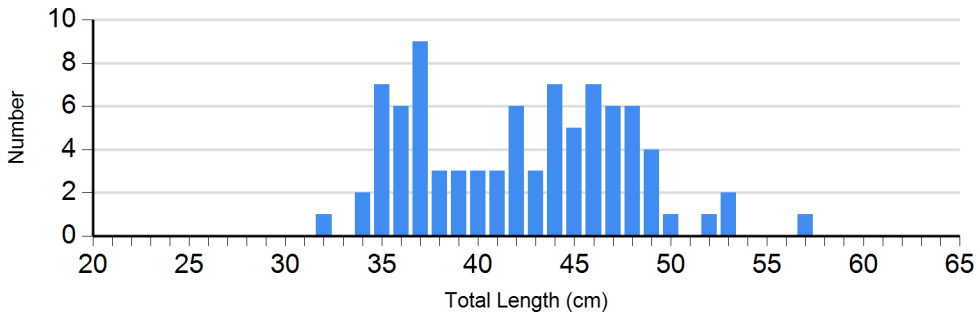
Length frequency histogram of species sampled by year.

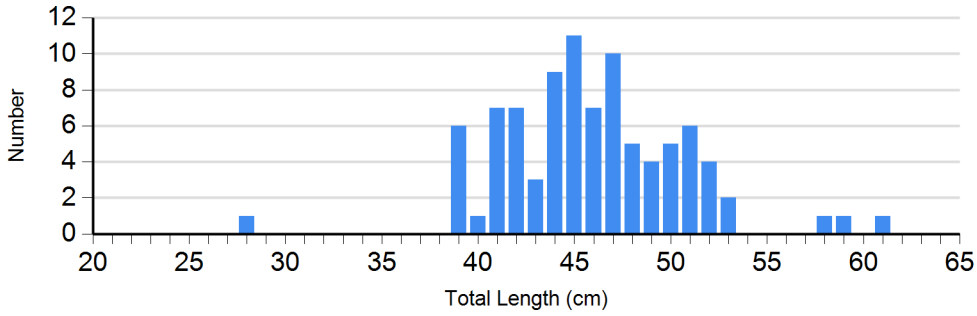
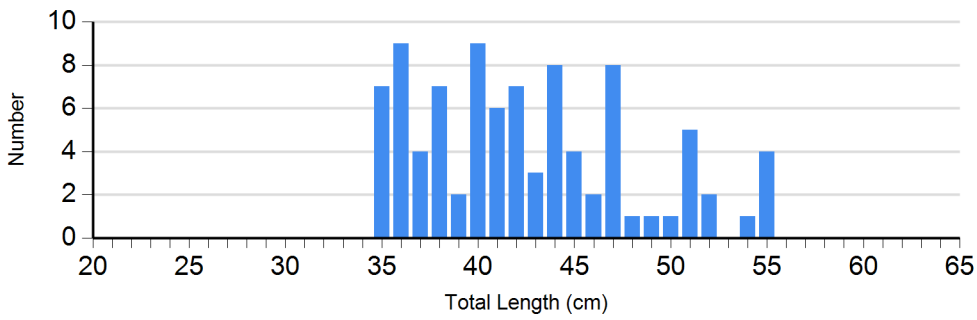
Species: Channel Catfish
Gear: AFS std gill net



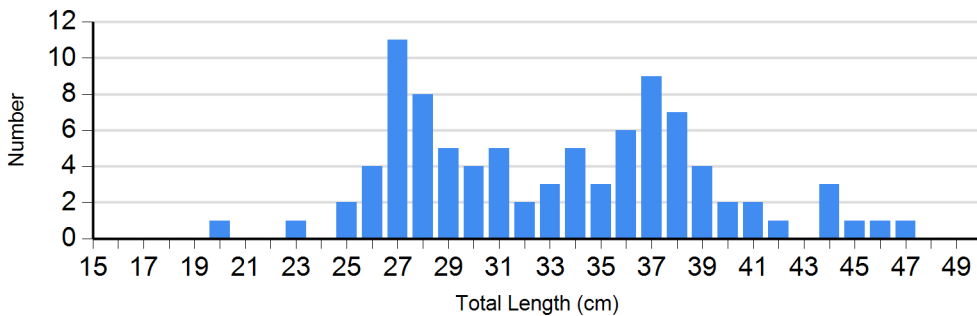
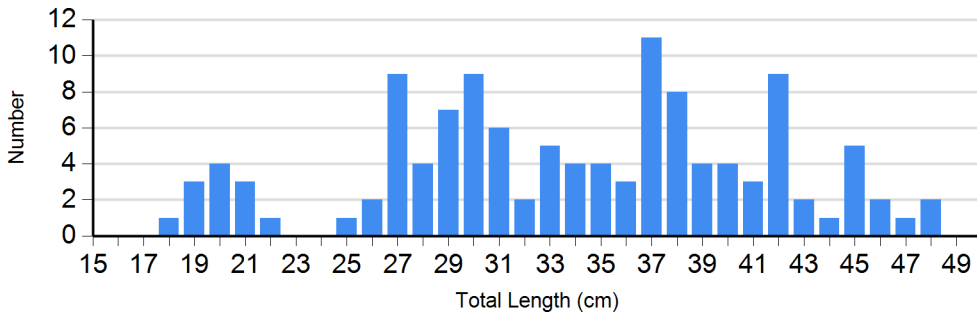
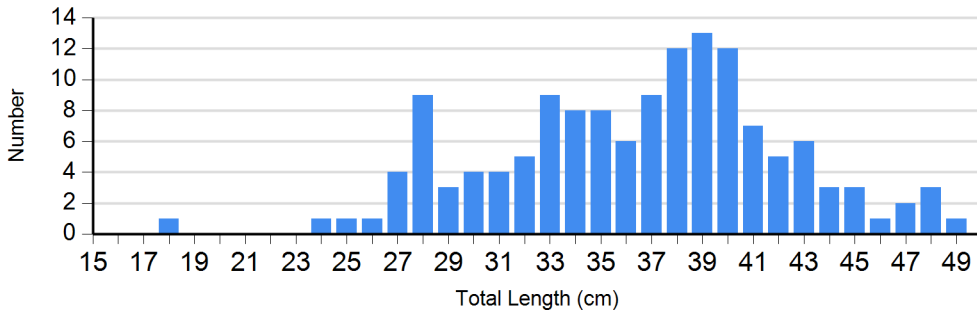


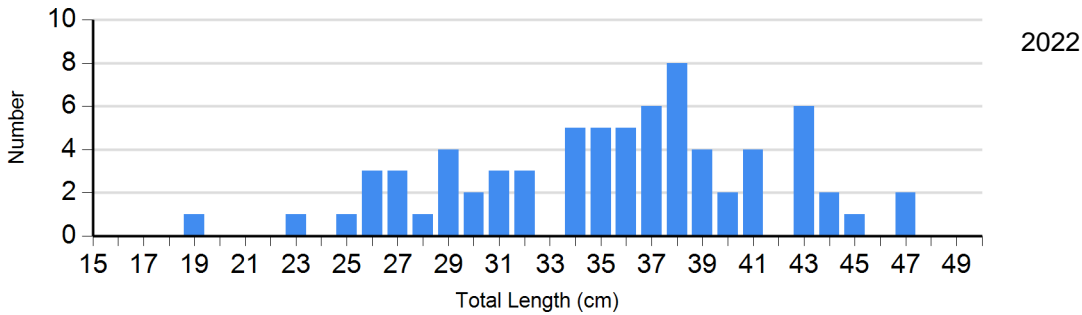
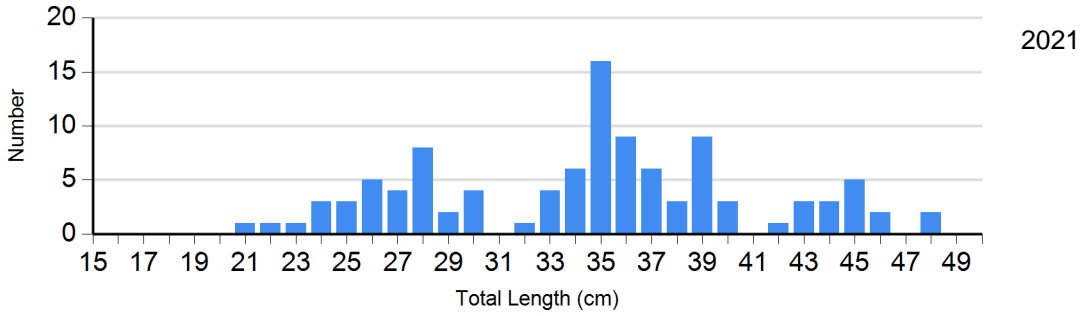
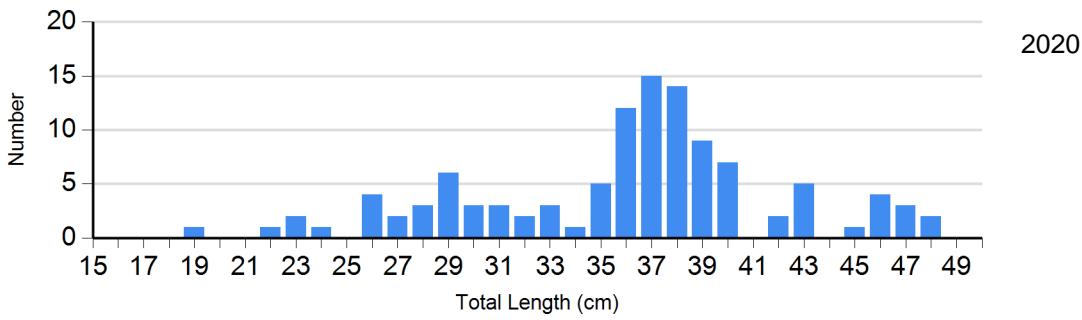
Species: Common Carp
Gear: AFS std gill net



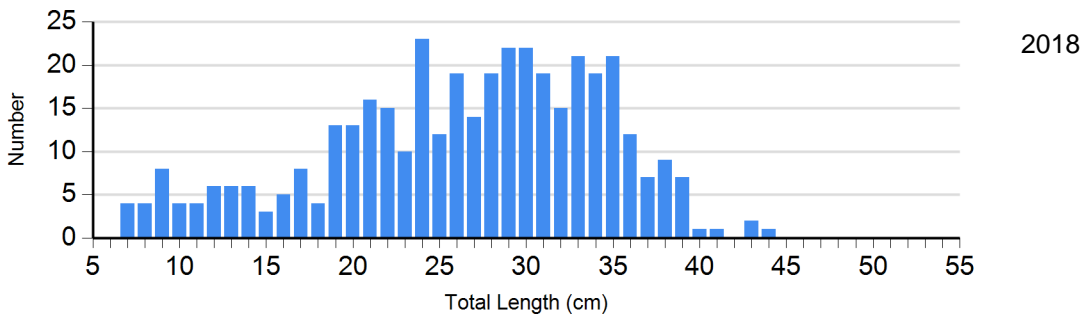
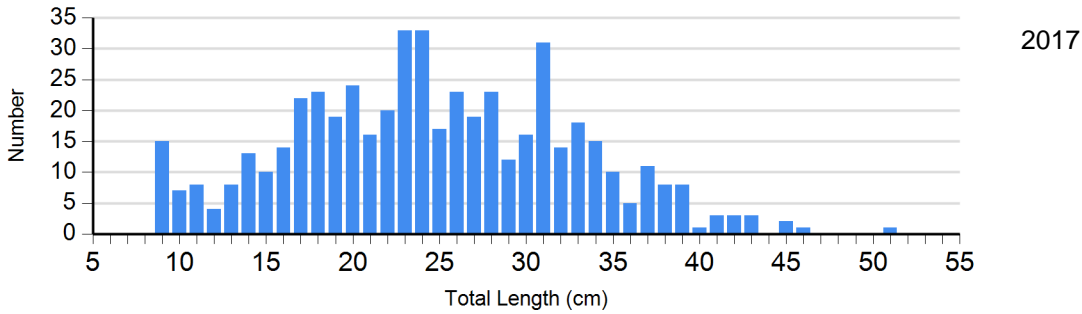


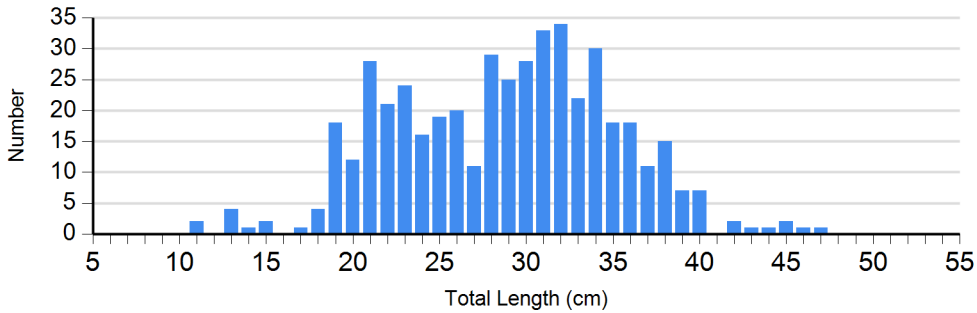
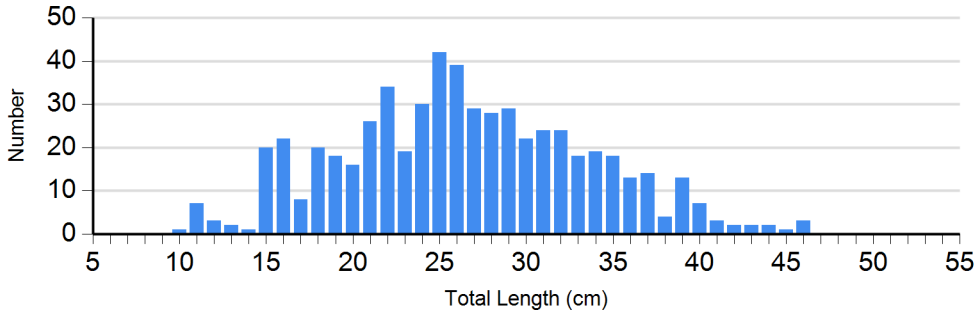
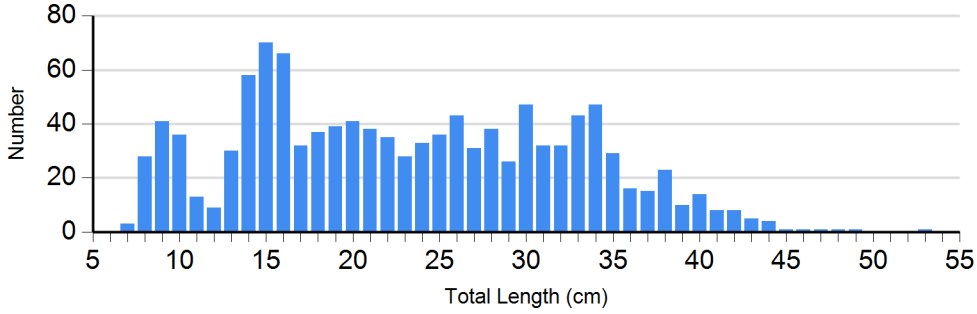
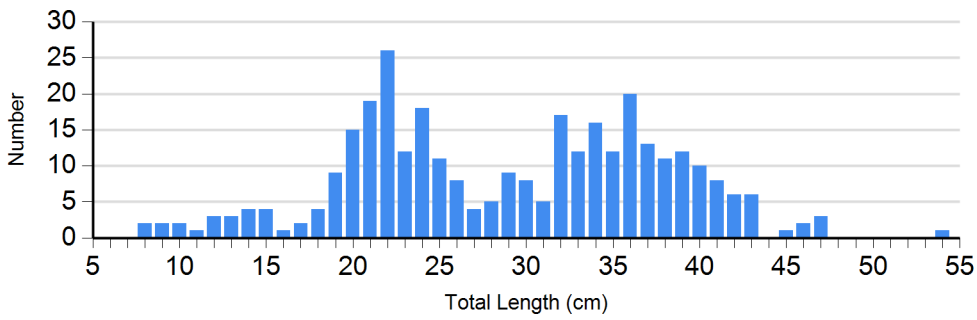
Species: Sauger
 Gear: AFS std gill net



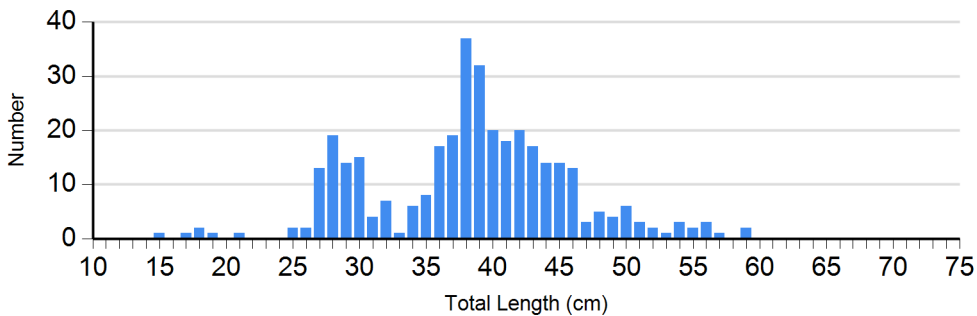


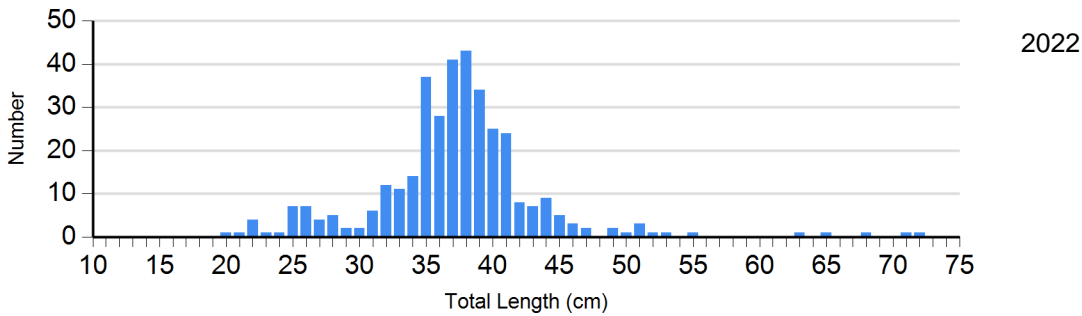
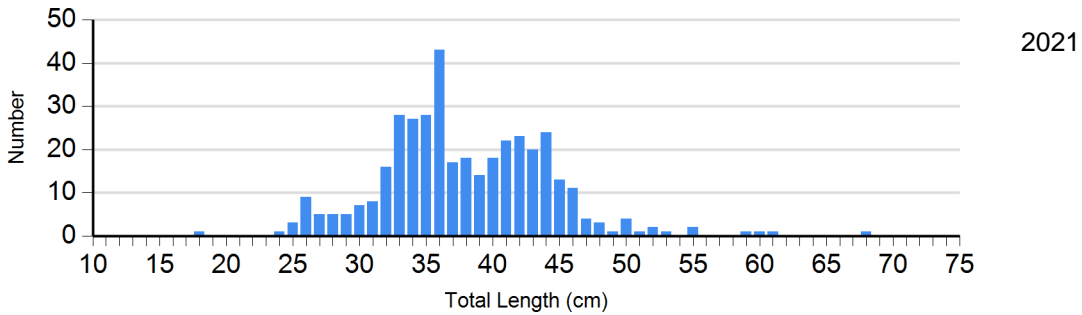
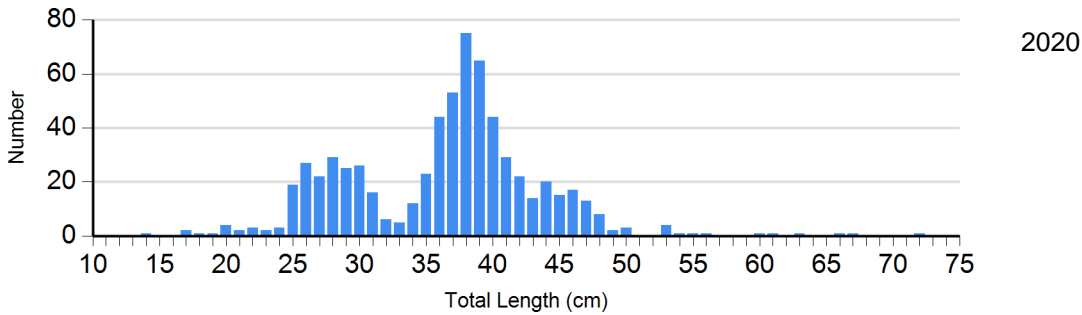
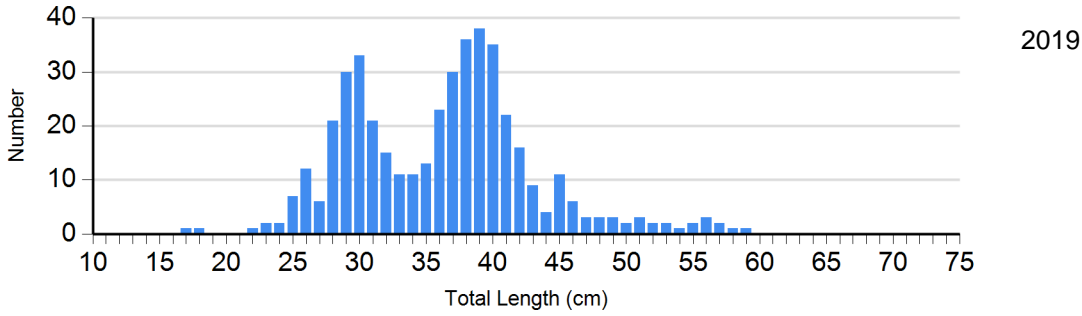
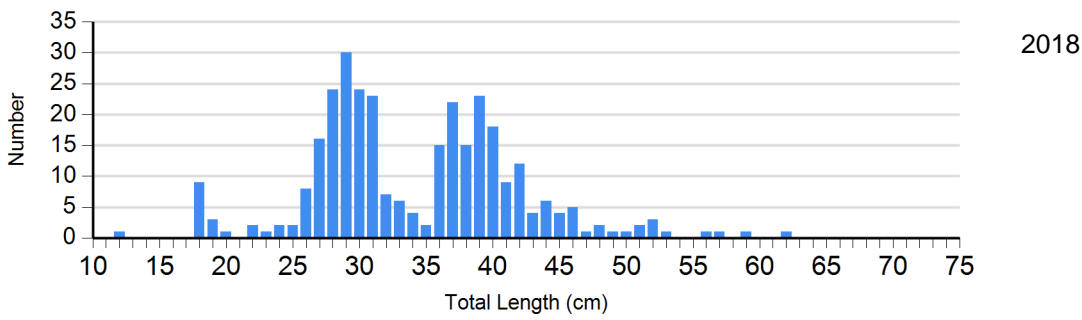
Species: Smallmouth Bass
 Gear: boat shocker (night)



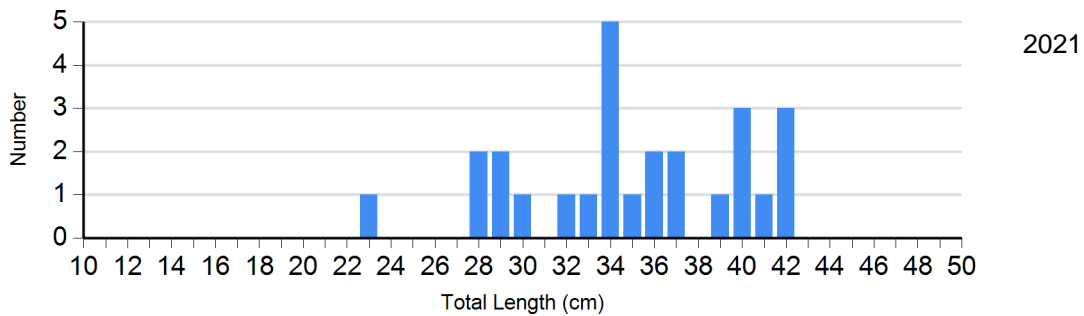
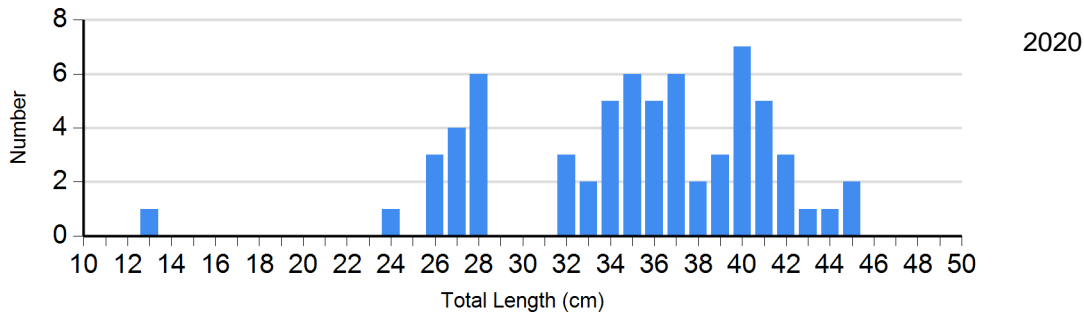
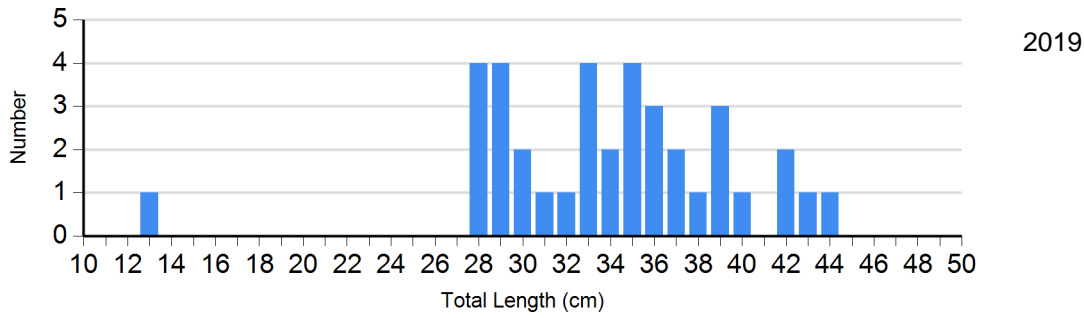
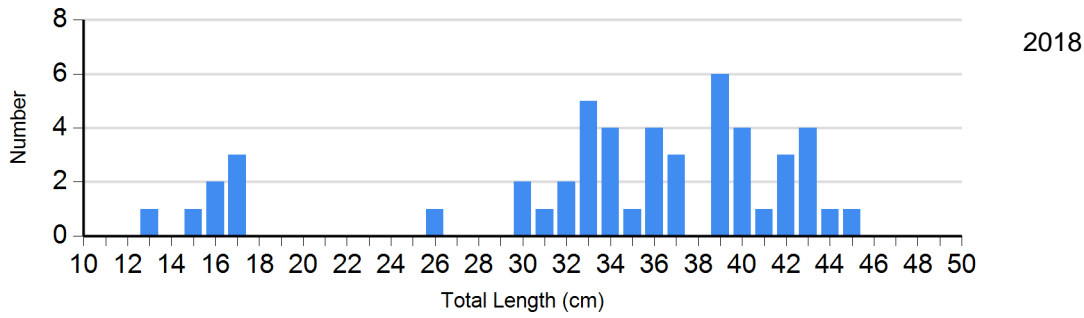
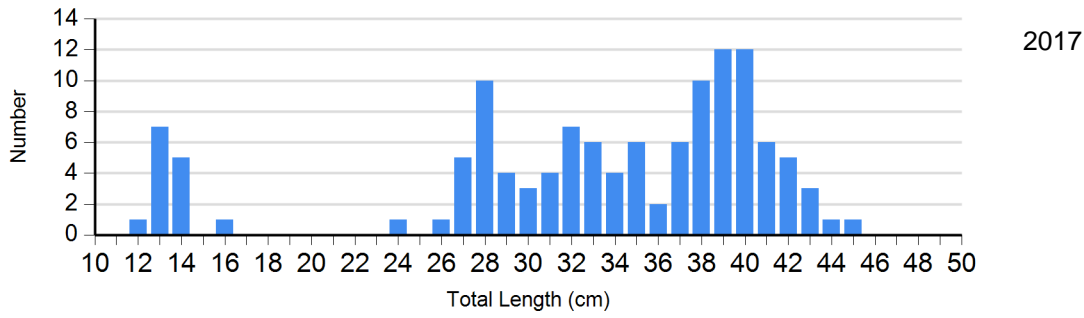


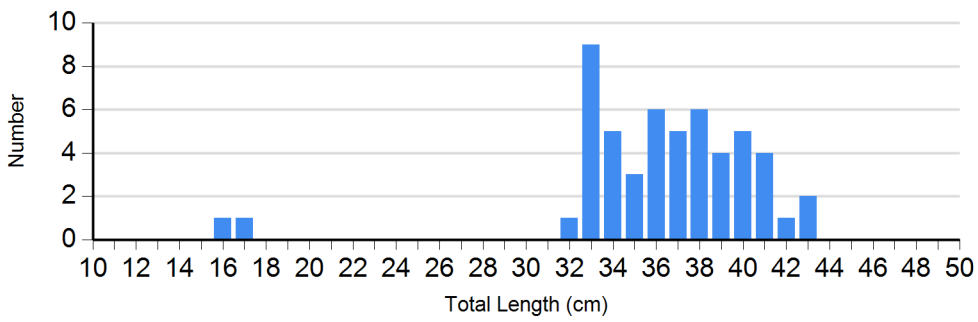
Species: Walleye
 Gear: AFS std gill net





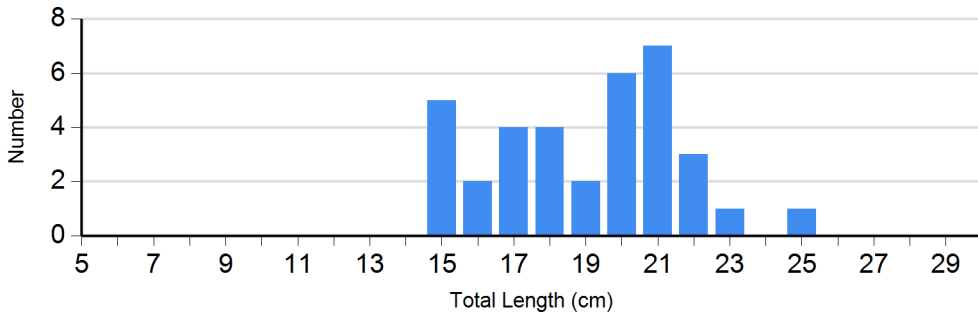
Species: White Bass
Gear: AFS std gill net



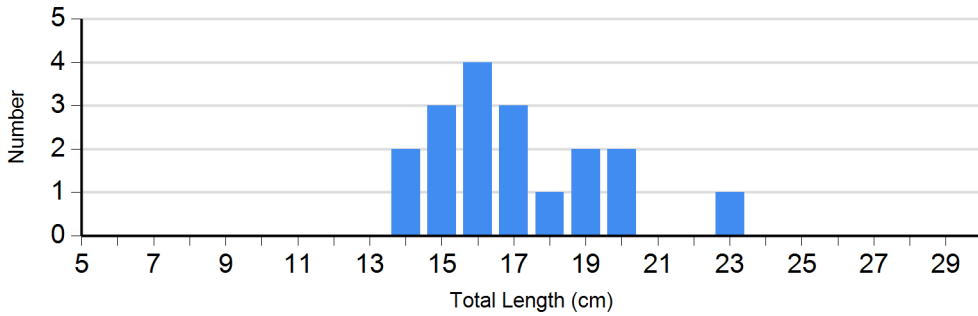


2022

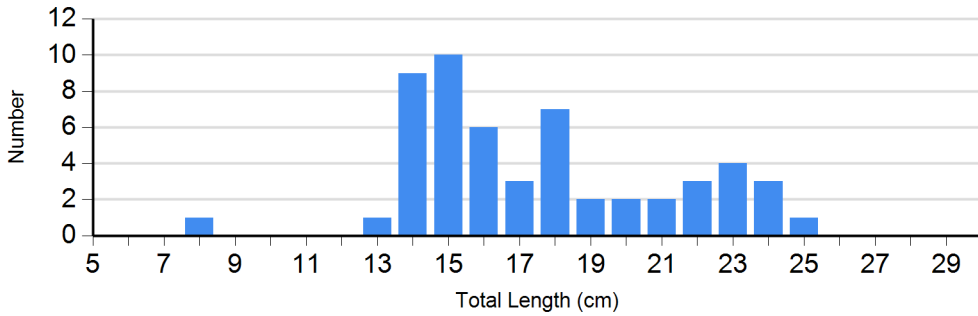
Species: Yellow Perch
Gear: AFS std gill net



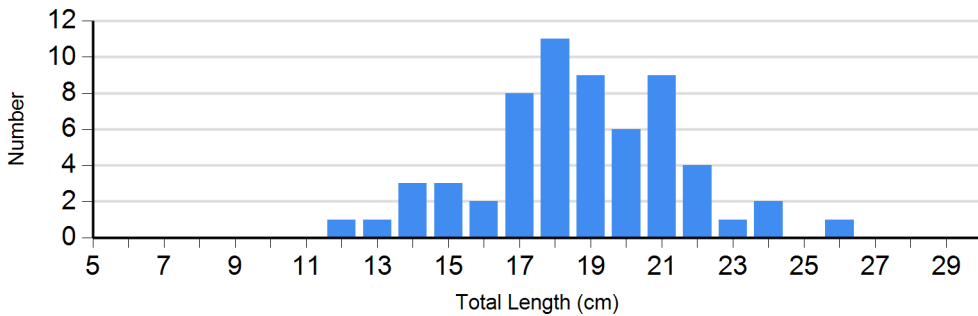
2017



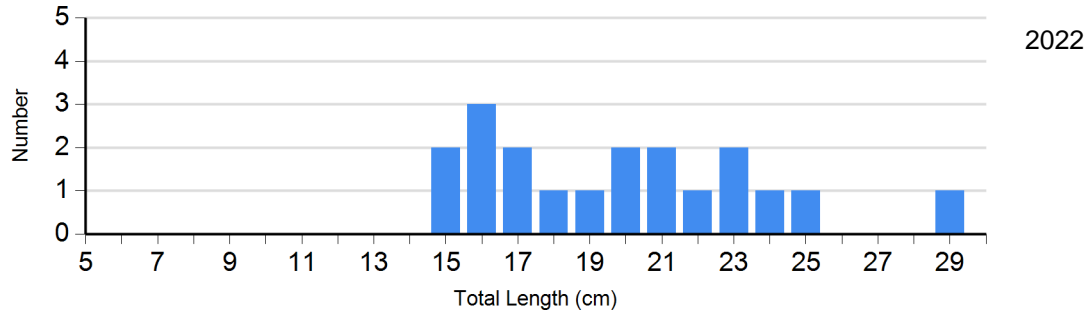
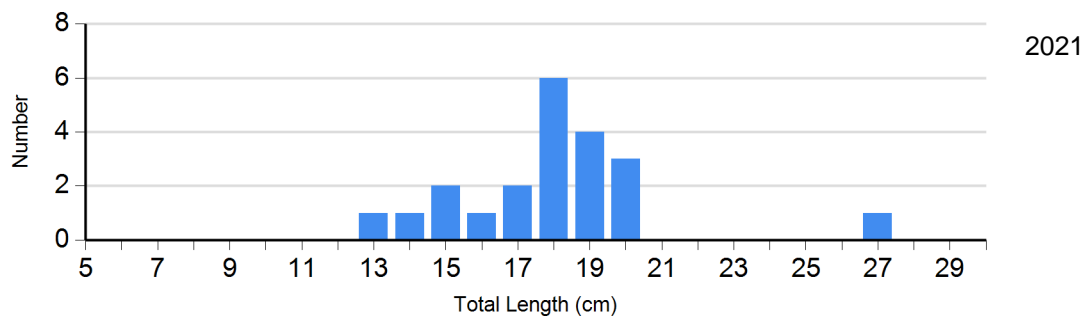
2018



2019



2020

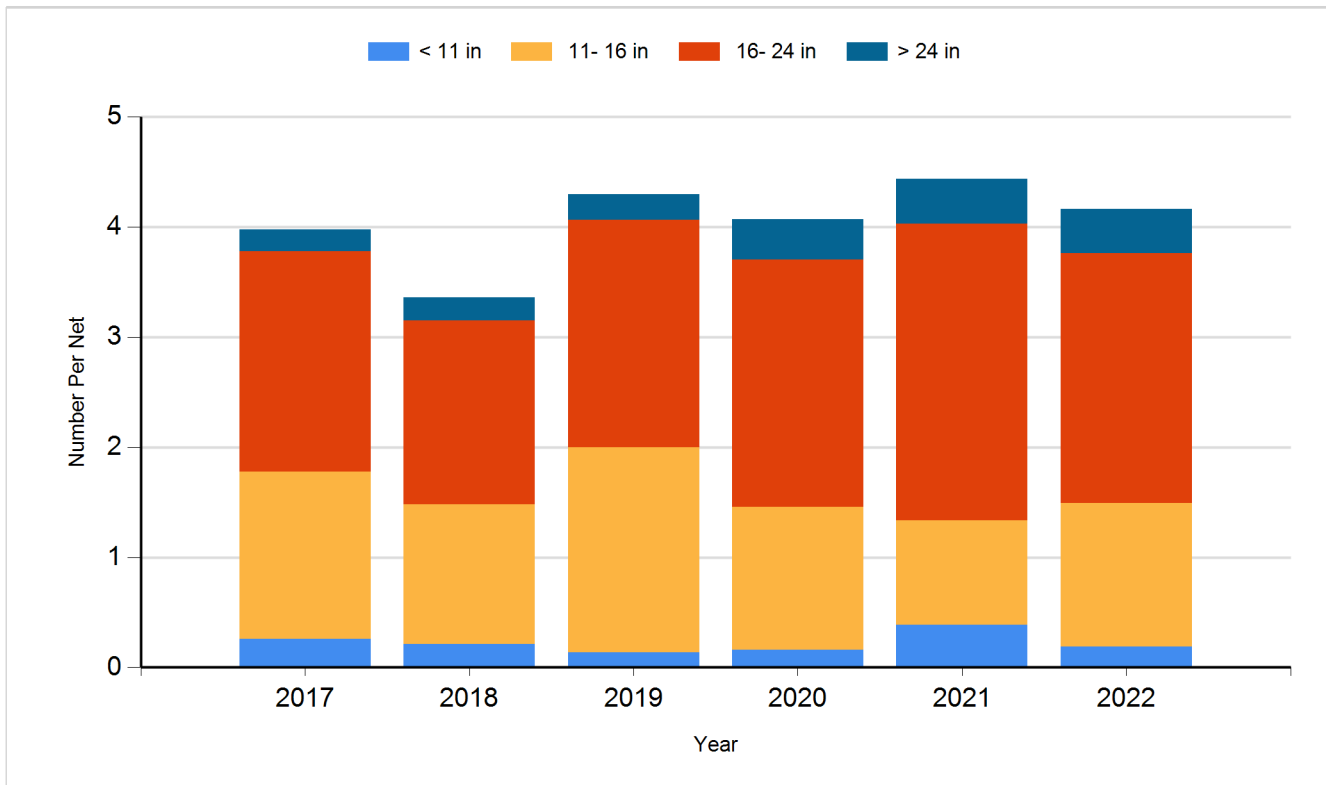


Historic Fish Sizes and Relative Abundance

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

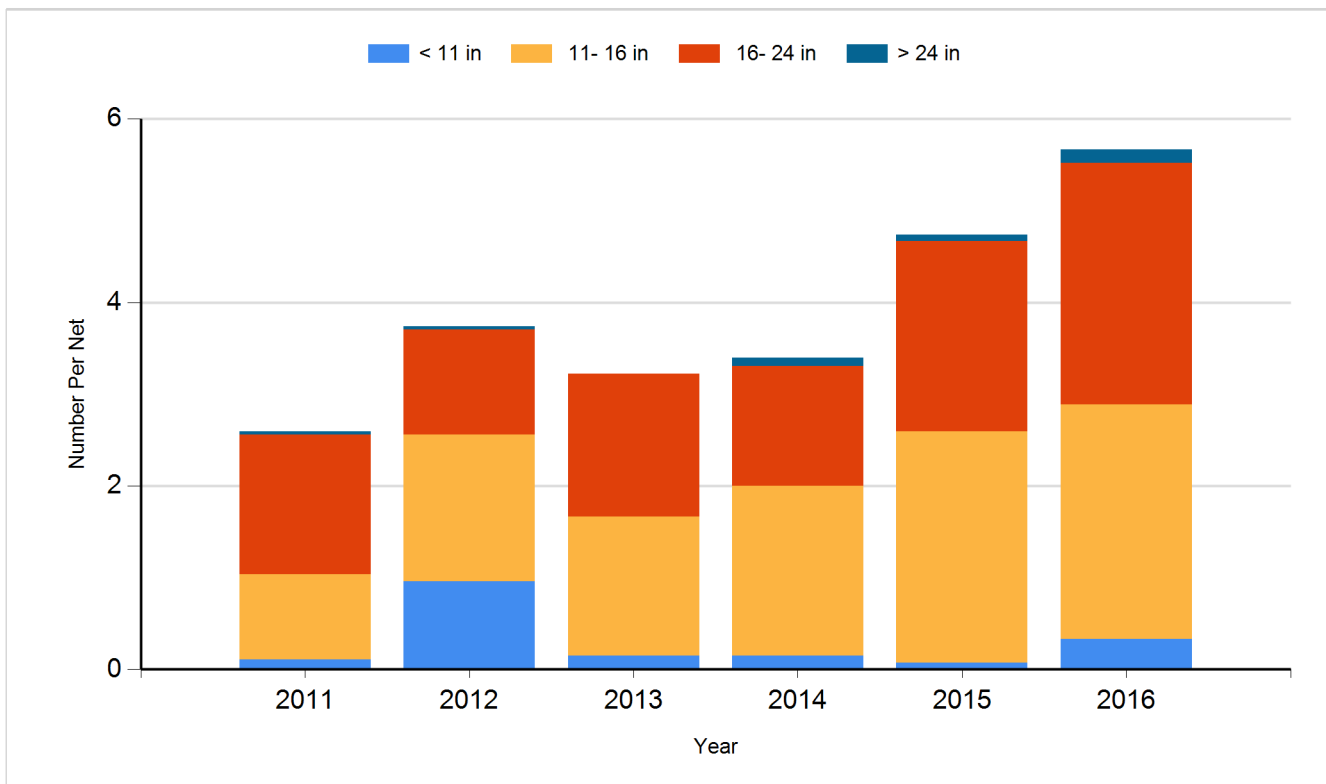
Species: Channel Catfish

Gear: AFS std gill net

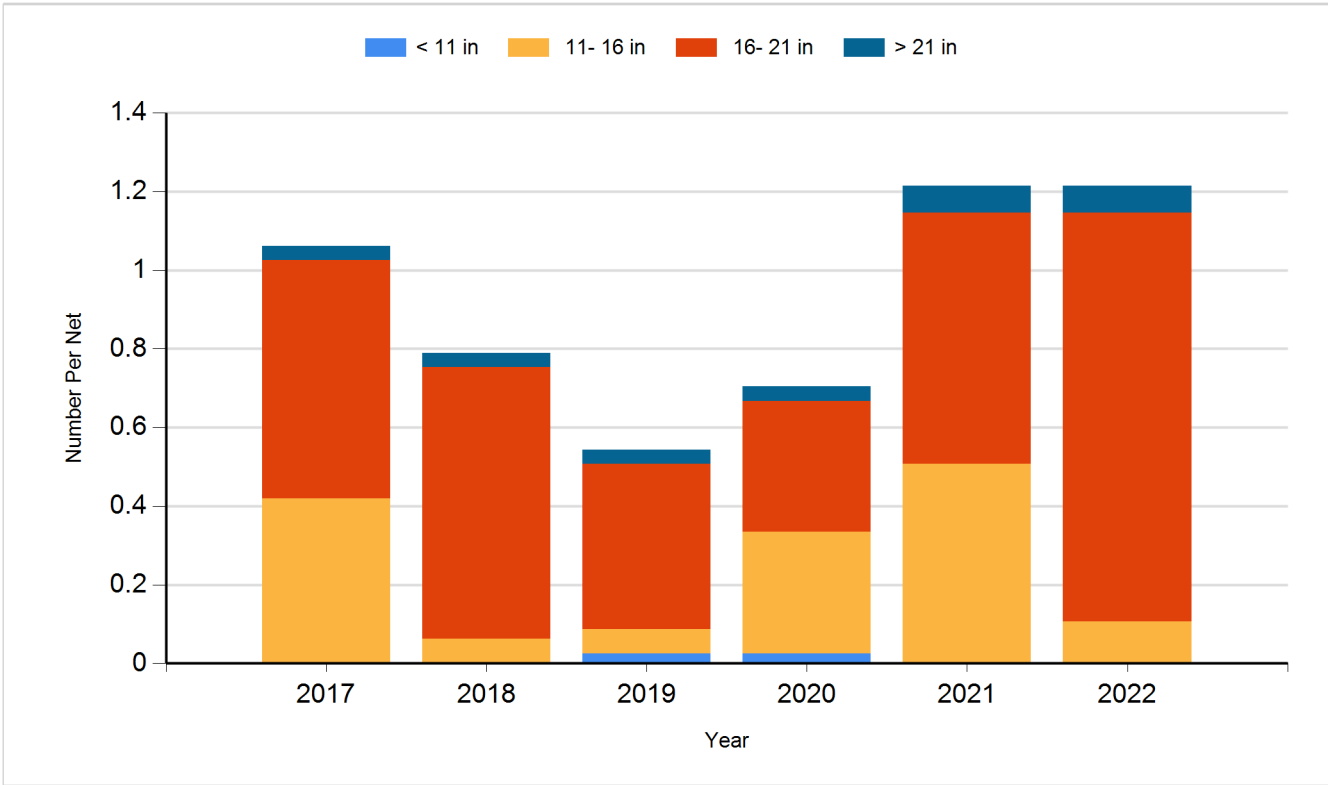


Species: Channel Catfish

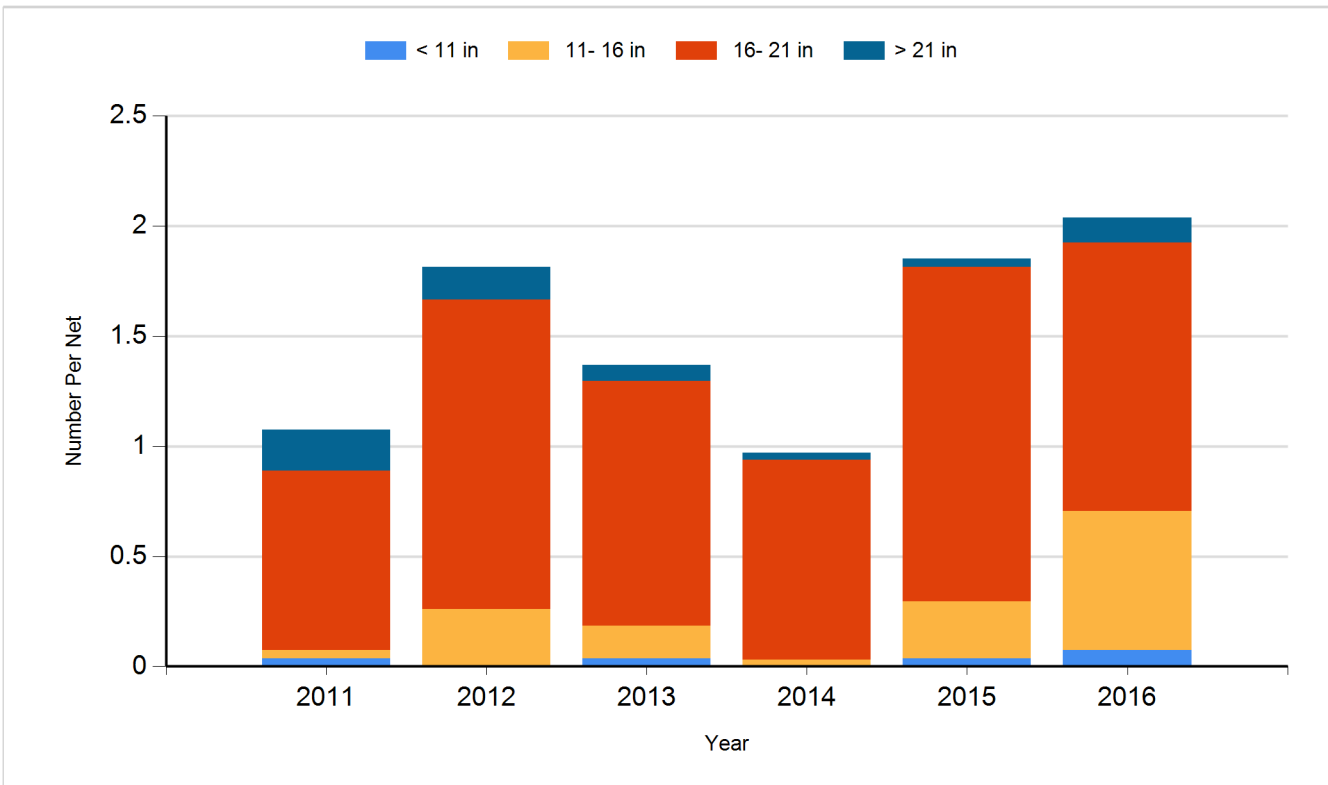
Gear: std exp gill net



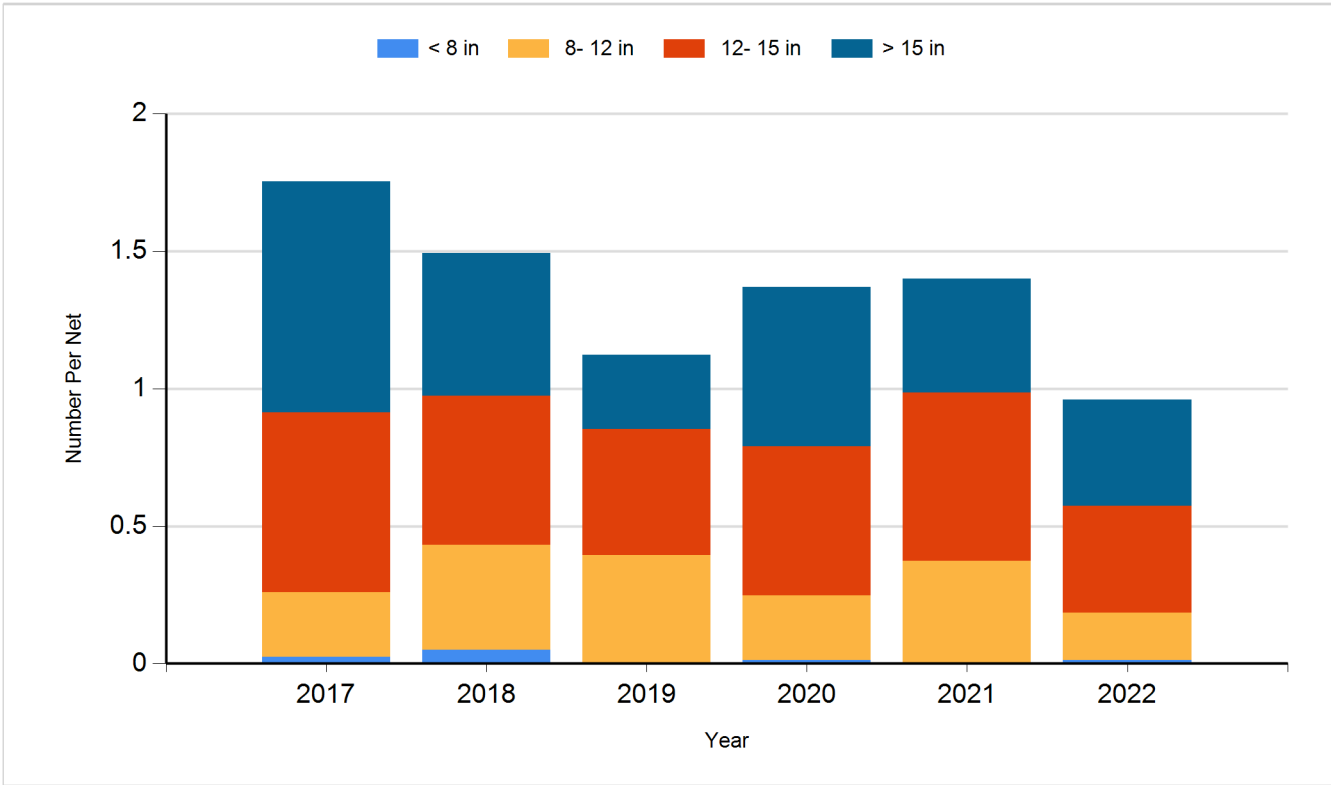
Species: Common Carp
Gear: AFS std gill net



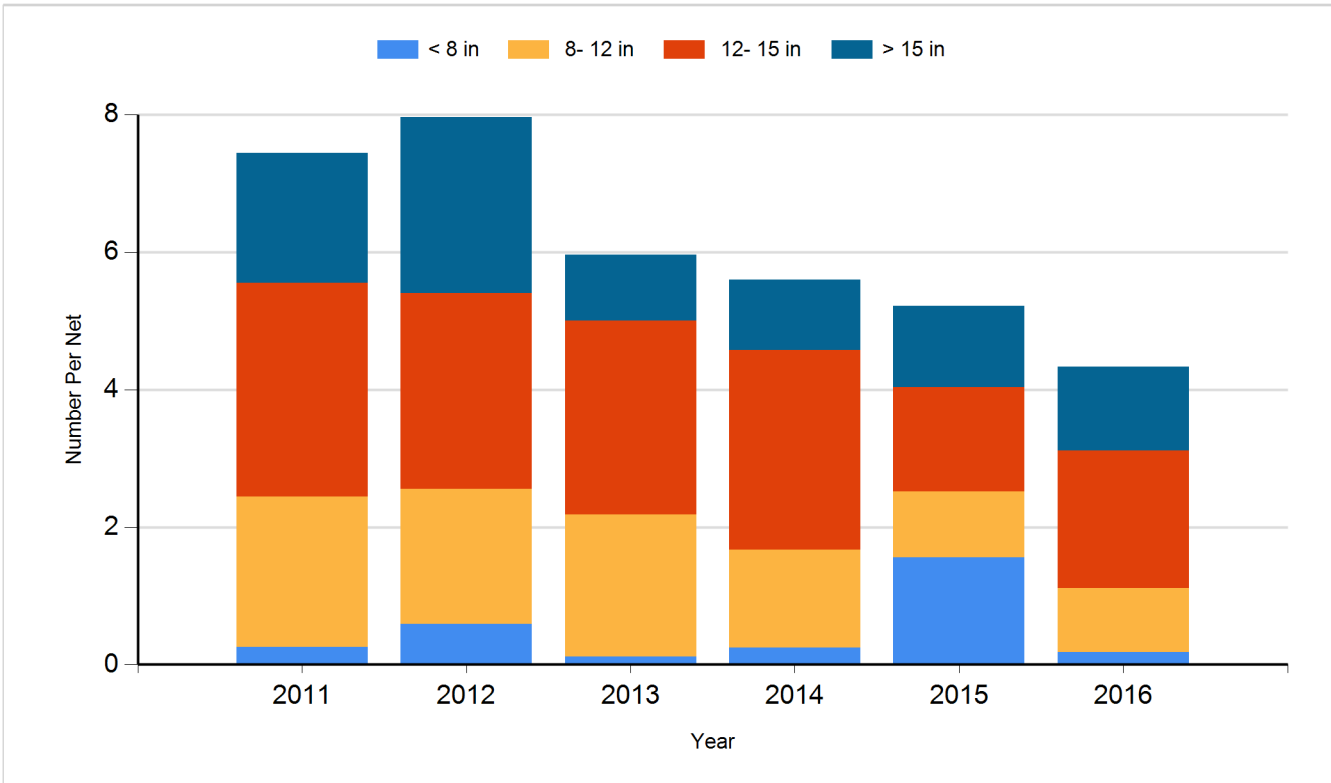
Species: Common Carp
Gear: std exp gill net



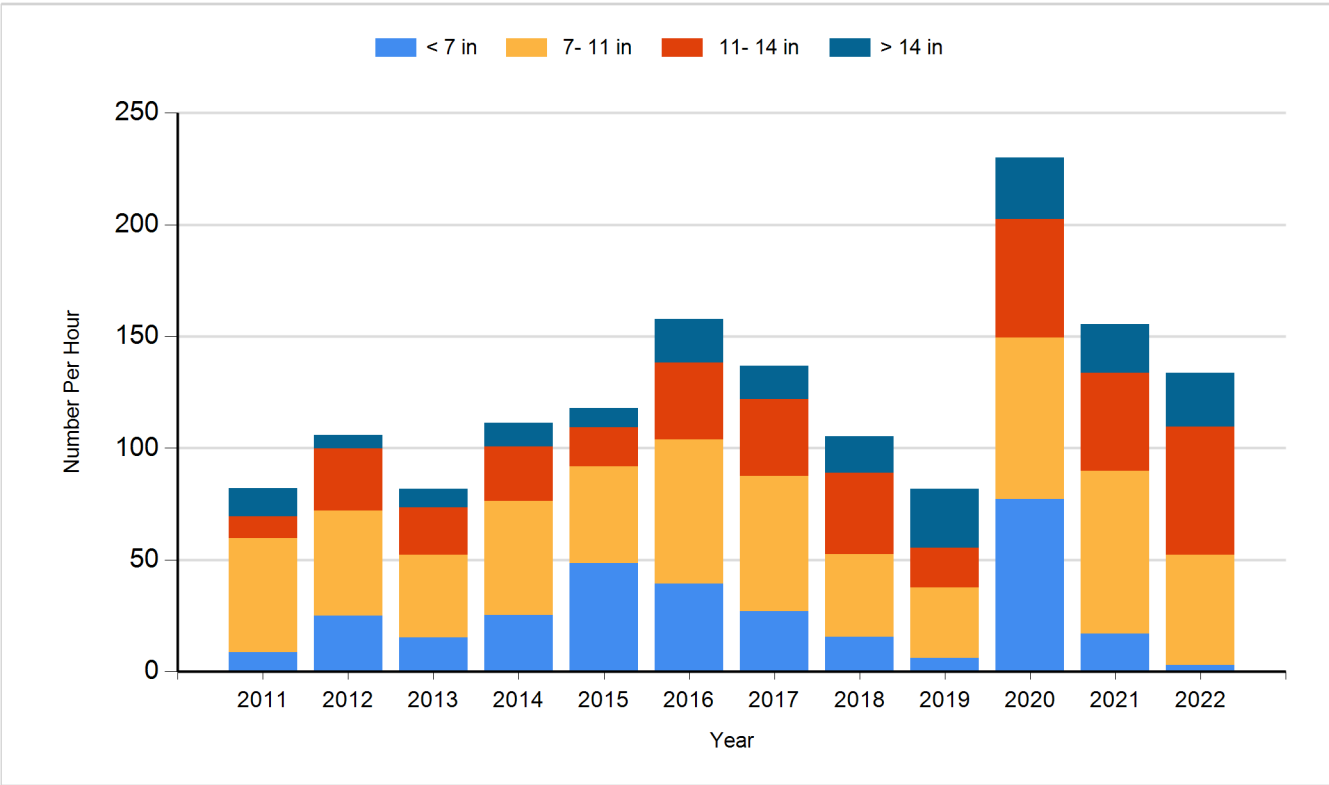
Species: Sauger
Gear: AFS std gill net



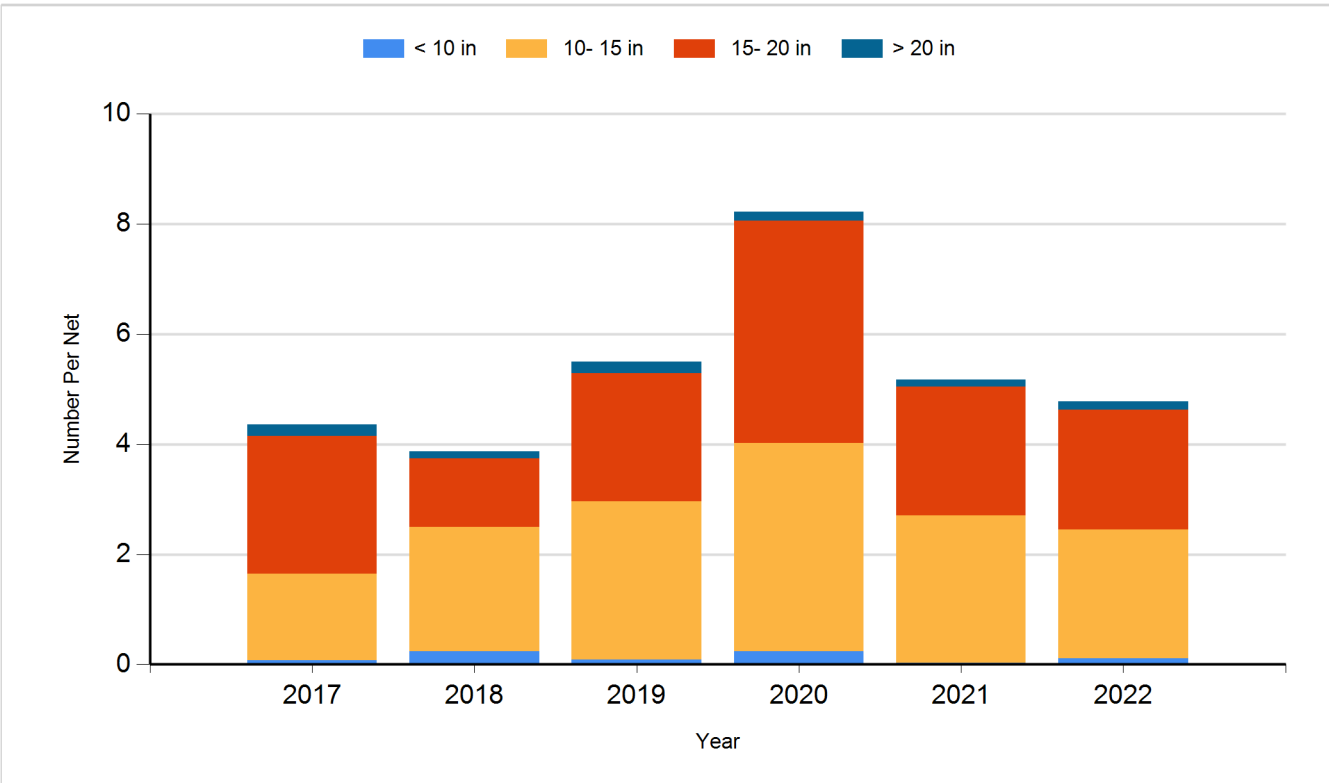
Species: Sauger
Gear: std exp gill net



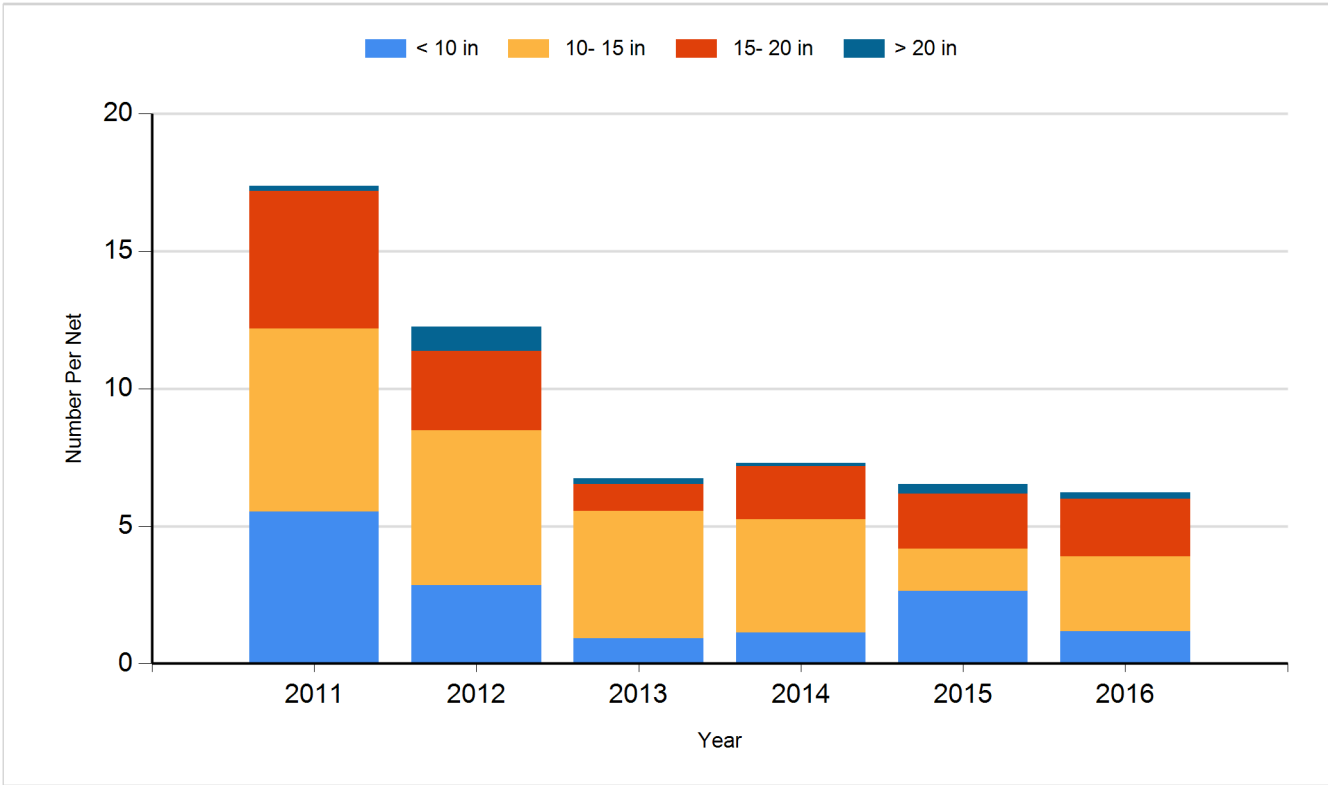
Species: Smallmouth Bass
 Gear: boat shocker (night)



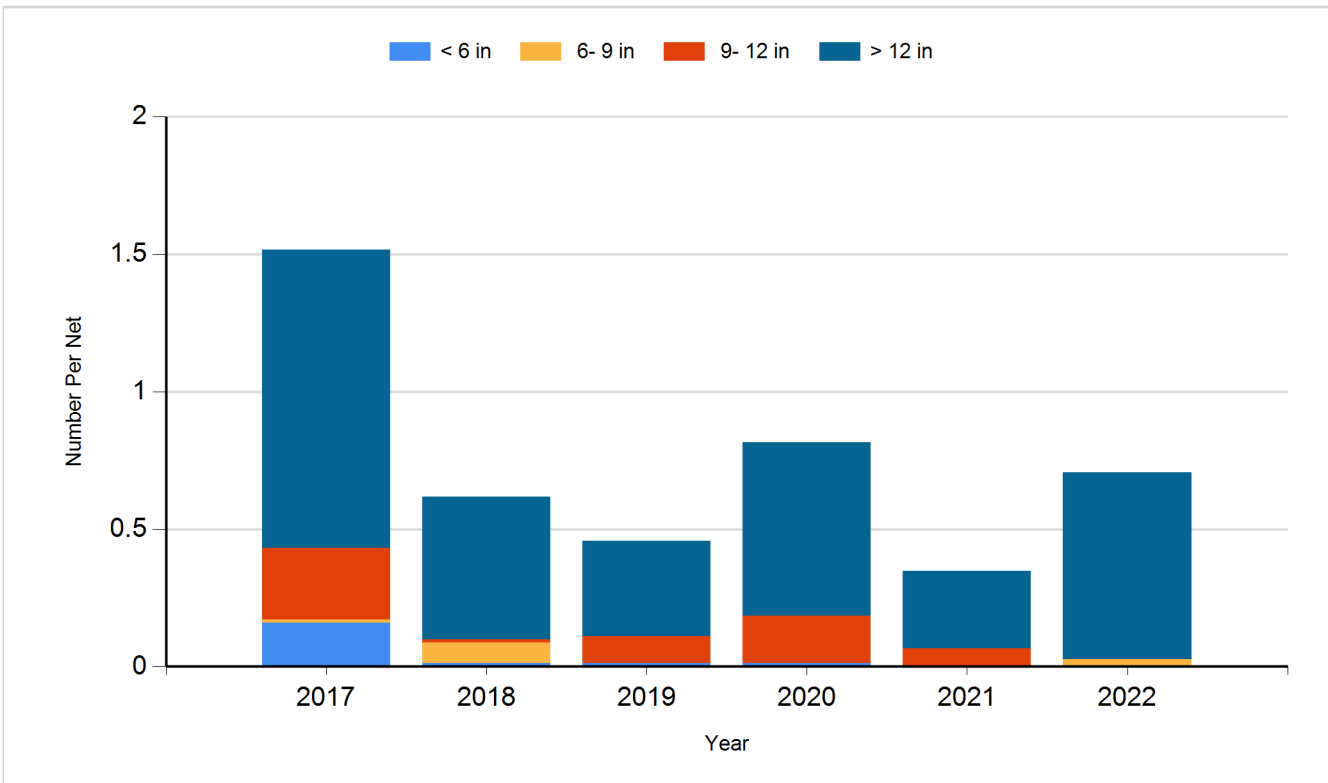
Species: Walleye
 Gear: AFS std gill net



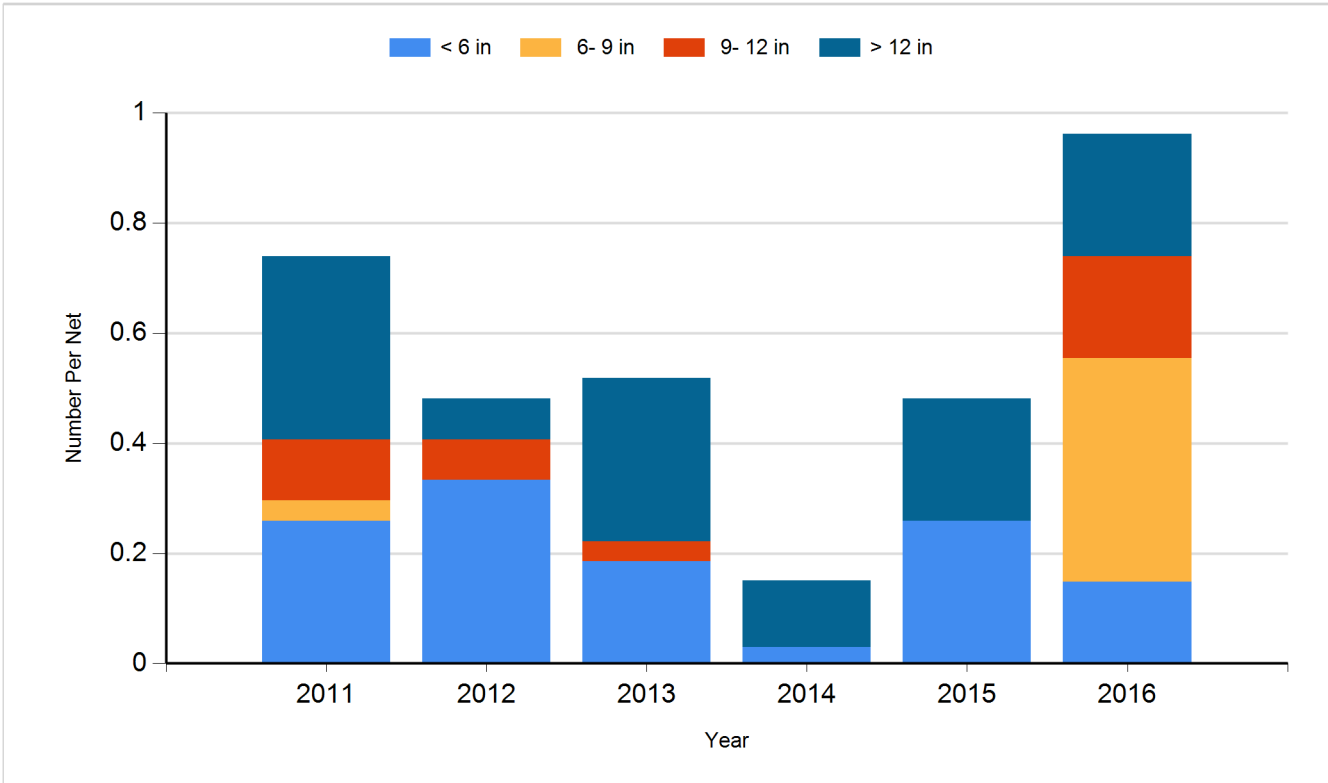
Species: Walleye
Gear: std exp gill net



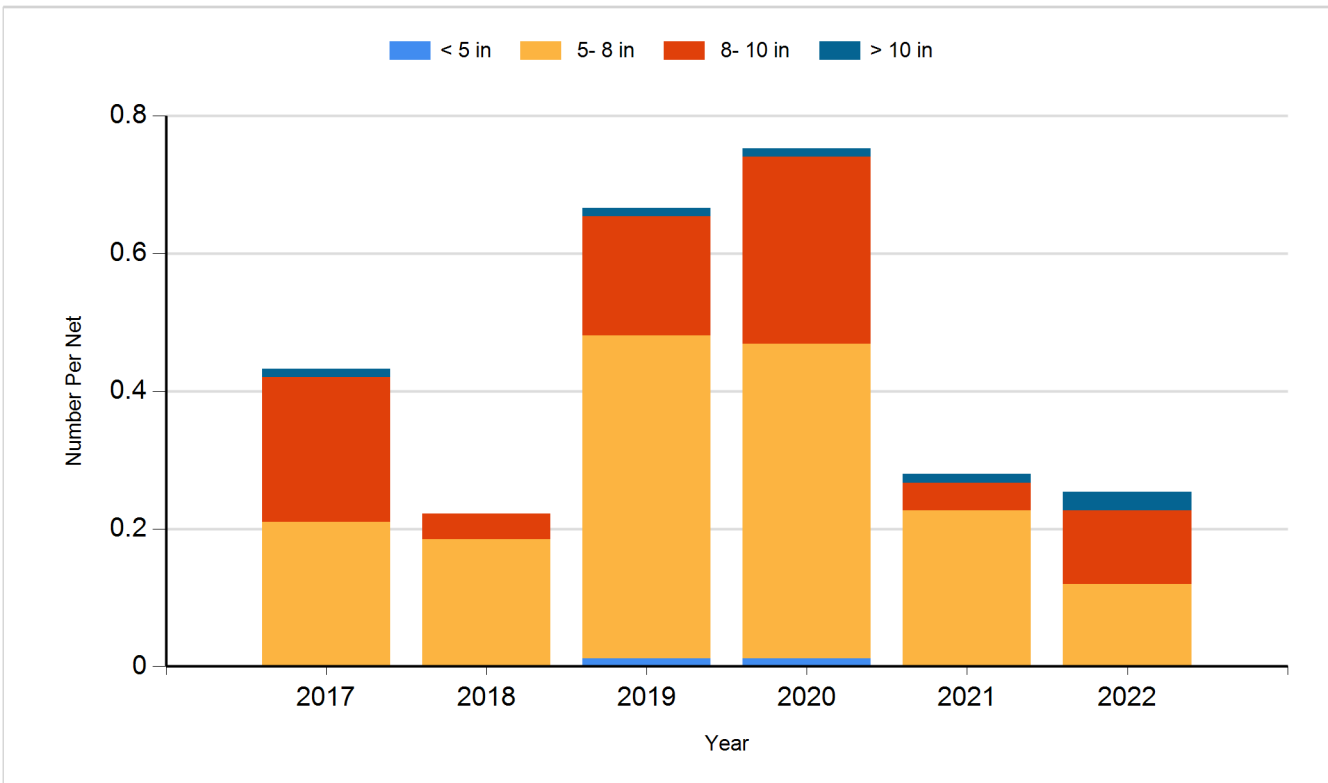
Species: White Bass
Gear: AFS std gill net



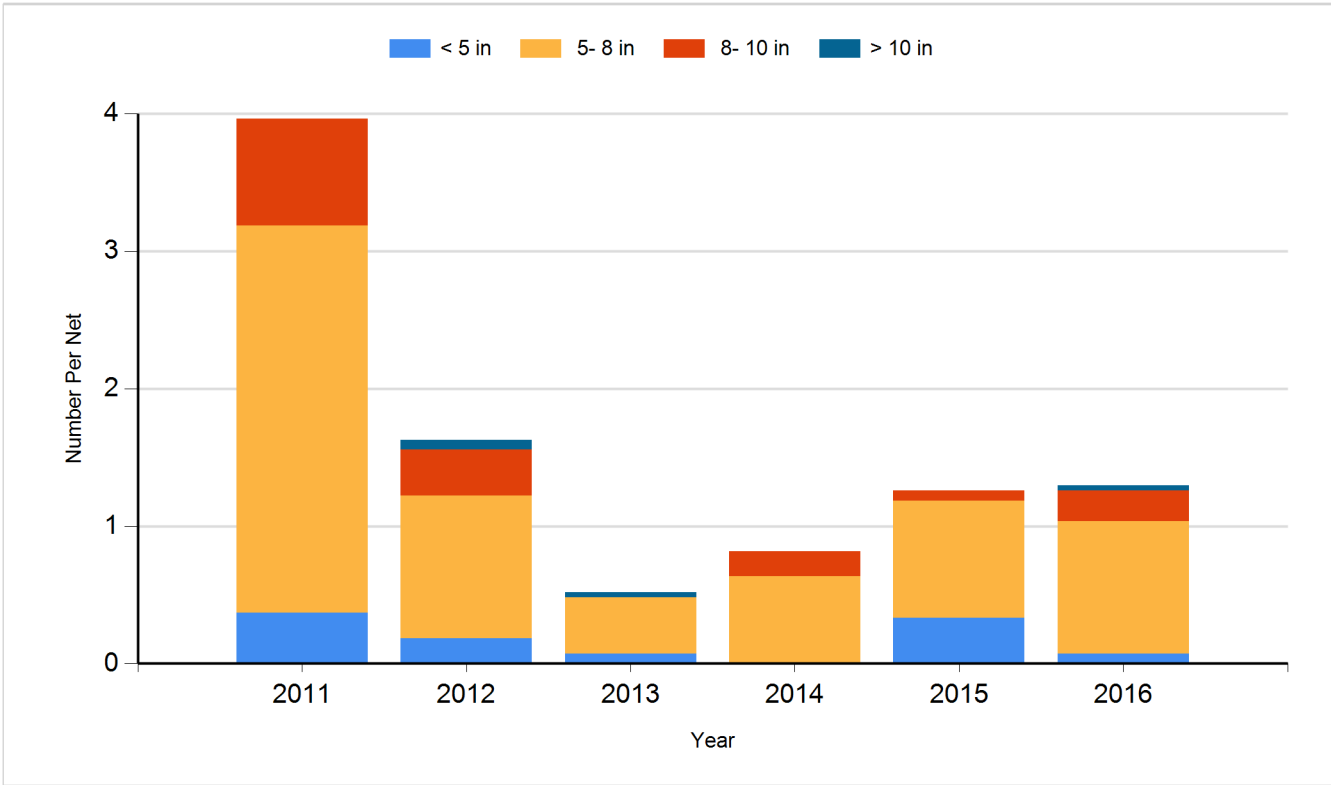
Species: White Bass
Gear: std exp gill net



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
2011	Paddlefish	Large Fingerling	55,792
2012	Paddlefish	Large Fingerling	1,896
2013	Paddlefish	Large Fingerling	3,750
2014	Paddlefish	Juvenile	3,980
2015	Paddlefish	Large Fingerling	31,862
2016	Paddlefish	Large Fingerling	10,071
2017	Paddlefish	Large Fingerling	35,603
2018	Paddlefish	Large Fingerling	24,679
2019	Paddlefish	Large Fingerling	43,204
2020	Paddlefish	Large Fingerling	35,116
2021	Paddlefish	Juvenile	27,444
2022	Paddlefish	Juvenile	30,680
