

**SOUTH DAKOTA STATEWIDE FISHERIES SURVEY**  
**Shadehill Reservoir, Perkins County**  
**SFG-Lake-1017-000**  
**2019**

**Lake Information**

**Name:** Shadehill Reservoir  
**County:** Perkins  
**Surface Area:** 5,072 Acres

**Surveys and Investigations**

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

Gear	Date	Effort
AFS gill net (1/2 inch)	Aug 14, 2019	4 net-nights
AFS std gill net	Aug 13, 2019	5 net-nights
AFS std gill net	Aug 14, 2019	5 net-nights
frame net (std 3/4 in)	May 29, 2019	9 net-nights

## **Common Fish Species Present**

Channel Catfish

Black Crappie

Gizzard Shad

Smallmouth Bass

Walleye

Yellow Perch

White Crappie

White Bass

Common Carp

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 gill net (1/2 inch)*	Channel Catfish	4	1.0	0.1							
	Common Carp	1	0.3	0.0							
	Walleye	2	0.5	0.0							
AFS std gill net	Black Crappie	1	0.1	0.1	100		100		90		
	Channel Catfish	145	13.9	3.7	58	6	4	3	83	1	
	Common Carp	18	1.8	0.9	100		28	18	90	1	
	Freshwater Drum	13	1.3	0.9	92		8		99	2	
	Goldeye	1	0.0	0.0							
	Northern Pike	2	0.2	0.2	50		0		82	8	
	River Carpsucker	14	1.4	0.6	100		100		93	2	
	Shorthead Redhorse	9	0.9	0.6	100		78		98	4	
	Smallmouth Bass	2	0.2	0.2	50		0		91	2	
	Walleye	31	3.1	1.2	26	12	6		80	1	
	White Bass	26	2.6	2.3	96		96		87	1	
	White Crappie	4	0.4	0.4	100		75		93	6	
	Yellow Perch	11	1.1	0.7	100		55		90	2	
	frame net (std 3/4 in)	Black Crappie	27	3.0	2.7	100		100		89	2
		Channel Catfish	70	6.4	4.2	31	9	0		91	2
Common Carp		18	1.9	1.4	82		29		89	4	
Freshwater Drum		5	0.6	0.6	40		0		102	2	
Northern Pike		2	0.2	0.2	100		100		53		
River Carpsucker		9	1.0	0.7	89		67		95	4	
Smallmouth Bass		2	0.2	0.2	100		0		94	2	
Tadpole Madtom		1	0.0	0.0							
Walleye		24	2.7	1.5	83		4		82	2	
White Bass		7	0.8	0.5	100		100		88	2	
White Crappie		69	7.7	4.0	100		87	6	95	1	
Yellow Perch		2	0.2	0.2	50		50		94	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.

Gear	Species	CPUE										Avg	
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
AFS gill net (1/2 inch)	Channel Catfish											1.0	1.00
	Common Carp											0.3	0.25
	Walleye											0.5	0.50
AFS std frame net	Black Crappie									14.2			14.20
	Common Carp									0.1			0.10
	Freshwater Drum									0.2			0.20
	Northern Pike									0.2			0.20
	River Carpsucker									0.9			0.90
	Shorthead Redhorse									0.1			0.10
	Smallmouth Bass									0.2			0.20
	Spottail Shiner									0.0			0.00
	Walleye									0.0			0.00
	White Bass									0.9			0.90
	White Crappie									4.2			4.20
AFS std gill net	Bigmouth Buffalo									0.0	0.1	0.0	0.03
	Black Crappie									0.4	0.4	0.1	0.30
	Bluegill									0.1	0.0	0.0	0.03
	Channel Catfish									8.5	8.9	13.9	10.43
	Common Carp									2.2	1.8	1.8	1.93
	Freshwater Drum									2.2	1.3	1.3	1.60
	Gizzard Shad									0.0	0.0	0.0	0.00
	Goldeye									0.0	0.0	0.0	0.00
	Northern Pike									0.3	0.7	0.2	0.40
	River Carpsucker									1.8	1.5	1.4	1.57
	Shorthead Redhorse									0.7	1.6	0.9	1.07
	Smallmouth Bass									0.2	0.1	0.2	0.17
	Walleye									3.6	7.0	3.1	4.57
	White Bass									6.0	3.3	2.6	3.97
	White Crappie									0.8	0.2	0.4	0.47
Yellow Perch									1.2	1.8	1.1	1.37	
boat shocker (night)	Walleye							168.3					168.3 0
frame net (std 3/4 in)	Black Bullhead	0.0	0.0	0.0	3.0	0.2	0.0	0.0			0.0	0.0	0.36
	Black Crappie	6.1	6.9	44.6	75.3	1.7	2.9	34.7			2.7	3.0	19.77
	Bluegill	0.8	0.3	1.8	0.0	2.4	0.3	0.4			0.1	0.0	0.68

		CPUE										
Gear	Species	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Avg
frame net (std 3/4 in)	Channel Catfish	1.6	3.6	0.0	0.0	3.5	0.2	0.5		6.3	6.4	2.46
	Common Carp	0.6	1.5	0.1	6.3	0.6	0.5	0.1		0.3	1.9	1.32
	Freshwater Drum	0.1	0.2	0.0	0.2	0.1	0.1	0.0		0.0	0.6	0.14
	Gizzard Shad	0.0	0.0	0.0	0.9	0.0	0.0	0.1		0.0	0.0	0.11
	Green Sunfish	0.0	0.0	0.1	0.0	0.0	0.0	0.0		0.0	0.0	0.01
	Northern Pike	0.0	0.0	0.0	1.7	0.0	0.1	0.0		0.0	0.2	0.22
	River Carpsucker	0.9	0.6	0.0	0.4	4.1	0.0	0.0		8.1	1.0	1.68
	Shorthead Redhorse	0.1	0.0	0.0	0.1	0.7	0.0	0.0		0.2	0.0	0.12
	Smallmouth Bass	1.3	0.1	0.9	0.2	0.2	0.3	0.3		0.0	0.2	0.39
	Tadpole Madtom	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.00
	Walleye	1.4	0.1	0.0	3.8	0.5	0.0	0.1		0.5	2.7	1.01
	White Bass	0.8	0.0	0.0	0.6	0.1	0.0	0.8		0.3	0.8	0.38
	White Crappie	0.1	13.9	4.1	49.6	1.7	22.6	45.3		6.8	7.7	16.87
	White Sucker	0.0	0.0	0.1	0.1	0.1	0.0	0.0		0.0	0.0	0.03
Yellow Perch	0.5	0.1	0.4	0.2	0.3	0.0	0.0		0.1	0.2	0.20	
std exp gill net	Black Bullhead	0.0	0.0	0.0	0.0	0.0	0.0	0.2				0.03
	Black Crappie	0.7	3.3	1.3	2.8	1.8	1.5	1.7				1.87
	Bluegill	0.0	0.0	0.0	0.0	0.2	0.0	0.0				0.03
	Channel Catfish	13.2	20.5	19.0	14.8	21.3	12.5	22.7				17.71
	Common Carp	0.3	2.0	1.3	0.4	2.2	1.7	8.2				2.30
	Freshwater Drum	1.5	3.0	1.0	0.4	0.8	2.3	3.0				1.71
	Gizzard Shad	0.0	0.0	2.3	3.6	0.0	2.3	1.0				1.31
	Goldeye	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.00
	Northern Pike	2.2	1.5	0.8	0.8	0.7	1.5	0.3				1.11
	River Carpsucker	1.3	1.2	0.7	1.4	0.8	0.3	0.8				0.93
	Shorthead Redhorse	1.3	2.5	0.3	1.8	6.5	5.8	2.3				2.93
	Smallmouth Bass	0.0	0.0	0.0	0.0	0.2	0.0	0.0				0.03
	Spottail Shiner	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.00
	Walleye	5.8	11.5	14.2	25.2	7.7	6.7	8.0				11.30
White Bass	11.5	8.0	0.7	1.0	9.8	20.3	1.3				7.51	
White Crappie	0.8	3.7	3.3	0.6	0.2	0.7	1.5				1.54	
White Sucker	0.2	0.7	0.0	0.2	0.0	0.2	0.0				0.19	
Yellow Perch	3.3	3.0	2.0	4.4	5.7	4.2	3.3				3.70	

## 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												
			2010	2011	2012	2013	2014	2015	2016	2017	2018	2019			
AFS std frame net	Black Crappie	PSD									100				
		PSD-P									82				
		Wr									95				
	Common Carp	PSD										0			
		PSD-P										0			
		Wr													
	River Carpsucker	PSD										100			
		PSD-P										91			
		Wr										108			
	Smallmouth Bass	PSD										50			
		PSD-P										0			
		Wr										91			
	Walleye	PSD										0			
		PSD-P										0			
	White Bass	PSD										100			
		PSD-P										100			
		Wr										91			
	White Crappie	PSD										100			
PSD-P											100				
Wr											98				
AFS std gill net	Black Crappie	PSD									100	100	100		
		PSD-P									100	100	100		
		Wr									94	95	90		
	Channel Catfish	PSD										41	63	58	
		PSD-P										5	5	4	
		Wr										86	87	83	
	Common Carp	PSD										73	100	100	
		PSD-P										12	27	28	
		Wr										93	89	90	
	Gizzard Shad	PSD											0		
	River Carpsucker	PSD										100	100	100	
		PSD-P										95	94	100	
		Wr										101	95	93	
	Smallmouth Bass	PSD										100	0	50	



Gear	Species	Index	Year											
			2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
AFS std gill net	Smallmouth Bass	PSD-P									50	0	0	
		Wr									71	100	91	
		PSD									33	27	26	
	Walleye	PSD-P										9	1	6
		Wr										81	79	80
		PSD										90	100	96
	White Bass	PSD-P										90	64	96
		Wr										92	89	87
		PSD										90	50	100
	White Crappie	PSD-P										90	50	75
		Wr										99	103	93
		PSD										86	73	100
	Yellow Perch	PSD-P										14	9	55
		Wr										92	99	90
		PSD												
boat shocker (night)	Walleye	PSD								80				
		PSD-P								20				
		Wr								90				
frame net (std 3/4 in)	Black Crappie	PSD	31	97	97	99	100	100	98			100	100	
		PSD-P	16	41	12	2	100	100	97			96	100	
		Wr	108	108	108	98	96	104	103			87	89	
	Channel Catfish	PSD	31	53		0	37	50	100			37	31	
		PSD-P	0	0		0	0	0	0			0	0	
		Wr	83	89			91	77	91			82	91	
	Common Carp	PSD	100	60	0	25	67	80	0			100	82	
		PSD-P	60	47	0	4	50	60	0			0	29	
		Wr	84		99	91	86	103	96			90	89	
	Gizzard Shad	PSD				13					100			
		Wr				84					85			
	River Carpsucker	PSD	100	100		100	100					100	89	
		PSD-P	86	50		75	98					98	67	
		Wr	95			88						96	95	
	Smallmouth Bass	PSD	20	100	14	0	100	33	33				100	
		PSD-P	0	0	0	0	0	33	33				0	
		Wr	102	98	93	77	93	99	92				94	
	Walleye	PSD	82	100		62	80			100		100	83	
PSD-P		9	0		9	0			0		80	4		

Gear	Species	Index	Year									
			2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
frame net (std 3/4 in)	Walleye	Wr	78	99		81	88		99		79	82
	White Bass	PSD	100			100	100		100		100	100
		PSD-P	100			20	100		63		100	100
		Wr	86			86	84		91		85	88
	White Crappie	PSD	100	100	100	100	100	100	100		100	100
		PSD-P	0	89	91	63	100	100	99		100	87
		Wr	99	102	103	96	96	104	102		96	95
	Yellow Perch	PSD	50	0	100	100	100				100	50
		PSD-P	0	0	33	0	0				100	50
		Wr	95	89	99	86	93				74	94
std exp gill net	Black Crappie	PSD	0	85	100	100	91	100	100			
		PSD-P	0	5	13	43	91	100	90			
		Wr	114	112	102	110	116	103	100			
	Channel Catfish	PSD	67	71	56	53	55	53	35			
		PSD-P	0	1	0	1	0	0	1			
		Wr	83	89	85	87	82	88	86			
	Common Carp	PSD	100	42	25	50	77	70	76			
		PSD-P	100	17	13	50	23	0	10			
		Wr	83	83	90	84	91	96	85			
	Gizzard Shad	PSD			0	94	0	86	83			
		Wr			90	89		122				
	River Carpsucker	PSD	88	86	100	100	100	100	100			
		PSD-P	63	43	50	43	100	100	100			
		Wr	92		98	87	94	103				
	Smallmouth Bass	PSD					100					
		PSD-P					100					
		Wr					96					
	Walleye	PSD	34	20	6	21	74	58	52			
		PSD-P	0	0	1	1	4	0	8			
		Wr	81	84	77	86	80	84	86			
	White Bass	PSD	74	92	100	100	58	98	100			
		PSD-P	68	50	25	60	44	30	63			
		Wr	90	91	86	104	93	95	94			
	White Crappie	PSD	80	86	100	100	0	100	100			
		PSD-P	60	36	20	100	0	100	100			
		Wr	106	103	99	101	92	102	99			
	Yellow Perch	PSD	30	67	58	77	65	36	90			

Gear	Species	Index	Year										
			2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
std exp gill net	Yellow Perch	PSD-P	0	11	0	0	6	12	20				
		Wr	101	96	91	99	96	101	98				

## 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+
2013	1304				227 (1271)	242 (33)					
2011	118		176 (2)	218 (68)	263 (6)	280 (22)	287 (20)				

Species: Walleye

Mean Length (expanded sample number) at capture by age											
Year	N	1	2	3	4	5	6	7	8	9	10+
2019	31		274 (3)	318 (20)	385 (2)	443 (4)					593 (2)
2018	22		310 (12)	366 (8)	384 (2)						
2017	35		333 (9)	366 (13)	430 (4)	423 (2)		471 (2)	528 (4)	630 (1)	
2016	96		294 (38)	384 (16)	394 (2)	411 (10)	468 (8)	480 (20)	505 (2)		
2015	104	215 (26)	305 (18)	353 (12)	398 (8)	396 (12)	443 (26)	441 (2)			
2014	92	275 (10)	330 (4)	367 (8)	407 (6)	430 (58)	545 (2)		483 (2)		748 (2)
2013	252	221 (4)	297 (8)	302 (22)	348 (207)	432 (7)				525 (4)	
2012	168		285 (17)	326 (149)		556 (2)					
2011	156	205 (6)	272 (106)	375 (34)	426 (6)	471 (4)					
2010	106	219 (40)	341 (34)	378 (18)	403 (12)					462 (2)	

Species: White Crappie

Mean Length (expanded sample number) at capture by age											
Year	N	1	2	3	4	5	6	7	8	9	10+
2015	430		168 (2)		283 (184)	293 (178)	300 (67)				
2013	892			254 (90)	252 (649)		305 (115)	296 (38)			
2011	278			249 (56)	278 (15)	290 (119)	296 (88)				

## 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).

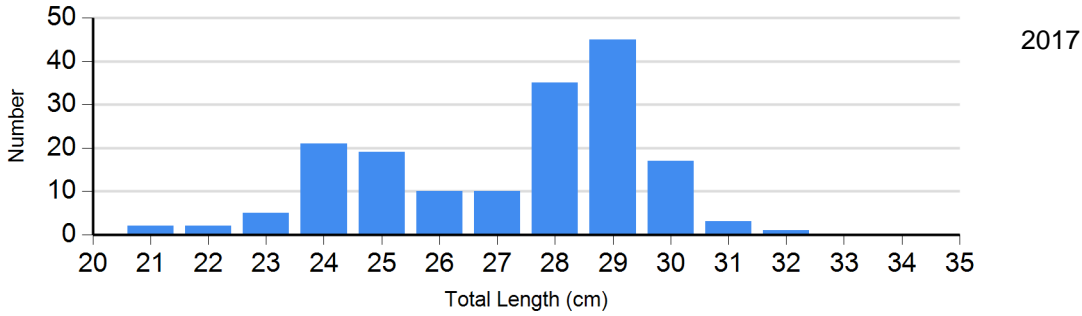
Species	Year	Length Groups							
		S-Q		Q-P		P-M		M	
		N	Wr (SE)	N	Wr (SE)	N	Wr (SE)	N	Wr (SE)
Black Crappie Frame Net	2015	0		0		58	104 (0.8)	0	
	2016	12	114 (1.3)	12	108 (2.2)	648	102 (0.3)	22	100 (0.7)
	2017	0		30	103 (1.4)	119	93 (0.8)	21	90 (1.1)
	2018	0		1	90	21	89 (1.3)	5	78 (5.2)
	2019	0		0		18	91 (1.9)	9	86 (1.9)
Channel Catfish Gill Net	2015	70	87 (0.9)	80	89 (0.8)	0		0	
	2016	178	86 (0.3)	90	87 (0.7)	4		0	
	2017	60	87 (1.2)	37	87 (1.3)	5	82 (8.7)	0	
	2018	40	86 (1.3)	62	87 (1.0)	5	82 (0.9)	0	
	2019	59	82 (0.7)	75	83 (0.8)	5	91 (2.1)	0	
Common Carp Gill Net	2015	6	97 (0.0)	14	96 (2.0)	0		0	
	2016	24	94 (0.0)	64	86 (2.8)	10	70 (0.0)	0	
	2017	7		16	93 (2.0)	3		0	
	2018	0		16	89 (0.9)	6	89 (0.2)	0	
	2019	0		13	92 (1.0)	5	85 (1.4)	0	
Walleye Gill Net	2015	34	84 (1.4)	46	83 (0.6)	0		0	
	2016	46	89 (0.7)	42	86 (0.7)	8	81 (2.0)	0	
	2017	29	81 (0.8)	10	80 (0.9)	3	84 (2.5)	1	88
	2018	61	80 (0.7)	22	78 (0.9)	1	81	0	
	2019	23	81 (0.9)	6	78 (1.7)	2	73 (0.3)	0	
White Bass Gill Net	2015	4	101 (0.0)	166	95 (0.3)	68	95 (0.6)	6	89 (1.8)
	2016	0		6	99 (1.3)	10	91 (0.6)	0	

Species	Year	Length Groups							
		S-Q		Q-P		P-M		M	
		N	Wr (SE)	N	Wr (SE)	N	Wr (SE)	N	Wr (SE)
White Bass Gill Net	2017	7	98 (2.2)	0		58	92 (0.6)	7	89 (2.2)
	2018	0		14	92 (1.1)	23	87 (0.8)	2	85 (3.2)
	2019	1		0		24	87 (0.9)	1	
White Crappie Frame Net	2015	2	117 (0.0)	0		348	105 (0.3)	102	99 (0.8)
	2016	0		12	107 (5.7)	594	102 (0.3)	300	101 (0.4)
	2017	0		0		11	99 (1.1)	39	98 (1.1)
	2018	0		0		37	98 (1.1)	31	93 (1.3)
	2019	0		9	104 (1.3)	22	96 (1.5)	38	91 (1.1)
Yellow Perch Gill Net	2015	32	100 (1.4)	12	106 (2.2)	6	99 (4.4)	0	
	2016	4	97 (0.7)	28	100 (1.5)	8	90 (2.2)	0	
	2017	2	96 (0.8)	10	93 (1.7)	2	87 (0.9)	0	
	2018	6	106 (3.0)	14	96 (2.4)	2	92 (5.0)	0	
	2019	0		5	94 (1.6)	6	87 (2.3)	0	

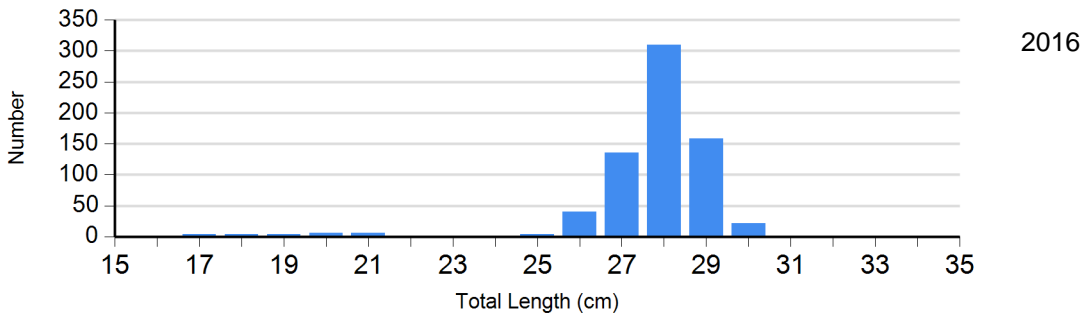
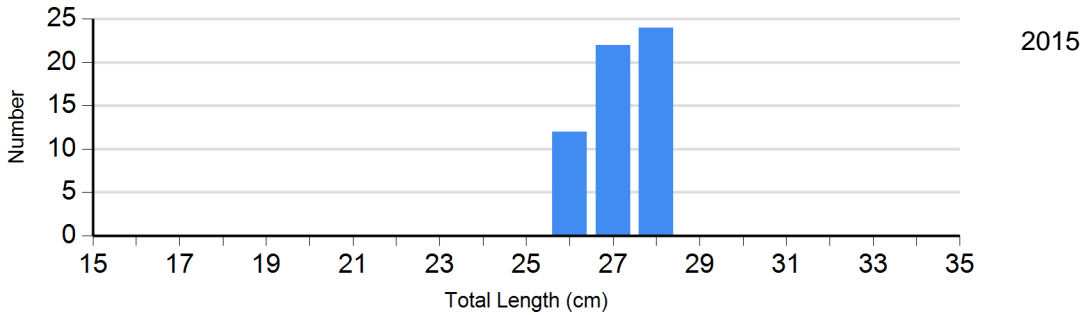
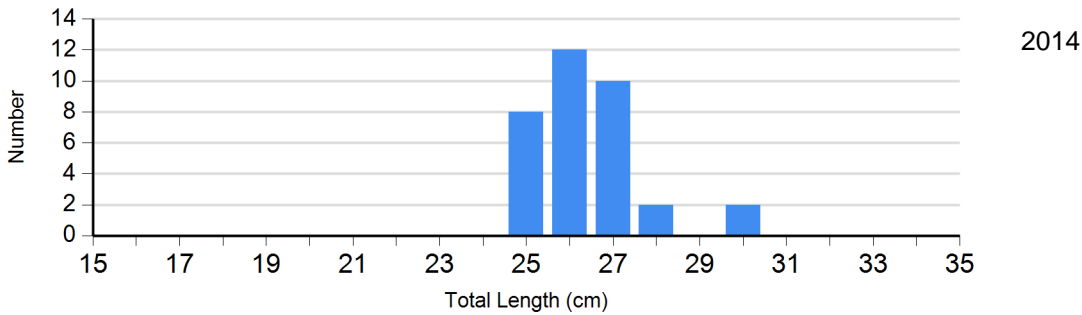
# Length Frequency Distribution

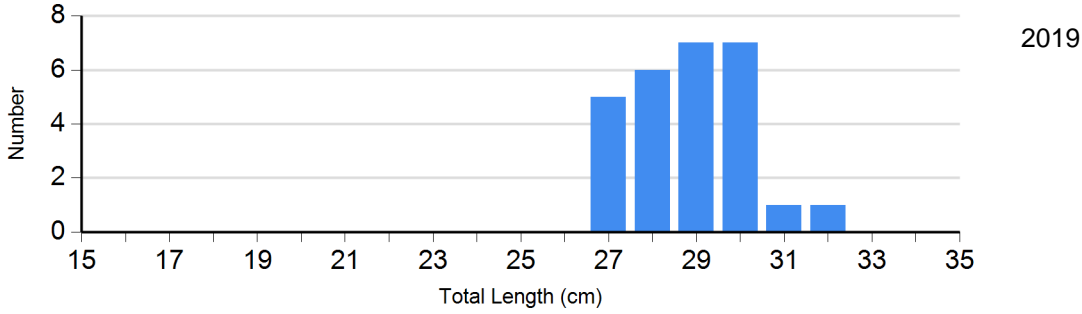
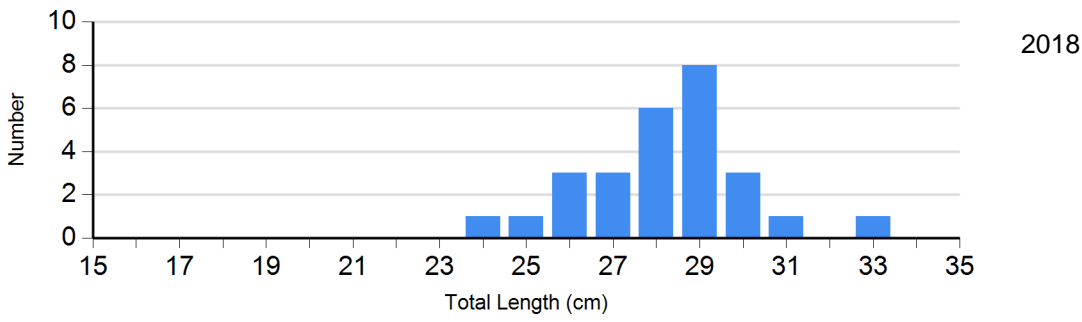
Length frequency histogram of species sampled by year.

Species: Black Crappie  
Gear: AFS std frame net

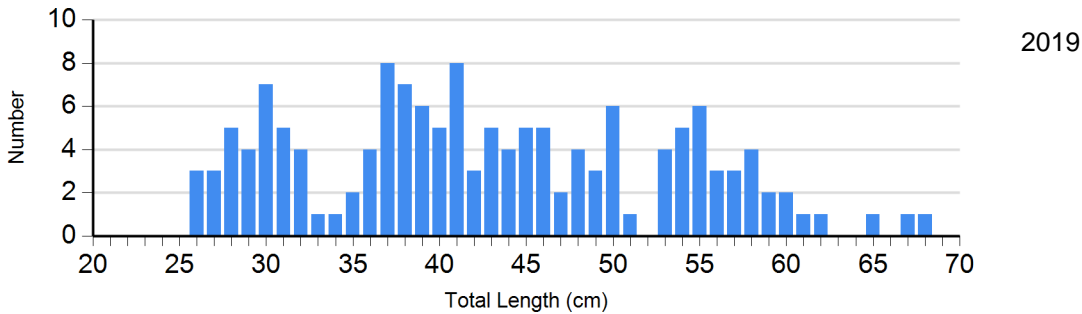
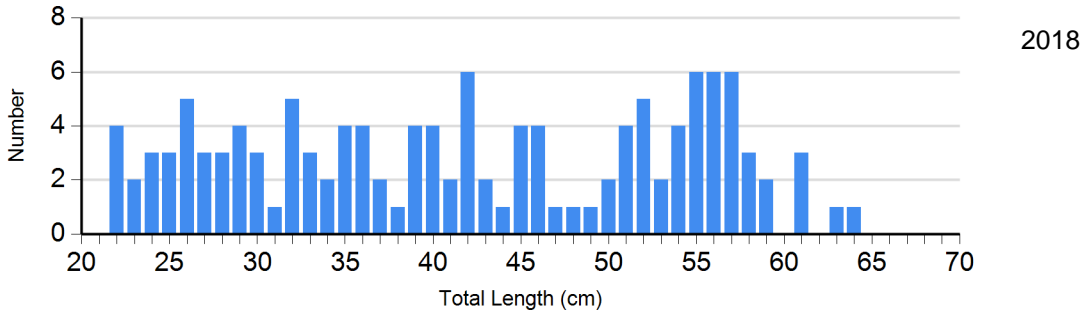
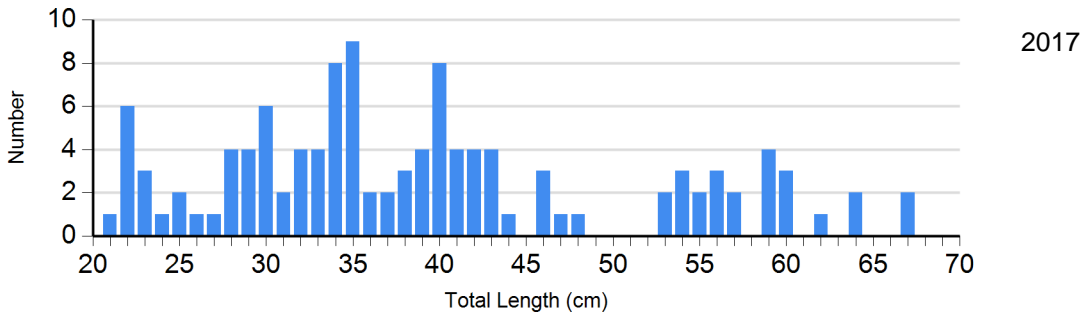


Species: Black Crappie  
Gear: frame net (std 3/4 in)



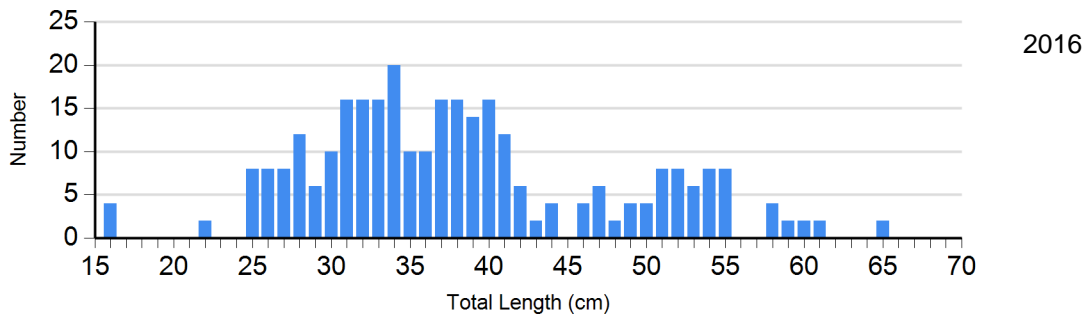
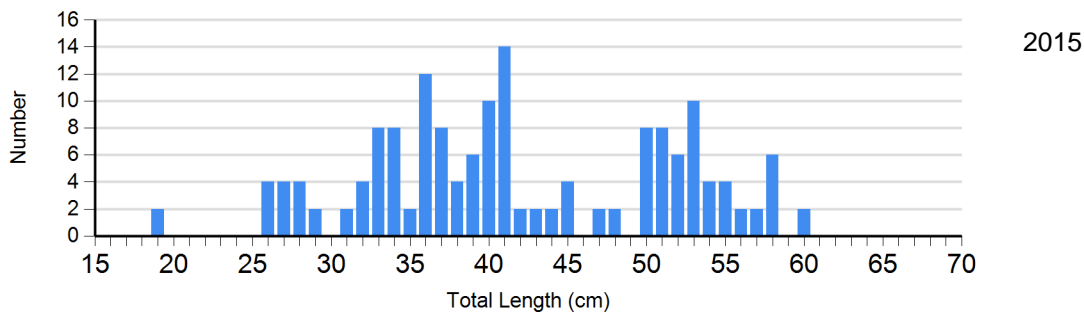
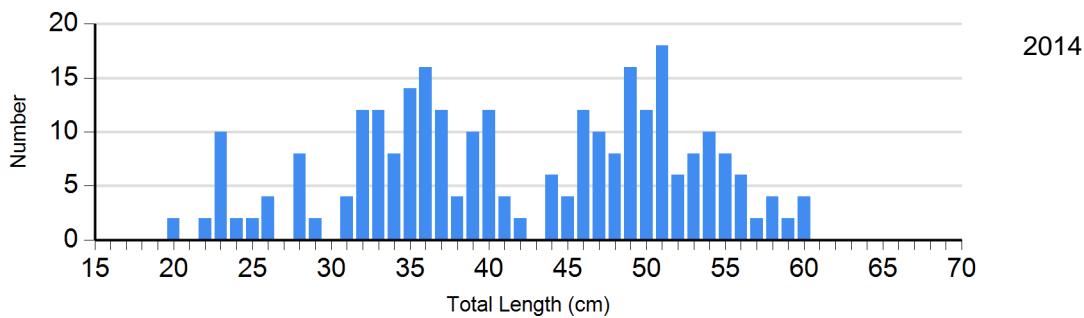


Species: Channel Catfish  
Gear: AFS std gill net

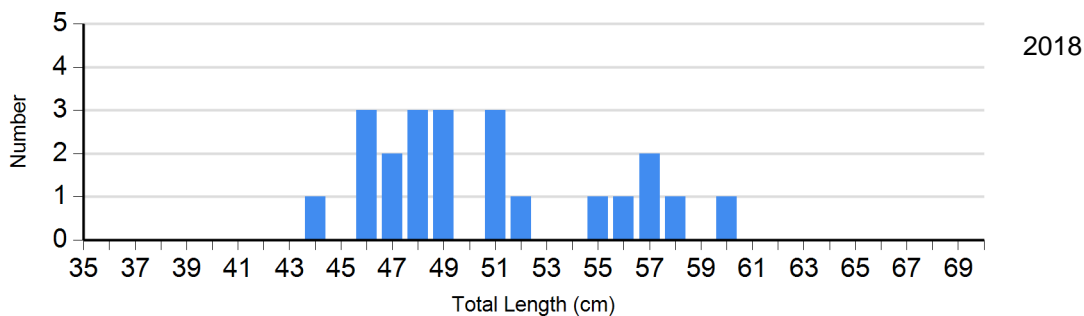
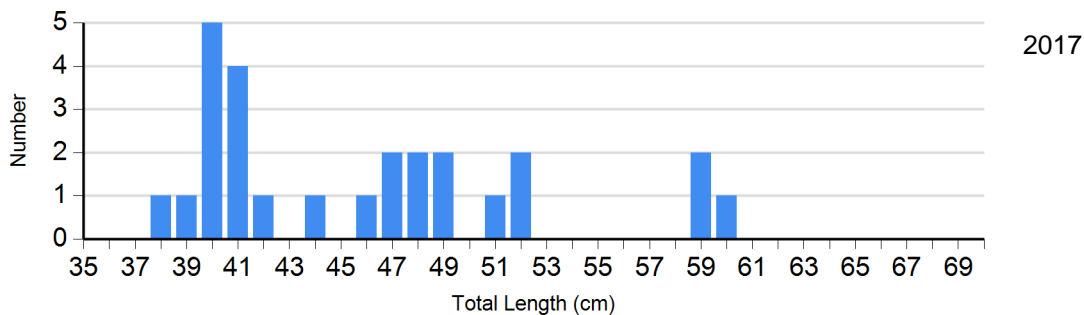


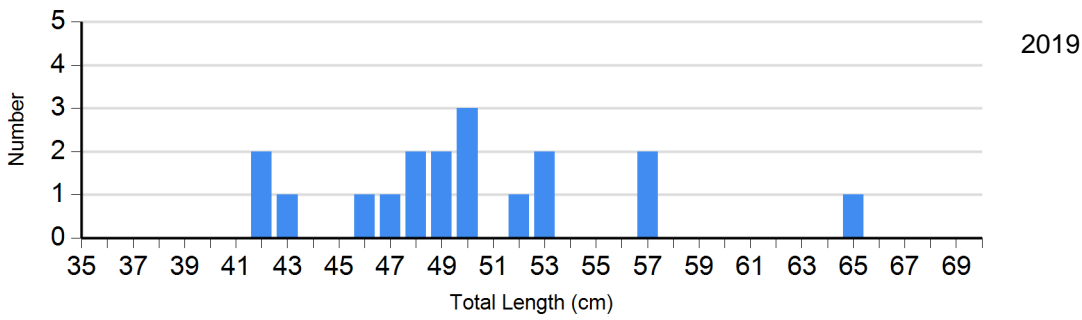


Species: Channel Catfish  
 Gear: std exp gill net

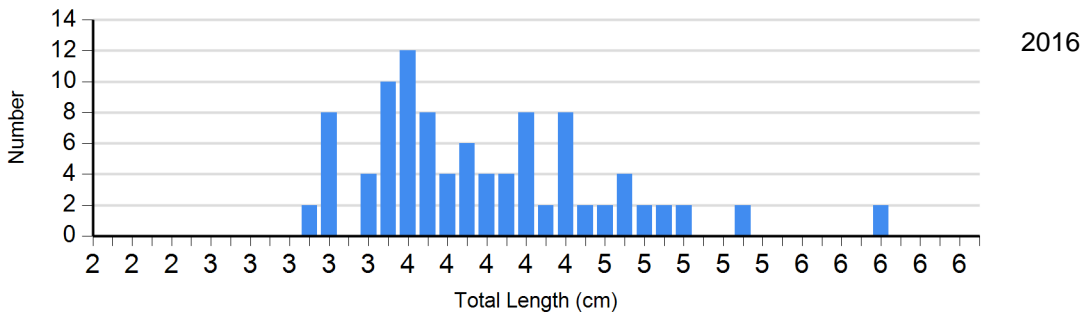
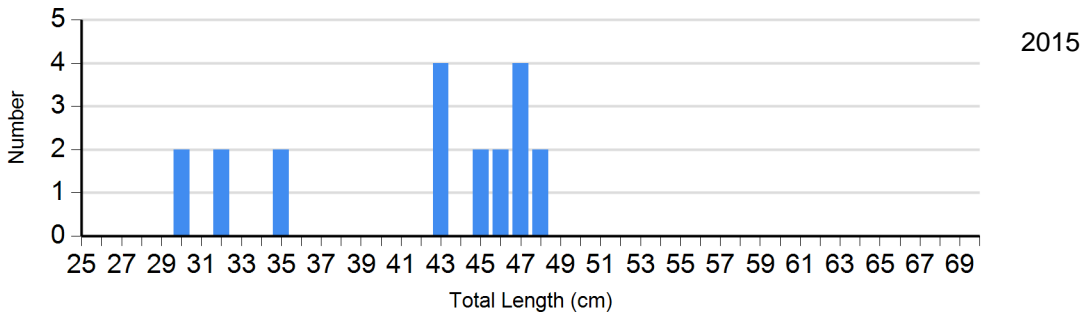
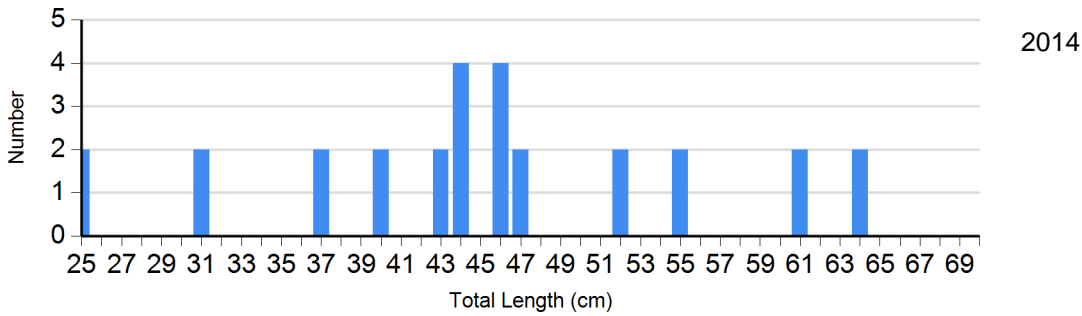


Species: Common Carp  
 Gear: AFS std gill net

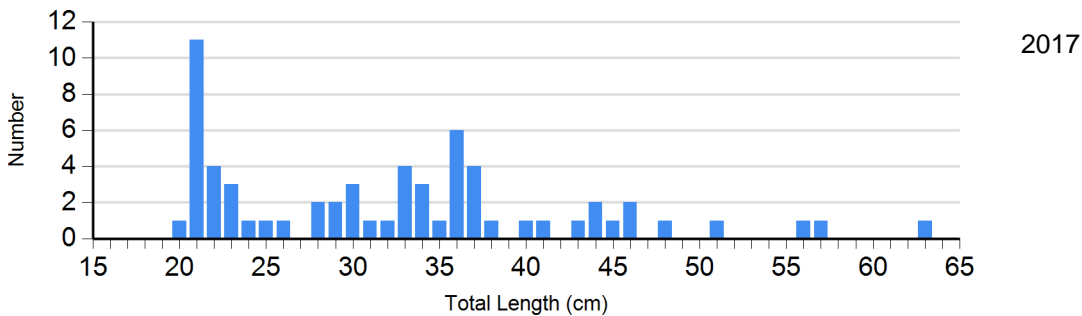


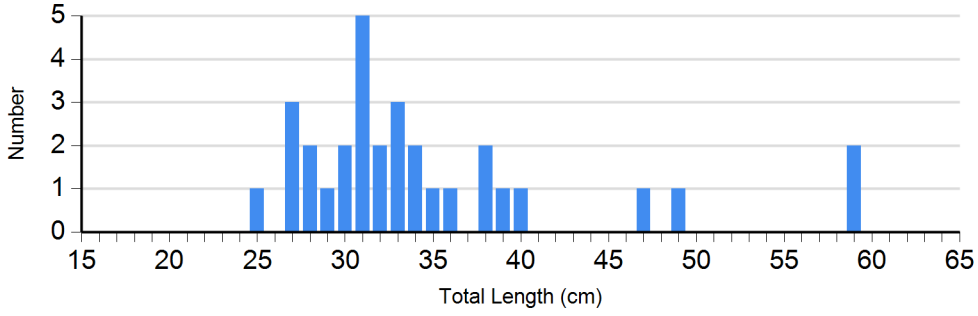
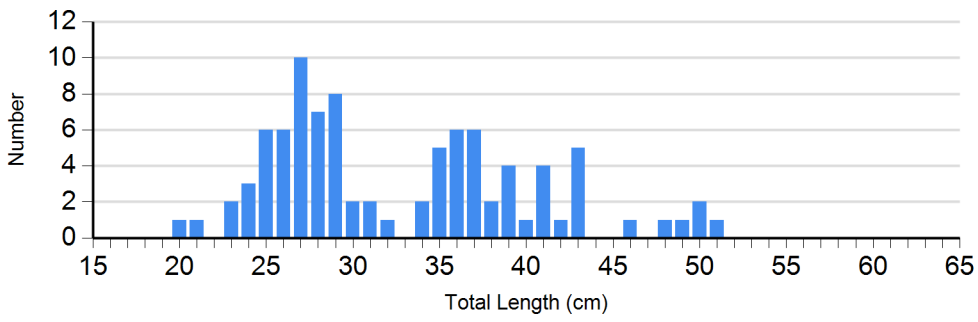


Species: Common Carp  
Gear: std exp gill net

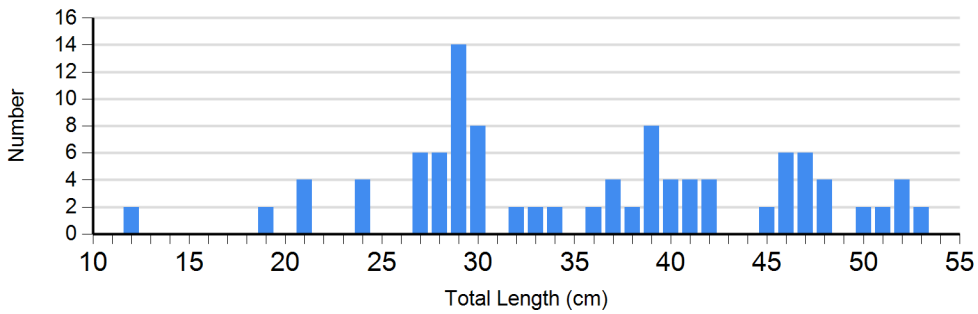
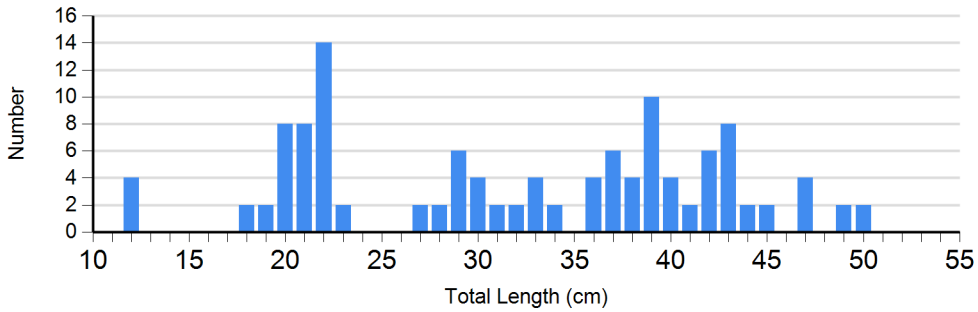
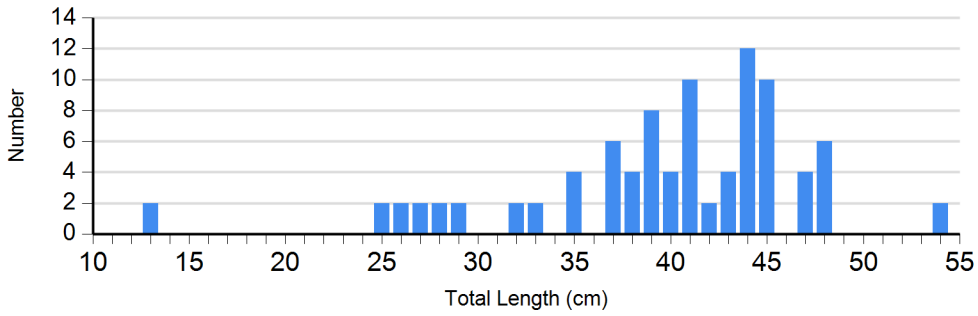


Species: Walleye  
Gear: AFS std gill net

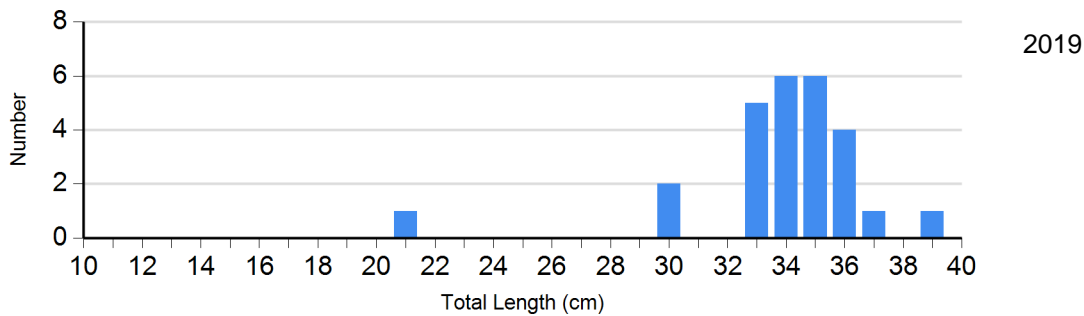
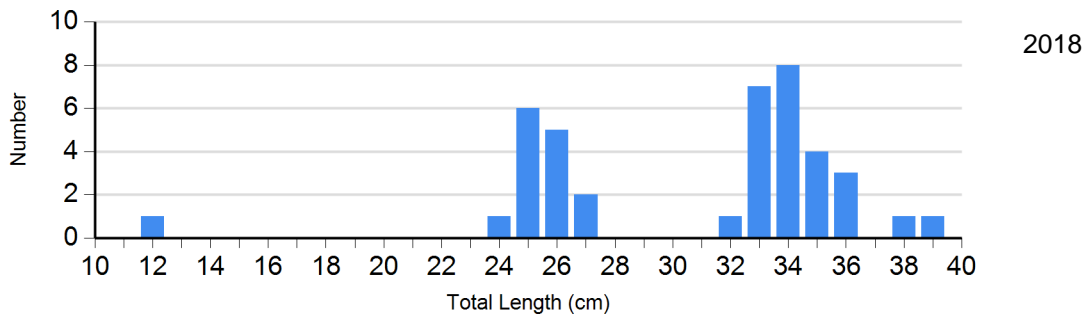
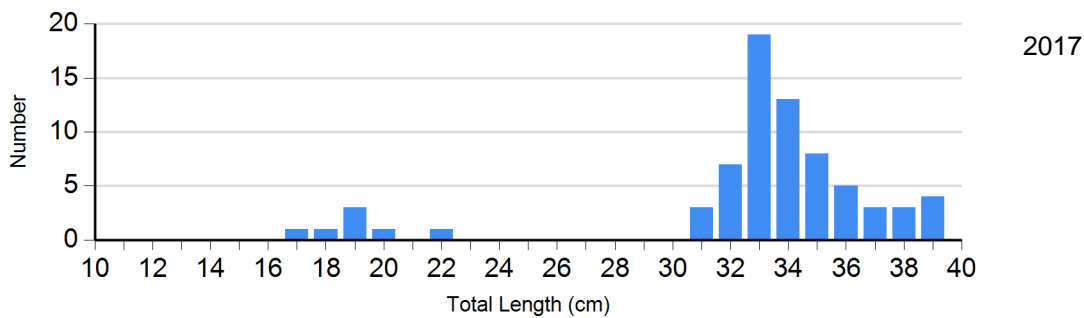




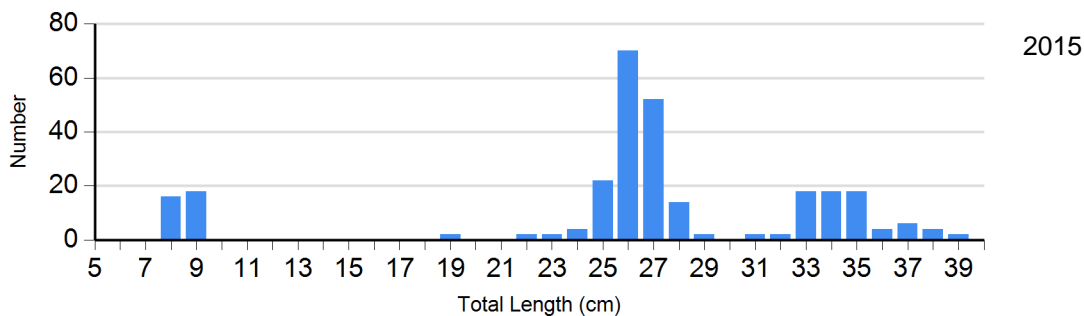
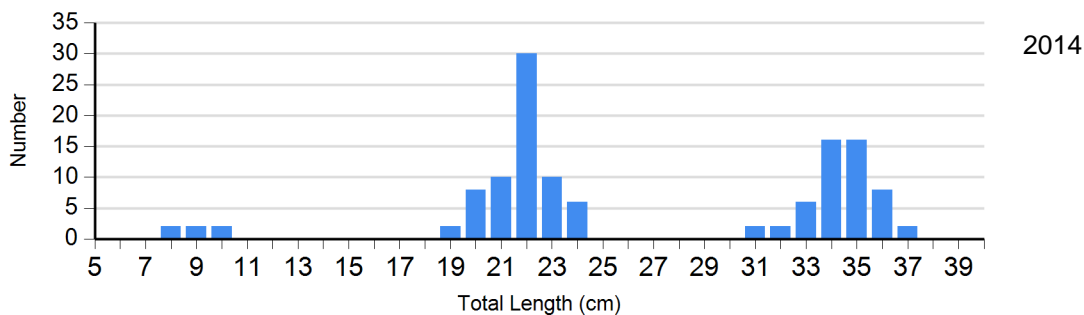
Species: Walleye  
Gear: std exp gill net

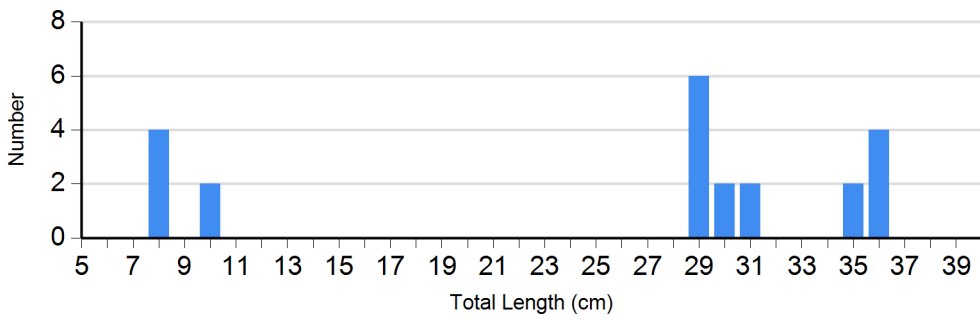


Species: White Bass  
Gear: AFS std gill net



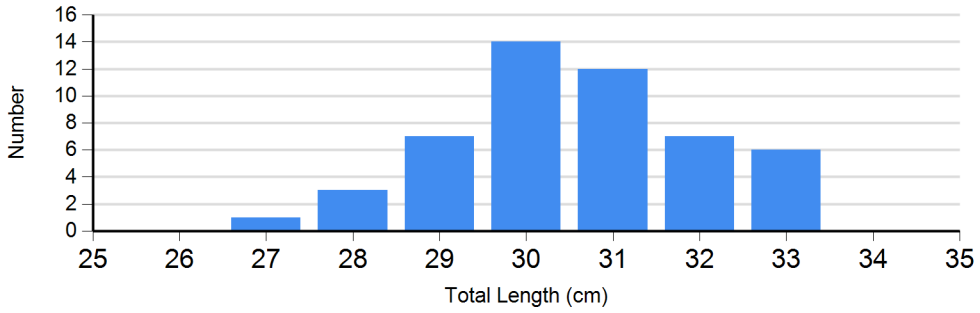
Species: White Bass  
Gear: std exp gill net





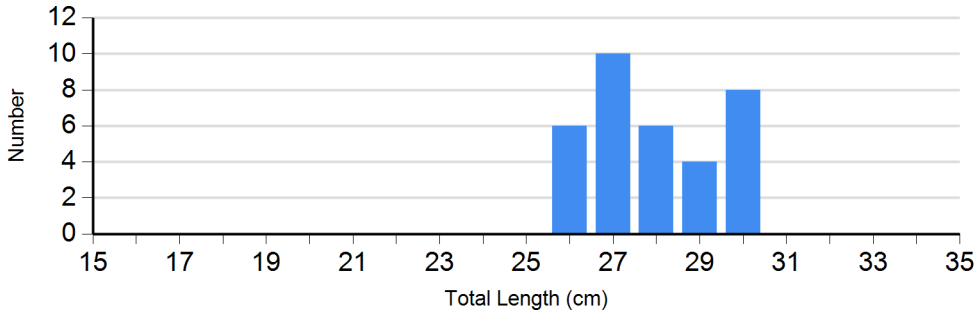
2016

Species: White Crappie  
Gear: AFS std frame net

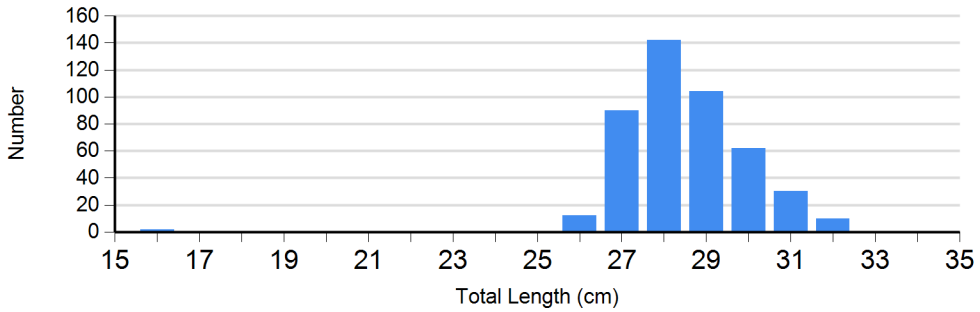


2017

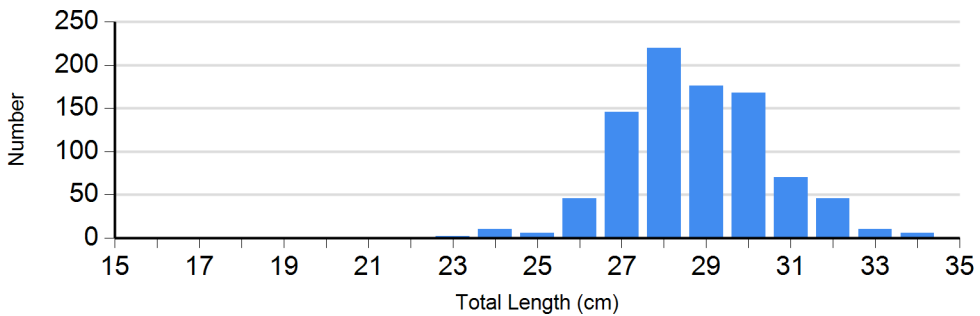
Species: White Crappie  
Gear: frame net (std 3/4 in)



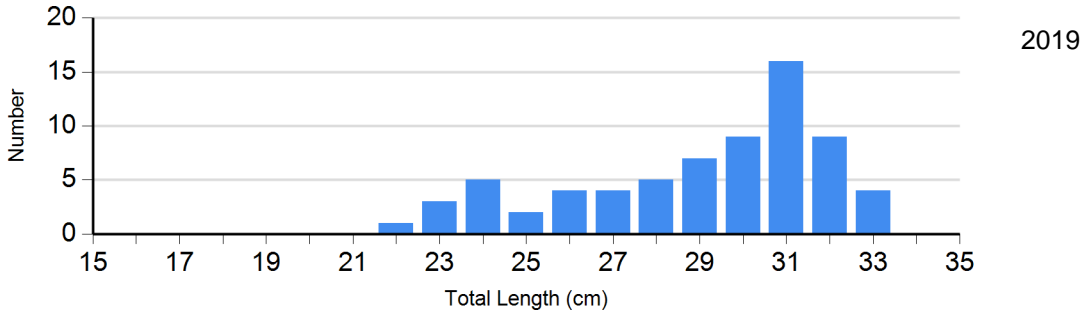
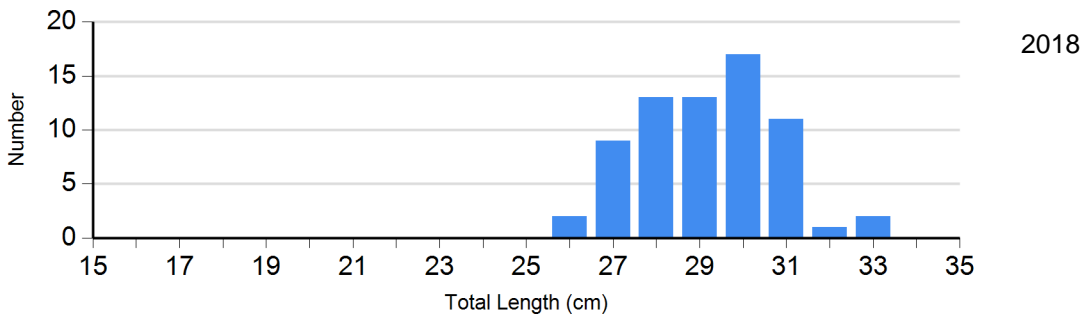
2014



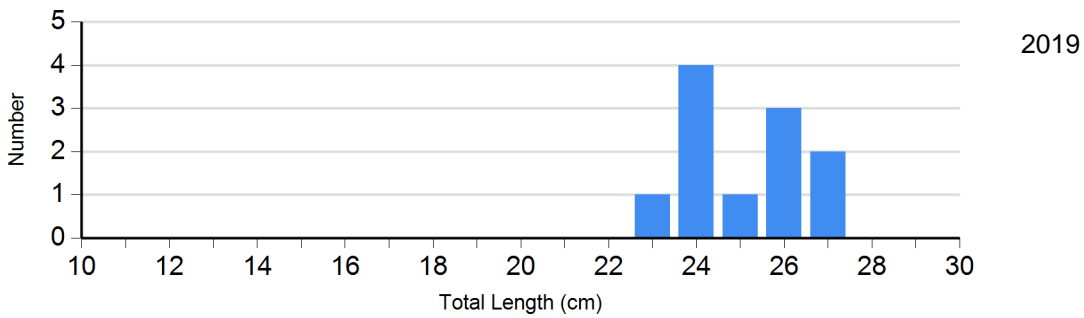
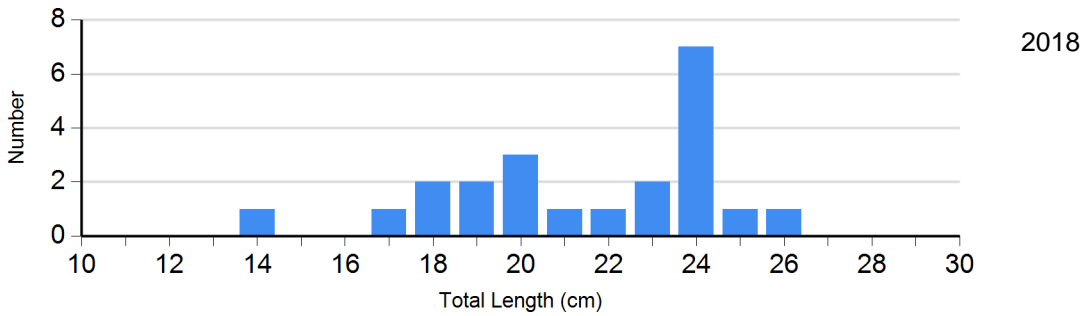
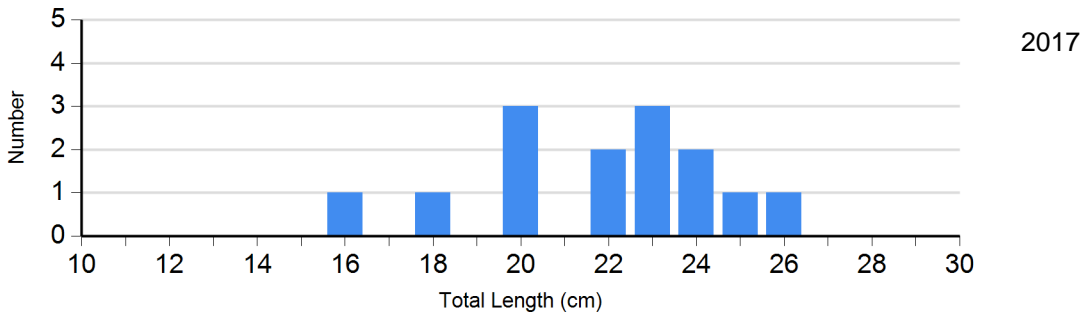
2015



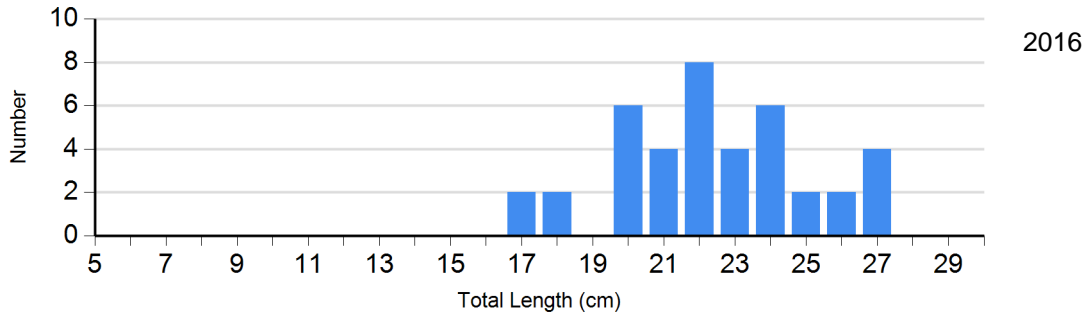
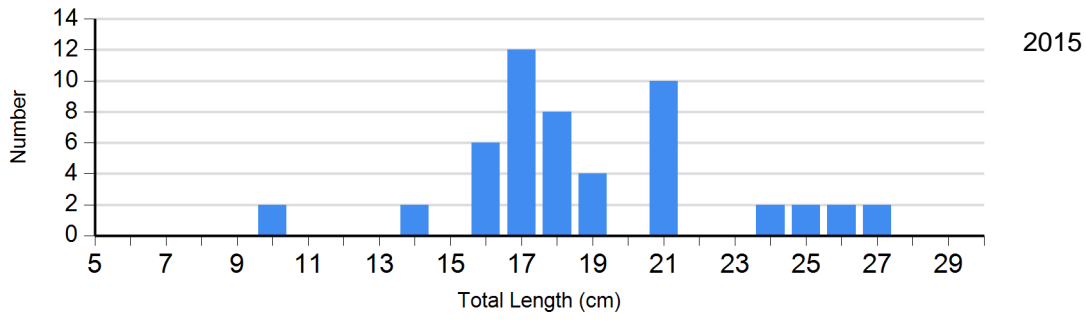
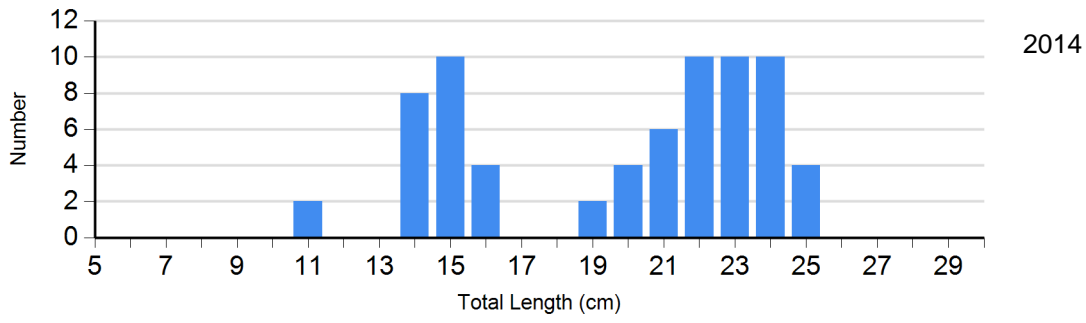
2016



Species: Yellow Perch  
 Gear: AFS std gill net



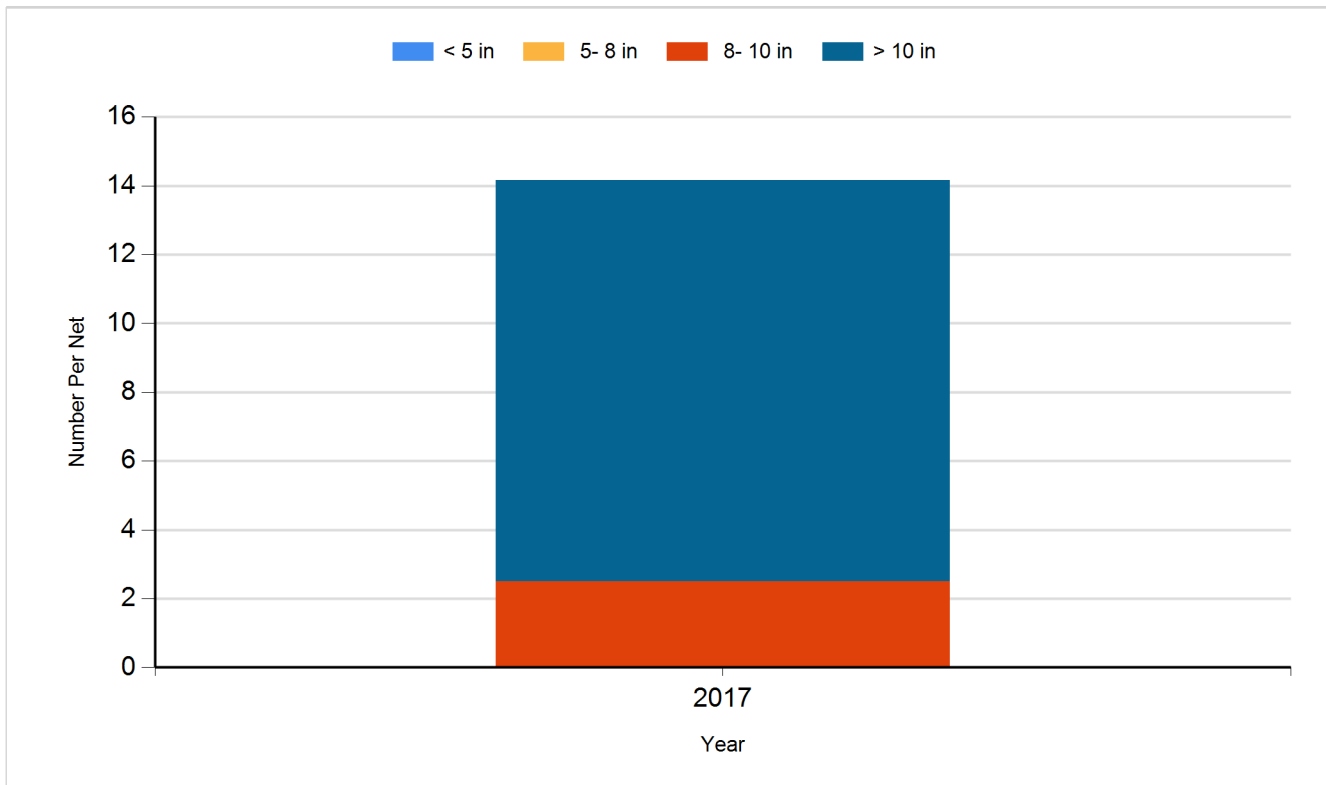
Species: Yellow Perch  
Gear: std exp gill net



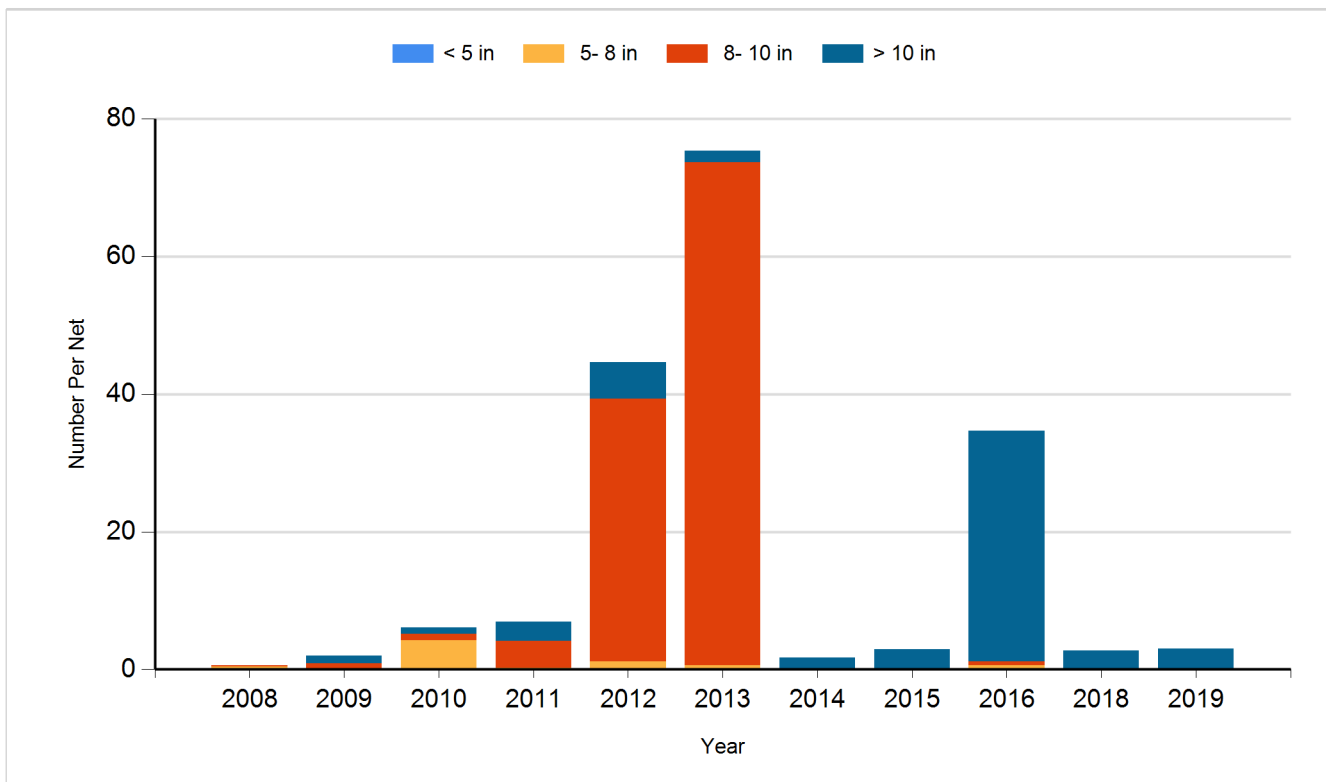
## Historic Fish Sizes and Relative Abundance

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

Species: Black Crappie  
Gear: AFS std frame net

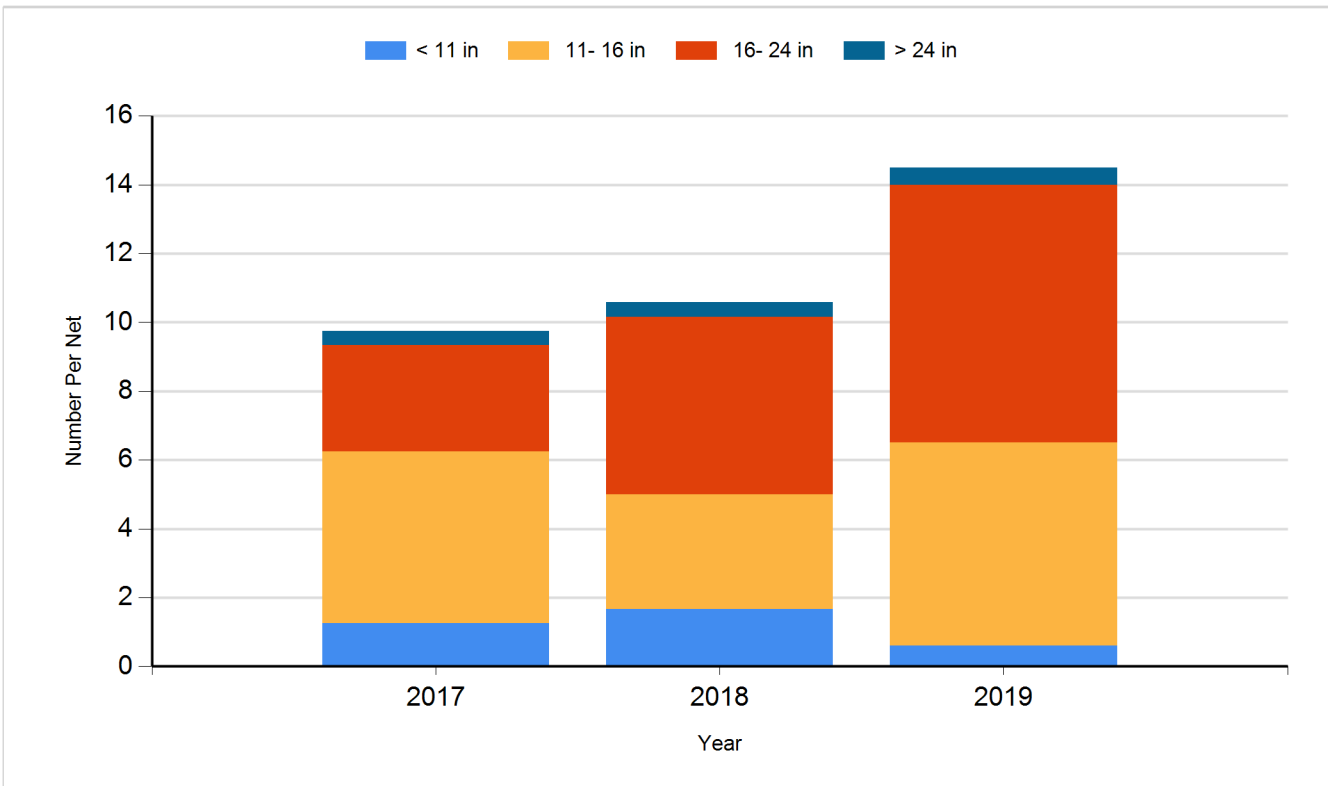


Species: Black Crappie  
Gear: frame net (std 3/4 in)

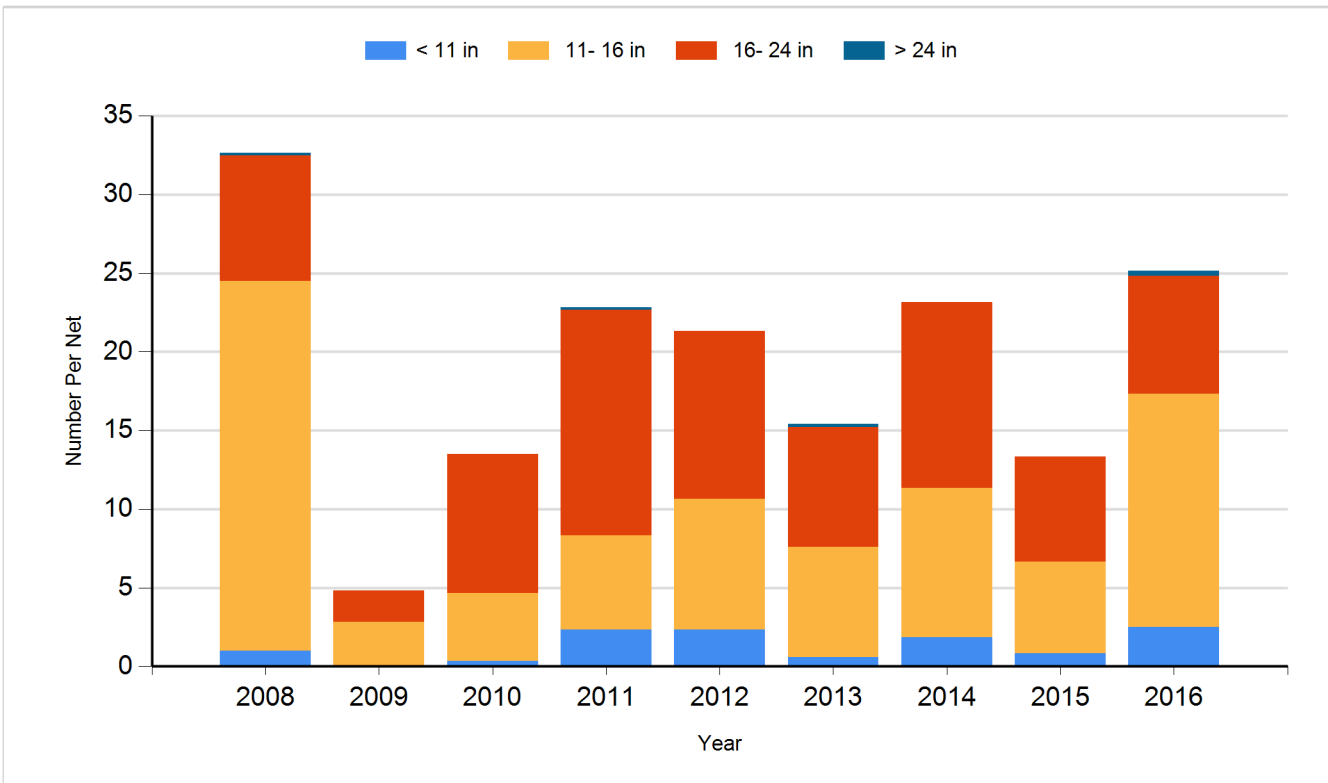




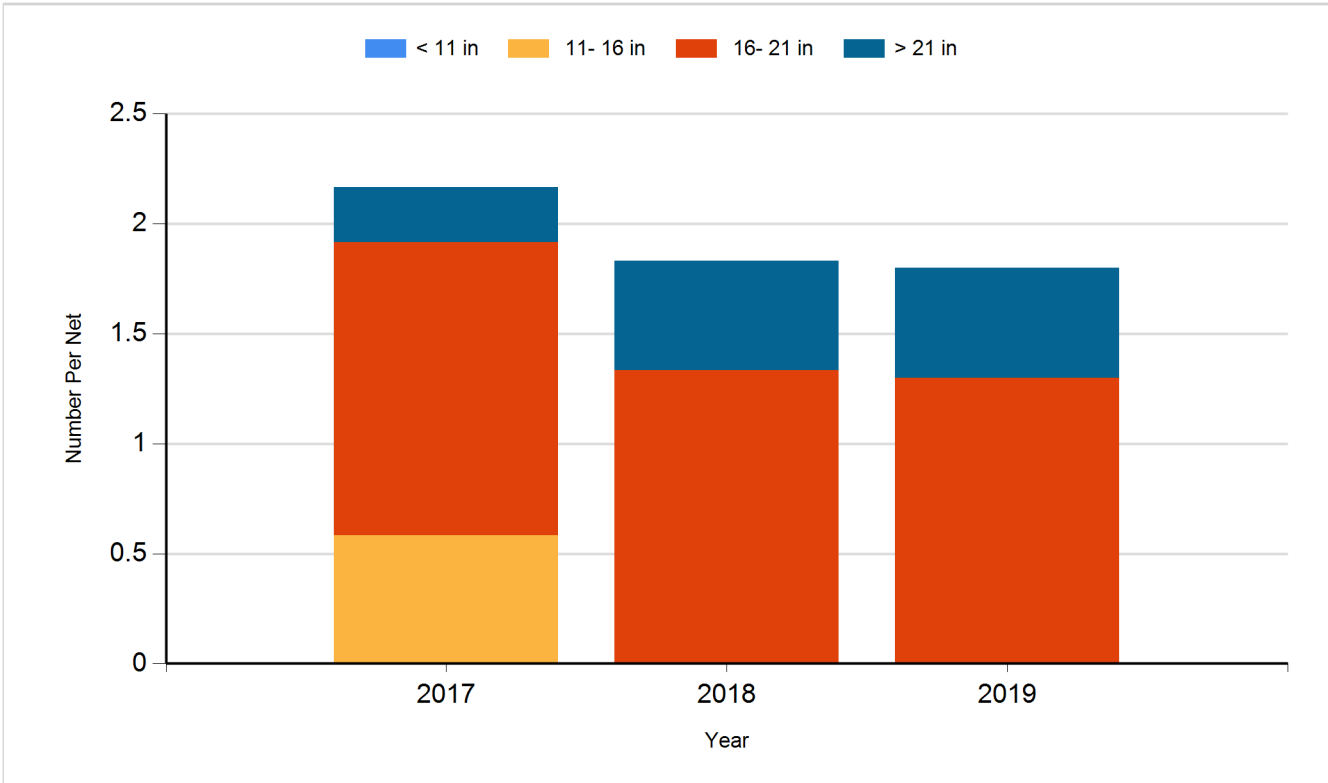
Species: Channel Catfish  
Gear: AFS std gill net



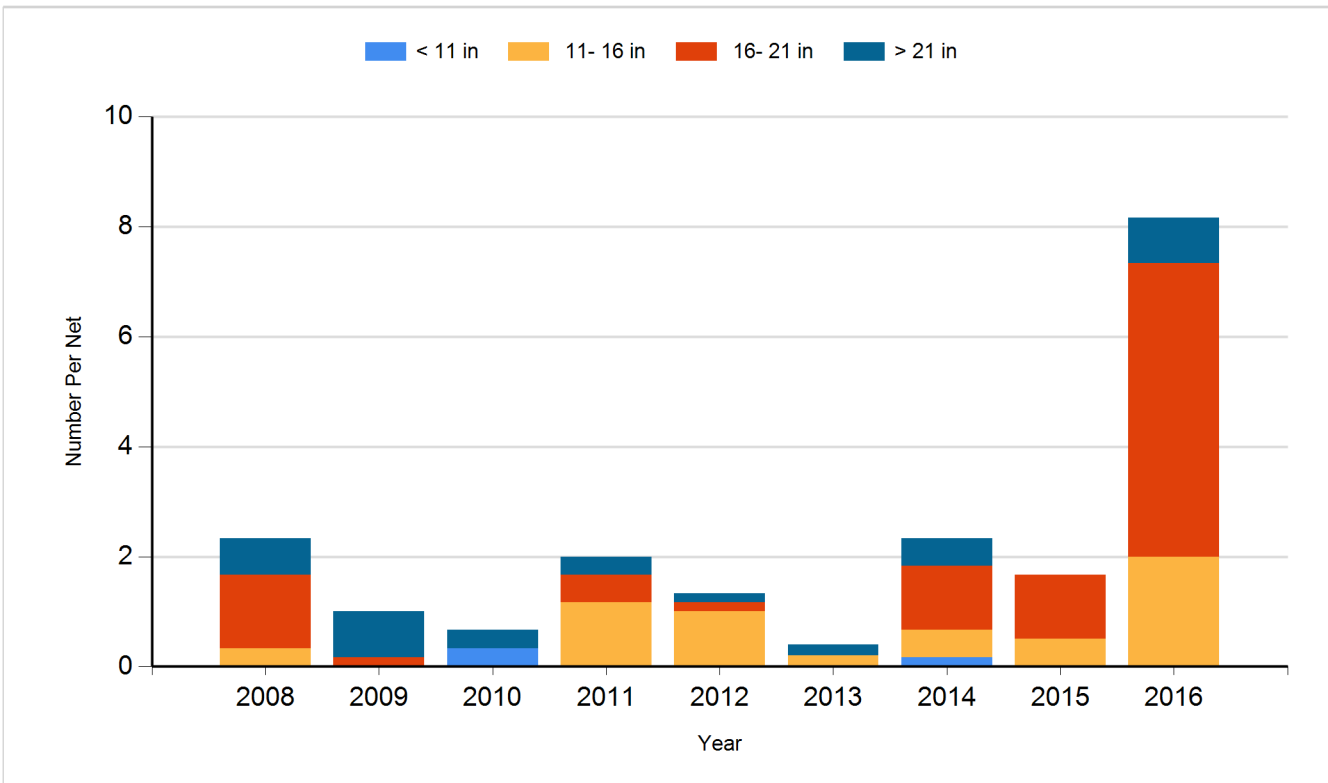
Species: Channel Catfish  
Gear: std exp gill net



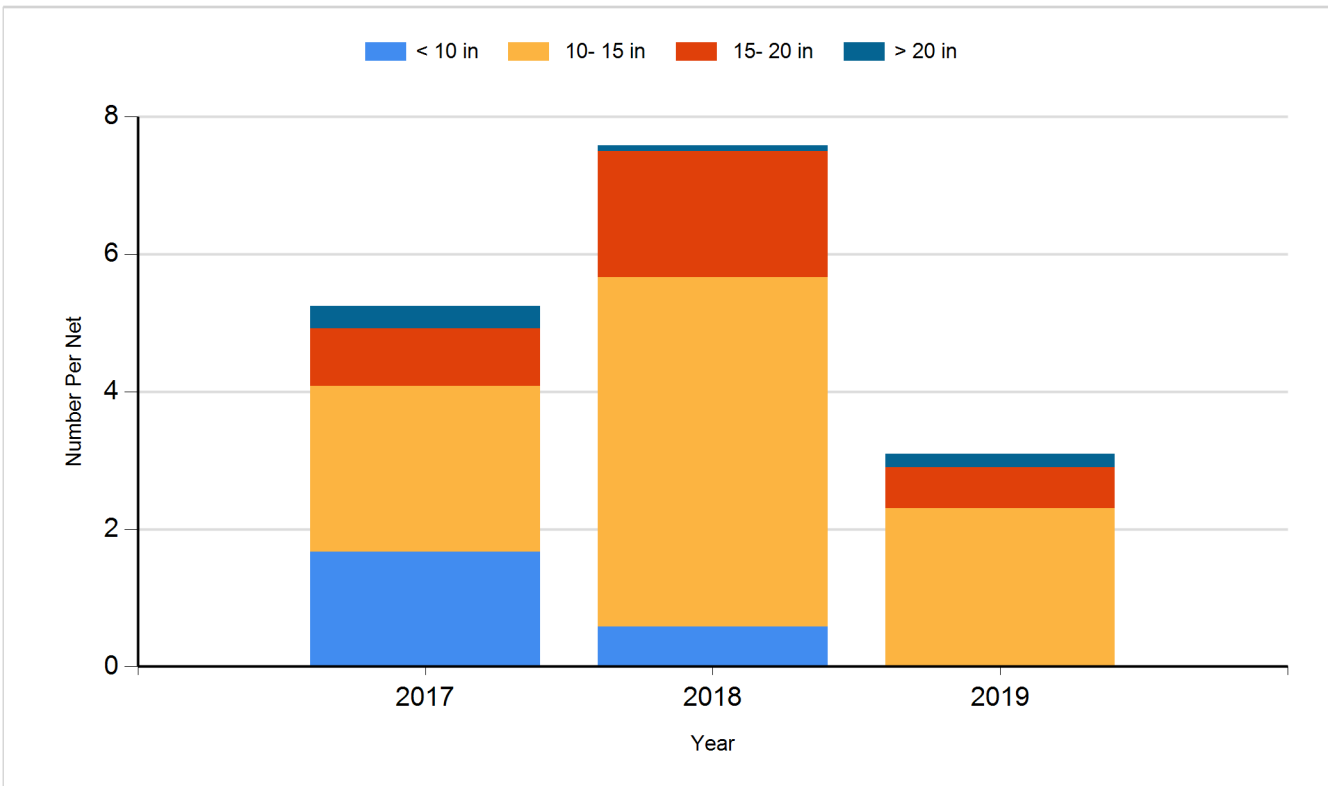
Species: Common Carp  
Gear: AFS std gill net



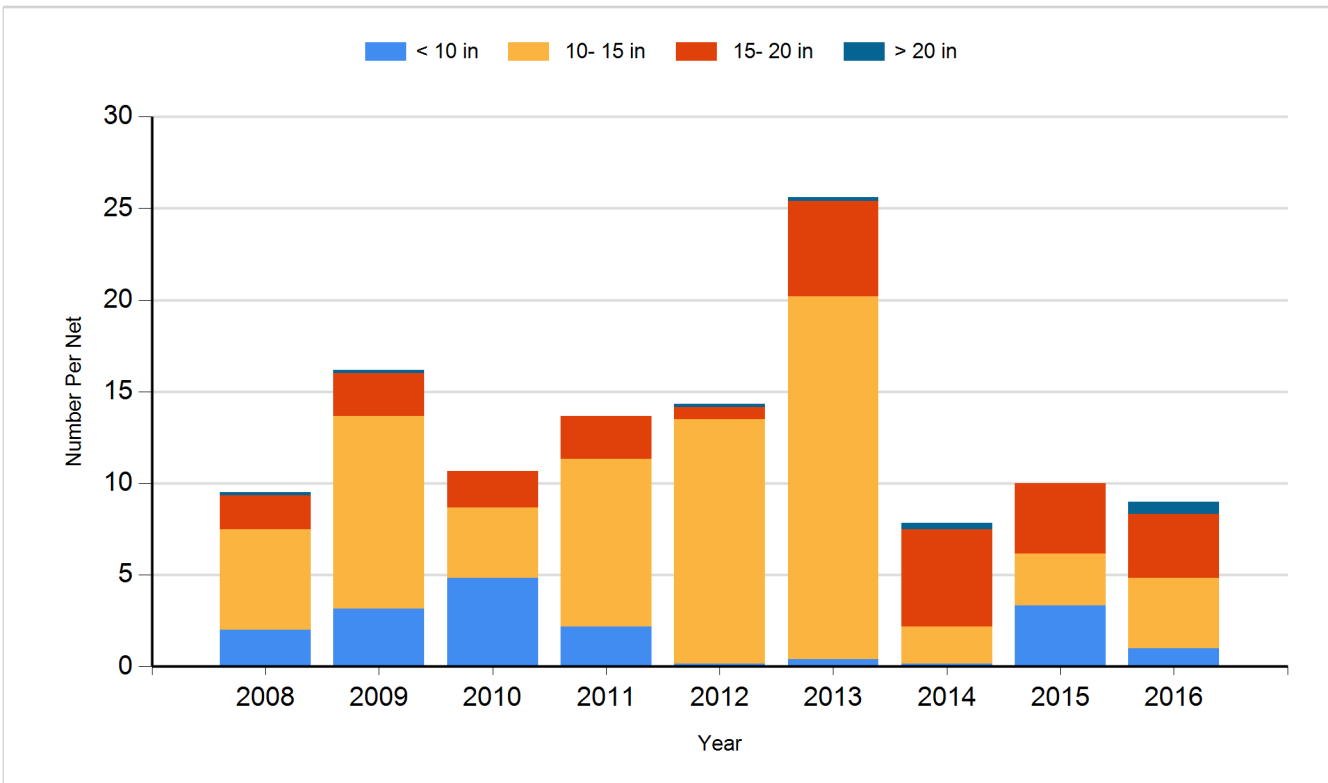
Species: Common Carp  
Gear: std exp gill net



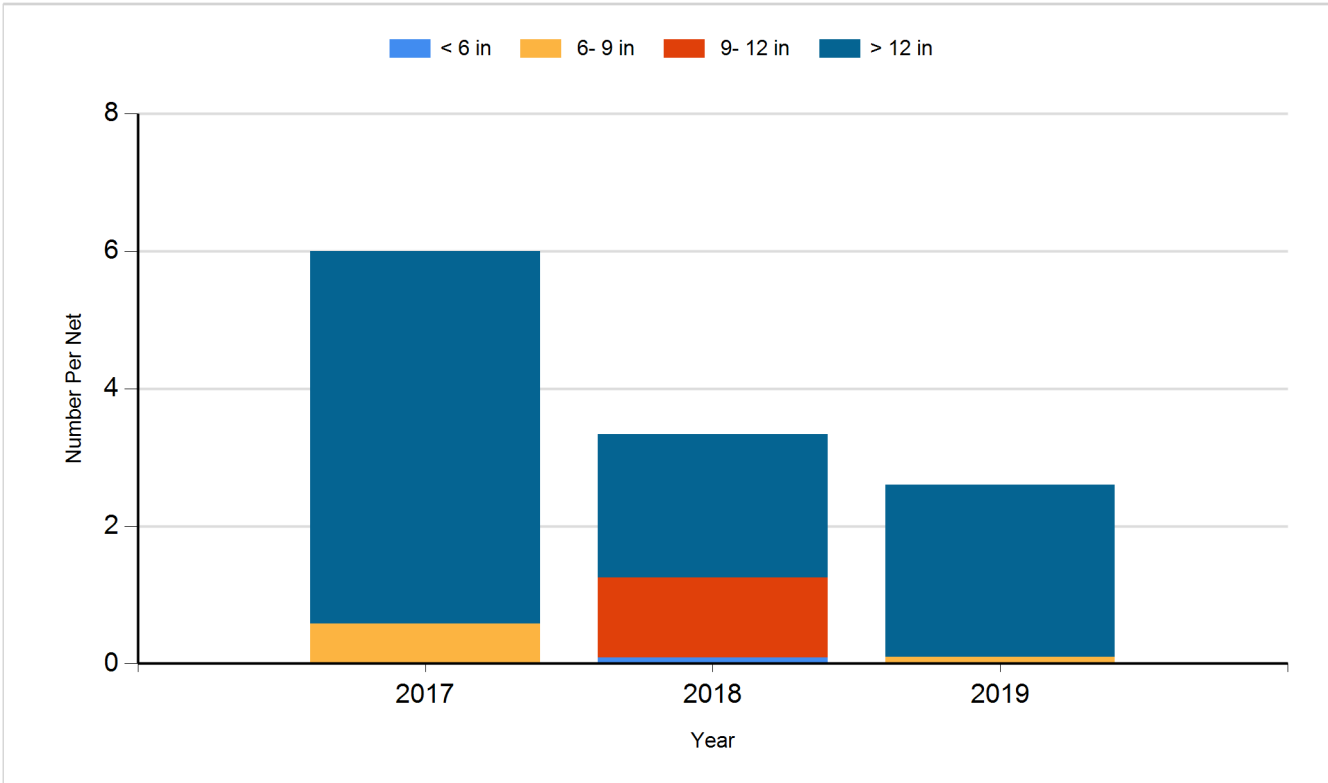
Species: Walleye  
Gear: AFS std gill net



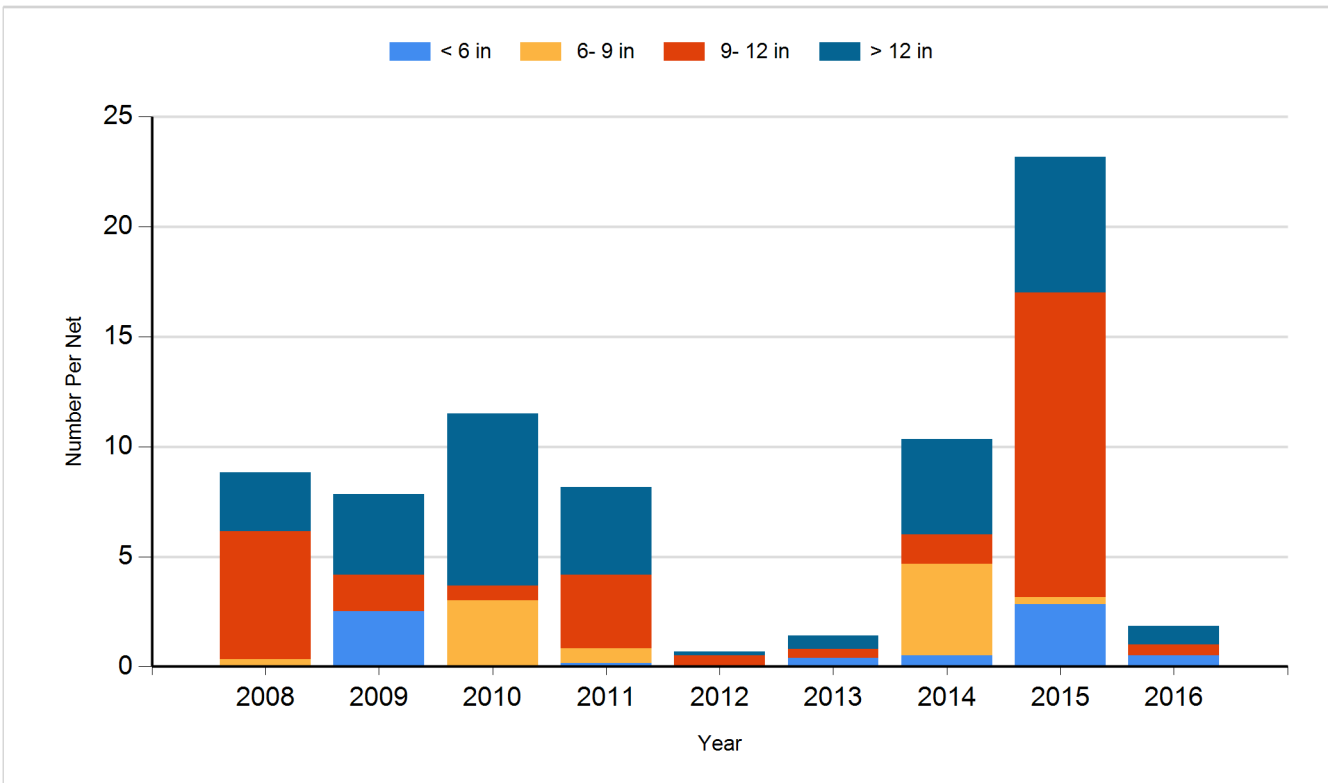
Species: Walleye  
Gear: std exp gill net



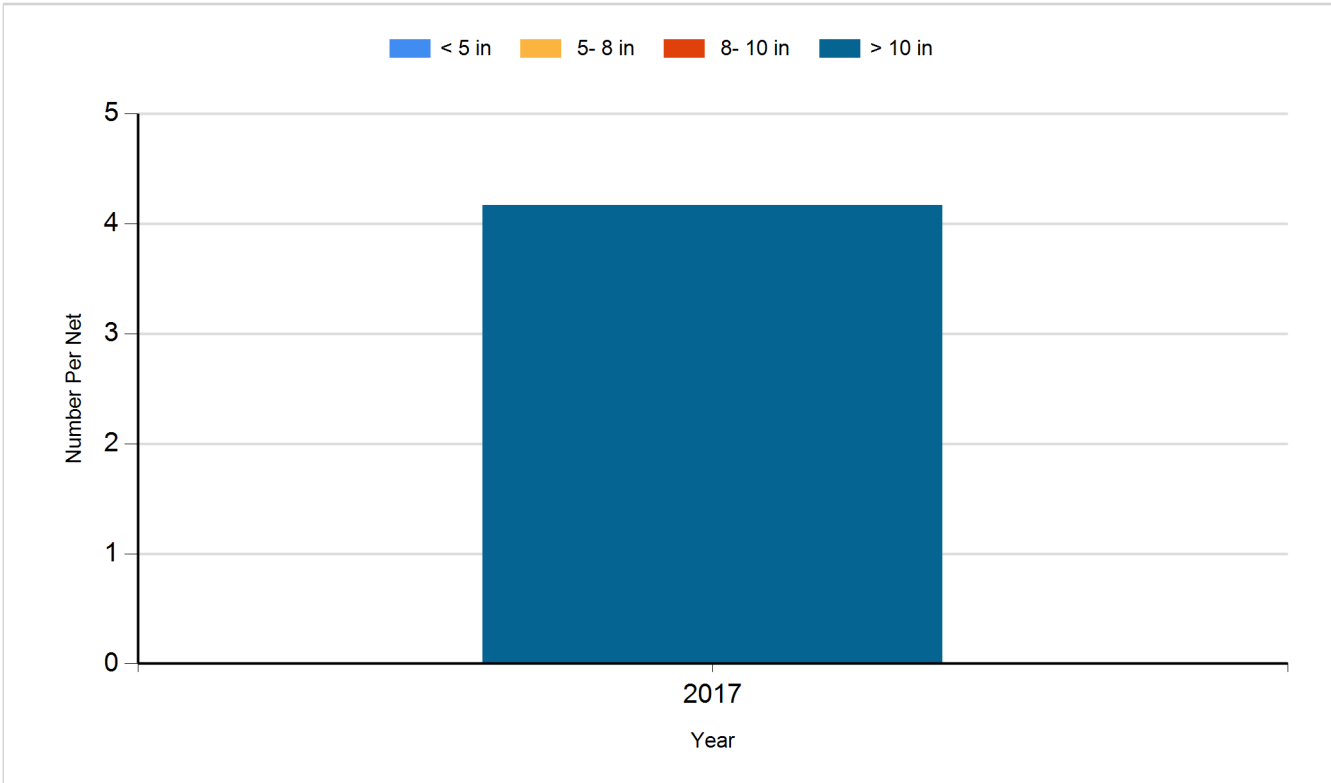
Species: White Bass  
Gear: AFS std gill net



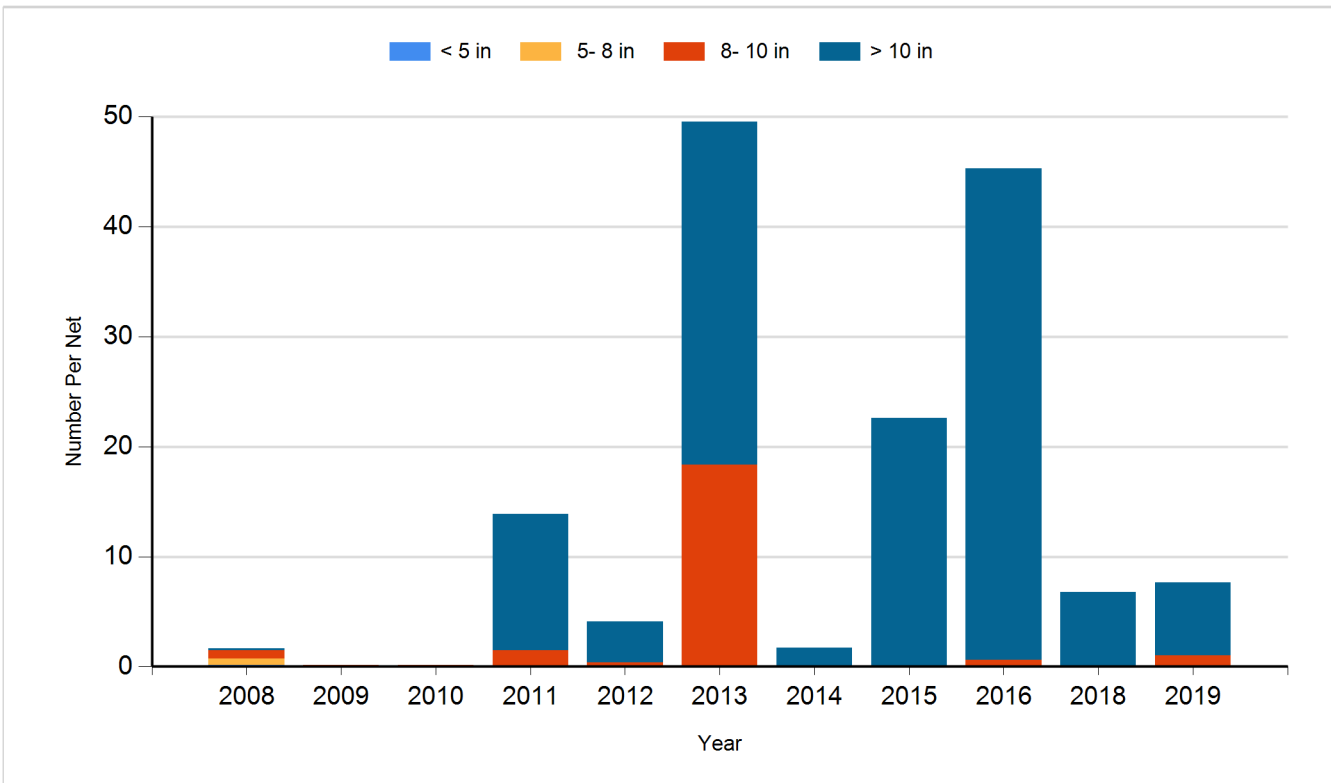
Species: White Bass  
Gear: std exp gill net



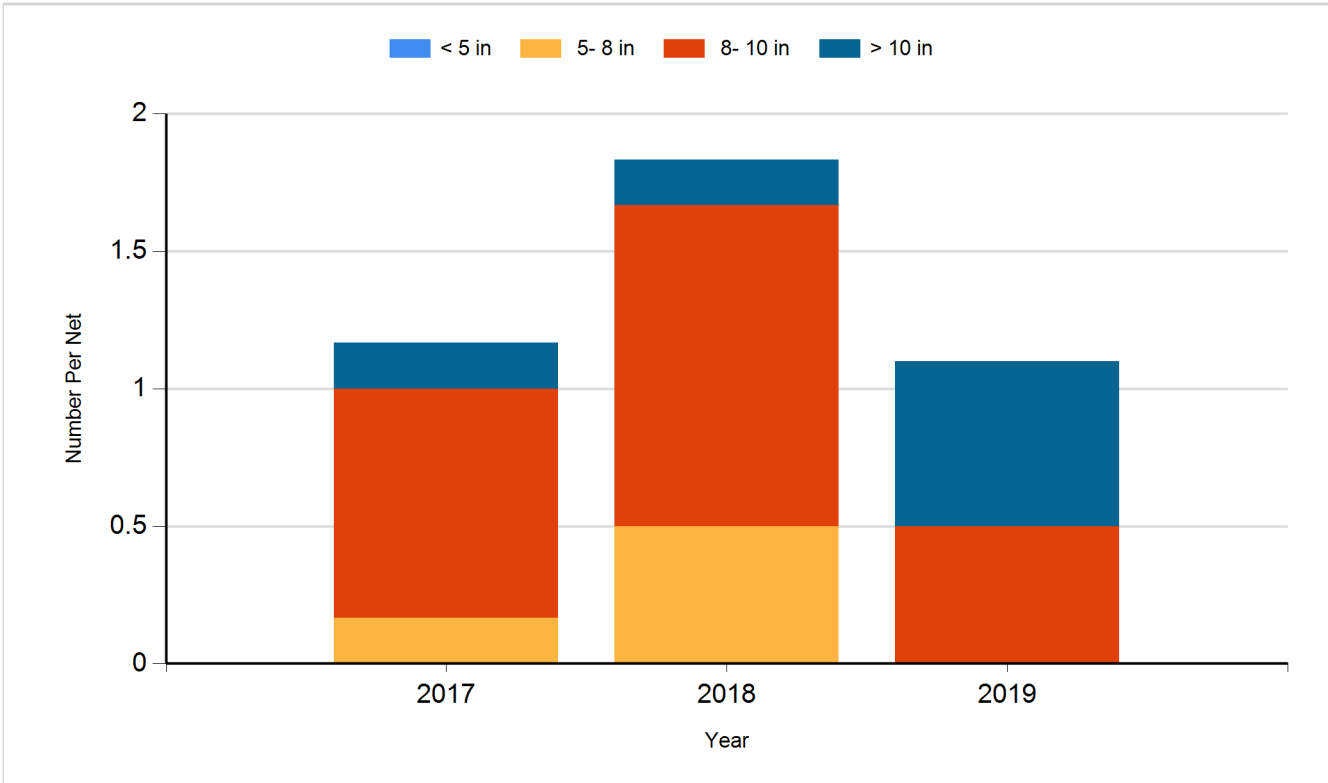
Species: White Crappie  
Gear: AFS std frame net



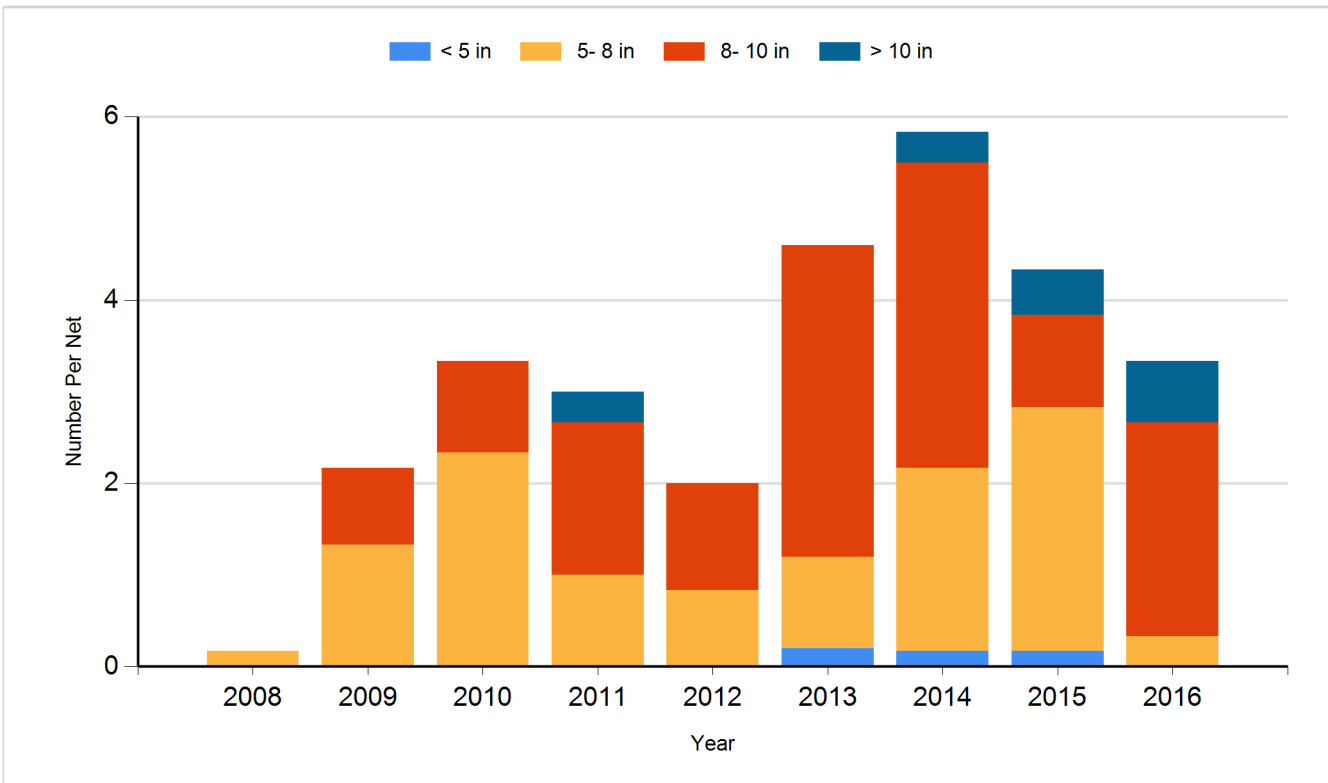
Species: White Crappie  
Gear: frame net (std 3/4 in)



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
2008	Walleye	Fingerling	409,235
2009	Gizzard Shad	Adult	85
2009	Walleye	Fingerling	420,652
2009	Walleye	Fry	420,652
2010	Gizzard Shad	Adult	90
2010	Walleye	Fingerling	385,829
2011	Gizzard Shad	Adult	225
2011	Walleye	Fingerling	278,922
2012	Rainbow Trout (Shasta)	Fingerling	28,832
2012	Smallmouth Bass	Fingerling	30,173
2012	Walleye	Fry	6,000,000
2013	Gizzard Shad	Adult	100
2013	Walleye	Fingerling	112,275
2014	Gizzard Shad	Adult	373
2014	Walleye	Fry	5,000,000
2015	Walleye	Fry	4,700,000
2016	Walleye	Fry	5,000,000
2017	Walleye	Fry	5,000,000
2018	Gizzard Shad	Adult	113
2018	Walleye	Fry	6,900,000
2019	Gizzard Shad	Adult	355