Lake Oahe – Lower Fish Population Survey Summary

Lake Oahe is very large Missouri River reservoir extending from Pierre, South Dakota to Bismarck, North Dakota. For summary and analysis purposes, Lake Oahe is divided into lower and upper regions with the dividing line being the US Highway 212 Bridge. This report is for lower Lake Oahe which is from the US Highway 212 Bridge downstream to the Oahe Dam. For summary and analysis upstream of the US Highway 212 to the North Dakota state line, please see Lake Oahe Upper report.

Many species of fish are found within Lake Oahe. A few species of aquatic invasive species (AIS) exists on Lake Oahe and include European Rudd, Eurasian Watermilfoil, and Curly-leafed Pondweed. Please remember to clean, drain, and dry all equipment used on Lake Oahe before future use. Lake Oahe follows state-wide fishing regulations, no special regulations exists. Fishing access is plentiful on Lower Lake Oahe with miles of shore fishing access, fifteen boat ramps complexes, and two State Recreation Areas all provide access for anglers to fish Lake Oahe.

Below are summaries for Lake Oahe – Lower from fisheries surveys completed in 2019. Survey methods completed in 2019 include shoreline seining to index prey near shore, AFS standard gill nets to index adult fish, small mesh gill nets in August to index small fish offshore, and electrofishing to index young Walleye produced during that year.

- **Channel Catfish:** Channel Catfish are abundant throughout Lake Oahe especially in embayments. Gill net catches help determine population trends in fish populations. Catfish gill net catch was 4.0 fish/net which is slightly below the average of 5.3. The majority (64%) of the fish collected were larger than 16 inches and approximately 4 percent of them also exceeded 24 inches. The average size collected in 2019 survey was 17 inches. Channel Catfish condition or plumpness was good as well (82 Wr). Anglers that target Channel Catfish in Lake Oahe can do very well and have a fun day of fishing.

- **Northern Pike:** Abundance of Northern Pike fluctuates on Lake Oahe depending on flooded vegetation and raising water levels in the spring helping to spur production of young fish. It is difficult to get an accurate account on Northern Pike abundance within a lake due to the difficulty of netting them. Lake Oahe Northern Pike abundance remain stable according to 2019 gill net survey with 0.2 fish/net. Sizes collected by netting ranged from 22 to 42 inches. Larger fish do exist throughout the lake with many caught by anglers over 20 pounds. Lake Oahe exhibits prime conditions to produce trophy Northern Pike. Occasional flooded vegetation for production, deep cool water for the summer months, and a large variety of food sources including Lake Herring and Rainbow Smelt can help produce large Northern Pike.

- **Smallmouth Bass:** Lake Oahe has a great population of Smallmouth Bass. They tend to be attracted to the rocky shorelines found throughout the lake including riprap. Net catches remained similar to previous years with 1.7 fish/net collected in 2019. Size collected during survey ranged from 6 to 19 inches and averaged 13 inches. Approximately 45 percent of the fish collected were larger than 14 inches. Many larger fish do exist within Lake Oahe. Catching a few Smallmouth Bass can excitement to your fishing trip.

- **Walleye:** Walleye are the most targeted fish by anglers on Lake Oahe. Walleye abundance has increased to 3.5 fish/net in 2019 which is above the average of 2.2 fish/net. Approximately 50 percent of the fish collected surpassed 15 inches with 13 percent were also larger than 20 inches. Fish condition or fatness has increased from previous years (88 Wr). Currently by the age of four most Walleye average approximately 15.5 inches, which is a slightly faster growth rate than the previous few years. Fall electrofishing helps to index the abundance of young walleye produced. In 2019, 57.7 young Walleye were collected per hour and in 2017, 29.3 fish were collected per hour. This indicates a good abundance of Walleye was produced. Time will tell if these young Walleye fully make it into the population for anglers to catch. Most years anglers fishing the lower portion of Lake Oahe experience best catch rates for Walleye during June and July and then again in the fall months for larger fish.

- **Yellow Perch:** Yellow Perch are an additional species found in Lake Oahe that are caught by anglers and provides a prey for larger fish within the lake. Abundance is near average at 0.8 fish/net. Approximately 25 percent of the Yellow Perch collected were larger than 8 inches. Many of the Yellow Perch caught by anglers are accidently caught while targeting Walleye.

- **Chinook Salmon:** Chinook Salmon are a great sportfish that are annually stocked into Lake Oahe. Anglers typically target Chinook Salmon by using downrigger methods near Oahe Dam during the summer months and fishing near shore during late fall. Depending on age of the fish and current prey base found in Lake Oahe, sizes can vary greatly from 1 to 16 pounds or greater.

For more detailed results see the computer-generated South Dakota Statewide Fisheries Survey for Lake Oahe – Lower below. Please contact South Dakota Game, Fish and Parks Fort Pierre office – (605) 223-7700 for additional information.

Prepared 02-26-2020 by KDP

SOUTH DAKOTA STATEWIDE FISHERIES SURVEY

Oahe Lower, Stanley County

LLO-Lake-2952-000

2019

Lake Information

Name: Oahe Lower

County: Stanley

Surface Area: 154,978 Acres

Surveys and Investigations

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

Gear	Date	Effort
AFS gill net (1/2 inch)	Aug 05, 2019	18 net-nights
AFS gill net (1/2 inch)	Aug 06, 2019	18 net-nights
AFS gill net (1/2 inch)	Aug 07, 2019	18 net-nights
AFS gill net (1/2 inch)	Aug 09, 2019	18 net-nights
AFS std gill net	Aug 05, 2019	18 net-nights
AFS std gill net	Aug 06, 2019	18 net-nights
AFS std gill net	Aug 07, 2019	18 net-nights
AFS std gill net	Aug 09, 2019	18 net-nights
fall night EF-WAE	Oct 02, 2019	10800 seconds
large seine	Jul 29, 2019	8 hauls
large seine	Jul 30, 2019	4 hauls

Common Fish Species Present

White Bass

Walleye

Emerald Shiner

Smallmouth Bass

Yellow Perch

White Crappie

River Carpsucker

Gizzard Shad

Freshwater Drum

Spottail Shiner

Terminology

Catch per unit effort (**CPUE**) refers to the relative abundance of a species. It is defined as the number of fish captured per unit of effort (i.e., number of fish captured per net-night or number of fish captured per hour electrofishing). In this report CPUE is typically given for only stock-length fish (see length categories table for stock lengths).

A statewide effort to help make netting efforts comparable to all waters sampled across the state, occurred in 2017, with a switch to American Fisheries Society gill nets. Past gill netting efforts were completed with different style/types of nets and are not comparable side by side.

- **AFS std gill net** – 80 ft experimental gill net containing eight panels (10 ft each) of varying monofilament meshes of 0.75, 1.00, 1.25, 1.50, 1.75, 2.00, 2.25 and 2.50 inches.
- **std experimental gill net for non-Missouri River waters** - 150 ft experimental gill net containing six panels (25 ft each) of varying monofilament meshes of 0.5, 0.75, 1.00, 1.25, 1.50 and 2.00 inches.
- s**td 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.

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

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.

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

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

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.

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

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).

	Stock		Quality		Preferred		Memorable		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		Stock Density Indices				Condition	
Gear	Species	Sample Size (n)	CPUE	CI-80	PSD	CI-80	PSD-P	CI-80	Wr	CI-80
AFS gill net (1/2 inch)*	Channel Catfish	6	0.1	0.1	0		0			
	Common Carp	6	0.1	0.1	83		33		84	3
	Freshwater Drum	3	0.0	0.0	0		0			
	Northern Pike	3	0.0	0.0	100		67		96	6
	Rainbow Smelt	2	0.0	0.0						
	Smallmouth Bass	8	0.1	0.1	0		0			
	Spottail Shiner	29	0.4	0.2						
	Walleye	21	0.3	0.1	18		0		88	1
	White Bass	8	0.1	0.1	0		0			
	White Crappie	3	0.0	0.0	0		0			
	Yellow Perch	85	1.2	0.4	6		3		104	2
AFS std gill net	Black Bullhead	3	0.0	0.1	0		0		99	10
	Black Crappie	2	0.0	0.0	100		100		94	4
	Channel Catfish	301	4.0	0.8	64	4	4	2	82	1
	Common Carp	62	0.8	0.3	72	9	32	9	85	1
	Freshwater Drum	55	0.7	0.2	82	8	31	10	88	2
	Gizzard Shad	5	0.0	0.0	0					
	Goldeye	22	0.0	0.0						
	Lake Herring	1	0.0	0.0	100		100		76	
	Northern Pike	14	0.2	0.1	100		71		96	3
	Rainbow Smelt	2	0.0	0.0						
	River Carpsucker	17	0.2	0.1	94		82		96	3
	Sauger	2	0.0	0.0	50		50		83	12
	Shorthead Redhorse	12	0.2	0.1	100		50	25	95	3
	Shortnose Gar	1	0.0	0.0						
	Smallmouth Bass	127	1.7	0.3	78	5	45	6	99	1
	Smallmouth Buffalo	13	0.2	0.1	54	23	23		80	2
	Walleye	279	3.5	0.5	50	4	13	3	88	1
	White Bass	14	0.2	0.1	100		93		100	2
	White Crappie	2	0.0	0.0	0		0		133	12
	White Sucker	1	0.0	0.0	100		0		88	
	Yellow Perch	55	0.8	0.3	25	9	2		95	3
fall night EF-WAE*	Walleye	173	57.7	11.2						

large seine*	Brassy Minnow	2	0.2	0.0
	Common Carp	13	1.1	0.2
	Emerald Shiner	434	36.2	3.9
	Fathead Minnow	2	0.2	0.0
	Freshwater Drum	54	4.5	1.5
	Gizzard Shad	68	5.7	3.4
	Goldeye	5	0.4	0.0
	Johnny Darter	6	0.5	0.2
	Largemouth Bass	2	0.2	0.0
	River Carpsucker	74	6.2	1.3
	Smallmouth Bass	227	18.9	0.6
	Smallmouth Buffalo	1	0.1	0.0
	Spottail Shiner	51	4.3	1.0
	Walleye	1	0.1	0.1
	White Bass	874	72.8	17.7
	White Crappie	79	6.6	0.8
	Yellow Perch	109	9.1	0.9

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.

		CPUE										
Gear	Species	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Avg
AFS gill net (1/2 inch)	Channel Catfish								0.0	0.0	0.1	0.03
	Common Carp								0.0	0.0	0.1	0.03
	Freshwater Drum								0.0	0.0	0.0	0.00
	Gizzard Shad								0.4	0.0	0.0	0.13
	Goldeye								0.0	0.0	0.0	0.00
	Northern Pike								0.0	0.0	0.0	0.00
	Rainbow Smelt								0.0	0.0	0.0	0.00
	Sauger								0.0	0.0	0.0	0.00
	Shortnose Gar								0.0	0.0	0.0	0.00
	Smallmouth Bass								0.0	0.0	0.1	0.03
	Spotfin Shiner								0.0	0.0	0.0	0.00
	Spottail Shiner								0.0	0.0	0.4	0.13
	Walleye								0.2	0.3	0.3	0.27
	White Bass								0.1	0.0	0.1	0.07
	White Crappie								0.0	0.0	0.0	0.00
	Yellow Perch								0.3	0.0	1.2	0.50
AFS std gill net	Bigmouth Buffalo								0.0	0.0	0.0	0.00
	Black Bullhead								0.0	0.0	0.0	0.00
	Black Crappie								0.0	0.0	0.0	0.00
	Channel Catfish								4.8	7.2	4.0	5.33
	Common Carp								0.4	0.5	0.8	0.57
	Freshwater Drum								0.4	0.4	0.7	0.50
	Gizzard Shad								0.0	0.0	0.0	0.00
	Goldeye								0.0	0.0	0.0	0.00
	Lake Herring								0.0	0.2	0.0	0.07
	Northern Pike								0.3	0.2	0.2	0.23
	Rainbow Smelt								0.0	0.0	0.0	0.00
	River Carpsucker								0.2	0.1	0.2	0.17
	Sauger								0.0	0.0	0.0	0.00
	Shorthead Redhorse								0.1	0.1	0.2	0.13
	Shortnose Gar								0.0	0.0	0.0	0.00
	Smallmouth Bass								1.6	1.7	1.7	1.67
	Smallmouth Buffalo								0.4	0.1	0.2	0.23
	Walleye								1.4	1.7	3.5	2.20
	White Bass								0.9	0.3	0.2	0.47
	White Crappie								0.0	0.0	0.0	0.00

	White Sucker								0.0	0.1	0.0	0.03
	Yellow Perch								0.1	0.4	0.8	0.43
fall night EF-WAE	Walleye								29.3		57.7	43.50
large seine	Black Crappie									26.6	0.0	13.29
	Brassy Minnow									0.0	0.2	0.08
	Common Carp									0.8	1.1	0.92
	Emerald Shiner									17.2	36.2	26.67
	Fathead Minnow									0.0	0.2	0.08
	Freshwater Drum									0.1	4.5	2.29
	Gizzard Shad									0.8	5.7	3.25
	Goldeye									0.0	0.4	0.21
	Johnny Darter									0.3	0.5	0.38
	Largemouth Bass									1.0	0.2	0.58
	River Carpsucker									1.4	6.2	3.79
	Smallmouth Bass									30.8	18.9	24.83
	Smallmouth Buffalo									0.0	0.1	0.04
	Spottail Shiner									2.0	4.3	3.13
	Walleye									0.4	0.1	0.25
	White Bass									39.3	72.8	56.04
	White Crappie									7.0	6.6	6.79
	Yellow Perch									12.3	9.1	10.67
std exp gill net	Bigmouth Buffalo	0.0	0.0	0.0	0.0	0.2	0.0	0.0				0.03
	Black Crappie	0.3	0.1	0.2	0.0	0.0	0.0	0.0				0.09
	Bluegill	0.5	0.1	0.1	0.0	0.0	0.0	0.0				0.10
	Channel Catfish	9.3	8.4	11.7	13.4	18.1	8.3	17.3				12.36
	Chinook Salmon	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.00
	Common Carp	2.5	2.3	1.3	2.7	2.6	1.4	2.2				2.14
	Freshwater Drum	1.3	0.8	0.6	0.5	0.8	0.3	0.7				0.71
	Gizzard Shad	0.0	0.0	0.1	0.0	0.0	0.0	0.0				0.01
	Goldeye	0.0	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	103.4	0.0				14.77
	Northern Pike	2.7	1.7	1.9	0.3	0.6	0.5	0.8				1.21
	Rainbow Smelt	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.00
	River Carpsucker	0.7	0.5	0.8	0.6	1.6	0.1	0.1				0.63
	Sauger	0.3	0.1	0.1	0.1	0.0	0.0	0.0				0.09
	Shorthead Redhorse	1.1	1.3	0.2	1.3	0.6	0.5	0.0				0.71
	Shortnose Gar	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.00
	Smallmouth Bass	8.4	3.2	2.3	1.5	1.5	2.1	2.9				3.13
	Smallmouth Buffalo	0.2	0.3	0.0	0.4	0.4	0.5	0.4				0.31
	Spottail Shiner	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.00

Walleye	17.3	20.1	18.2	10.7	10.7	3.0	3.9	11.99
White Bass	0.6	0.5	0.9	0.6	0.8	0.3	0.2	0.56
White Crappie	0.2	0.1	0.0	0.3	0.1	0.2	0.0	0.13
White Sucker	1.1	0.9	0.4	0.2	0.9	0.2	0.1	0.54
Yellow Perch	18.1	2.9	0.4	0.5	0.8	1.8	0.8	3.61

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.

			Year									
Gear	Species	Index	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
AFS gill net (1/2 inch)	Channel Catfish	PSD								100		0
		PSD-P								0		0
		Wr								78		
	Common Carp	PSD								100	100	83
		PSD-P								50	100	33
		Wr								79	86	84
	Gizzard Shad	PSD								0	0	
	Northern Pike	PSD										100
		PSD-P										67
		Wr										96
	Sauger	PSD									0	
		PSD-P									0	
		Wr									103	
	Smallmouth Bass	PSD								0	0	0
		PSD-P								0	0	0
		Wr								93	102	
	Walleye	PSD								0	100	18
		PSD-P								0	0	0
		Wr								78	96	88
	White Bass	PSD								0	0	0
		PSD-P								0	0	0
	White Crappie	PSD								0	0	0
		PSD-P								0	0	0
		Wr								135		
	Yellow Perch	PSD								0	0	6
		PSD-P								0	0	3
		Wr								125	98	104
AFS std gill net	Bigmouth Buffalo	PSD								100	100	
		PSD-P								100	100	
		Wr								98	128	
	Black Bullhead	PSD										0
		PSD-P										0
		Wr										99

Black Crappie	PSD			100
	PSD-P			100
	Wr			94
Channel Catfish	PSD	60	66	64
	PSD-P	1	3	4
	Wr	79	82	82
Common Carp	PSD	65	100	72
	PSD-P	15	49	32
	Wr	81	79	85
Gizzard Shad	PSD	0	0	0
Lake Herring	PSD		100	100
	PSD-P		0	100
	Wr		76	76
Northern Pike	PSD	100	100	100
	PSD-P	29	62	71
	Wr	91	94	96
River Carpsucker	PSD	100	100	94
	PSD-P	100	100	82
	Wr	101	93	96
Sauger	PSD	100		50
	PSD-P	0		50
	Wr	75		83
Shorthead Redhorse	PSD	60	100	100
	PSD-P	60	60	50
	Wr	92	94	95
Smallmouth Bass	PSD	57	82	78
	PSD-P	13	39	45
	Wr	94	96	99
Smallmouth Buffalo	PSD	0	50	54
	PSD-P	0	10	23
	Wr	81	85	80
Walleye	PSD	36	38	50
	PSD-P	19	15	13
	Wr	81	86	88
White Bass	PSD	100	100	100
	PSD-P	90	100	93
	Wr	90	100	100
White Crappie	PSD	50		0
	PSD-P	50		0
	Wr	99		133
White Sucker	PSD	100	100	100

		PSD-P								100	100	0
		Wr								98	93	88
	Yellow Perch	PSD								25	54	25
		PSD-P								0	4	2
		Wr								84	96	95
std exp gill net	Bigmouth Buffalo	PSD					100					
		PSD-P					100					
		Wr					85					
	Black Crappie	PSD	60	0	100			0				
		PSD-P	0	0	100			0				
		Wr	114	113	77			108				
	Bluegill	PSD	33	100	0							
		PSD-P	0	0	0							
		Wr	107	117								
	Channel Catfish	PSD	68	36	51	38	31	36	49			
		PSD-P	7	4	7	3	3	3	2			
		Wr	83	82	80	79	85	78	77			
	Common Carp	PSD	89	86	100	100	100	97	65			
		PSD-P	51	36	58	47	63	70	40			
		Wr	83	84	92	83	91	82	82			
	Gizzard Shad	PSD	0		100	0						
		Wr			104							
	Lake Herring	PSD						99				
		PSD-P						3				
	Northern Pike	PSD	41	63	88	100	100	73	100			
		PSD-P	6	7	24	50	90	27	40			
		Wr	85	85	77	78	83	88	88			
	River Carpsucker	PSD	85	100	100	100	100	0	100			
		PSD-P	85	44	93	100	100	0	100			
		Wr	103	93	95	104	100	837	103			
	Sauger	PSD	80	100	100	0						
		PSD-P	80	100	100	0						
		Wr	83	86	70	186						
	Shorthead Redhorse	PSD	100	83	100	88	100	100				
		PSD-P	15	43	25	50	80	77				
		Wr	94	90	81	83	98	101				
	Smallmouth Bass	PSD	73	62	61	52	78	65	65			
		PSD-P	48	33	24	30	44	49	44			
		Wr	96	91	85	98	108	94	94			
	Smallmouth Buffalo	PSD	100	100		50	86	100	86			

	PSD-P	75	100		38	71	62	71
	Wr	81	80		82	215	81	76
Walleye	PSD	43	51	32	21	19	59	59
	PSD-P	18	15	7	2	1	3	36
	Wr	90	88	76	75	87	81	83
White Bass	PSD	91	100	100	100	100	83	100
	PSD-P	91	100	94	100	100	83	0
	Wr	97	92	87	90	100	88	148
White Crappie	PSD	67	0	0	100	100	100	
	PSD-P	33	0	0	100	100	100	
	Wr	83	140		88	95	86	
White Sucker	PSD	89	100	100	100	94	100	50
	PSD-P	5	53	100	100	94	40	0
	Wr	90	89	85	91	87	89	91
Yellow Perch	PSD	21	12	13	44	27	25	27
	PSD-P	4	2	13	0	7	0	0
	Wr	85	83	68	88	100	85	82

Length at Capture

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

Species: Sauger

		Mean Length (expanded sample number) at capture by age									
Year	N	1	2	3	4	5	6	7	8	9	10+
2019	2	266 (1)								470 (1)	
2017	1			341 (1)							
2013	1				282 (1)						
2011	1					501 (1)					
2010	5	298 (1)				511 (4)					

Species: Walleye

		Mean Length (expanded sample number) at capture by age									
Year	N	1	2	3	4	5	6	7	8	9	10+
2019	279	253 (73)	314 (41)	369 (40)	400 (21)	435 (57)	460 (10)	492 (8)	526 (6)	643 (2)	644 (20)
2018	122	253 (6)	310 (22)	367 (12)	379 (48)	454 (15)	345 (1)	532 (4)	421 (1)	527 (10)	678 (3)
2017	86	219 (9)	286 (7)	327 (39)	354 (13)	555 (1)	506 (7)	593 (2)	535 (7)		645 (1)
2016	84	218 (2)	264 (23)	310 (16)	390 (5)	480 (10)	530 (4)	539 (24)	514 (1)		
2015	92	211 (21)	278 (16)	343 (10)	391 (13)	458 (5)	454 (28)				
2014	211	196 (13)	273 (19)	316 (37)	317 (15)	360 (123)		463 (1)	471 (1)		750 (1)
2013	211	211 (11)	274 (45)	298 (13)	353 (137)	538 (1)	496 (3)	560 (1)	521 (1)		
2012	343	233 (18)	257 (8)	351 (285)	468 (8)	490 (4)	517 (13)	565 (3)		548 (3)	658 (3)
2011	375	153 (11)	351 (246)	435 (29)	499 (22)	508 (36)	543 (18)	533 (1)	559 (2)	568 (3)	603 (5)
2010	313	295 (174)	391 (21)	451 (20)	495 (51)	526 (30)	530 (2)	586 (1)	636 (2)	548 (3)	574 (9)

Fish Condition

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

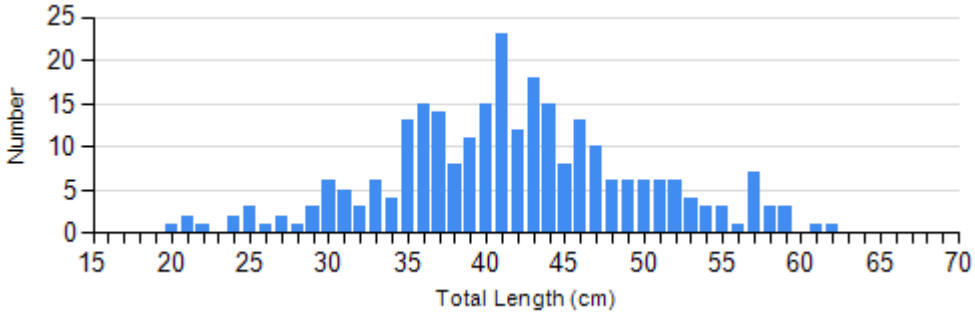
		Length Groups							
		S-Q		Q-P		P-M		M	
Species	Year	N	Wr (SE)	N	Wr (SE)	N	Wr (SE)	N	Wr (SE)
Black Bullhead Gill Net	2019	3	99 (7.8)	0		0		0	
Channel Catfish Gill Net	2015	128	77 (0.6)	67	78 (0.8)	5	82 (3.6)	0	
	2016	159	76 (0.6)	146	77 (1.2)	7	82 (3.8)	0	
	2017	104	79 (1.0)	153	78 (0.8)	2	86 (13.5)	0	
	2018	174	83 (1.2)	328	80 (0.6)	17	94 (4.4)	0	
	2019	104	85 (1.3)	175	81 (0.8)	12	82 (3.5)	0	
Common Carp Gill Net	2015	1	88	9	83 (2.8)	23	81 (1.3)	0	
	2016	14	82 (1.5)	10	82 (2.4)	16	82 (1.8)	0	
	2017	7	86 (1.8)	10	82 (2.3)	3	69 (15.4)	0	
	2018	0		18	82 (1.5)	17	76 (2.0)	0	
	2019	17	91 (1.2)	24	87 (1.2)	19	78 (1.4)	0	
Northern Pike Gill Net	2015	3	91 (8.3)	5	87 (2.6)	2	84 (1.0)	1	91
	2016	0		9	94 (2.8)	2	71	4	79 (16.6)
	2017	0		12	89 (7.4)	4	98 (1.4)	1	95
	2018	0		5	96 (3.6)	6	94 (2.4)	2	85 (4.8)
	2019	0		4	96 (3.2)	6	96 (1.5)	4	95 (8.7)
Sauger Gill Net	2017	0		1	75	0		0	
	2019	1	92	0		1	74	0	
Walleye Gill Net	2015	29	76 (1.0)	40	84 (1.1)	2	91 (3.6)	0	
	2016	29	77 (1.0)	16	81 (2.1)	25	91 (1.6)	0	
	2017	47	78 (0.9)	13	81 (1.7)	13	91 (1.7)	1	98
	2018	75	84 (0.7)	28	87 (1.1)	10	86 (5.5)	8	95 (2.7)
	2019	127	87 (0.5)	92	89 (0.6)	19	92 (1.6)	14	95 (2.5)

White Bass Gill Net	2015	1	103	0		1	82	4	86 (5.9)
	2016	0		3	148 (58.6)	0		0	
	2017	0		5	99 (2.0)	24	94 (1.2)	21	84 (2.0)
	2018	0		0		14	106 (1.0)	11	93 (2.9)
	2019	0		1	112	3	96 (2.7)	10	100 (1.3)
White Sucker Gill Net	2015	0		3	90 (3.6)	0		2	89 (2.0)
	2016	1	89	1	93	0		0	
	2017	0		0		0		2	98 (4.0)
	2018	0		0		3	89 (4.0)	1	103
	2019	0		1	88	0		0	
Yellow Perch Gill Net	2015	33	85 (2.0)	11	83 (2.3)	0		0	
	2016	11	81 (2.1)	4	84 (5.5)	0		0	
	2017	6	86 (3.6)	2	78 (3.3)	0		0	
	2018	13	105 (16.1)	14	90 (1.1)	1	65	0	
	2019	41	99 (2.4)	13	86 (2.1)	1	108	0	

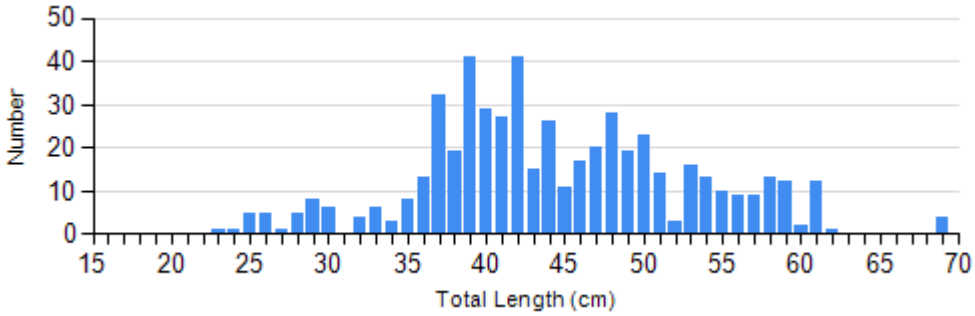
Length Frequency Distribution

Length frequency histogram of species sampled by year.

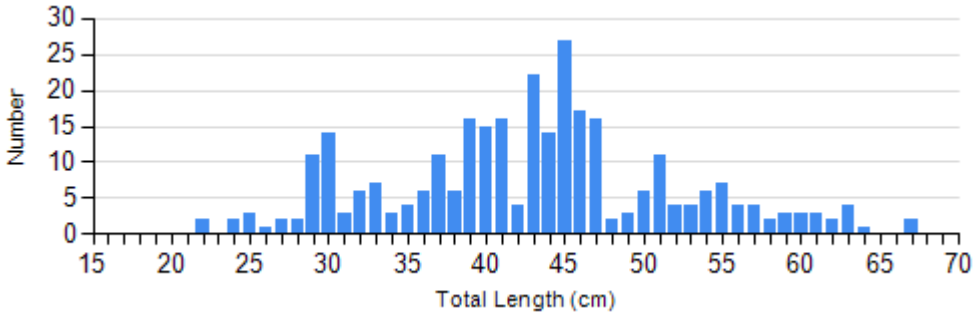
Species: Channel Catfish
Gear: AFS std gill net



2017

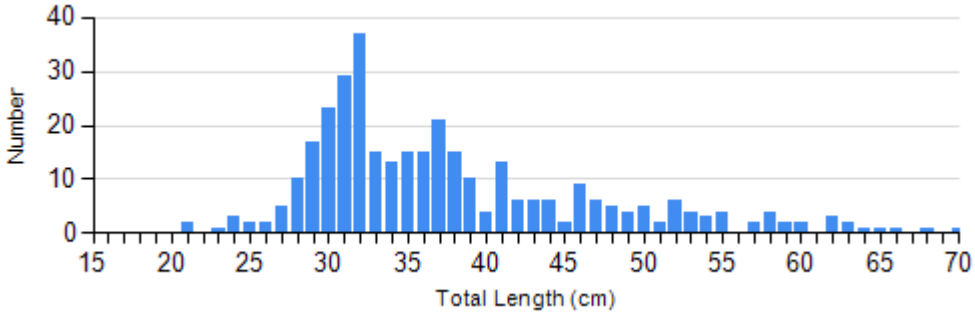


2018

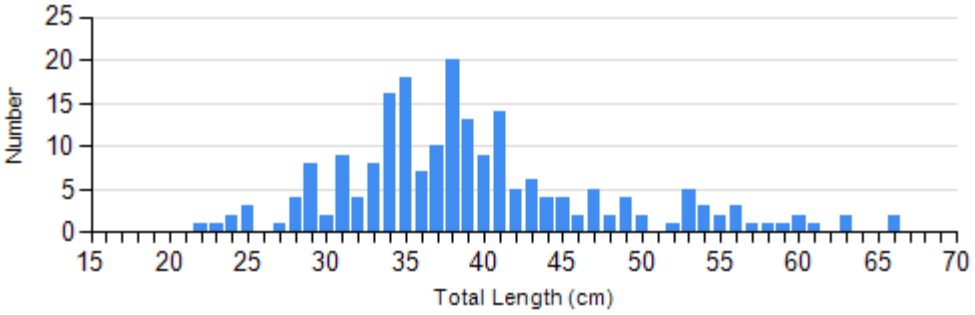


2019

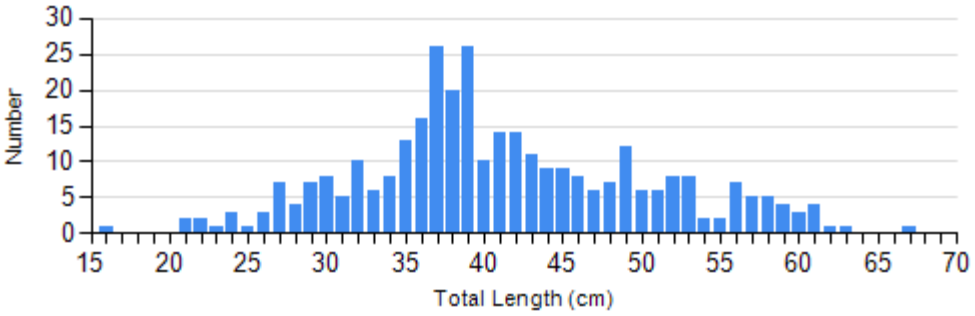
Species: Channel Catfish
Gear: std exp gill net



2014

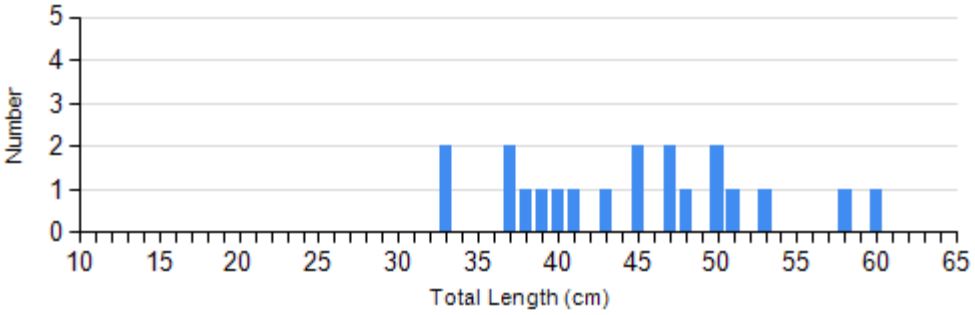


2015

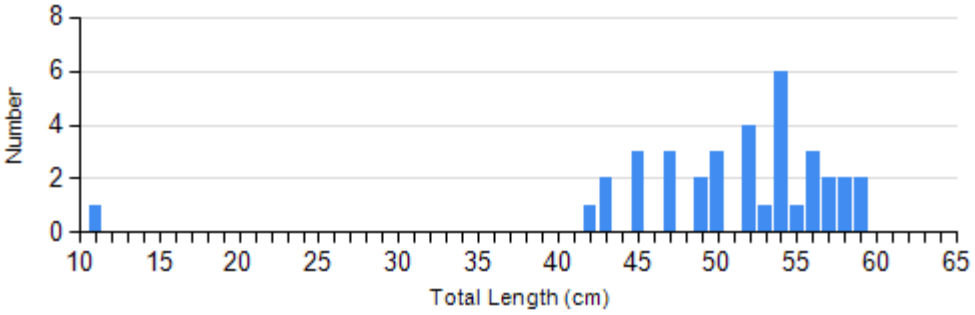


2016

Species: Common Carp
Gear: AFS std gill net



2017



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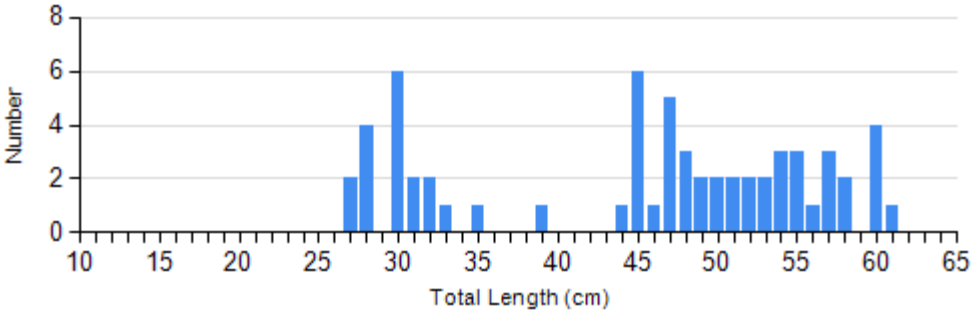
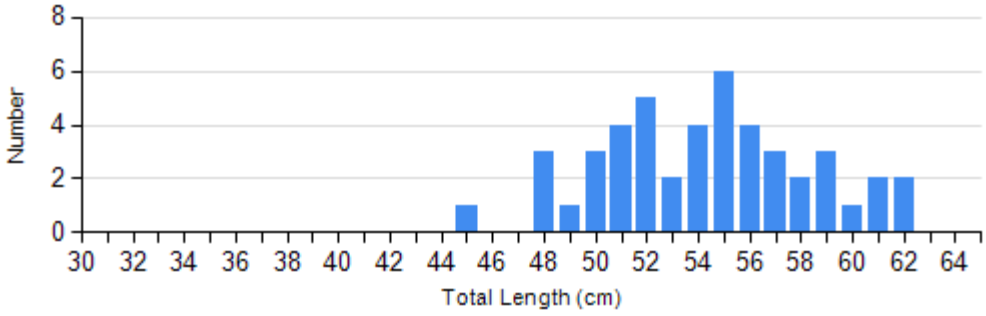


2019

Species: Common Carp
Gear: std exp gill net

2014



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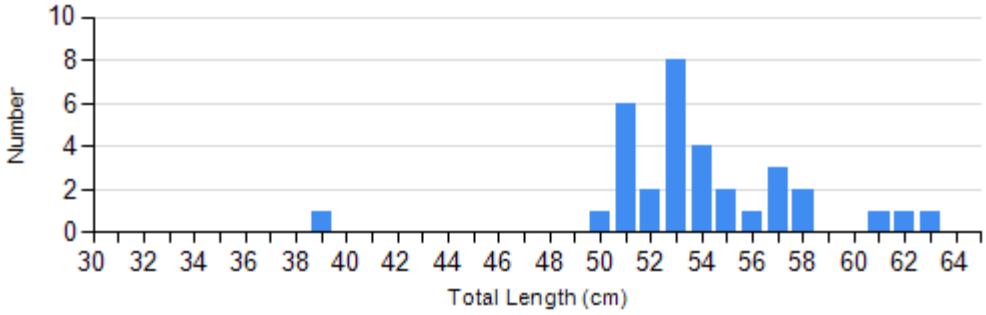

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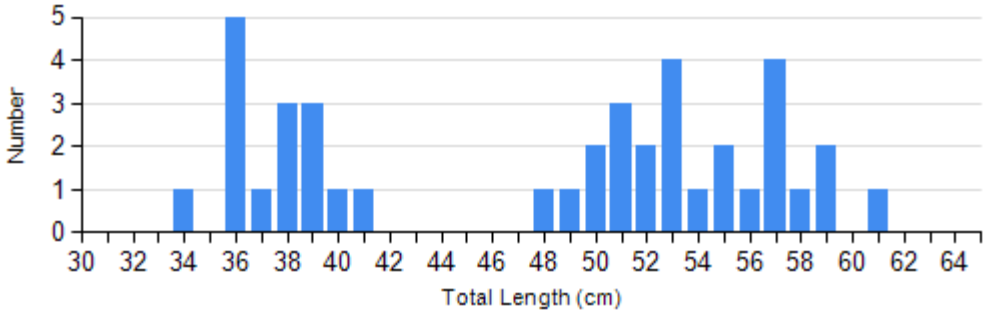
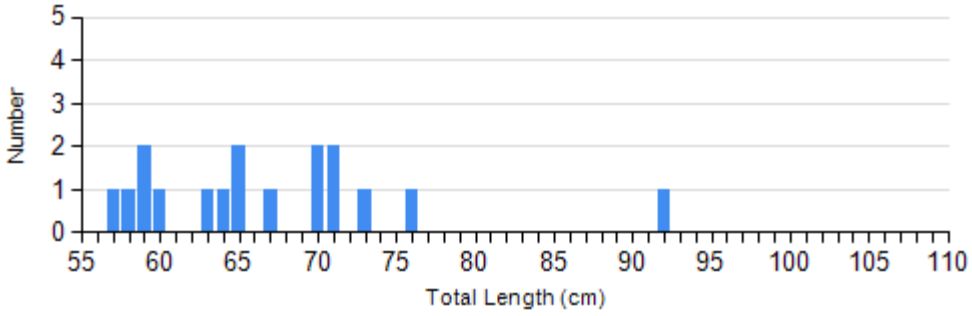
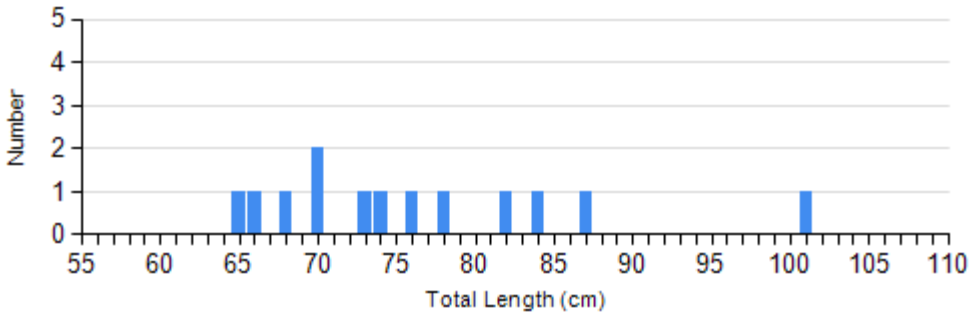


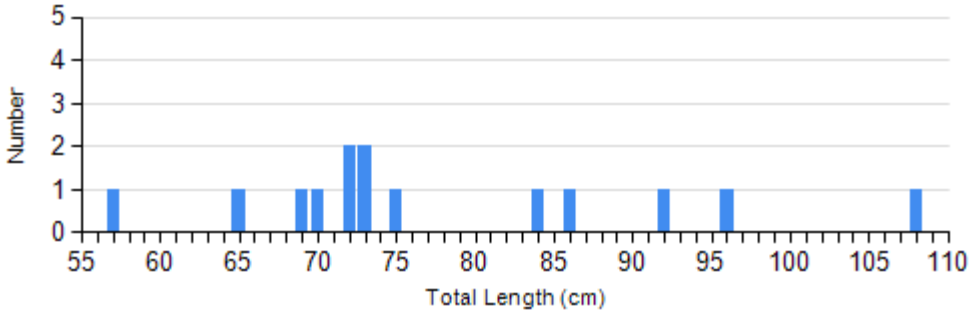
Species: Northern Pike
Gear: AFS std gill net

2017



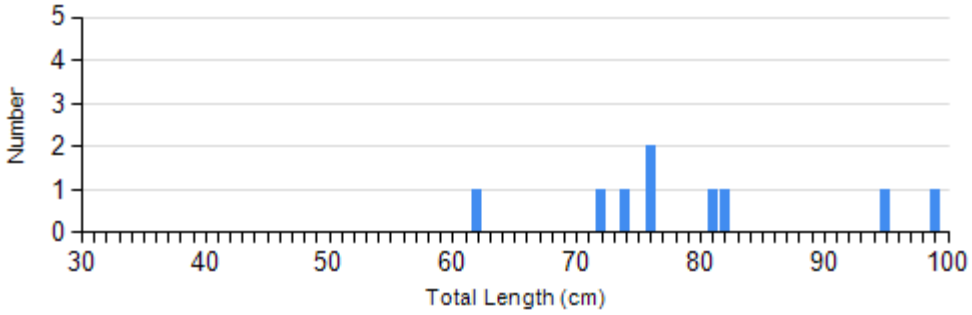
2018



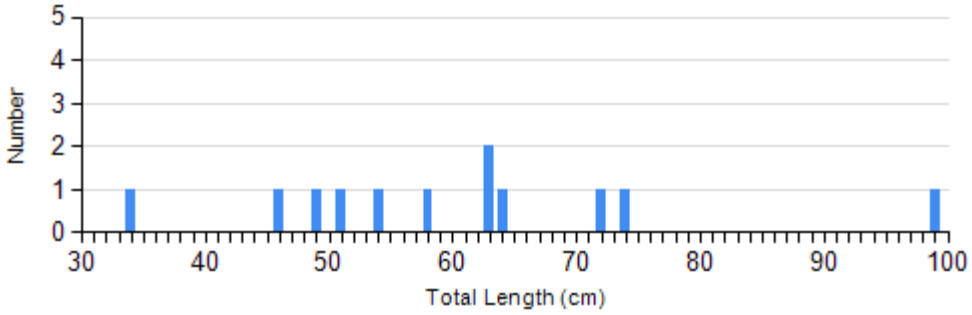


2019

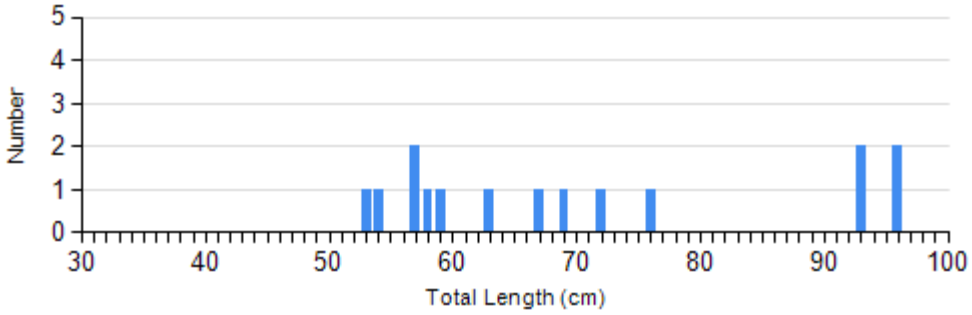
Species: Northern Pike
Gear: std exp gill net



2014

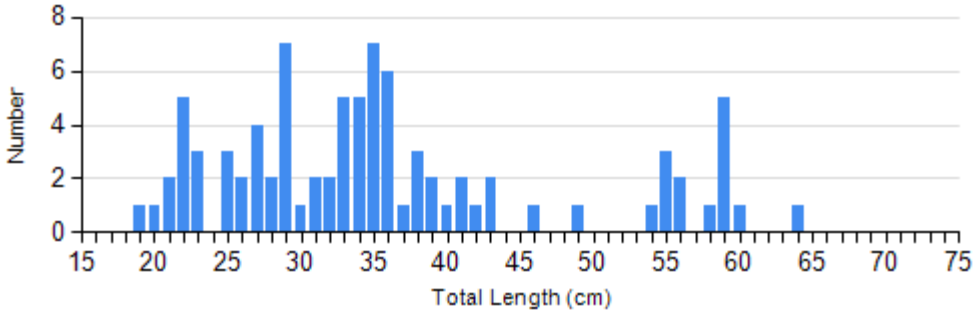


2015

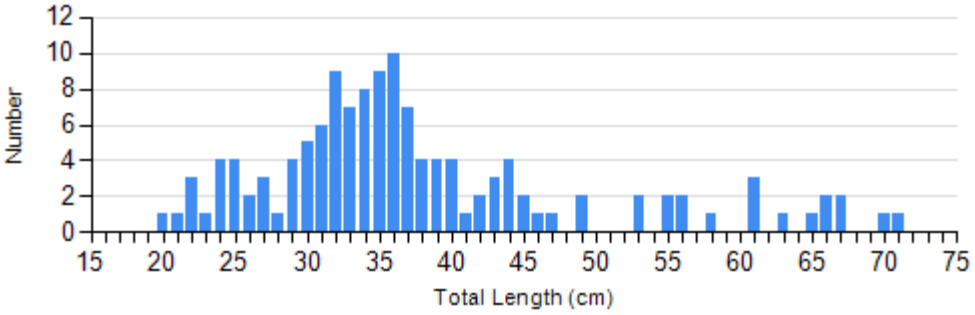


2016

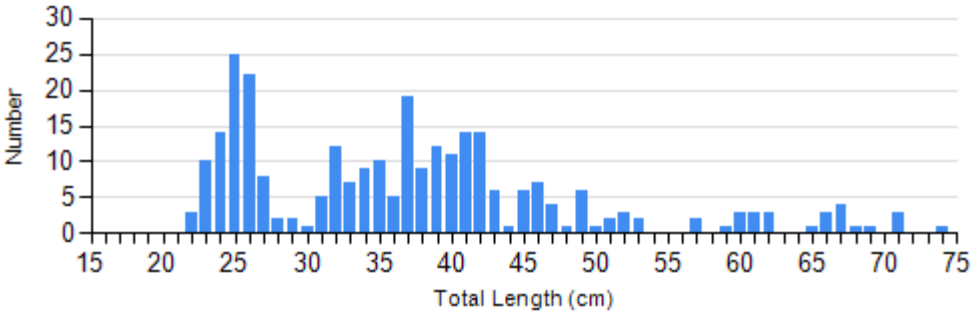
Species: Walleye
Gear: AFS std gill net



2017

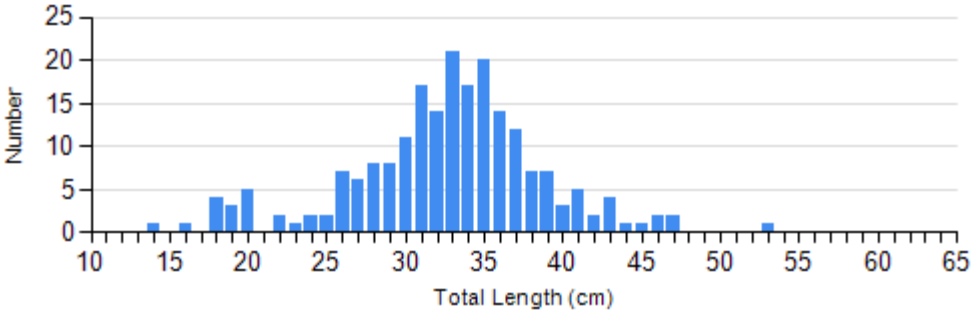


2018

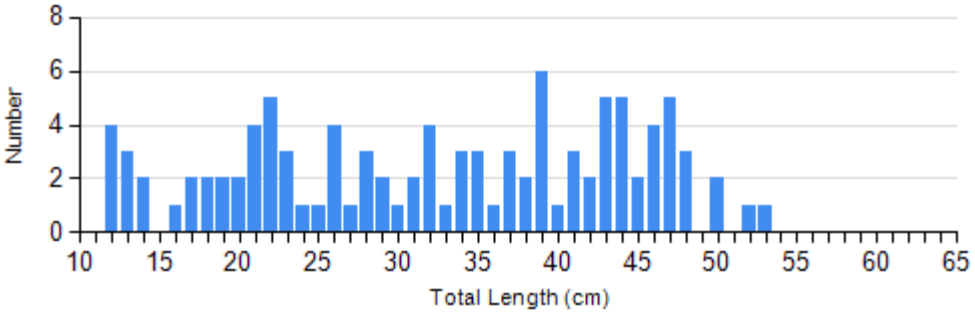


2019

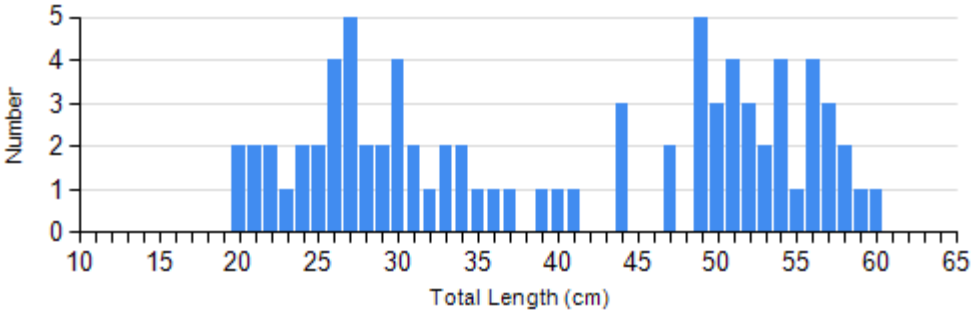
Species: Walleye
Gear: std exp gill net



2014



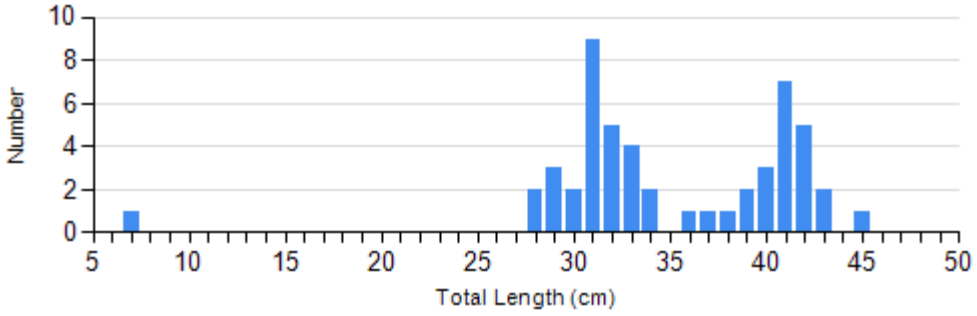
2015



2016

Species: White Bass
Gear: AFS std gill net

2017



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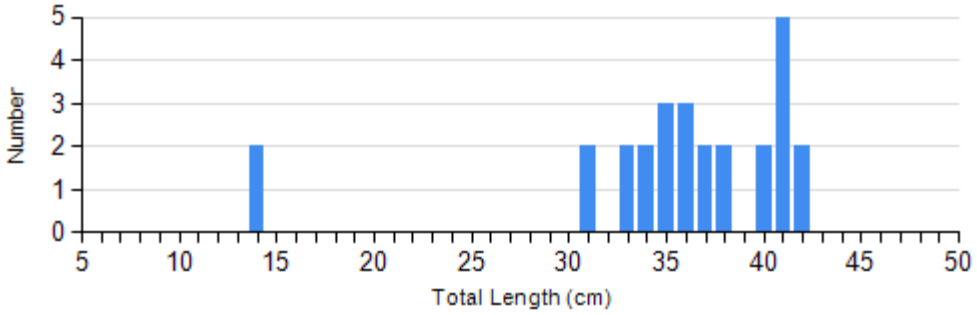
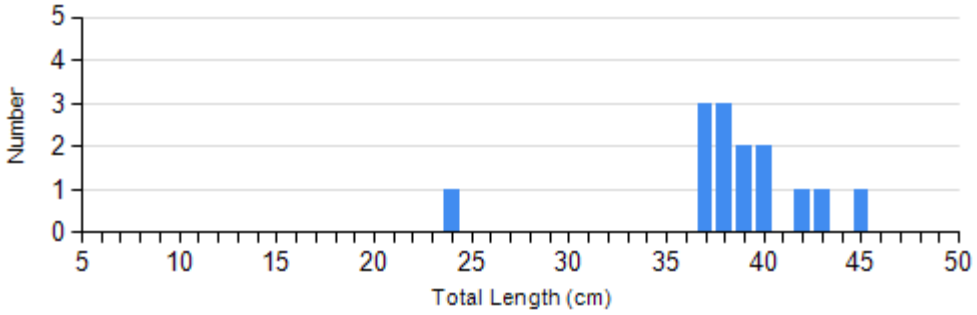
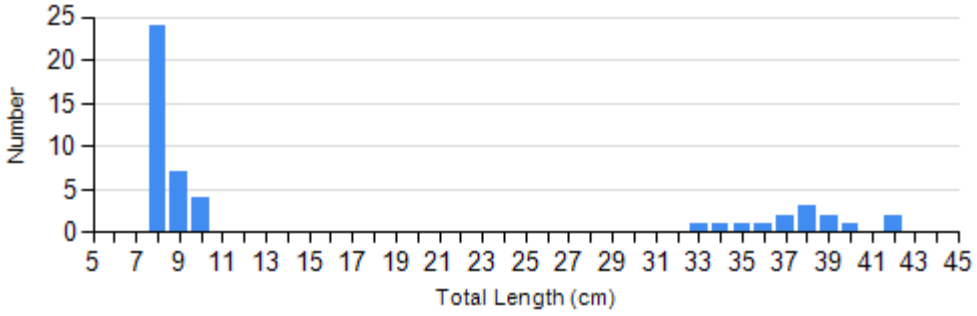


2019

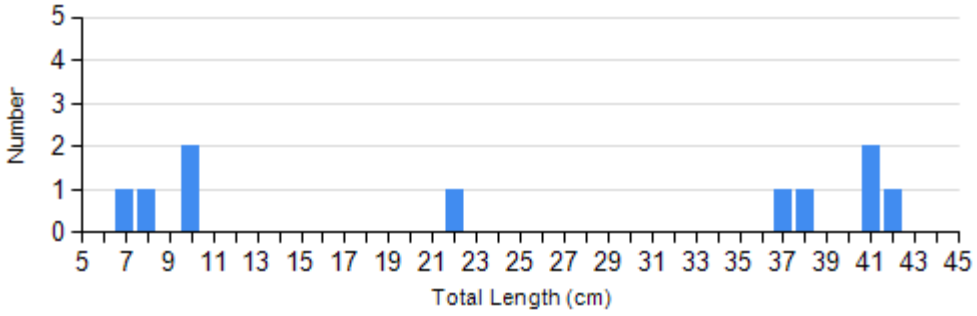


Species: White Bass
Gear: std exp gill net

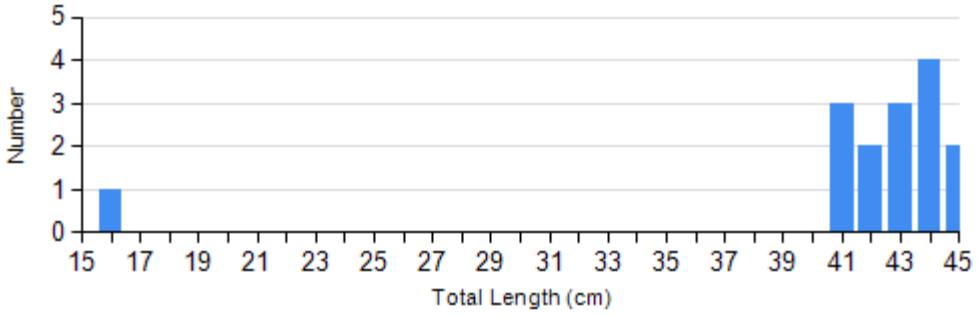
2014



2015

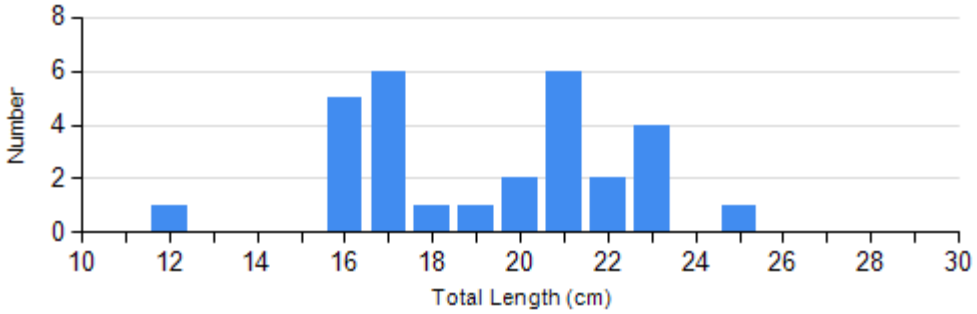


Species: White Sucker
Gear: std exp gill net

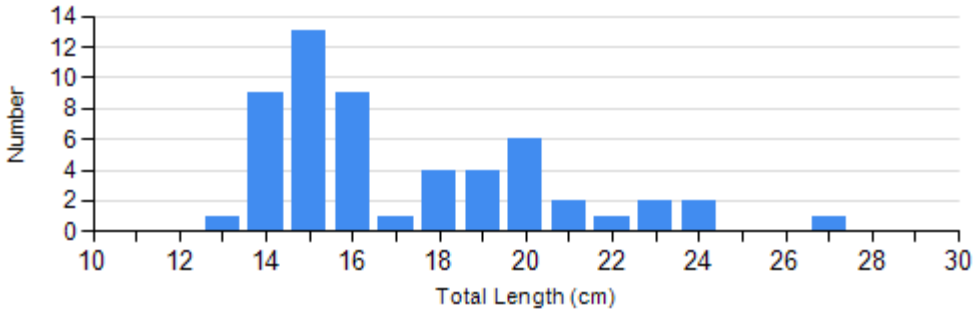


2014

Species: Yellow Perch
Gear: AFS std gill net

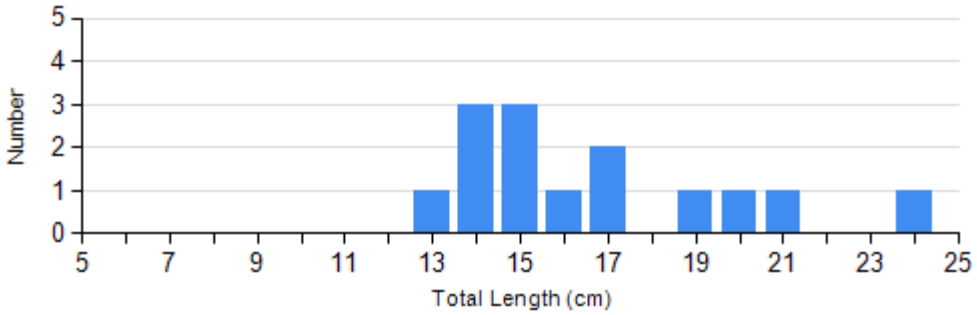


2018

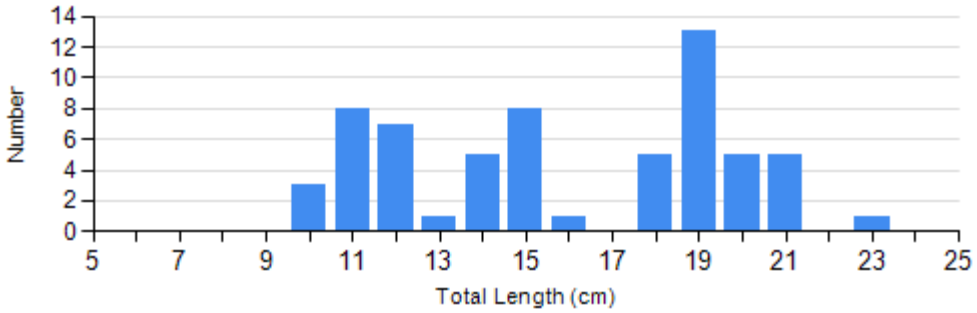


2019

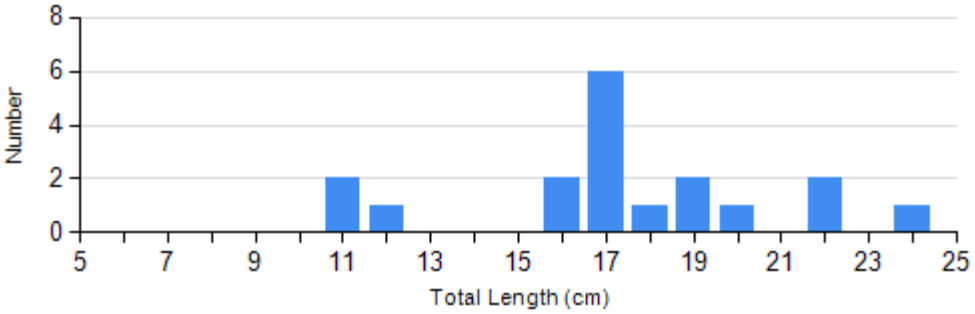
Species: Yellow Perch
Gear: std exp gill net



2014



2015

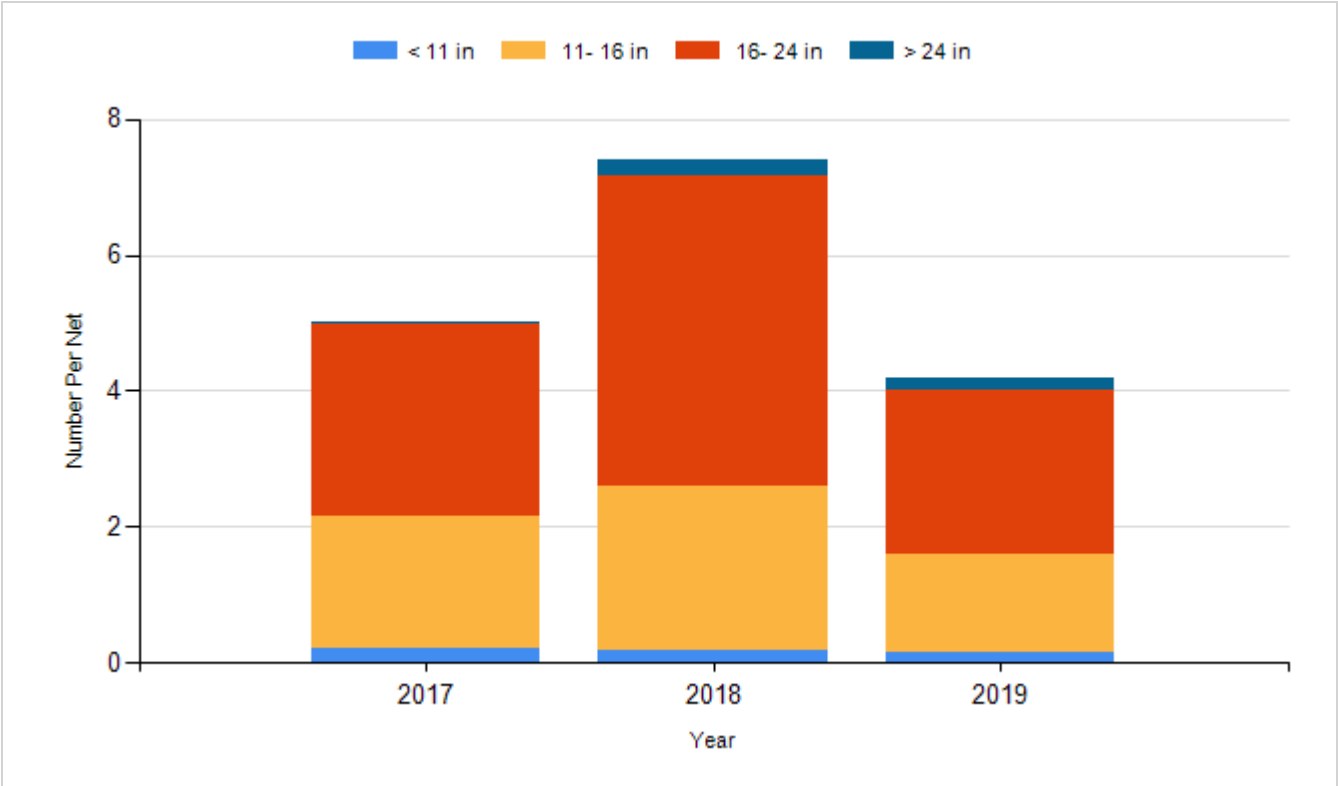


2016

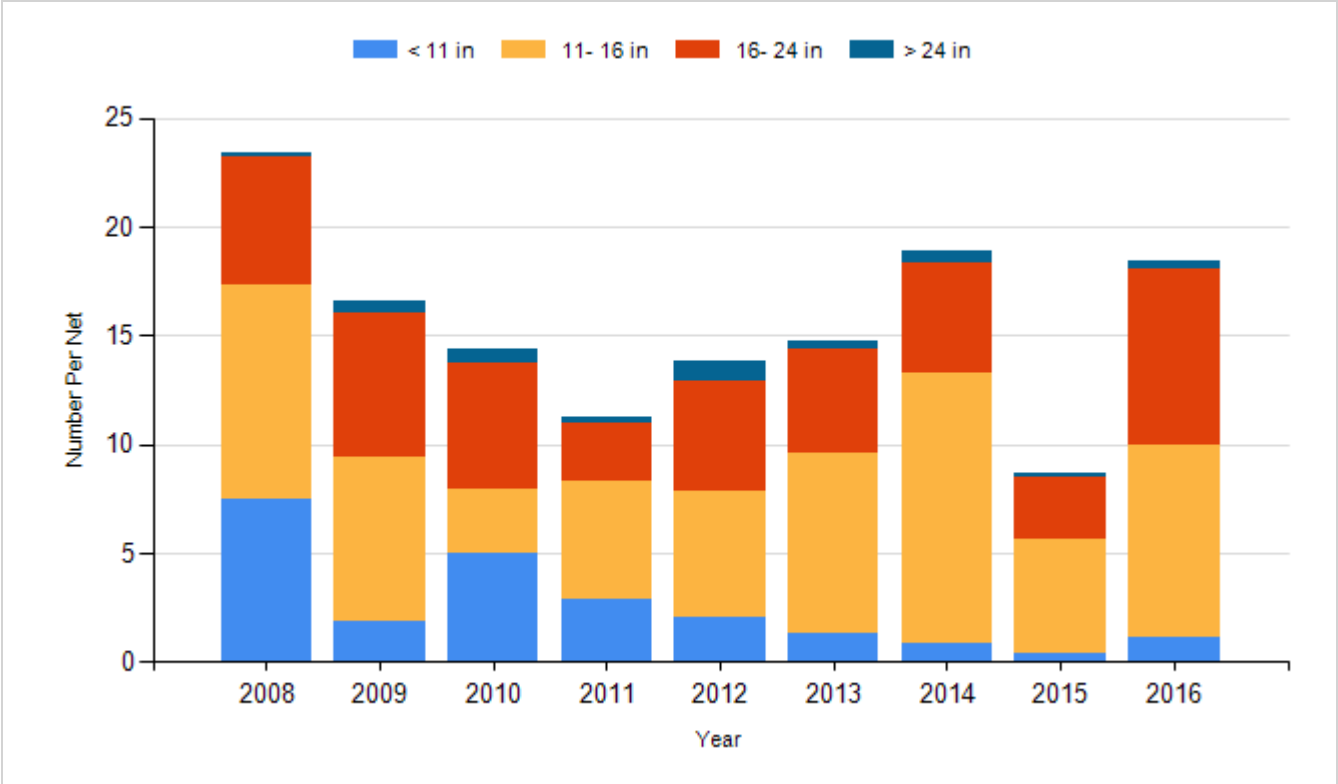
Historic Fish Sizes and Relative Abundance

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

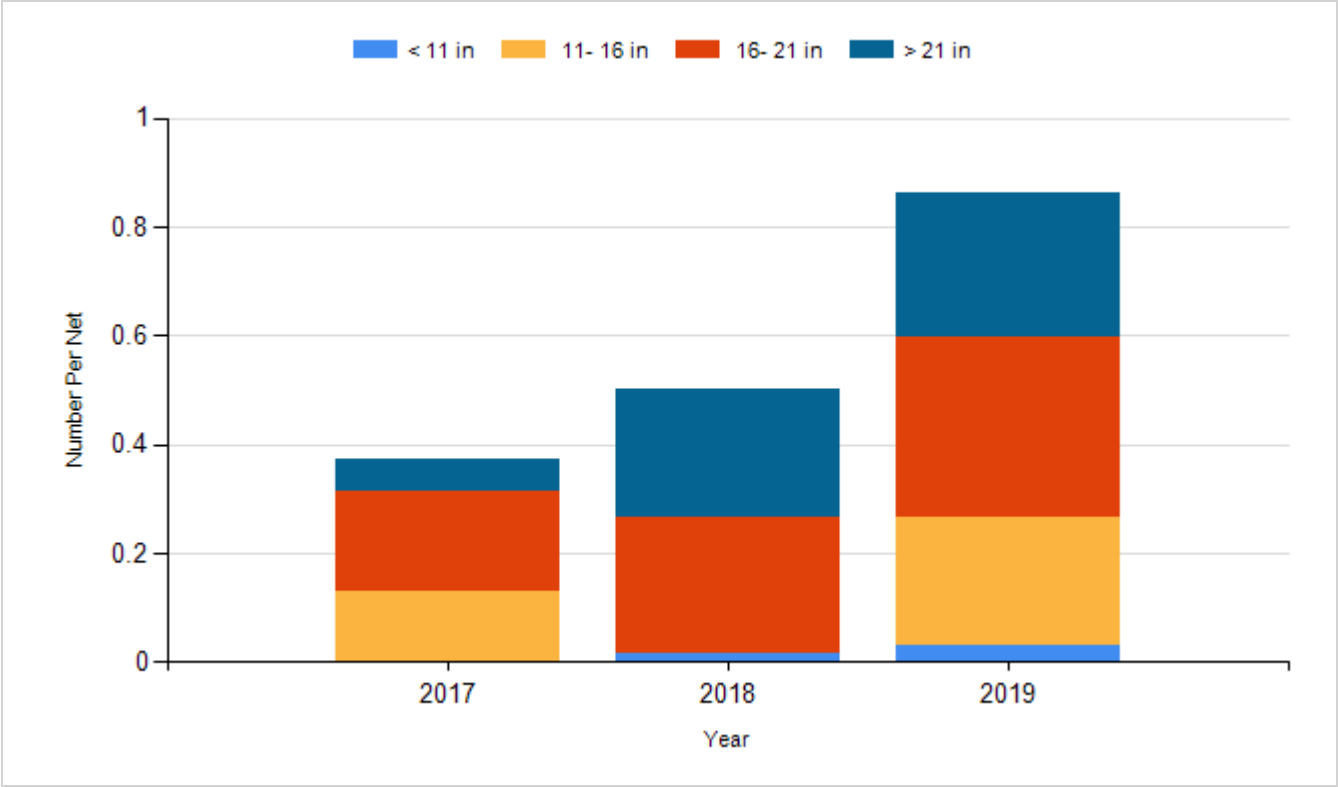
Species: Channel Catfish
Gear: AFS std gill net



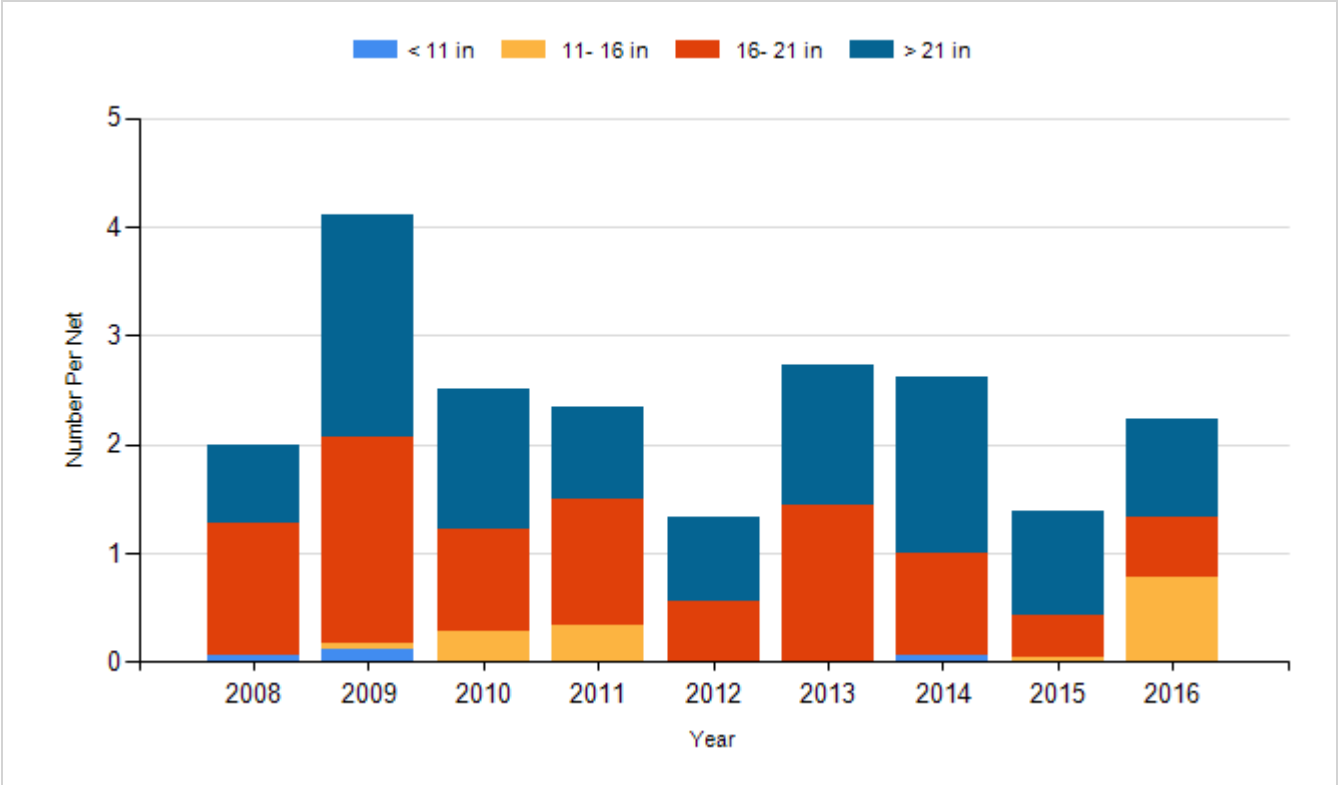
Species: Channel Catfish
Gear: std exp gill net



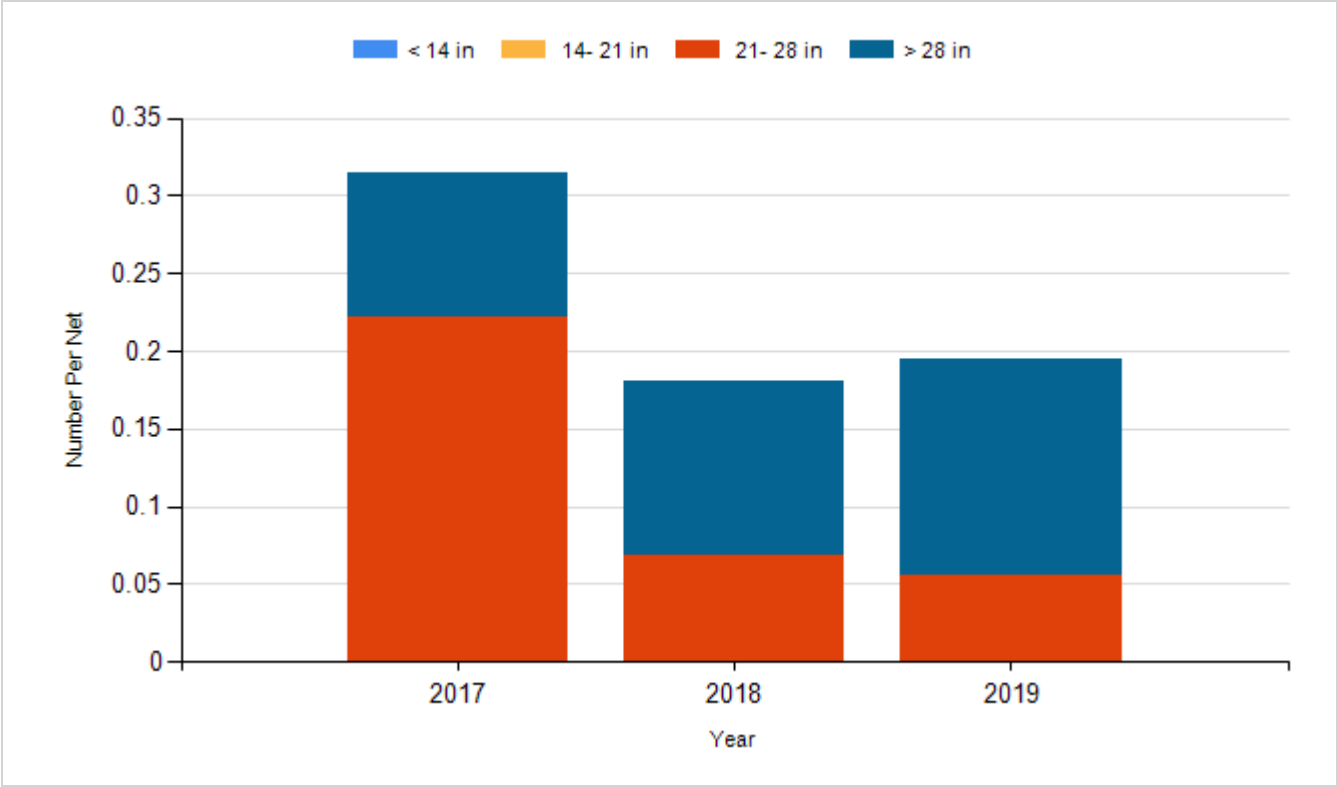
Species: Common Carp
Gear: AFS std gill net



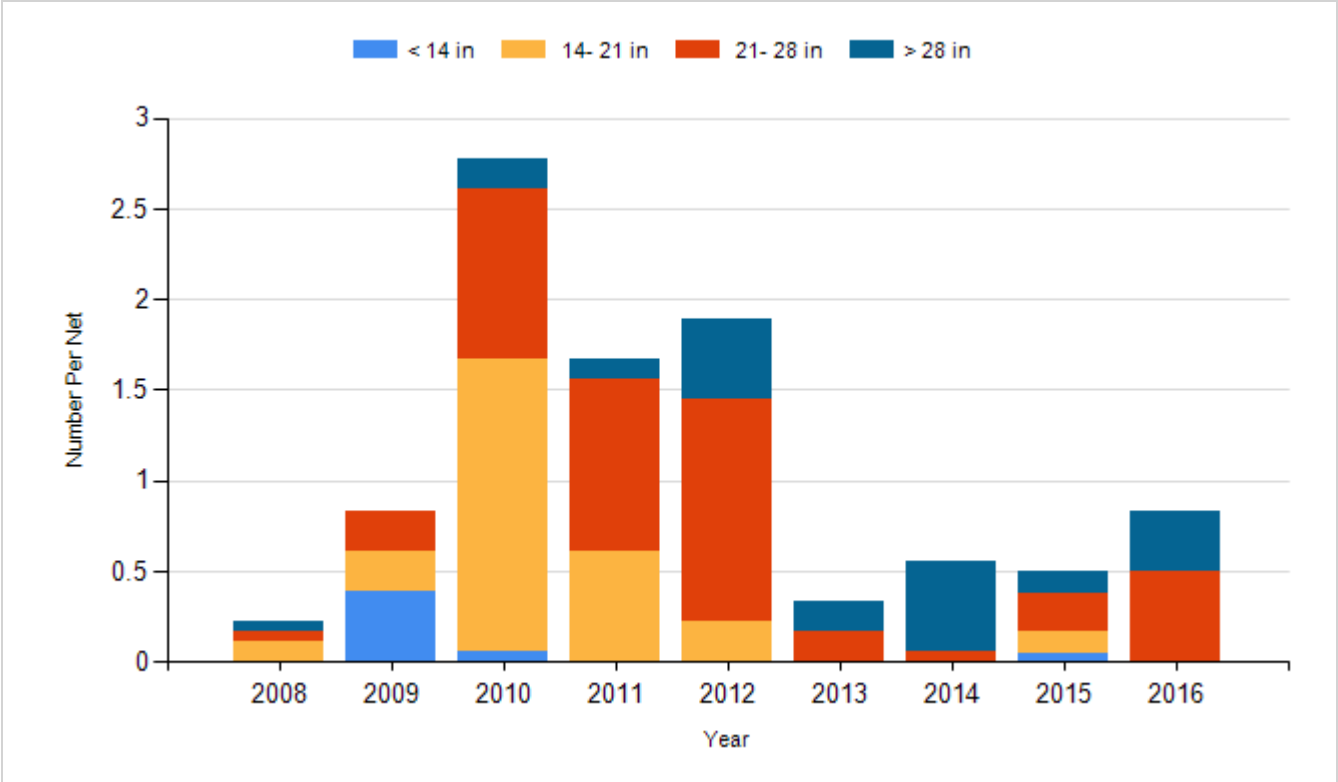
Species: Common Carp
Gear: std exp gill net



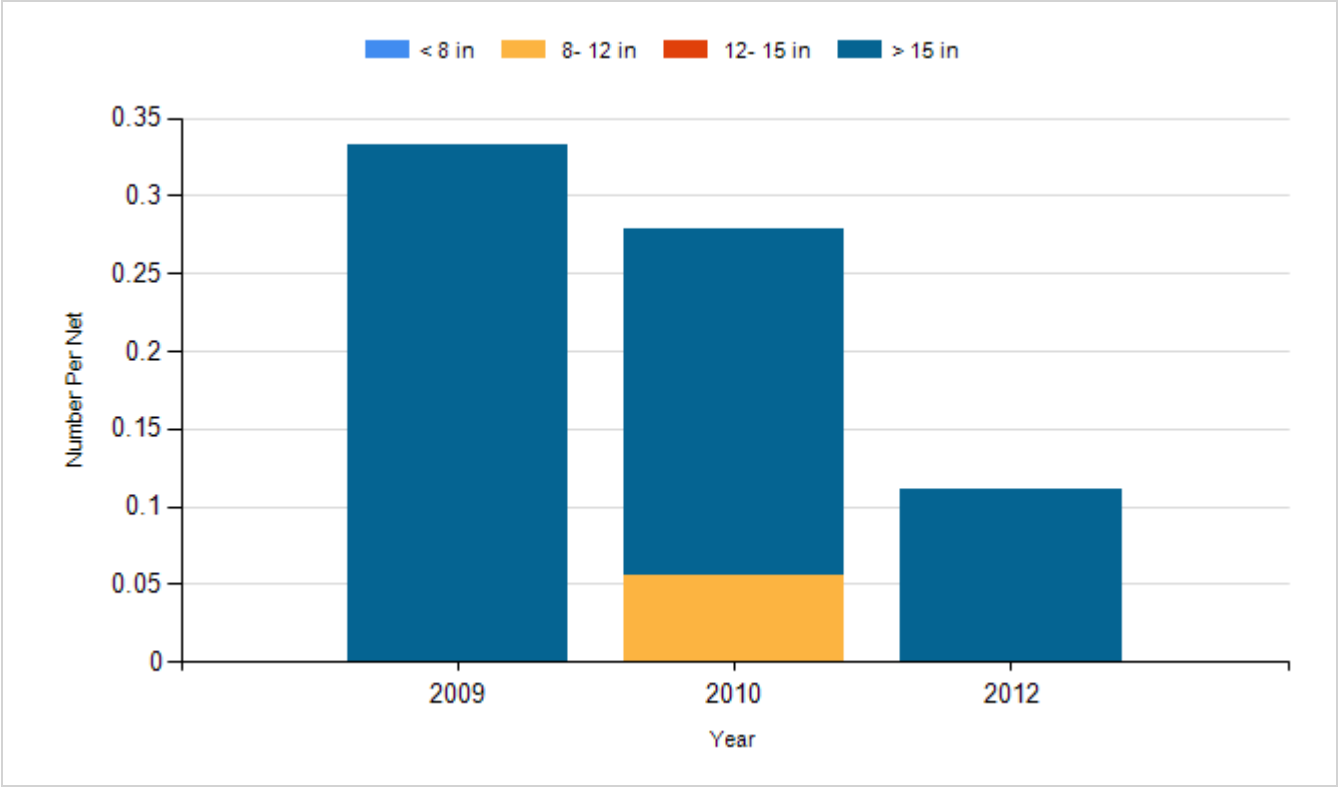
Species: Northern Pike
Gear: AFS std gill net



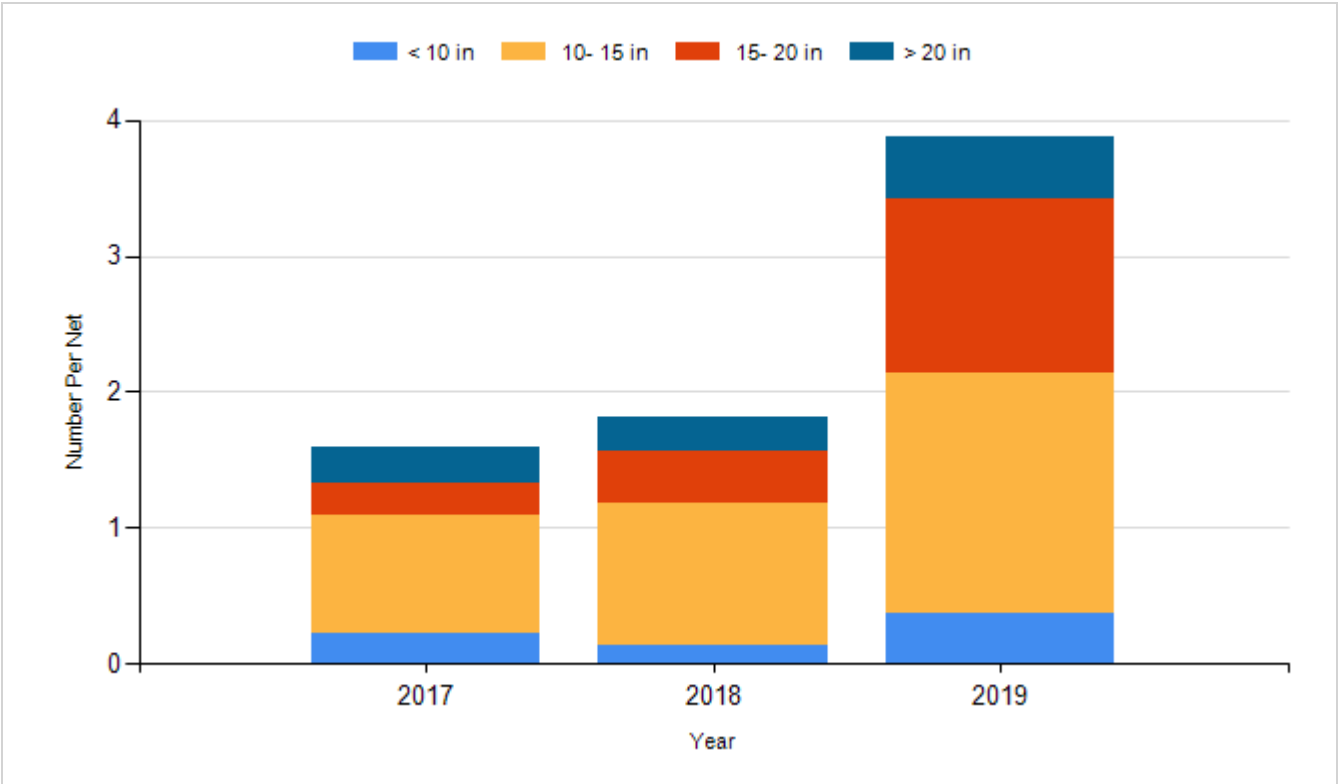
Species: Northern Pike
Gear: std exp gill net



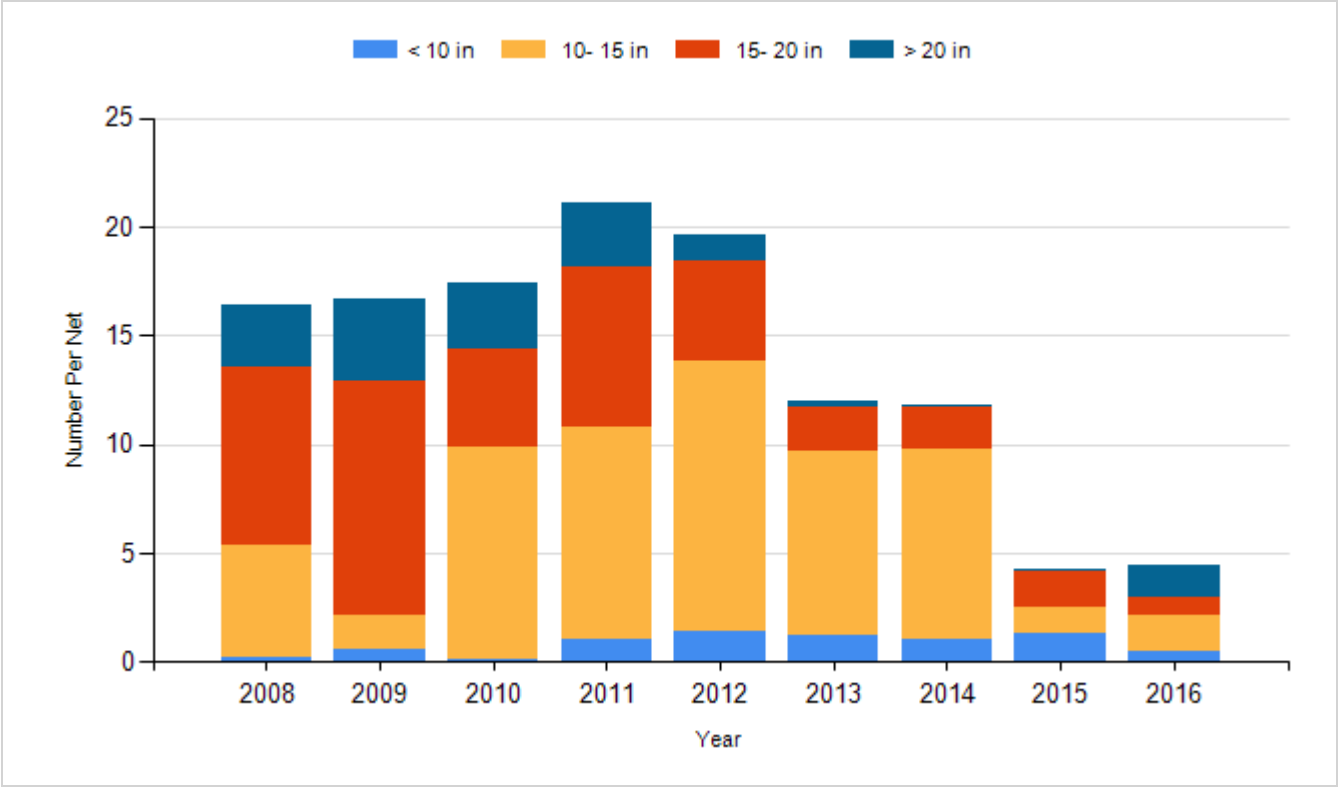
Species: Sauger
Gear: std exp gill net



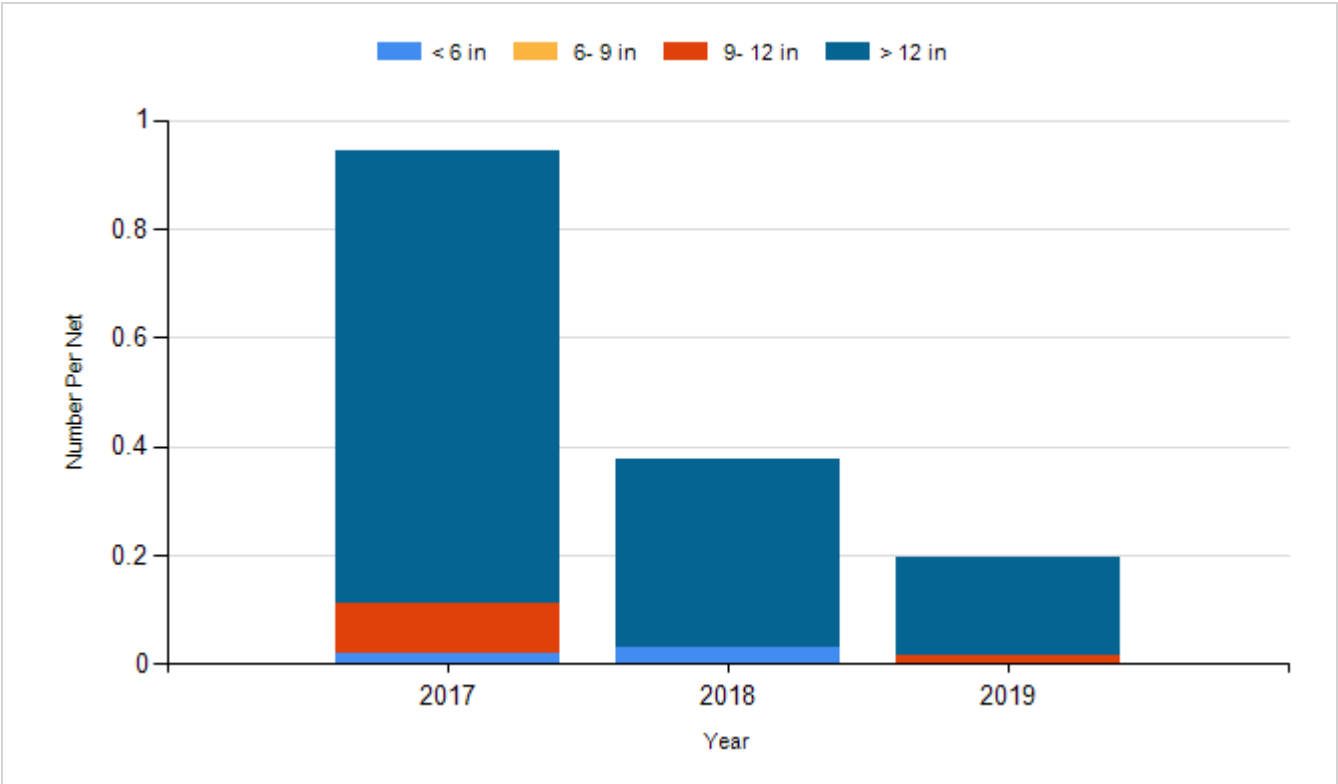
Species: Walleye
Gear: AFS std gill net



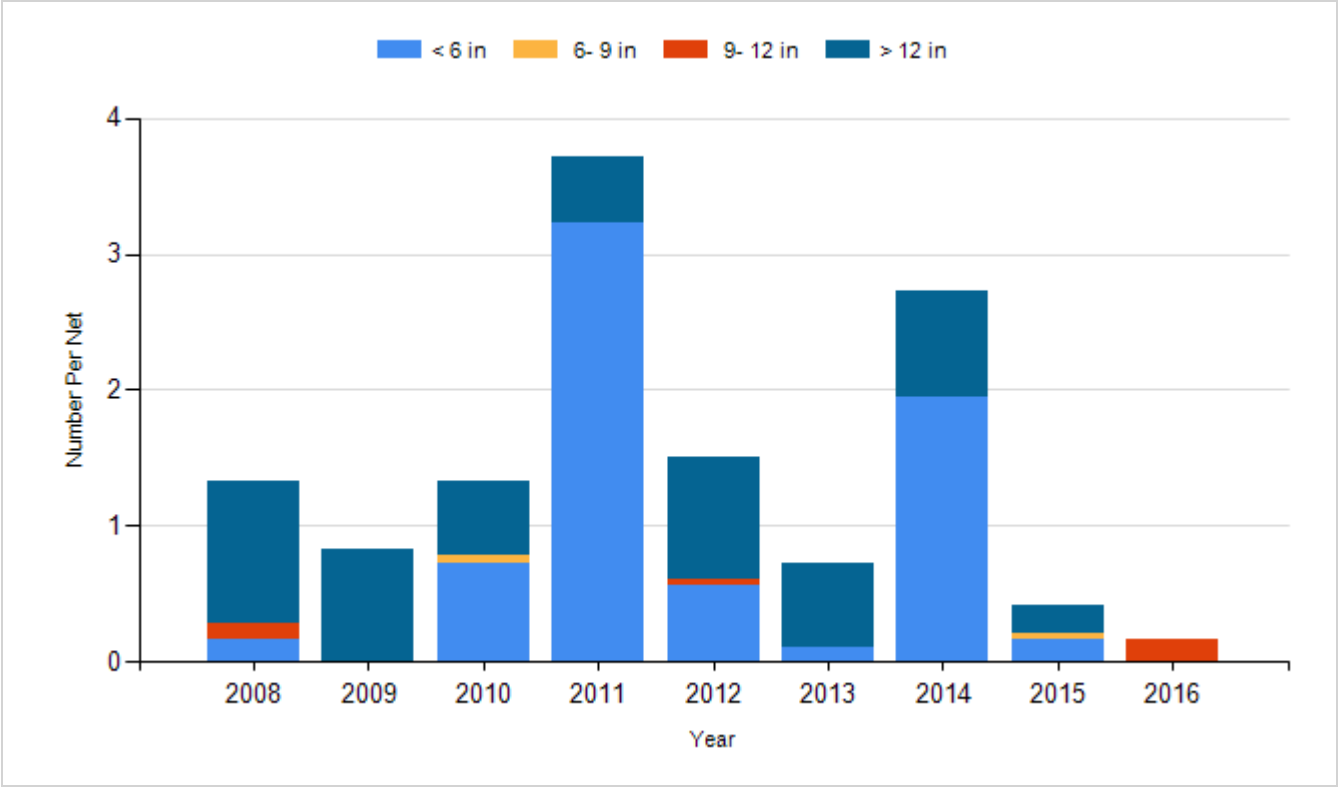
Species: Walleye
Gear: std exp gill net



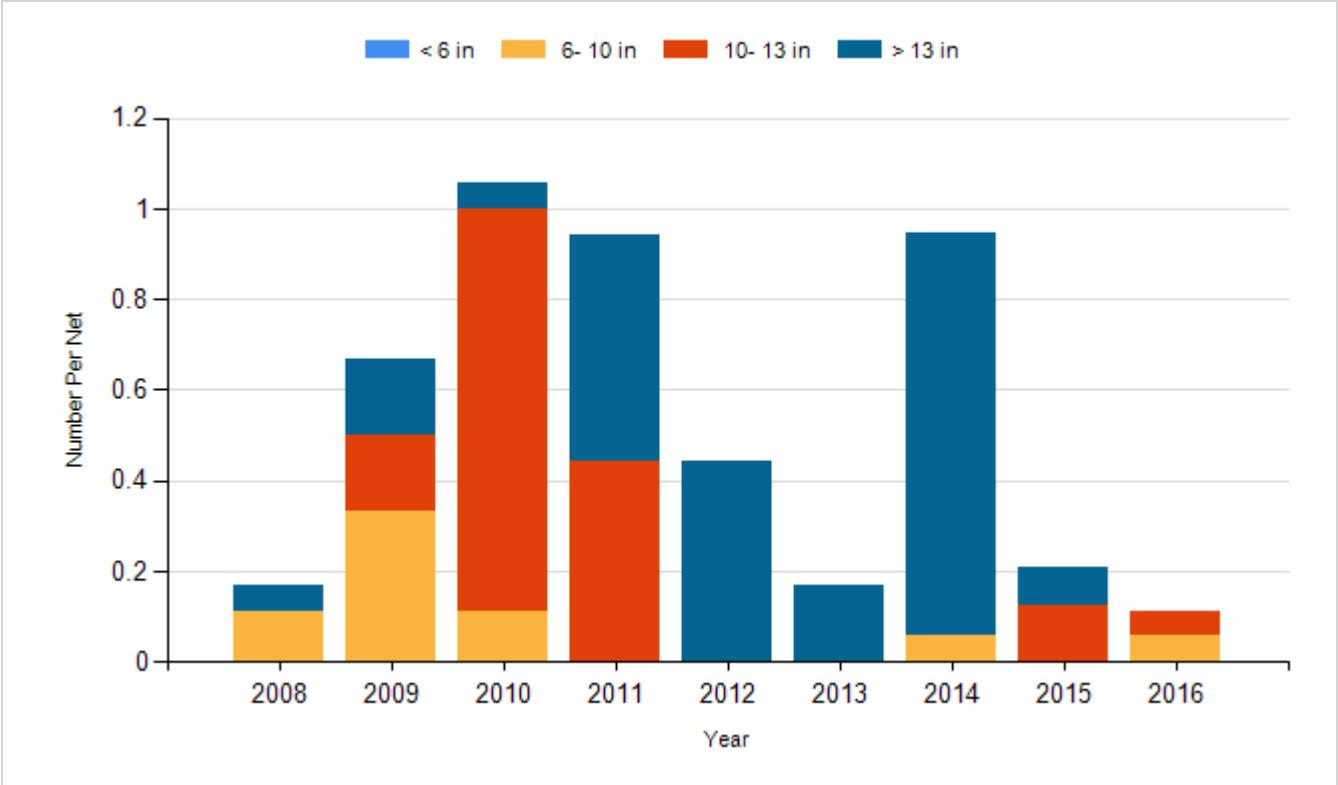
Species: White Bass
Gear: AFS std gill net



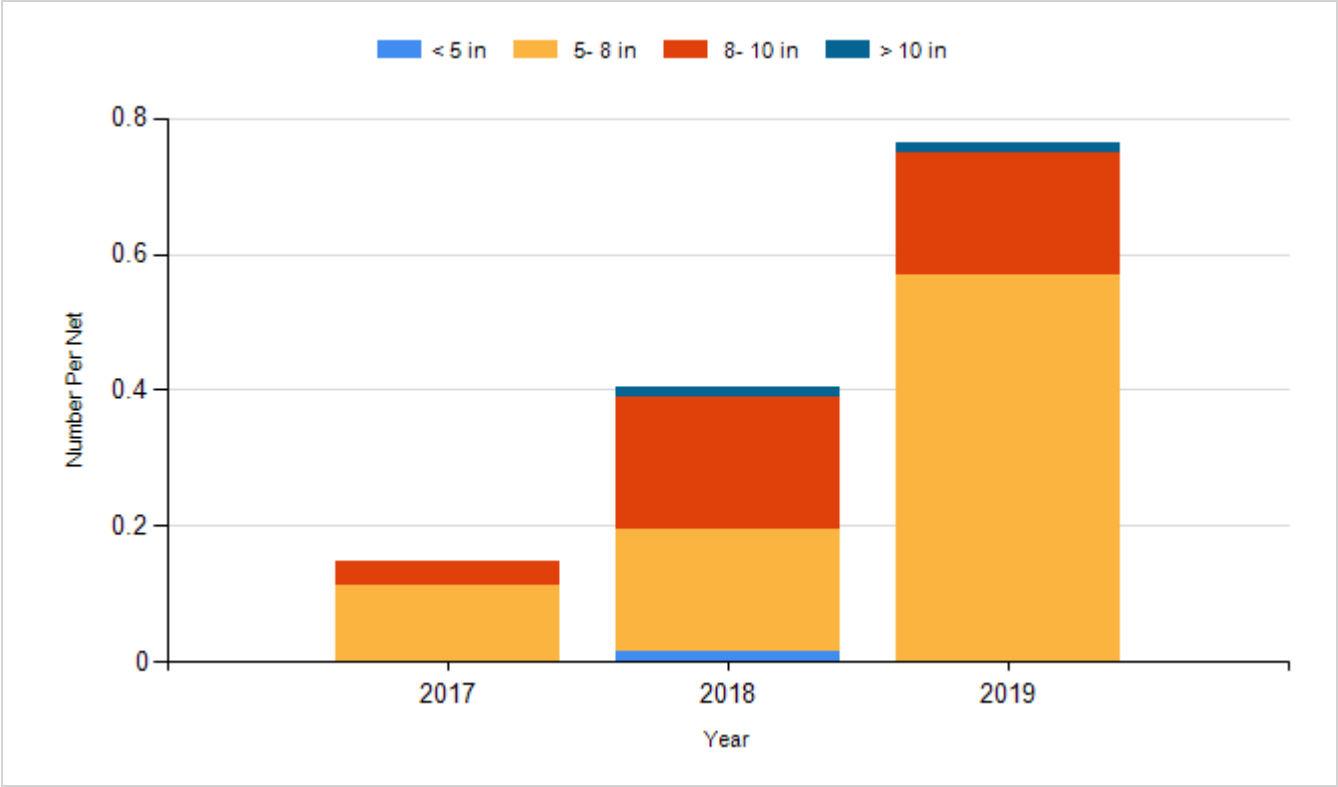
Species: White Bass
Gear: std exp gill net



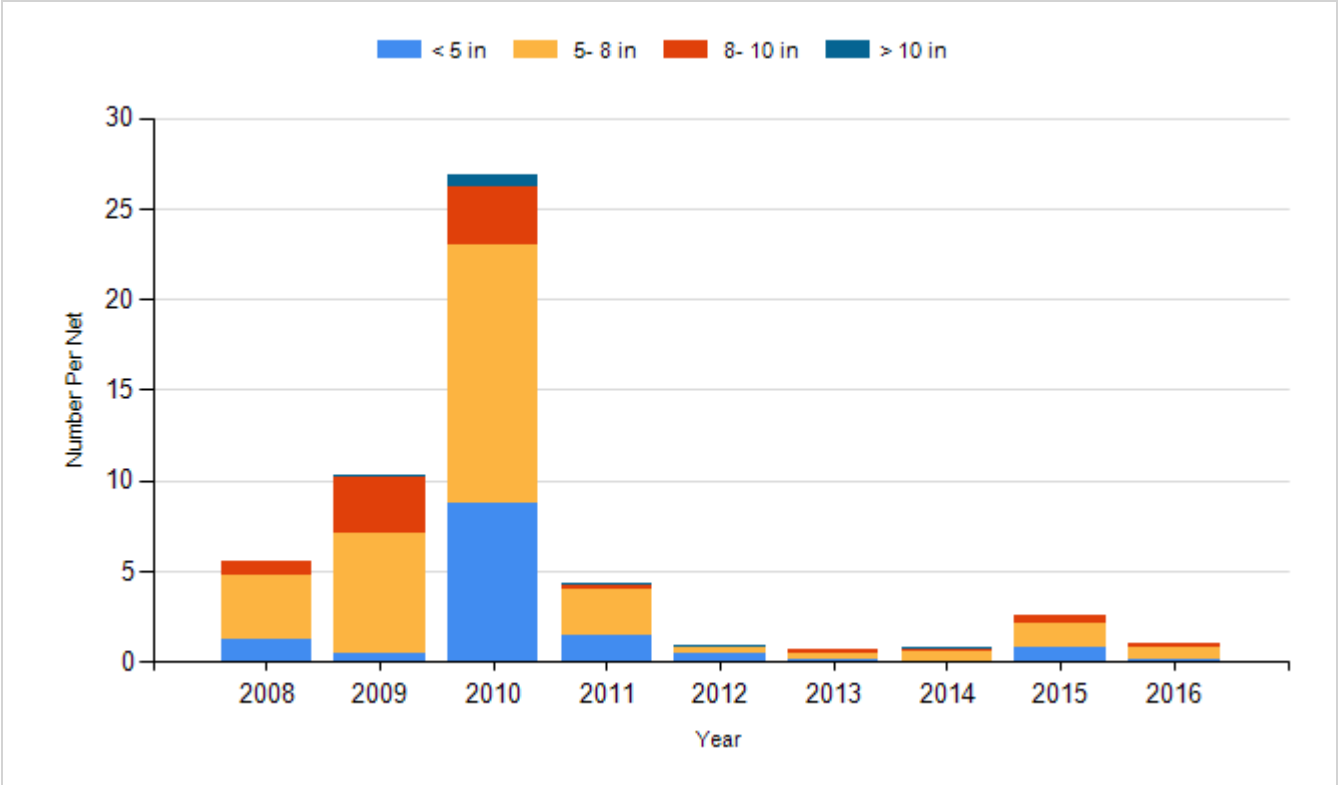
Species: White Sucker
Gear: std exp gill net



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
2010	Chinook Salmon (Oahe)	Fingerling	15,000
2010	Chinook Salmon (Oahe)	Large Fingerling	10,000
2011	Chinook Salmon (Oahe)	Large Fingerling	10,249
2011	Chinook Salmon (Oahe)	Small Fingerling	15,000
2012	Chinook Salmon (Oahe)	Fingerling	15,000
2012	Chinook Salmon (Oahe)	Large Fingerling	10,000
2012	Gizzard Shad	Adult	893
2012	Rainbow Trout (Shasta)	Large Fingerling	12,246
2013	Chinook Salmon (Oahe)	Fingerling	61,584
2013	Chinook Salmon (Oahe)	Large Fingerling	5,000
2013	Gizzard Shad	Adult	616
2013	Rainbow Trout (Erwin x Arlee)	Fingerling	32,904
2014	Chinook Salmon (Oahe)	Fingerling	80,125
2014	Chinook Salmon (Oahe)	Large Fingerling	4,932
2014	Chinook Salmon (Oahe)	Small Fingerling	31,104
2014	Gizzard Shad	Adult	642
2015	Chinook Salmon (Oahe)	Fingerling	71,308
2015	Gizzard Shad	Adult	168
2017	Chinook Salmon (Oahe)	Fingerling	79,242
2017	Walleye	Fry	3,700,000
2017	Walleye	Small Fingerling	300,820
2018	Chinook Salmon (Oahe)	Fingerling	99,426
2018	Walleye	Small	144,460
2018	Walleye	Small Fingerling	1,830,546
2019	Burbot	Fingerling	30,550
2019	Chinook Salmon (Oahe)	Catchable 11"	10,332
2019	Chinook Salmon (Oahe)	Fingerling	62,046
2019	Walleye	Small Fingerling	364,500