Kampeksa Pits Survey Summary

The waterbody referred to as Kampeska Pits, located north of Lake Kampeska on the Cotton Slough/Ellis 80 Game Production Area, is managed as a community-based fishery. Because the pond is shallow and prone to winterkill, stockings of adult fish (generally bluegill, northern pike, or white bass) have been used to create angling opportunities.

In 2018, daytime electrofishing was used to sample fish populations in the lake. Unfortunately, few fish that would interest anglers were sampled; bigmouth buffalo and common carp were the two most abundant species.

- **Northern pike**. A single northern pike was observed but not captured during daytime electrofishing in 2018. Northern pike can be difficult to catch when electrofishing; thus, their numbers may be higher than sampling suggests. Northern pike were abundant (10.0/gill net) in 2014, when gill nets were used.

- **White bass**. Six white bass ranging in length from 11.8 to 16.1 inches were sampled. Although not abundant, adult white bass were present and may provide some angling opportunity.

- **Yellow perch**. Yellow perch were sampled (10.5/hour) but nearly all were less than 8.0 inches.

- **Saugeye**. Because water levels were high in 2018 and excess fish were available, small fingerling saugeye (≈1.5 inches) were stocked into the Kampeska Pits. Hopefully, these fish survive and reach sizes that will interest anglers in upcoming years.

For more detailed results see the computer generated South Dakota Statewide Fisheries Survey for the Kampeska Pits (below).

SOUTH DAKOTA STATEWIDE FISHERIES SURVEY
Kampeska Pits, Codington County
UBS-Lake-171-800
2018

Lake Information

Name: Kampeska Pits

County: Codington

Surface Area: 41 Acres

Surveys and Investigations

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

Gear	Date	Effort
boat shocker (day)	May 25, 2018	2400 seconds

Common Fish Species Present

Bigmouth Buffalo

Common Carp

Yellow Perch

White Bass

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)
Bigmouth Buffalo	11	28	18	46	24	61	30	76	37	94
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
Channel Catfish	11	28	16	41	24	61	28	71	36	91
Common Carp	11	28	16	41	21	53	26	66	33	84
Freshwater Drum	8	20	12	30	15	38	20	51	25	63
Gizzard Shad	7	18	11	28						
Green Sunfish	3	8	6	15	8	20	10	25	12	30
Lake Herring	5	13	8	20	11	28	14	35	17	43
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
Rock Bass	4	10	7	18	9	23	11	28	13	33
Rudd	6	15	10	25	12	30	15	38	19	48
Saugeye	9	23	14	35	18	46	22	56	27	69
Shorthead Redhorse	6	15	10	25	13	33	16	41	20	51
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
White Sucker	6	15	10	25	13	33	16	41	20	51
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	CPUE	CI-80	PSD	CI-80	PSD-P	CI-80	Wr	CI-80
boat shocker (day)	Bigmouth Buffalo	36.0	12.7	100		17			
	Common Carp	15.0	11.7	100		100			
	White Bass	9.0	8.5	100		100			
	Yellow Perch	10.5	4.7	43		0			

Fish Stocking

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

Year	Species	Size	Number
2008	Yellow Perch	Adult	875
2009	Largemouth Bass	Juvenile	375
2010	Bluegill	Adult	1,330
2011	Bluegill	Adult	500
2011	Yellow Perch	Adult	1,785
2014	Northern Pike	Adult	268
2015	Northern Pike	Adult	110
2015	White Bass	Adult	300
2016	Northern Pike	Adult	307
2016	Yellow Perch	Juvenile	3,300
2017	Bluegill	Adult	480
2018	Saugeye	Small Fingerling	2,320