SOUTH DAKOTA STATEWIDE FISHERIES SURVEY
Edgemont Airport North Pond, Fall River County
ANR-Lake-72-000
2022

Lake Information

Name: Edgemont Airport North Pond

County: Fall River

Surface Area: 4 Acres

Surveys and Investigations

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

Gear	Date	Effort
rod and reel	May 17, 2022	2 minutes

Common Fish Species Present

Rainbow Trout

Largemouth Bass

Black Crappie

Green Sunfish

Terminology

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

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

- **AFS std gill net** – 80 ft experimental gill net containing eight panels (10 ft each) of varying monofilament meshes of 0.75, 1.00, 1.25, 1.50, 1.75, 2.00, 2.25 and 2.50 inches.
- **std experimental gill net for non-Missouri River waters** - 150 ft experimental gill net containing six panels (25 ft each) of varying monofilament meshes of 0.5, 0.75, 1.00, 1.25, 1.50 and 2.00 inches.
- 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
rod and reel	Black Crappie	10	300.0		100		0		96	3
	Green Sunfish	1	30.0		100		0		107	
	Largemouth Bass	9	150.0		40		0		93	3
	Rainbow Trout	7	210.0		0		0		85	5

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**

		CPUE										
Gear	Species	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Avg
rod and reel	Black Crappie										300.0	300.00
	Green Sunfish										30.0	30.00
	Largemouth Bass										150.0	150.00
	Rainbow Trout										210.0	210.00

10-Year Size Structure and Condition Statistics by Gear and Species

Species proportional size distribution (PSD), proportional size distribution of preferred length fish (PSD-P), and relative weight (Wr) collected by different gear types across 10 years.

			Year									
Gear	Species	Index	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
rod and reel	Black Crappie	PSD										100
		PSD-P										0
		Wr										96
	Green Sunfish	PSD										100
		PSD-P										0
		Wr										107
	Largemouth Bass	PSD										40
		PSD-P										0
		Wr										93
	Rainbow Trout	PSD										0
		PSD-P										0
		Wr										85

Fish Stocking

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

Year	Species	Size	Number
2011	Rainbow Trout (Erwin x Arlee)	Catchable	200
2011	Rainbow Trout (Erwin x Arlee)	Catchable 15"	20
2011	Rainbow Trout (Shasta)	Catchable	200
2012	Rainbow Trout (Erwin x Arlee)	Catchable	400
2012	Rainbow Trout (Erwin x Arlee)	Catchable 15"	20
2012	Rainbow Trout (Shasta)	Catchable	200
2013	Rainbow Trout (Erwin x Arlee)	Catchable	200
2013	Rainbow Trout (Erwin x Arlee)	Catchable 15"	30
2013	Rainbow Trout (Shasta)	Catchable	400
2014	Rainbow Trout (Erwin x Arlee)	Catchable	219
2014	Rainbow Trout (Erwin x Arlee)	Catchable 15"	20
2014	Rainbow Trout (Shasta)	Catchable	400
2015	Rainbow Trout (Erwin x Arlee)	Catchable	200
2015	Rainbow Trout (Erwin x Arlee)	Catchable 15"	20
2015	Rainbow Trout (Shasta)	Catchable	200
2016	Rainbow Trout (Erwin x Arlee)	Catchable	400
2016	Rainbow Trout (Erwin x Arlee)	Catchable 15"	20
2016	Rainbow Trout (Shasta)	Catchable	200
2017	Rainbow Trout (Erwin x Arlee)	Catchable	200
2017	Rainbow Trout (Shasta)	Catchable	400
2018	Rainbow Trout (Shasta)	Catchable 11"	200
2019	Rainbow Trout (Shasta)	Catchable 11"	600
2020	Rainbow Trout (Arlee)	Catchable 11"	600
2021	Rainbow Trout (Arlee)	Adult	200
2021	Rainbow Trout (Shasta)	Adult	400
2022	Rainbow Trout (Shasta)	Adult	200
2022	Rainbow Trout (Trout Lodge)	Adult	400