SOUTH DAKOTA STATEWIDE FISHERIES SURVEY

2102-F-21-R-45

Name: Draper Dam **County(ies):** Jones
Legal Description: T1S-R30E-Sec. 33 **GPS:** 43º54'57.971"N 100º32'00.74"W
Location from nearest town: ¼ mile south of Draper

Date of present survey: June 18-19, 2012 (netting)
Date of last survey: July 21-22, 2009 (netting)
Most recent lake management plan: F-21-R-45 (January 1, 2013 to December 31, 2017)
Management classification: Warm water Semi-permanent

Primary Game Species	Secondary and Other Species
Largemouth Bass	Golden Shiner
Black Bullhead	

PHYSICAL DATA

Surface Area: 12 acres **Watershed:** 400 acres
Maximum Depth: 11 feet **Mean Depth:** 5 feet
Lake elevation at time of survey (field observations): Full
Contour map: No **Date:** NA

Ownership of lake and adjacent lakeshore properties:

Draper Dam is a 12-acre impoundment just south of the town of Draper in east central Jones County. The lake was created in the early 1930s when the Works Progress Administration (WPA) constructed an earthen dam on the south fork of Medicine Creek. To allow for the construction of the dam and subsequent flooding, an easement for public use was granted to the State of South Dakota. The City of Draper owns the dam grade, lake and entire shoreline. The Wildlife Division of the South Dakota Game, Fish and Parks conducts fisheries management activities at Draper Lake.

Watershed condition with percentages of land use types:

The watershed for Draper is recorded at approximately 400 acres or less than one square mile that is made up entirely of privately owned native grassland. Land use in the watershed is almost entirely pasture and hayland. The immediate shoreline is owned by the City of Draper and is native grasses.

Fishing access:

No boat ramp is found at Draper Dam. Shorefishing is limited due to the abundant aquatic vegetation found around and throughout the lake during open water periods.

Condition of all structures (i.e. spillway, boat ramp, level regulators, etc.):

No structures are found at Draper Dam. Dam and spillway are in good condition.

Field observations of aquatic vegetation conditions:

Submergent vegetation consists of dense mats of various species of pondweeds throughout much of the lake. Emergent vegetation surrounds abut 95% of the shoreline and consists of cattails, rushes, sedges and phragmites.

CHEMICAL DATA

Field observations of water quality and pollution problems:

No pollution problems were evident at the time of the survey. Water clarity was fair with a secchi disc reading of 2 feet. Other water quality characteristics were measured in the field on June 18, 2012, using a HACH water quality kit and a Hanna multiparameter meter. Results are found in Table 1.

Presence of a thermocline and depth from surface: No
Station for water chemistry located on attached map: Yes

Table 1. Water chemistry results from Draper Dam, Jones County, June 18, 2012.

Station	Depth (ft)	Temp (F)	DO (ppm)	CO2 (ppm)	ALK (mg/L)	HRD (mg/L)	pH	Cond. (µS/cm)	TDS (ppm)	Sal.	ORP	Secchi (ft)
A	Surface	78.27	11.70	40.6	290	1271	8.99	3192	--	--	69.4	2
A	10	74.12	2.59	39.4	374	1078	8.75	--	--	--	75.3	

BIOLOGICAL DATA

Methods:

Draper Dam was sampled on June 18-19, 2012, with four overnight trap net sets. The trap nets have 3ft x 5ft frames, 60ft leads, and ¾ inch knotted mesh. No experimental gill nets set or electrofishing done during this survey season. Fish indices and statistics were completed using Winfin.

Results and Discussion:

On June 18, four trap nets were set to check in on the fish populations in Draper Lake. The nets were pulled on June 19 after only a couple fish were sampled. The fish sampled were 2 bluegills. The only other things netted were some large crayfish. This was very surprising as the lake has remained full for a couple years now and a largemouth bass fingerling stocking was done in 2009 after the last survey revealed no fish. Nothing has survived even though the lake has been full and looks like it should hold fish. Things will be monitored again in three years on the cycle of surveys and if nothing shows up, a management adjustment may need to be made.

RECOMMENDATIONS

1. Resurvey in 2015 to monitor the fish population and reevaluate the ability of the lake to sustain fish populations.

2. Stock largemouth bass adults, juveniles and fingerlings to establish a population.

3. Stock bluegill adults to start to establish a population.