SOUTH DAKOTA STATEWIDE FISHERIES SURVEY

2102-F21-R-46

Name: Todd Dam **County:** Bennett

Legal description: Sec 16, T 36N, R 36W
Location from nearest town: Approximately 7 miles southeast of Martin, South Dakota.
Dates of present survey: July 2, 2013
Date last surveyed: June 2, 1998
Management classification: Warmwater semi-permanent

Primary Species: (game and forage)	Secondary and other species:
1. Largemouth Bass	1. Green Sunfish
2. Bluegill	2. Fathead Minnow
3. Pumpkinseed Sunfish	3. Golden Shiner
4. Smallmouth Bass	4. Black Bullhead

PHYSICAL CHARACTERISTICS

Surface Area: 6.4 acres **Watershed:** NA
Maximum depth: NA **Mean depth:** <3ft
Lake elevation at survey: Full (Water was going out the overflow pipe)

Ownership of lake and adjacent lakeshore property:

Todd Dam is located on the Todd Game Production Area (GPA), and is owned and managed by the South Dakota Game, Fish, and Parks Department.

Fishing Access

There are areas around Todd Dam where anglers can fish from shore. However, the pond is very shallow and submergent vegetation covered nearly the entire pond at the time of this survey. There is no boat ramp, but a small boat or canoe could be launched in the pond, however, the dense submergent vegetation in mid and late summer would make it difficult to run a boat motor in the pond. The road leading to the pond receives little maintenance and not recommended to travel on during wet conditions.

Observations of Water Quality and Aquatic Vegetation

There is ermergent aquatic vegetation around some of the shoreline. During the later summer there is dense submergent vegetation throughout the entire pond. Approximately 90% of the pond was covered in submergent vegetation and approximately 60% of the shoreline was covered with emergent aquatic vegetation during midsummer. No apparent water quality issues were observed during the survey; however, no water chemistry testing was completed.

Observations on conditions of structures (i.e. spillway, boat ramps and docks, roads, etc.)

Water was flowing out of the outlet structure even though the lake level was very low. A more detailed examination of the outlet structure is needed to make sure it is working properly. There

is no boat ramp or docks on the pond and the roads going to the pond are “two track” roads which receive little maintenance.

MANAGEMENT OBJECTIVES

Objective 1. Maintain a moderate to high density of Largemouth Bass with PSD range between 20 and 40 (panfish option; Willis et al. 1993).

Objective 2. Maintain a moderate density of Bluegill with PSD’s of 50 or greater.

BIOLOGICAL DATA

Sampling Effort and Catch

Seine Net Survey

A fisheries survey was conducted on Todd Dam on July 2, 2013. Three quarter arc seine hauls were used to sample the fishery (Figure 1). During the seine hauls a total of seven fish were collected. These included Largemouth Bass (N=4), Bluegill (N=2), and Pumpkinseed Sunfish (N=1).

The Largemouth Bass collected during the seine hauls were all under the stock length of 200 mm (8 in) and ranged from 40 mm (1.6 in) to 178 mm (7 in). These Largemouth Bass varied in age including age-0 (N=1), age-1 (N=2), and age-2 (N=1) fish. The catch-per-unit-effort (CPUE) of Largemouth Bass by seine haul was 1.3.

The Bluegills collected during the seine hauls were 47 mm (1.9 in) and 126 mm (5 in) in length.

There was one Pumpkinseed Sunfish collected and it measured 180 mm (7.1 in). The Pumpkinseed Sunfish was in good condition with relative weight (*Wr*) of 113.4.

Angling Survey

Angling was utilized to survey the Largemouth Bass population in Todd Dam. During two angler hours a total of nine Largemouth Bass were caught (4.5 fish/angler hour). One Largemouth Bass was lost and not measured but the remaining fish ranged from 205 mm (8.1 in) to 342 mm (13.5 in). The ages of the Largemouth Bass collected during angling were age-2 (N=6), age-4 (N=1), and age-5 (N=1). The mean length of the age-2 Largemouth Bass was 233 (22; 95% CI) mm, and the lengths of the age-4 and age-5 fish were 323 and 342 mm, respectively.

The Largemouth Bass were in excellent condition with a mean *Wr* of 118.9 (4.9; 95% CI). The angling survey may not be representative of the number of Largemouth Bass in Todd Dam. The dense submergent vegetation made angling difficult. During sampling many surfacing fish (likely Largemouth Bass) could be seen throughout the pond, but most of the fish were inaccessible due to the dense vegetation in the water.

Figure 1. Map of seine net locations for Todd Dam in 2013.

1998 Survey

Todd Dam was last surveyed by SDGF&P personnel in 1998. A boat electrofishing survey conducted using a Coffelt boat shocking unit with a VVP-15 control box. The survey pedal time was 1,736 total seconds, and a total of nine fish species were collected. These include Largemouth Bass (N=30), Smallmouth Bass (N=40), Golden Shiner (N=300), Black Bullhead (N=10), Bluegill (N=20), Green Sunfish (N=10), Pumpkinseed Sunfish (N=40), Black Crappie (N=10), and Fathead Minnows (N=20).

It was indicated in the 1998 survey report that 40% of the pond was <1.5 feet deep and too shallow to operate a small outboard motor, yet the pond was full and water was flowing out of the overflow pipe. This is consistent with the 2013 survey in which a small boat was brought to the pond but the pond was too heavily vegetated and shallow to operate the boat. The water was going out the overflow structure during the 2013 survey as well. Three fish species were collected during the 2013 survey, and it is unknown whether any of the other species found during the 1998 survey remain.

MANAGEMENT RECOMMENDATIONS

1. Continue to monitor the fishery to ensure it remains after drought periods or harsh winters.

2. Continue to stock Largemouth Bass as needed, and evaluate stocking success.

3. Evaluate possibilities for increasing the water depth in the pond.

LITERATURE CITED

Willis, D.W., B.R. Murphy, and C.S. Guy. 1993. Stock density indices: development, use, and limitations. Reviews in Fisheries Science 1:203-222.

APPENDIX

Appendix A. All recorded fish stockings for Todd Dam from 1994 to 2013.

Year	Species	Size	# Stocked
1994	Largemouth Bass	Adult	12
1997	Largemouth Bass	Adult	40
2004	Largemouth Bass	Fingerling	3,000
2012	Largemouth Bass	Fingerling	1,500