

## SOUTH DAKOTA STATEWIDE FISHERIES SURVEY

2102-F21-R-47

**Name:** New Wall Lake

**County:** Pennington

**Legal description:** Sec 1-2, 11-12, T 1S, R 15E

**Location from nearest town:** 1.5 mi. S and 1.5 mi. W of Wall, SD

**Dates of present survey:** September 3, 2014

**Date last surveyed:** September 24, 2013

**Management classification:** Warm water permanent

Primary Species: (game and forage)

1. Largemouth bass
2. Bluegill
3. Black crappie
4. Yellow perch
5. \_\_\_\_\_

Secondary and other species:

1. White crappie
2. Golden shiner
3. White sucker
4. Northern pike
5. Walleye

### PHYSICAL CHARACTERISTICS

**Surface Area:** 42 acres

**Watershed:** 3,780 acres

**Maximum depth:** 24 feet

**Mean depth:** 12.9 feet

**Lake elevation at survey (from known benchmark):** -4 feet

#### Ownership of lake and adjacent lakeshore property:

New Wall Dam was built by the South Dakota Department of Game, Fish and Parks and the department maintains the lake, dam and surrounding property.

#### Fishing Access

Fishing access on New Wall Lake is good. Shore anglers will find several areas near the water's edge that can be driven to by vehicle. Emergent vegetation can be a problem in late summer for shore access and submerged vegetation in late summer can limit most fishing except in deeper areas accessed by boat or other small watercraft. A new boat ramp was installed in 2009. Also, a boat dock was reconditioned by the Rapid City Area Chapter of Walleyes Unlimited and installed in the Spring of 2012.

#### Observations of Water Quality and Aquatic Vegetation

Emergent vegetation consists of primarily cattails and surrounds most of the lake. Submergent vegetation is plentiful in the shallow, upper ends of the lake in water under six feet.

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

All structures associated with New Wall Lake are in good condition. The boat ramp is situated at the bottom of a steep hill and needs periodic maintenance.

## MANAGEMENT OBJECTIVES

**Objective 1.** Maintain a largemouth bass population with a minimum nighttime electrofishing CPUE for stock-length fish of 20, PSD range greater than 50, and PSD-P  $\geq$  30.

## BIOLOGICAL DATA

### Sampling Effort and Catch

Sampling with night boat electrofishing was conducted at New Wall Lake on September 3, 2014, when surface water temperature was 71°F. Five sites were completed during the survey for a total of 50 minutes (Table 3). Discussion on the targeted fish species, largemouth bass, follows and completes this report.

### Largemouth bass

Largemouth bass CPUE remains well above management objectives at 97.2 fish per hour (Table 1). Size structure is also exceeding management objectives with a PSD of 72 and a PSD-P of 47. Last year values were above or near management objectives as well with CPUE of 138.2, PSD of 44 and a PSD-P of 22. Fish condition remains high with an average *Wr* for stock length and larger fish of 112.7. The length frequency shows high size structure with no fish under stock length (Figure 1).

Table 1. Composite listing of data for largemouth bass collected by electrofishing in New Wall Lake, 2005-2014. Total catch (N), pedal time (seconds), CPUE's with 80% confidence intervals in parentheses. PSD, PSD-P, and *Wr* with 90% confidence intervals in parentheses.

Year	N	Pedal Time (sec)	CPUE	CPUE-S	PSD	PSD-P	<i>Wr</i> $\geq$ S
2005	45	3,484	45.9 (15.8)	43.7 (15.3)	79 (11)	28(12)	103.0 (1.4)
2006	16	1,700	34.8 (22.0)	13.2 (8.6)	50 (45)	17 (33)	106.1 (5.1)
2007	68	1,719	146.3 (79.6)	23.6 (16.8)	55 (28)	9 (17)	103.3 (5.0)
2008	43	3,000	51.6 (11.1)	42.0 (12.7)	49 (15)	26 (13)	103.3 (2.0)
2010	92	3,283	103.5 (21.8)	76.4 (17.7)	18 (8)	10 (7)	105.1 (0.2)
2011	77	3,600	77.0 (18.8)	43.0 (20.4)	33 (13)	12 (9)	102.3 (0.4)
2012	125	1,597	292.6 (167.7)	247.9 (142.1)	69 (8)	9 (5)	113.1 (0.9)
2013	101	2,589	138.2 (34.9)	121.3 (35.8)	44 (9)	22 (8)	115.6 (3.2)
2014	81	3,000	97.2 (41.0)	97.2 (41.0)	72 (9)	47 (9)	112.7 (0.8)

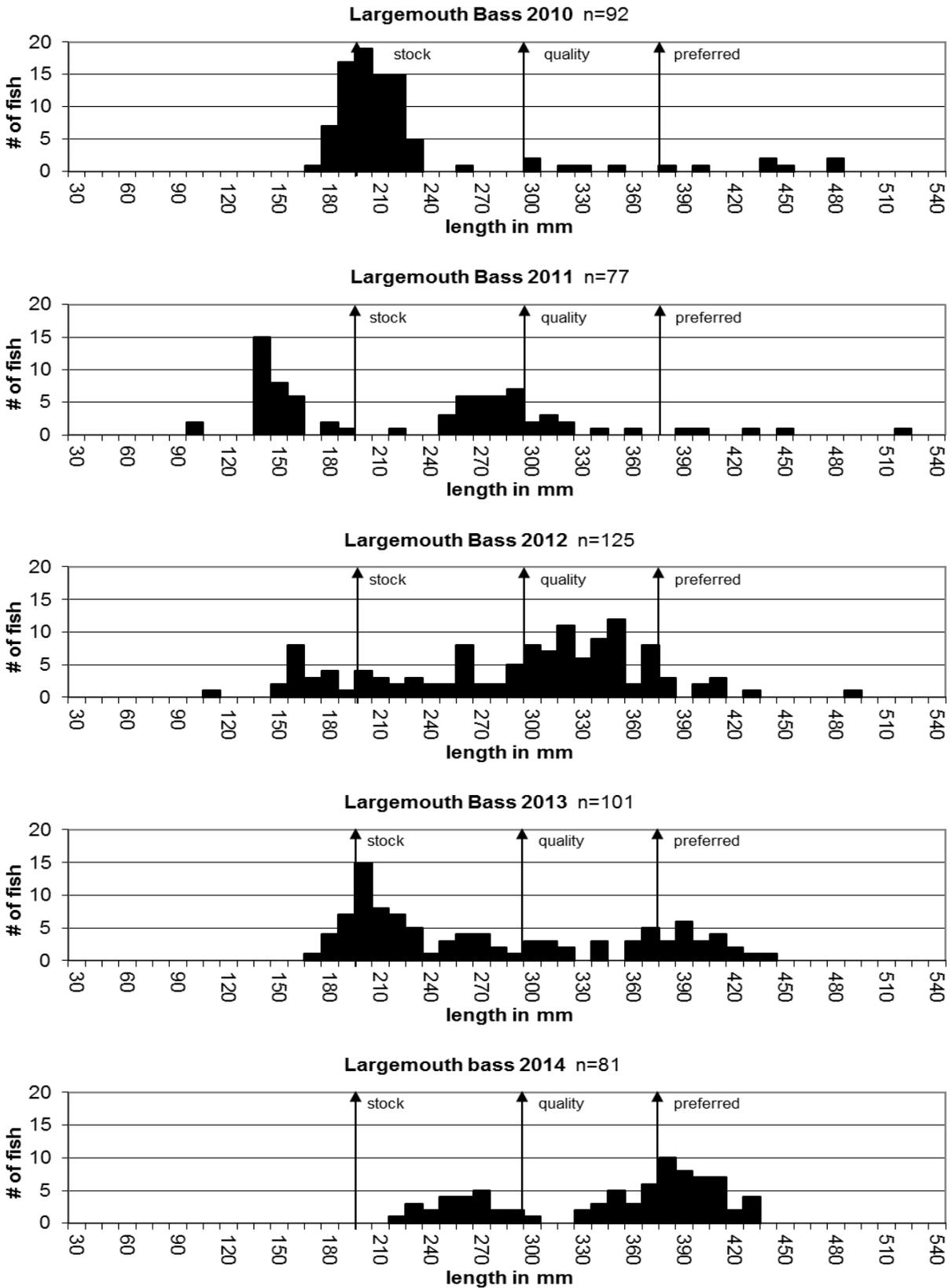


Figure 1. Length frequencies of largemouth bass collected by electrofishing in New Wall Lake, 2010-2014.

## RECOMMENDATIONS

1. Continue to conduct netting surveys in New Wall Lake on an as needed basis. Conduct electrofishing surveys annually to assess the largemouth bass population and effectiveness of the special regulation.

## APPENDIX

### Appendix A. Stocking records for New Wall Lake, Pennington County, 1994-2014.

Year	Number	Species	Size
1994	4,300	Largemouth bass	Fingerling
1995	400	Walleye	Fingerling
1996	4,300 1,200	Largemouth bass Walleye	Fingerling Fingerling
1997	4,300	Largemouth bass	Fingerling
1998	4,300	Largemouth bass	Fingerling
1999	3,000	Largemouth bass	Fingerling
2001	18 50	Black crappie Bluegill	Adult Adult
2007	150	Largemouth bass	Adult
2009	3700	Largemouth bass	Fingerling