Clear Lake

Site Description

Location
Water designation number (WDN)   48-0032-00
Legal description   T126N-R53W-Sec.18,19 T126N-R54W-Sec. 12,13,14,24
County (ies)   Marshall
Location from nearest town   3.0 miles southeast of Lake City, SD

Survey Dates and Sampling Information
Survey dates   June 5, 2015 (EF-SMB)
    July 14-15, 2015 (GN)
    September 29, 2015 (EF-WAE)
Electrofishing-SMB (min)   59
Gill net sets (n)   6
Electrofishing-WAE (min)   60

Morphometry (Figure 1)
Watershed area (acres)   21,826
Surface area (acres)   1,170
Maximum depth (ft)   20
Mean depth (ft)   12

Ownership and Public Access
Clear Lake is a meandered lake owned by the State of South Dakota and the fishery is managed by SDGFP. A single public access site maintained by SDGFP is located on the southeastern shore. The access site includes a double-lane concrete boat ramp, dock, picnic area, and primitive restroom (Figure 1; Figure 2). Lands adjacent to Clear Lake are under mixed ownership including private individuals, Bureau of Indian Affairs, and SDGFP.

Watershed and Land Use
The Clear Lake watershed is primarily agricultural with a mix of hay/pasture land, cropland, and scattered shelterbelts.

Water Level Observations
The South Dakota Water Management Board established OHWM is 1823.7 fmsl and the outlet elevation of Clear Lake is 1822.5 fmsl. On April 28, 2015 the elevation was 1822.6 fmsl; 0.4 ft higher than the fall 2014 elevation of 1822.2 fmsl. The water level had declined to an elevation of 1821.7 fmsl on October 20, 2015.

Fish Management Information
Primary species   largemouth bass, smallmouth bass, walleye, yellow perch
Other species   black bullhead, black crappie, bluegill, common carp, green sunfish, northern pike, white sucker
Lake-specific regulations   largemouth/smallmouth bass: only those less than 14", or 18" and longer may be taken; of those no more than one may be 18" or longer
    walleye: minimum length 15"
Management classification   warm-water permanent
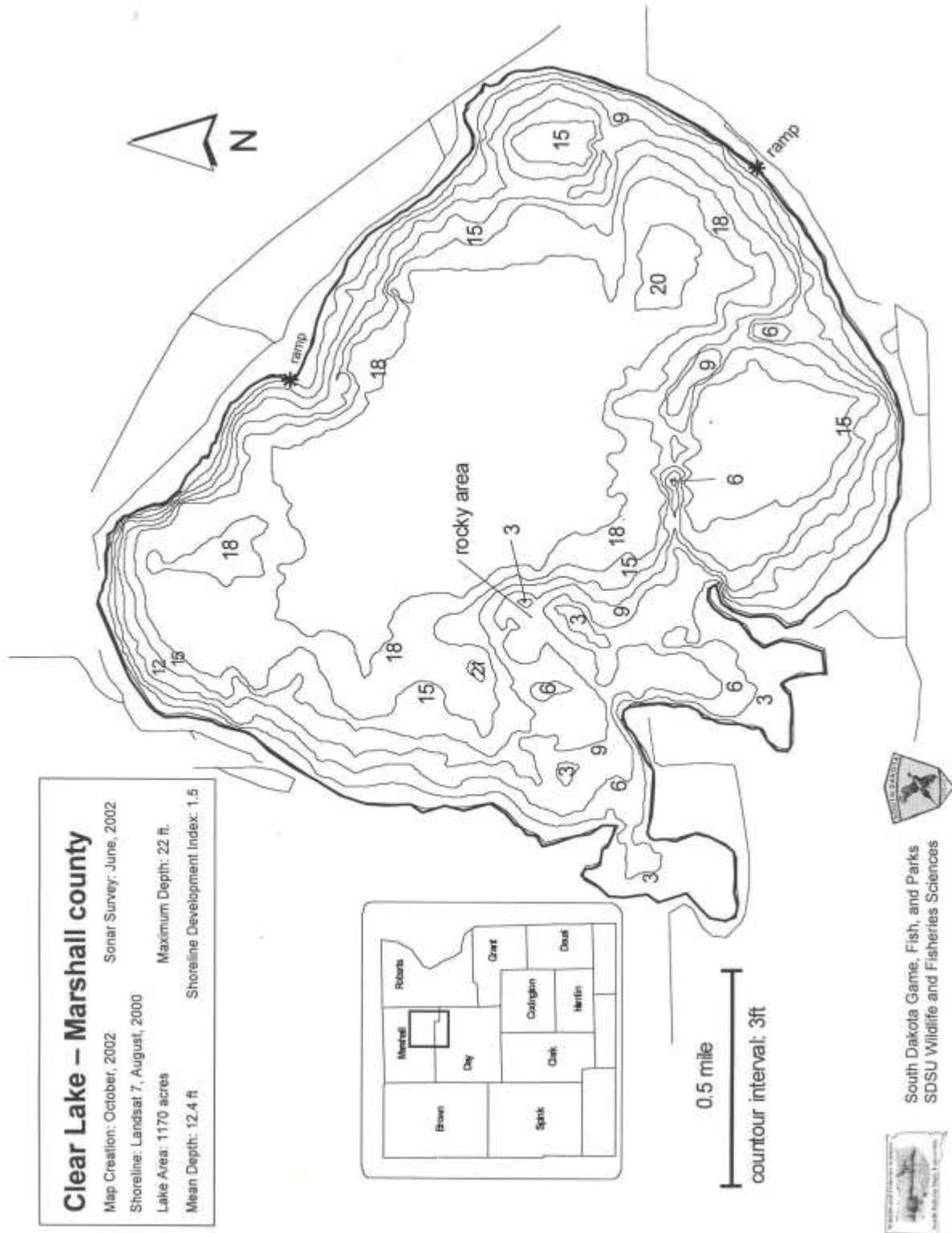Fish consumption advisories   none

Figure 1. Map depicting depth contours and the access site for Clear Lake, Marshall County, South Dakota.

Figure 2. Map depicting geographic locations of Bullhead, Clear, Cottonwood, Four-Mile, Six-Mile, and Roy Lakes from Lake City, Marshall County, South Dakota (top). Also noted is the public access location and standardized net locations for Clear Lake (bottom). CLFN= frame net; CLGN= gill net

Management Objectives

1) Maintain a mean spring night electrofishing CPUE of stock-length largemouth bass ≥ 30, a PSD of 40-70, and a PSD-P of 10-40.

2) Maintain a moderate density smallmouth bass population with a PSD of 40-70, and a PSD-P of 10-40.

3) Maintain a mean gill net CPUE of stock-length walleye ≥ 10, a PSD of 30-60, and a PSD-P of 5-10.

4) Maintain a mean gill net CPUE of stock-length yellow perch ≥ 30, a PSD of 30-60, and a PSD-P 5-10.

5) Maintain a mean frame net CPUE of stock-length black bullhead ≤ 100.

Results and Discussion

Clear Lake is a natural lake situated on the Coteau des Prairie. Two major surface water inlets to Clear Lake are located at the north shore and flow directly from the Red Iron Lakes and Long Lake. Water exiting Clear Lake flows into Roy Lake, then through a chain of other Coteau Lakes before eventually emptying into the James River. Currently, Clear Lake is managed as a black bass (largemouth and smallmouth bass), walleye, and yellow perch fishery. Black bullhead, black crappie, bluegill, and northern pike also contribute to the fishery.

Primary Species

Largemouth Bass: Spring night electrofishing is used to monitor largemouth bass population parameters and are conducted biennially during odd years (i.e., 2015, 2017, 2019….). Unfortunately, due to mechanical issues no survey was conducted in 2015. The next survey is scheduled for the spring of 2017.

Smallmouth Bass: Spring electrofishing is used to monitor population parameters for smallmouth bass and is conducted biennially during odd years (i.e., 2015, 2017, 2019….) at Clear Lake (Table 2; Table 3). In the spring of 2015 the night electrofishing mean CPUE was 28.0 (Table 1). The 2015 CPUE was similar to the 2013 CPUE of 30.0 (Table 2).

Smallmouth bass ranged in TL from 20 to 46 cm (7.9 to 18.1 in; Figure 3), had a PSD of 71 and PSD-P of 50 (Table 1). Both the PSD and PSD-P were slightly above the management objectives of 40-70 and 10-40, respectively (Table 3).

Scales were collected from a sub-sample of smallmouth bass and indicated seven year classes (2005, 2007-2012; Table 4) were present. Growth was fair with weighted mean TL at capture for age-4 and age-5 being 280 and 374 mm (11.0 and

14.7 in (Table 5). Condition was good with mean Wr values ranging from 91 to 110 for all length categories (i.e., stock-quality) sampled. A decreasing trend in Wr was observed as total length increased.

Walleye: The mean gill net CPUE of stock-length walleye was 10.8 (Table 1) and slightly above the minimum objective (≥ 10 stock-length walleye/net night; Table 3). Since 2006, the mean gill net CPUE has ranged from a low of 4.2 (2012) to a high of 10.8 (2015; Table 2). Based on the 2015 gill net CPUE, relative abundance is considered high.

Gill net captured walleye ranged in TL from 14 to 57 cm (5.5 to 22.4 in), had a PSD of 37 and a PSD-P of 5 (Table 1; Figure 4). Both the PSD and PSD-P were within management objective ranges of 30-60 and 5-10, respectively (Table 3). As the relatively large 2011 year class has grown the size structure has increased (Table 4; Figure 3). In 2015, 31% of walleye in the gill net catch were above the 381-mm (15-inch) minimum length restriction (Figure 4).

Since 2006, otoliths have been collected from a sub-sample of gill net captured walleye. Age structure information suggests that both natural recruitment and stocking contribute to the population (Table 6). Seven year classes (2008-2014) were represented in the 2015 gill net catch; individuals from the strong 2011 cohort, which coincided with a fry stocking, comprised 74% of walleye sampled (Table 6). Walleye stocked in 2011 were marked with Oxytetracycline (OTC) so that the contribution of stocked fish could be evaluated; the estimated stocking contribution was 66% (Table 4; Table 6). Fall night electrofishing in 2015 indicated a weak age-0 year class was produced with a mean CPUE of 17.0 (Table 1). The 2015 walleye fry stocking was OTC marked and indicated stocked fish comprised most (75%) of the age-0 class (Table 6).

Walleye in Clear Lake tend to exhibit moderate growth and typically attain quality length and the minimum length limit (38 cm; 15 in) by age 4 (Table 7). Since 2006, the weighted mean length at capture for age-3 walleye has ranged from 317 to 428 mm (12.5 to 16.9 in); while the weighted mean length at capture for age-4 fish has ranged from 373 to 462 mm (14.7 to 18.2 in; Table 7). However due to low sample sizes, weighted mean TL at capture values at times represent few walleye (Table 7). In 2015, weighted mean TL at capture values for age-3 and age-4 walleye were 324 and 373 mm (12.8 and 14.7 in; Table 7). Gill net captured walleye had mean Wr values that ranged from 77 to 110 for all 10-mm length groups sampled. The mean Wr of stock-length walleye was 88 (Table 1) and no length-related trends in condition were apparent.

Yellow Perch: The mean gill net CPUE of stock-length yellow perch was 7.0 (Table 1) and below the minimum objective (≥ 30 stock-length yellow perch/net night). Since 2006, the mean gill net CPUE has ranged from 7.0 (2015) to 122.3 (2011; Table 2). Based on the 2015 gill net catch, relative abundance appears to be low.

Gill net captured yellow perch ranged in TL from 9 to 23 cm (3.5 to 9.1 in; Figure 5), had a PSD of 24 and a PSD-P of 0 (Table 1; Figure 5). Both the PSD and PSD-P were below the management objective ranges of 30-60 and 5-10, respectively (Table 3).

In recent years, yellow perch in Clear Lake have exhibited consistent recruitment of varying magnitudes (Table 9). In 2015, otoliths collected from a sub-sample of gill net captured yellow perch suggested the presence of five year classes (2009, 2010, and

2012-2014; Table 9). The 2013 cohort was the most abundant and comprised 63% of yellow perch in the gill net catch (Table 9).

Since 2009, weighted mean TL at capture values for age-2 yellow perch have ranged from 116 to 146 mm (4.6 to 5.7 in); while the weighted mean TL at capture for age-3 fish has ranged from 151 to 178 mm (5.9 to 7.0 in; Table 10). In 2015, the weighted mean TL at capture for age-2 and age-3 individuals was the slowest observed at 116 and 151 mm (4.6 and 5.9 in), respectively (Table 10). Gill net captured yellow perch had mean Wr values that ranged from 84 to 102 for all 10-mm length groups sampled; no length-related trend in Wr was observed.

Other Species

Black Bullhead: The status of the black bullhead population is typically assessed with frame nets; however, no frame nets were used in 2015. The mean gill net CPUE for stock-length black bullhead was 10.3 (Table 1). Gill net captured black bullhead ranged in TL from 14 to 39 cm (5.5 to 15.4). The mean Wr of stock-length black bullhead was 99 (Table1).

Black Crappie: Black crappie populations are typically assessed with frame nets; however, no frame nets were used in 2015. The mean gill net CPUE of stock-length black crappie was 1.5 (Table 1). Black crappie ranged in TL from 8 to 29 cm (3.1 to 11.4 in). The mean Wr of stock-length black crappie was 100 (Table 1).

Bluegill: Bluegill populations are typically assessed with frame nets; however, no frame nets were used in 2015. The mean gill net CPUE of stock-length bluegill was 1.5 (Table 1). Gill net captured bluegill ranged in TL from 9 to 21 cm (3.5 to 8.3 in). The mean Wr of stock-length bluegill was 112 (Table 1).

Northern Pike: Northern pike typically are not sampled effectively during mid-summer fish community surveys. As a result, mean gill net CPUE values are often low. In 2015 the mean gill net CPUE of stock-length northern pike was 5.5 (Table 1) and one of the highest recorded since 2006 (Table 2). Currently, relative abundance appears to be high.

Northern pike captured in the gill net catch ranged in TL from 42 to 81 cm (16.5 to 31.9 in; Figure 6), had a PSD of 55, and a PSD-P of 3 (Table 1). The condition of gill net captured northern pike was similar to that of northern pike captured from other northeast South Dakota glacial lakes (e.g., Cattail/Kettle and Roy Lakes) with mean Wr values that ranged from 75 to 94 for all 10-mm length groups sampled. Stock-length northern pike had a mean Wr of 84 (Table 1) and a decreasing trend in Wr was observed as TL increased.

Other: Smallmouth bass and a white sucker were captured in low numbers during the 2015 gill net survey (Table 1).

Management Recommendations

1) Conduct fish community assessment surveys utilizing gill nets annually (next survey scheduled in summer 2016) and utilizing frame nets biennially (next survey scheduled in summer 2016) to monitor fish relative abundance, fish population size structures, fish growth, and stocking success.

2) Conduct spring night electrofishing on a biennial basis (odd years) to monitor largemouth bass and smallmouth bass population parameters.

3) Conduct fall night electrofishing on an annual basis to monitor age-0 walleye relative abundance.

4) Collect otoliths from bluegill, walleye, and yellow perch; scales from largemouth and smallmouth bass to assess the age structure and growth rates of each population.

5) Stock walleye at (≈500 fry/acre) to establish additional year classes if fall night electrofishing CPUE of age-0 walleye and gill netting results warrant [i.e., low gill net CPUE of sub-stock (i.e., < 25 cm (10 in) walleye and/or fall night electrofishing CPUE of age-0 walleye < 75 fish/hour].

6) Maintain the 356-457 mm (14-18 in) protected slot length limit on largemouth and smallmouth bass. The regulation is designed to increase the average size of black bass while allowing harvest of small bass to avoid slowing of growth (Blackwell and Lucchesi 2009).

7) Maintain the 381-mm (15 in) minimum length limit on walleye. The regulation is designed to protect smaller fish from harvest and increase average fish size (Lucchesi and Blackwell 2009).

8) Partner with willing landowners on shoreline restoration projects designed to restore native plant fauna along highly-developed shorelines providing improvements to water quality and littoral habitats within the lake.

Table 1. Mean catch rate (CPUE; gill/frame net = catch/net night, electrofishing = catch/hour) of stock-length fish, proportional size distribution of quality- (PSD) and preferred-length (PSD-P) fish, and mean relative weight (Wr) of stock-length fish for various fish species captured using frame nets, experimental gill nets, and electrofishing in Clear Lake, 2015. Confidence intervals include 80 percent (± CI-80) or 90 percent (± CI-90). BLB= black bullhead; BLC= black crappie; BLG= bluegill; NOP= northern pike; SMB= smallmouth bass; WAE= walleye; WHS= white sucker; YEP= yellow perch

Species	Abundance		Stock Density Indices				Condition	
	CPUE	CI-80	PSD	CI-90	PSD-P	CI-90	Wr	CI-90
Gill nets								
BLB	10.3	1.7	97	4	15	8	99	2
BLC	1.5	1.7	100	0	100	0	100	2
BLG	1.5	0.8	44	33	22	28	112	4
NOP	5.5	2.4	55	15	3	5	84	1
SMB	3.0	1.9	89	13	72	19	97	3
WAE	10.8	4.1	37	10	5	5	88	1
WHS	1.3	0.5	100	0	63	35	99	4
YEP	7.0	1.7	24	11	0	---	92	1
Electrofishing								
SMB[1]	28.0	10.2	71	14	50	16	102	4
WAE[2]	17.0	---	---	---	---	---	---	---

[1] Spring Electrofishing-SMB
[2] Fall Electrofishing-WAE; catch rate (CPUE) represents age-0 walleye/hour

Table 2. Historic mean catch rate (CPUE; gill/frame net = catch/net night, electrofishing = catch/hour) of stock-length fish for various fish species captured using frame nets, experimental gill nets and electrofishing in Clear Lake, 2006-2015. BIB= bigmouth buffalo; BLB= black bullhead; BLC= black crappie; BLG= bluegill; COC= common carp; GSF= green sunfish; LMB= largemouth bass; NOP= northern pike; SMB= smallmouth bass; WAE= walleye; WHS= white sucker; YEP= yellow perch

Species	CPUE									
	2006[4]	2007[4]	2008	2009	2010	2011	2012	2013	2014	2015
Frame nets										
BLB	4.0	7.8	5.2	0.6	0.6	---	7.2	29.7	26.4	---
BLC	1.1	3.6	0.8	0.0	0.3	---	5.2	10.7	2.4	---
BLG	24.8	19.3	35.6	4.8	13.1	---	18.6	39.0	22.9	---
COC	0.1	0.1	0.0	0.0	0.0	---	0.1	0.0	0.0	---
GSF	0.1	0.0	0.1	0.0	0.0	---	0.0	0.0	0.0	---
LMB	0.0	0.0	0.0	0.0	0.0	---	0.0	0.1	0.0	---
NOP	0.7	0.7	0.7	0.4	0.2	---	1.8	0.6	1.1	---
SMB	1.9	1.4	2.0	0.8	5.1	---	3.4	2.4	1.1	---
WAE	0.7	0.3	0.5	0.2	0.2	---	0.2	0.4	0.5	---
WHS	0.1	0.1	0.1	0.5	0.2	---	0.1	0.1	0.0	---
YEP	14.6	18.7	1.4	2.5	16.5	---	10.4	3.9	1.8	---
Gill nets										
BIB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
BLB	2.2	6.5	4.8	0.2	0.0	0.2	7.5	20.3	21.7	10.3
BLC	0.0	0.0	0.0	0.0	0.0	1.0	14.0	6.2	11.7	1.5
BLG	2.2	0.8	1.3	0.0	0.7	0.0	1.0	0.3	2.5	1.5
COC	2.7	2.0	0.3	0.2	0.0	0.2	0.0	0.0	0.0	0.0
NOP	1.5	5.3	2.2	0.7	1.3	2.7	3.3	3.8	6.0	5.5
SMB	2.8	1.2	2.0	4.0	7.8	2.5	2.0	4.3	3.3	3.0
WAE	6.0	6.8	6.2	6.0	4.8	6.8	4.2	10.7	9.2	10.8
WHS	1.2	1.2	1.0	1.8	3.3	3.3	5.2	1.3	2.2	1.3
YEP	39.5	117.2	20.8	15.0	82.8	122.3	84.8	40.1	25.5	7.0
Electrofishing										
LMB[1]	---	---	37.6	58.5	---	54.0	---	92.0	---	---
SMB[2]	---	---	---	89.5	---	83.0	---	30.0	---	28.0
WAE[3]	0.0	109.6	0.9	361.8	2.0	340.8	13.5	51.0	3.0	17.0

[1]Spring Electrofishing-LMB
[2]Spring Electrofishing-SMB
[3]Fall Electrofishing-WAE; catch rate (CPUE) represents age-0 walleye/hour
[4] Monofilament gill net mesh size (0.75", 1.00", 1.25", 1.50", 2.00" and 2.50")

Table 3. Mean catch rate (CPUE; gill/frame net = catch/net night, electrofishing = catch/hour), proportional size distribution for quality- (PSD) and preferred-length (PSD-P) fish, and relative weight (Wr) for selected species captured using frame nets, experimental gill nets, electrofishing in Clear Lake, 2006-2015. BLB= black bullhead; LMB= largemouth bass; SMB= smallmouth bass; WAE= walleye; YEP= yellow perch

Species	2006[3]	2007[3]	2008	2009	2010	2011	2012	2013	2014	2015	Objective
Frame nets											
BLB											
CPUE	4	8	5	1	1	---	7	30	26	---	≤ 100
PSD	57	74	96	100	73	---	38	60	55	---	---
PSD-P	51	33	29	73	55	---	8	5	12	---	---
Wr	85	88	89	102	88	---	93	98	95	---	---
Gill nets											
WAE											
CPUE	6	7	6	6	5	7	4	11	9	11	≥ 10
PSD	61	41	24	53	72	32	32	22	15	37	30-60
PSD-P	33	15	8	11	14	10	16	3	2	5	5-10
Wr	89	90	89	93	91	88	90	89	86	88	---
YEP											
CPUE	40	117	21	15	83	122	85	40	26	7	≥ 30
PSD	30	15	10	0	0	0	14	32	36	24	30-60
PSD-P	1	1	1	0	0	0	0	0	2	0	5-10
Wr	99	100	98	99	103	98	98	94	92	92	---
Electrofishing											
LMB [1]											
CPUE	---	---	38	59	---	54	---	92	---	---	≥ 10
PSD	---	---	79	95	---	94	---	43	---	---	40-70
PSD-P	---	---	32	36	---	83	---	12	---	---	10-40
Wr	---	---	112	118	---	115	---	110	---	---	---
SMB [2]											
CPUE	---	---	---	90	---	83	---	30	---	28	---
PSD	---	---	---	48	---	55	---	53	---	71	40-70
PSD-P	---	---	---	38	---	41	---	47	---	50	10-40
Wr	---	---	---	102	---	105	---	95	---	102	---

[1] Spring Electrofishing-LMB.
[2] Spring Electrofishing-SMB.
[3] Monofilament gill net mesh size (0.75", 1.00", 1.25", 1.50", 2.00" and 2.50").

Table 4. Year class distribution based on the expanded age/length summary for smallmouth bass sampled during spring electrofishing from Clear Lake, 2009-2015; includes both day and night samples (2015).

								Year Class							
Year	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001
2015				4	8	4	3	7	1		1				
2013	---	---		11	9				4				1	3	1
2011	---	---	---	---			4	41	4	1	6	5	7	8	3
2009[1]	---	---	---	---	---	---			18	30	10	10	7	4	12

[1] Older smallmouth bass were sampled, but are not reported in this table.

Table 5. Weighted mean TL (mm) at capture for smallmouth bass age-2 through age-10 sampled during spring electrofishing (expanded sample size) from Clear Lake, 2009-2015; includes both day and night samples (2015).

					Age				
Year	2	3	4	5	6	7	8	9	10
2015	---	218(4)	280(8)	374(4)	358(3)	412(7)	461(1)	---	460(1)
2013[1]	195(11)	249(9)	---	---	387(4)	---	---	427(1)	451(3)
2011	203(4)	248(41)	324(4)	368(1)	407(6)	431(5)	450(7)	455(8)	451(3)
2009	189(18)	242(30)	326(10)	373(10)	407(7)	431(4)	442(12)	434(2)	---

[1] Older smallmouth bass were sampled, but are not reported in this table.

Table 6. Year class distribution based on the expanded age/length summary for walleye sampled in gill nets and associated stocking history (# stocked x 1,000) from Clear Lake, 2011-2015.

							Year Class						
Survey Year	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
2015		1	5	7	52	1	3	1					
2014	---		5		51	1	2				1		
2013	---	---			42	5	17		1				
2012[1]	---	---	---		4	3	15		1		3	1	
2011	---	---	---	---		1	31	2	4		6	1	
# stocked													
Fry	550[2]	542[3]	600	600	600[4]		600[5]				600		1200
sm. fingerling													
lg. fingerling		25										62	

[1]Older walleye were sampled, but are not reported in this table.

[2]Stocked walleye were OTC marked; 12 of 16 otoliths collected from fall electrofished age-0 walleye exhibited marks for an estimated stocking contribution of 75%.

[3]Stocked walleye were OTC marked; 0 of 3 otoliths collected from fall electrofished age-0 walleye exhibited marks for an estimated stocking contribution of 0%.

[4]Stocked walleye were OTC marked; 33 of 50 otoliths collected from fall electrofished age-0 walleye exhibited marks for an estimated stocking contribution of 66%.

[5]Stocked walleye were OTC marked; 42 of 50 otoliths collected from fall electrofished age-0 walleye exhibited marks for an estimated stocking contribution of 84%.

Table 7. Weighted mean TL at capture (mm) for walleye age-1 through age-10 sampled in experimental gill nets (expanded sample size) from Clear Lake, 2006-2015. Note: sampling was conducted at approximately the same time during each year allowing comparisons among years to monitor growth trends.

Year	Age									
	1	2	3	4	5	6	7	8	9	10
2015	149(1)	241(5)	324(7)	373(52)	420(1)	480(3)	575(1)	---	---	---
2014	187(5)	---	345(51)	394(1)	461(2)	---	---	---	589(1)	---
2013[1]	---	278(42)	359(5)	394(17)	---	481(1)	---	---	---	---
2012[1]	194(4)	313(3)	348(15)	---	472(1)	---	561(3)	483(1)	---	---
2011	190(1)	272(31)	428(2)	462(4)	---	514(6)	481(1)	---	---	---
2010[1]	195(11)	306(2)	383(11)	---	471(9)	---	---	500(1)	615(1)	---
2009[1]	---	289(16)	---	409(15)	460(2)	---	---	555(1)	---	---
2008[1]	168(1)	---	317(28)	443(2)	480(2)	---	490(2)	---	---	---
2007	---	257(29)	378(7)	438(4)	---	470(2)	---	---	590(3)	608(4)
2006	182(5)	277(10)	360(6)	373(1)	478(5)	458(2)	---	584(2)	574(5)	571(5)

[1] Older walleye were sampled, but are not reported in this table

Table 8. Stocking history including size and number for fishes stocked into Clear Lake, 2002-2015. WAE= walleye

Year	Species	Size	Number
2003	WAE	fry	1,200,000
2004	WAE	large fingerling	62,349
2005	WAE	fry	600,000
2009	WAE	fry	600,000
2011	WAE	fry	600,000
2012	WAE	fry	600,000
2013	WAE	fry	600,000
2014	WAE	fry	542,000
	WAE	large fingerling	24,879
2015	WAE	fry	550,000

Table 9. Year class distribution based on the age/length summary for yellow perch sampled in gill nets from Clear Lake, 2011-2015.

Survey Year	Year Class							
	2015	2014	2013	2012	2011	2010	2009	2008
2015		3	72	27		11	1	
2014[1]	---		13	101	14	53	27	18
2013	---	---		81	34	93	59	77
2012	---	---	---		67	243	109	157
2011	---	---	---	---		419	342	415

[1]Older yellow perch were sampled, but are not reported in this table.

Table 10. Weighted mean TL (mm) at capture for yellow perch captured in experimental gill nets (expanded sample size) from Clear Lake, 2009-2015.

Year	Age						
	1	2	3	4	5	6	7
2015	92(3)	116(72)	151(27)	---	210(11)	237(1)	---
2014	98(13)	126(101)	158(14)	193(53)	207(27)	231(18)	223(7)
2013	98(81)	123(34)	166(93)	187(59)	217(77)	---	---
2012	102(67)	146(243)	178(109)	193(157)	---	---	---
2011	97(419)	141(342)	164(415)	---	---	---	---
2010	99(161)	138(563)	167(24)	---	---	---	---
2009	96(842)	139(90)	---	---	---	---	---
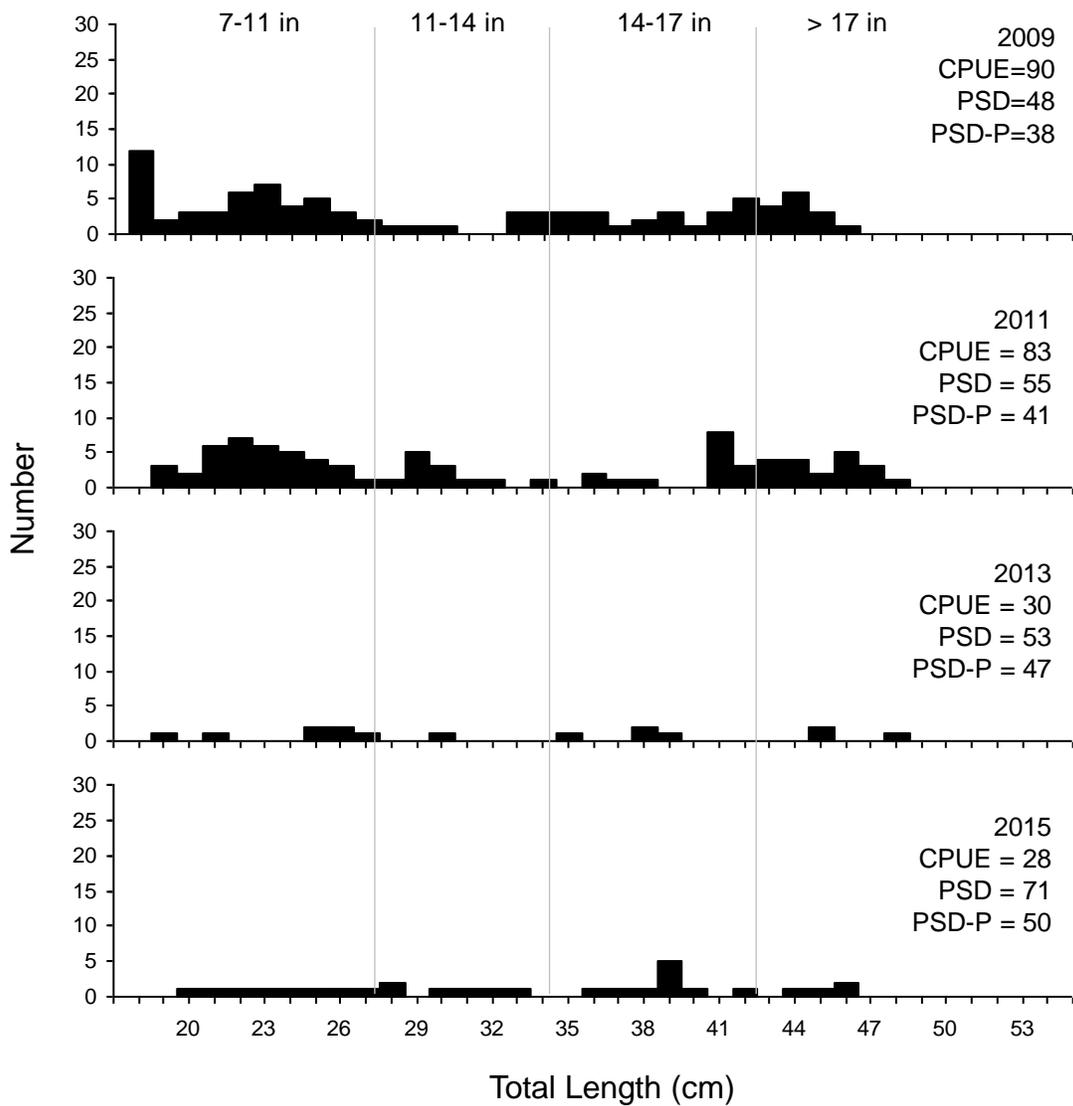
Figure 3. Length-frequency histogram, catch rate of stock-length fish (CPUE), proportional size distribution of quality- (PSD) and preferred-length (PSD-P) fish for smallmouth bass captured during spring night electrofishing in Clear Lake, 2009-2015.
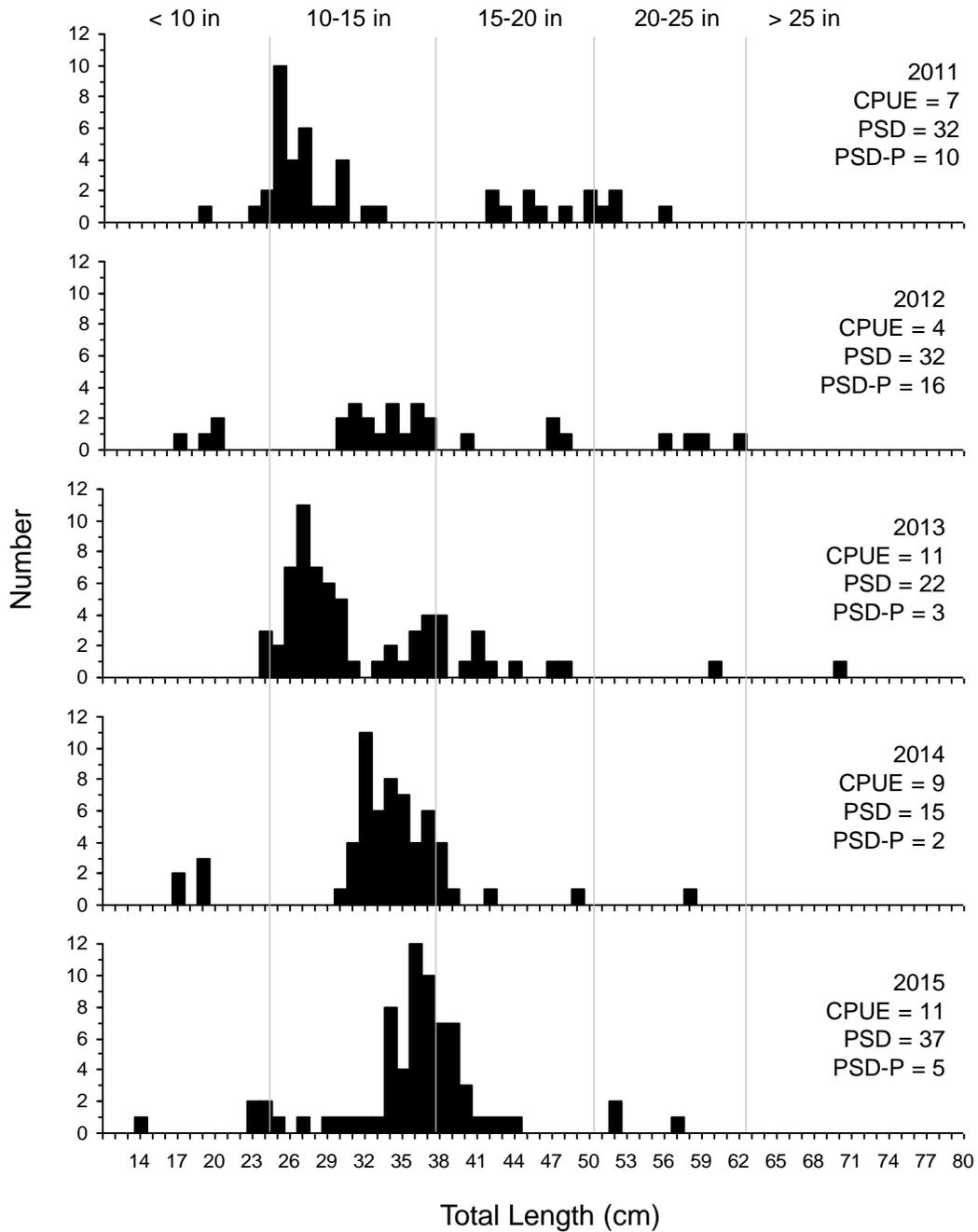
Figure 4. Length-frequency histogram, catch rate of stock-length fish (CPUE), proportional size distribution of quality- (PSD) and preferred-length (PSD-P) fish for walleye captured using experimental gill nets in Clear Lake, 2011-2015.
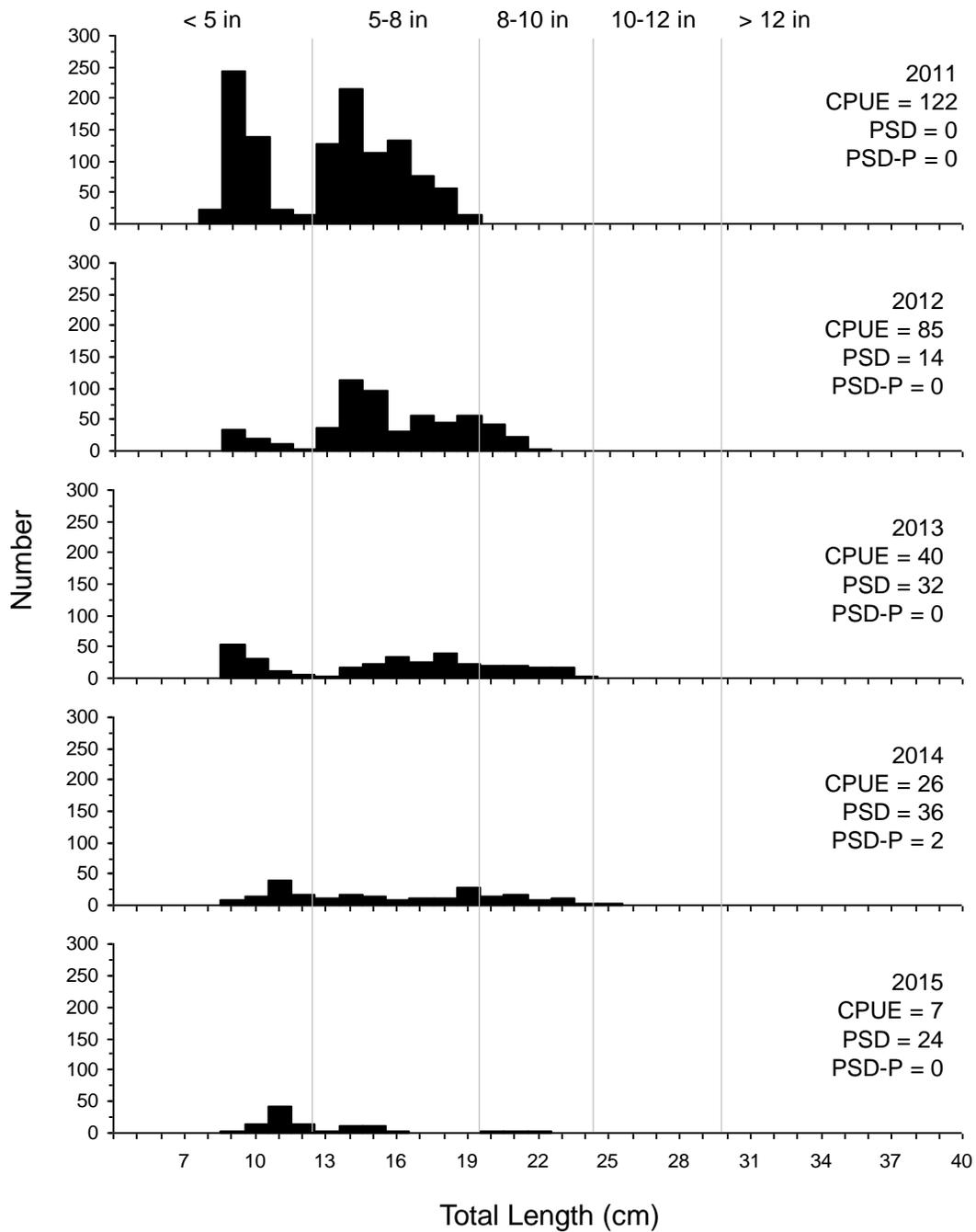
Figure 5. Length-frequency histogram, catch rate of stock-length fish (CPUE), proportional size distribution of quality- (PSD) and preferred-length (PSD-P) fish for yellow perch captured using experimental gill nets in Clear Lake, 2011-2015.
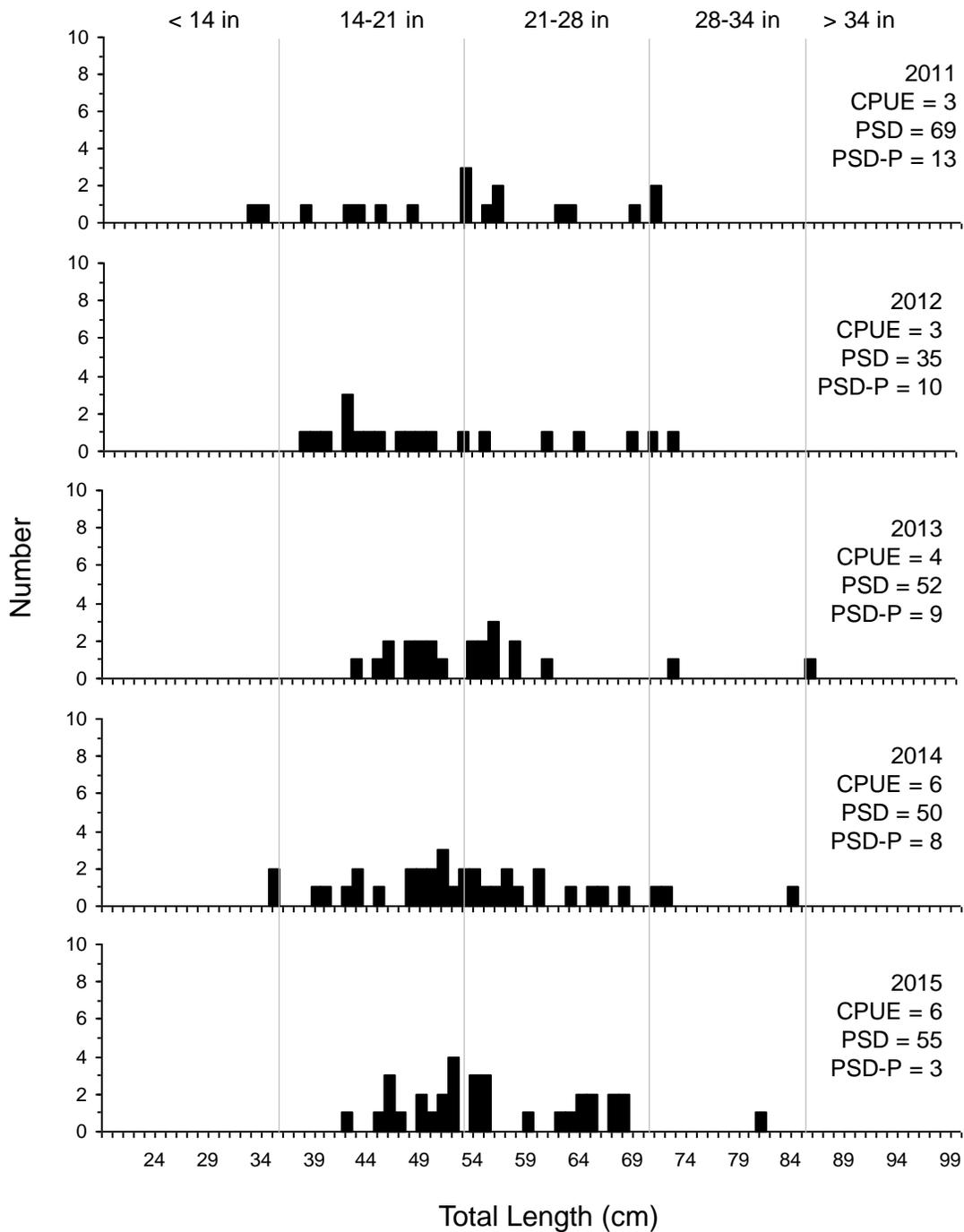
Figure 6. Length-frequency histogram, catch rate of stock-length fish (CPUE), proportional size distribution of quality- (PSD) and preferred-length (PSD-P) fish for northern pike captured using gill nets in Clear Lake, 2011-2015.