

Lake Poinsett

Site Description

Location

Water designation number (WDN)	32-0001-00
Legal description	T112N-R52W-Sec.3-6; T113N-R52W-Sec.14-16,20-23,26-34
County (ies)	Hamlin/Brookings
Location from nearest town	7 miles west of Estelline, SD

Survey Dates and Sampling Information

Survey dates	May 23, 2012 (EF-SMB) July 24-26, 2012 (GN) September 18, 2012 (EF-WAE)
Spring electrofishing-SMB (min)	63
Frame net sets (n)	18
Gill net sets (n)	6
Fall electrofishing-WAE (min)	60

Morphometry (Figure 1)

Watershed area (acres)	292,197
Surface area (acres)	7,903
Maximum depth (ft)	22
Mean depth (ft)	17

Ownership and Public Access

Lake Poinsett is a meandered lake owned by the State of South Dakota and the fishery is managed by the SDGFP. The SDGFP maintains four public access sites on Lake Poinsett including one in a State Recreation Area (Figure 1). Ownership of the Lake Poinsett shoreline includes the State of South Dakota and private ownership. The shoreline of Lake Poinsett is highly developed and supports many cabins and homes.

Watershed and Land Use

Land use within the Lake Poinsett watershed is primarily agricultural including a mix of cropland, pasture or grassland, and shelterbelts.

Water Level Observations

The OHWM elevation for Lake Poinsett is 1651.5 fmsl and the outlet elevation is 1650.5 fmsl. The elevation of Lake Poinsett on May 1, 2012 was 1652.7 fmsl and indicated a slight decrease from the fall 2011 elevation of 1653.0 fmsl. The water level had declined to an elevation of 1650.1 fmsl on October 3, 2012.

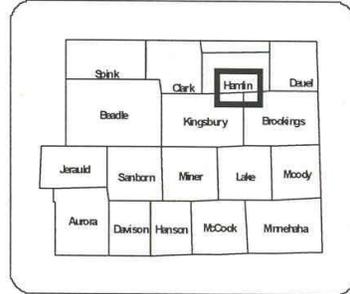
Fish Management Information

Primary species	Smallmouth Bass, Walleye, Yellow Perch
Other species	Bigmouth Buffalo, Black Bullhead, Black Crappie, Bluegill, Channel Catfish, Common Carp, Green Sunfish, Northern Pike, Orangespotted Sunfish, Shorthead Redhorse, Spottail Shiner, White Bass, White Crappie, White Sucker, Yellow Bullhead
Lake-specific regulations	Walleye: minimum length 15"
Management classification	warm-water semi-permanent
Fish consumption advisories	none

Lake Poinsett - Hamlin County

Map creation: October, 2002 Sonar Survey: June, 2001
 Shoreline: Landsat7, August, 2000

Lake Area: 7,903 acres Maximum Depth: 22 ft.
 Mean Depth: 16.5 ft. Shoreline Development Index: 1.3



South Dakota Game, Fish, and Parks
 SDSU Wildlife and Fisheries Sciences



0 0.5 1 Miles

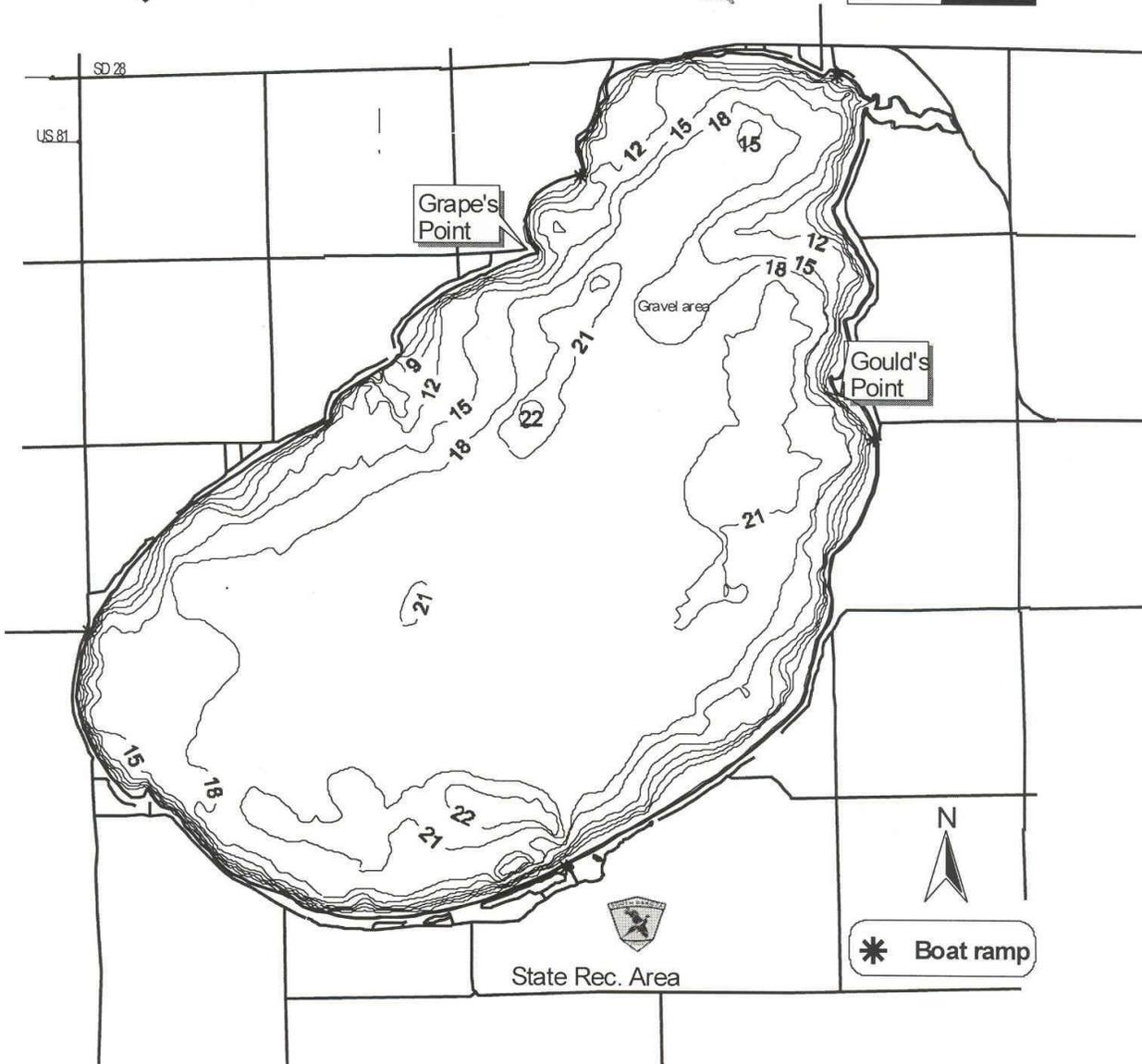


Figure 1. Map depicting depth contours of Lake Poinsett, Hamlin County, South Dakota.



Figure 2. Map depicting access sites and standardized net locations for Lake Poinsett, Hamlin County, South Dakota. POFN= frame nets, POGN= gill nets

Management Objectives

- 1) Maintain a moderate density Smallmouth Bass population with a PSD of 40-70, and a PSD-P of 10-40.
- 2) Maintain a mean gill net CPUE of stock-length Walleye ≥ 10 , a PSD of 30-60, and a PSD-P of 5-10.
- 3) Maintain a mean gill net CPUE of stock-length Yellow Perch ≥ 30 , a PSD of 30-60, and a PSD-P of 5-10.
- 4) Maintain a mean frame net CPUE of stock-length Black Bullhead ≤ 100 .

Results and Discussion

Lake Poinsett is one of South Dakota's largest natural lakes with a surface area of nearly 8,000 acres. Lake Poinsett receives water from Lake Albert and Dry Lake. Historically, Lake Poinsett has been a popular destination for recreational activities including fishing, boating, swimming, water-skiing, and camping. Public access to Lake Poinsett is exceptional with access locations on the north, east, south (State Recreation Area), and west shores of the lake. Currently, Lake Poinsett is primarily managed as a Smallmouth Bass, Walleye, and Yellow Perch fishery.

Primary Species

Smallmouth Bass: The 2012 mean spring night electrofishing CPUE of stock-length Smallmouth Bass was 30.6 (Table 1) and represented an increase from the 2010 CPUE of 19.6 (Table 2). Smallmouth Bass collected in the spring electrofishing catch ranged in TL from 21 to 39 cm (8.3 to 15.4 in) with the majority being \leq quality-length (i.e., 28 cm; 11 in) resulting low PSD and PSD-P values of 13 and 6, respectively (Table 1; Table 3; Figure 3). Both the PSD and PSD-P were below management objectives of 40-70 and 10-40 (Table 3). However, size structure indices should be interpreted with caution as sample size was low (i.e., 32 stock-length Smallmouth Bass).

Scales collected from a sub-sample of Smallmouth Bass captured during spring night electrofishing indicated the presence of three year classes (2008-2010; Table 4). The 2010 (age-2) cohort was the most represented and comprised 91% of sampled Smallmouth Bass (Table 4). Low relative abundance and size/age structure in 2012 may be related to sampling variability, generally attributed to limited availability of quality habitat for electrofishing (i.e., shallow rocky areas) coupled with difficulty sampling larger Smallmouth Bass.

Smallmouth Bass from the 2010 year class have exhibited fast growth, with a mean back-calculated length at age-2 of 241 mm (9.5 in) compared to the region IV and statewide mean of means of 179 and 171 mm (7.0 and 6.7 in; Willis et al. 2001; Table

4). The majority of Smallmouth Bass in the spring electrofishing catch were the stock-quality length category, which had a mean Wr of 98.

Walleye: The mean gill net CPUE of stock-length Walleye was 12.5 (Table 1) and above the minimum objective (≥ 10 stock-length Walleye/net night; Table 3). Since 2003, the mean gill net CPUE has ranged from a low of 3.0 (2004) to a high of 27.7 (2011; Table 2). The 2012 gill net CPUE represented a decrease from the 2011 CPUE of 27.7 (Table 2), but still indicated high relative abundance.

Walleye captured in the gill net catch ranged in TL from 17 to 70 cm (6.7 to 27.6 in), had a PSD of 57 and a PSD-P of 4 (Table 1; Figure 3). The PSD was within the objective range of 30-60; while the PSD-P was slightly below the objective range of 5-10 (Table 3). The increased PSD in 2012 can be attributed to growth of individuals from the strong 2009 cohort to quality length (i.e., 38 cm; 15 in) coupled with limited recruitment of the 2010 year class (Table 3; Table 5; Figure 4). In 2012, approximately 49% of Walleye captured in gill nets were above the 38-cm (15-in) minimum-length restriction and available for harvest on Lake Poinsett (Figure 4).

Otoliths were collected from a sub-sample of gill net captured Walleye. Age structure information indicated the presence of seven year-classes (2003, 2006-2011; Table 5). The 2009 and 2011 year classes, which coincided with fry stockings, comprised 78% and 14%, respectively, of Walleye in the gill net catch (Table 5). In 2012, the mean fall night electrofishing CPUE of age-0 walleye was 305.0 (Table 1) and indicated production of a strong year class, which coincided with a fry stocking (Table 1; Table 7). However, recruitment is currently unknown and will be assessed in future surveys.

In recent years, strong Walleye year classes have been produced in both stocked (e.g., 2009) and non-stocked (e.g., 2007 and 2008) years (Table 5; Table 7). Walleye stocked in 2009 and 2011 were marked with Oxytetracycline (OTC) so that the contribution of stocked fish could be evaluated. The estimated stocking contribution for the 2009 cohort was 16% (Table 5). However, it was noted that extensive cracking through the focus of examined otoliths likely influenced mark visibility; therefore, the stocking contribution may have been higher. Sample size was too small to reliably estimate the stocking contribution of the 2011 year class, as only four age-0 Walleye were captured during fall night electrofishing (Table 2; Table 5).

Walleye in Lake Poinsett typically attain quality length and the minimum length limit (38 cm; 15 in) by age 3 (Table 6). Since 2005, the weighted mean length at capture for age-3 Walleye has ranged from 394 to 480 mm (15.5 to 18.9 in; Table 6). The strong 2009 cohort has exhibited slightly slower growth than year classes produced in 2007 and 2008. The 2009 cohort had a weighted mean TL at capture of 346 mm (13.6 in) at age 2; compared to 358 and 369 mm (14.1 and 14.5 in) for the 2007 and 2008 year classes (Table 6). At age 3 the 2009 year class had a weighted mean TL at capture of 394 mm (15.5 in); compared to 436 and 440 mm (17.2 and 17.3 in) for the 2007 and 2008 cohorts (Table 6). Gill net captured Walleye had mean Wr values that ranged from 78 to 85 for all length categories (e.g., stock to quality) sampled, with the mean Wr of stock-length Walleye being 81 (Table 1). No discernible length-related trends in condition were observed in 2012.

Yellow Perch: The mean gill net CPUE of stock-length Yellow Perch was 22.0 (Table 1) and below the minimum objective (≥ 30 stock-length Yellow Perch/net night; Table 3). Since 2003, mean gill net CPUE values have ranged from a low of 0.8 (2005) and 137.2 (2010; Table 2). Based in on the 2012 gill net CPUE, relative abundance is considered moderate.

Gill net captured Yellow Perch ranged in TL from 12 to 30 cm (4.7 to 11.8 in), with the majority being \geq quality-length (i.e., 20 cm; 8 in) resulting in high PSD and PSD-P values of 83 and 55 (Table 1; Figure 4). Both the PSD and PSD-P were above management objectives of 30-60 and 5-10 (Table 3).

Otoliths were collected from a sub-sample of gill net captured Yellow Perch. Age structure information suggested that year classes produced from 2009-2011 comprised the entire sample (Table 8). The 2009 year class was the most represented and comprised 74% of Yellow Perch in the gill net catch; while year the 2010 and 2011 cohorts accounted for an additional 8% and 18%, respectively (Table 8). Male Yellow Perch from the 2009 cohort had a weighted mean TL at capture of 234 mm (9.2 in) at age 3; while their female counterparts had a weighted mean TL at capture of 265 mm (10.4 in; Table 9). Gill net captured Yellow Perch had high condition with mean W_r values that exceeded 100 for all length categories (e.g., stock to quality) sampled. The mean W_r of stock-length Yellow Perch was 107 (Table 1). No length-related trends in condition were apparent.

Other Species

Black Bullhead: Black Bullheads were the most abundant fish species in the frame net catch (Table 1). The mean frame net CPUE of stock-length Black Bullhead was 79.7 (Table 1) and within the management objective (≤ 100 stock-length bullhead/net night; Table 3). The 2012 mean frame net CPUE represented a substantial increase from the 2010 CPUE of 0.2 (Table 2). Currently, relative abundance is considered high.

Black Bullhead in the frame net catch ranged in TL from 14 to 37 cm (5.5 to 14.6 in), with nearly all cm-length groups being represented indicating consistent recruitment in recent years (Figure 6). The PSD was 36 and the PSD-P was 14 (Table 1; Table 3). No age and growth information was collected in 2012. The mean W_r of stock-length Black Bullhead was 95 (Table 1) and no length-related trends in condition were apparent.

Channel Catfish: Channel Catfish in Lake Poinsett have generally been considered to be present at a low density with mean gill net CPUE values that have ranged from a low of 0.0 (2010) to a high of 3.2 (2003; Table 2). In 2012, 13 channel catfish that ranged in TL from 51 to 77 cm (20.1 to 30.3 in) were captured by gill nets, which resulted in a mean gill net CPUE of 2.2 (Table 1). Although abundance is low the potential exists for anglers to catch channel catfish in Lake Poinsett.

Northern Pike: Northern Pike typically are not sampled effectively during standardized mid-summer fish community surveys. As a result, mean gill net CPUE values are often low. Northern Pike relative abundance in Lake Poinsett has generally been considered low, with mean gill net CPUE values that ranged from 0.0 to 1.0 from 2003-2010 (Table 2). The mean gill net CPUE of stock-length Northern Pike increased substantially in 2011, with a mean gill net CPUE of 7.3 (Table 2). In 2012, the mean gill net CPUE of stock-length Northern Pike declined to 2.0 (Table 1) and indicated moderate relative abundance.

Gill net captured Northern Pike ranged in TL from 46 to 83 cm (18.1 to 32.7 in), had a PSD of 92, and a PSD-P of 25 (Table 1). No age and growth information was collected in 2012. Sampled Northern Pike in the stock-quality, quality-preferred, and preferred-memorable length categories had mean Wr values of 74, 76, and 87, respectively.

White Bass: White Bass were not abundant in either the gill net or frame net catch. Frame nets captured 55 stock-length White Bass that ranged in TL from 20 to 46 cm (7.9 to 18.1 in) resulting in a mean frame net CPUE of 3.1 (Table 1). Thirteen White Bass that ranged in TL from 21 to 44 cm (8.3 to 17.3 in) were captured by gill nets, which resulted in a mean gill net CPUE of 2.2 (Table 1).

No age and growth information was available. Frame net captured White Bass exhibited a slight decreasing trend in condition as TL increased. White Bass in the stock-quality length category had the highest condition (i.e., mean Wr of 92); while those in the memorable-trophy length category had the lowest condition (i.e., mean Wr of 80). However, condition indices should be interpreted with caution as sample size was relatively low.

Yellow Bullhead: Yellow Bullheads were the second most abundant fish species in the frame net catch (Table 1). The mean frame net CPUE of stock-length Yellow Bullhead was 19.3 and the highest frame net CPUE recorded since 2003 (Table 1; Table 2).

Yellow Bullheads in the frame net catch ranged in TL from 12 to 34 cm (4.7 to 13.4 in), with nearly all cm-length groups being represented indicating consistent recruitment in recent years. A high proportion were \geq quality-length (i.e., 23 cm; 9 in) resulting in the high PSD of 91 (Table 1). No age or growth information was collected in 2012. Sampled Yellow Bullhead had high condition with mean Wr values that were \geq 100 for all length categories. The mean Wr of stock-length Yellow Bullhead was 101 (Table 1) and no length-related trends in condition were apparent.

Other: Bigmouth Buffalo, Black Crappie, Bluegill, Common Carp, Shorthead Redhorse, and White Sucker were other fish species captured in low numbers during the 2012 survey (Table 1).

Bigmouth Buffalo, Common Carp, and White Bass are commonly harvested through a permit by commercial fisherman. No commercial harvest was reported from Lake Poinsett during the 2011-12 ice-covered season.

Management Recommendations

- 1) Conduct fish community assessment surveys utilizing gill nets and frame nets on an annual basis (next survey scheduled in summer 2013) to monitor fish relative abundance, fish population size structure, fish growth, and stocking success.
- 2) Conduct fall night electrofishing on an annual basis to monitor age-0 Walleye relative abundance.
- 3) Conduct spring night electrofishing on a biennial basis (even years) to monitor Smallmouth Bass population parameters.
- 4) Stock Walleye (≈ 500 fry/acre) to establish additional year-classes if gill netting and/or fall night electrofishing CPUE of age-0 Walleye results warrant [i.e., low gill net CPUE of sub-stock (< 25 cm (10 in) Walleye and/or fall night electrofishing CPUE of age-0 Walleye < 75 fish/hour].
- 5) 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).
- 6) Continue the angler use and harvest survey on Lake Poinsett throughout the 2013 summer.
- 7) Monitor commercial harvest of Bigmouth Buffalo, Common Carp, and White Bass.
- 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 nets= 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 in frame nets, gill nets and electrofishing in Lake Poinsett, 2012. Confidence intervals include 80 percent (\pm CI-80) or 90 percent (\pm CI-90). BIB= Bigmouth Buffalo; BLB= Black Bullhead; BLC= Black Crappie; BLG= Bluegill; CCF= Channel Catfish; COC= Common Carp; NOP= Northern Pike; SHR= Shorthead Redhorse; SMB= Smallmouth Bass; WAE= Walleye; WHB= White Bass; WHS= White Sucker; YEB= Yellow Bullhead; YEP= Yellow Perch

Species	Abundance		Stock Density Indices				Condition	
	CPUE	CI-80	PSD	CI-90	PSD-P	CI-90	Wr	CI-90
<i>Frame nets</i>								
BLB	79.7	51.6	36	2	14	1	95	7
BLC	4.5	1.1	86	6	54	9	106	<1
BLG	0.1	0.1	0	---	0	---	---	---
CCF	0.8	0.5	100	0	47	23	107	10
COC	0.3	0.2	100	0	17	34	96	9
NOP	5.9	1.0	67	8	19	6	77	1
SHR	0.2	0.1	100	0	100	0	109	17
SMB	2.2	0.6	46	14	8	7	98	1
WAE	4.0	1.1	56	10	11	6	78	2
WHB	3.1	0.8	84	8	76	10	85	1
WHS	1.1	0.5	100	0	95	9	96	3
YEB	19.3	7.9	91	3	62	4	101	1
YEP	0.6	0.7	18	22	9	16	100	4
<i>Gill nets</i>								
BIB	0.7	1.0	75	59	25	59	103	10
BLB	2.5	2.6	87	16	0	---	98	2
CCF	2.2	1.3	100	0	31	24	104	5
COC	2.8	2.7	94	10	12	14	101	2
NOP	2.0	0.5	92	15	25	23	88	2
SMB	1.3	1.1	75	31	38	35	96	2
WAE	12.5	3.7	57	10	4	4	82	<1
WHB	2.2	1.1	54	26	54	26	89	1
WHS	2.3	1.0	100	0	100	0	108	2
YEB	2.7	1.7	94	11	56	22	104	2
YEP	22.0	5.7	83	5	55	7	107	<1
<i>Electrofishing</i>								
SMB ¹	30.6	11.0	13	10	6	7	99	1
WAE ²	305.0	---	---	---	---	---	---	---

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 nets= catch/net night, electrofishing= catch/hour) of stock-length fish for various fish species captured using gill nets, frame nets, and electrofishing in Lake Poinsett, 2003-2012. BIB= Bigmouth Buffalo; BLB= Black Bullhead; BLC= Black Crappie; BLG= Bluegill; CCF= Channel Catfish; COC= Common Carp; NOP= Northern Pike; OSF= Orangespotted Sunfish; SHR= Shorthead Redhorse; SMB= Smallmouth Bass; SPS= Spottail Shiner; WAE= Walleye; WHB= White Bass; WHS= White Sucker; YEB= Yellow Bullhead; YEP= Yellow Perch

Species	CPUE									
	2003	2004	2005	2006 ⁴	2007 ⁴	2008	2009	2010	2011	2012
<i>Frame nets</i>										
BIB	0.4	1.5	0.1	---	---	0.0	1.8	0.4	---	0.0
BLB	170.7	0.7	0.2	---	---	0.6	0.3	0.2	---	79.7
BLC	0.0	0.1	0.0	---	---	0.0	0.0	0.1	---	4.5
BLG	0.0	0.1	0.0	---	---	0.0	0.0	0.0	---	0.1
CCF	0.0	0.0	1.6	---	---	0.7	0.1	0.4	---	0.8
COC	0.1	0.1	0.0	---	---	0.2	1.1	0.6	---	0.3
NOP	1.3	0.2	1.0	---	---	1.3	0.6	0.5	---	5.9
OSF ¹	0.0	0.0	0.1	---	---	0.0	0.0	0.0	---	0.0
SHR	0.0	0.2	0.0	---	---	0.1	0.1	0.0	---	0.2
SMB	1.2	1.1	0.0	---	---	4.3	0.3	1.7	---	2.2
WAE	0.9	0.1	0.1	---	---	1.4	4.1	0.3	---	4.0
WHB	0.7	2.5	0.0	---	---	0.7	0.6	0.1	---	3.1
WHS	1.1	1.9	0.5	---	---	1.4	2.4	0.7	---	1.1
YEB	0.1	0.0	0.0	---	---	0.0	0.0	0.0	---	19.3
YEP	0.0	0.3	4.3	---	---	2.3	0.4	22.4	---	0.6
<i>Gill nets</i>										
BIB	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.7
BLB	14.8	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0	2.5
CCF	3.2	1.0	1.2	2.7	1.0	0.3	0.5	0.0	0.8	2.2
COC	0.0	0.0	0.2	0.8	1.0	0.0	0.0	0.3	0.3	2.8
NOP	0.7	0.3	0.0	0.7	0.8	0.5	0.0	1.0	7.3	2.0
OSF ¹	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
SHR	0.0	0.0	0.2	0.3	0.3	0.0	0.2	0.2	0.0	0.0
SMB	0.7	0.8	0.8	0.7	1.8	0.2	0.2	0.2	0.3	1.3
SPS ¹	0.2	0.0	0.0	0.0	0.0	0.2	2.0	4.7	0.0	0.0
WAE	3.8	3.0	8.3	5.0	6.3	5.7	16.0	10.0	27.7	12.5
WHB	17.3	25.5	15.0	11.7	10.0	3.2	3.5	3.5	1.3	2.2
WHS	1.8	1.2	2.0	1.5	1.2	0.5	0.2	2.7	2.7	2.3
YEP	8.5	11.5	0.8	5.7	6.2	16.0	13.2	137.2	22.0	22.0
<i>Electrofishing</i>										
SMB ²	---	---	---	---	---	---	---	19.6	---	30.6
WAE ³	706.1	31.1	97.5	117.0	79.8	19.5	257.2	0.0	4.0	305.0

¹ All fish sizes

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 nets= catch/net night, electrofishing= catch/hour) of stock-length fish, proportional size distribution of quality- (PSD) and preferred-length (PSD-P) fish, and relative weight (Wr) for selected species captured using gill nets, frame nets, and electrofishing in Lake Poinsett, 2003-2012. BLB= Black Bullhead; SMB= Smallmouth Bass; WAE= Walleye; YEP= Yellow Perch

Species	2003	2004	2005	2006 ¹	2007 ¹	2008	2009	2010	2011	2012	Objective
<i>Frame nets</i>											
BLB											
CPUE	171	1	< 1	---	---	1	<1	<1	---	79.7	≤ 100
PSD	99	100	100	---	---	100	33	67	---	36	---
PSD-P	1	100	100	---	---	100	33	67	---	14	---
Wr	94	102	101	---	---	90	102	88	---	95	---
<i>Gill nets</i>											
WAE											
CPUE	4	3	8	5	6	6	16	10	28	13	≥ 10
PSD	48	72	72	63	42	59	17	32	16	57	30-60
PSD-P	0	6	10	23	18	12	2	2	5	4	5-10
Wr	88	99	97	85	89	88	90	94	85	82	---
YEP											
CPUE	9	12	1	6	6	16	13	137	22	22	≥ 30
PSD	100	77	60	100	32	17	27	9	93	83	30-60
PSD-P	92	75	60	38	22	16	15	3	5	55	5-10
Wr	119	119	105	105	107	105	106	106	107	107	---
<i>Electrofishing</i>											
SMB ²											
CPUE	---	---	---	---	---	---	---	20	---	31	---
PSD	---	---	---	---	---	---	---	45	---	13	40-70
PSD-P	---	---	---	---	---	---	---	30	---	6	10-40
Wr	---	---	---	---	---	---	---	116	---	99	---

¹ Monofilament gill net mesh size (0.75", 1.00", 1.25", 1.50", 2.00" and 2.50")

² Spring electrofishing-SMB

Table 4. Mean back-calculated length (mm) at age and standard error (SE) for Smallmouth Bass captured during spring night electrofishing in Lake Poinsett, 2012.

Year	Age	N	Age				
			1	2	3	4	5
2010	2	29	127	241			
2009	3	1	184	267	302		
2008	4	2	86	182	329	390	
Mean	---	32	132	230	316	390	
SE	---	---	28	25	14	0	
<i>Mean Comparison¹</i>							
			98	180	241	291	---
			92	169	237	304	335
			96	179	249	316	339
			91	171	242	300	333

¹ Willis et al. 2001.

Table 5. Year class distribution based on the expanded age/length summary for Walleye sampled in gill nets and associated stocking history (# stocked x 10,000) from Lake Poinsett, 2008-2012.

Survey Year	Year Class												
	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
2012		12	1	68	2	2	1			1			
2011	---			145	7	8	3	2		1			
2010	---	---		51	21	8	3		2				
2009	---	---	---		47	44	2	3	1	1	1		
2008	---	---	---	---		21	14	4	3	4			1
# stocked fry	400	300 ¹		400 ²			805	1170		1052			
sm. fingerling													
lg. fingerling													

¹50% of stocked Walleye were OTC marked; only three age-0 Walleye were collected during fall electrofishing. All exhibited marks.

² Stocked Walleye were OTC marked; 8 of 50 otoliths collected from fall electrofished age-0 walleye exhibited marks for an estimated stocking contribution of 16%. However, it was noted that extensive cracking through the focus of examined otoliths likely influenced mark visibility; therefore, the stocking contribution may have been higher.

Table 6. Weighted mean TL at capture (mm) for Walleye age-1 through age-10 sampled in experimental gill nets (expanded sample size) from Lake Poinsett, 2005-2012. 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
2012	205(12)	307(1)	394(68)	477(2)	508(2)	577(1)	---	---	706(1)	---
2011		346(145)	440(7)	499(8)	547(3)	444(2)	---	534(1)	---	---
2010	250(51)	369(21)	436(8)	480(3)	---	517(2)	---	---	---	---
2009	265 (47)	358 (44)	468 (2)	478 (3)	496 (1)	514 (1)	580(1)	---	---	---
2008	233 (21)	372 (14)	450 (4)	506 (3)	520 (4)	---	---	568 (1)	---	---
2007 ¹	265 (9)	362 (19)	433 (1)	506 (6)	---	554 (1)	---	---	---	---
2006 ¹	223 (39)	378 (1)	461 (12)	---	563 (2)	---	532 (1)	---	559 (1)	---
2005 ¹	269 (3)	385 (37)	480 (1)	---	511 (2)	519 (3)	491 (1)	---	---	---

¹ Older Walleye were sampled, but are not reported in this table.

Table 7. Stocking history including size and number for fishes stocked into Lake Poinsett, 2000-2012. WAE= Walleye

Year	Species	Size	Number
2003	WAE	fry	10,520,000
2005	WAE	fry	11,700,000
2006	WAE	fry	8,050,000
2009	WAE	fry	4,000,000
2011	WAE	fry	3,000,000
2012	WAE	fry	4,000,000

Table 8. Year class distribution based on the age/length summary for Yellow Perch sampled in gill nets from Lake Poinsett, 2009-2012.

Survey Year	Year Class							
	2012	2011	2010	2009	2008	2007	2006	2005
2012		23	11	98				
2011	---		6	126				
2010	---	---		761	47	14	2	
2009	---	---	---		59	19	1	1

Table 9. Weighted mean TL (mm) at capture by gender for Yellow Perch captured in experimental gill nets (expanded sample size) from Lake Poinsett, 2009-2012.

Year	Age			
	1	2	3	4
2012				
Male	156 (3)	217 (1)	234 (19)	---
Female	156 (18)	228 (10)	265 (78)	---
Combined	156 (23)	226 (11)	259 (98)	---
2011				
Male	156(4)	212(16)	---	---
Female	155(1)	232(99)	---	---
Combined	156(6)	228(126)	---	---
2010				
Male	161(126)	227(9)	258(4)	---
Female	169(484)	242(40)	299(8)	328(2)
Combined	167(761)	239(47)	281(14)	328(2)
2009				
Male	144 (14)	220 (1)	---	---
Female	147 (44)	247 (18)	313 (1)	325 (1)
Combined	147 (59)	246 (19)	313 (1)	325 (1)

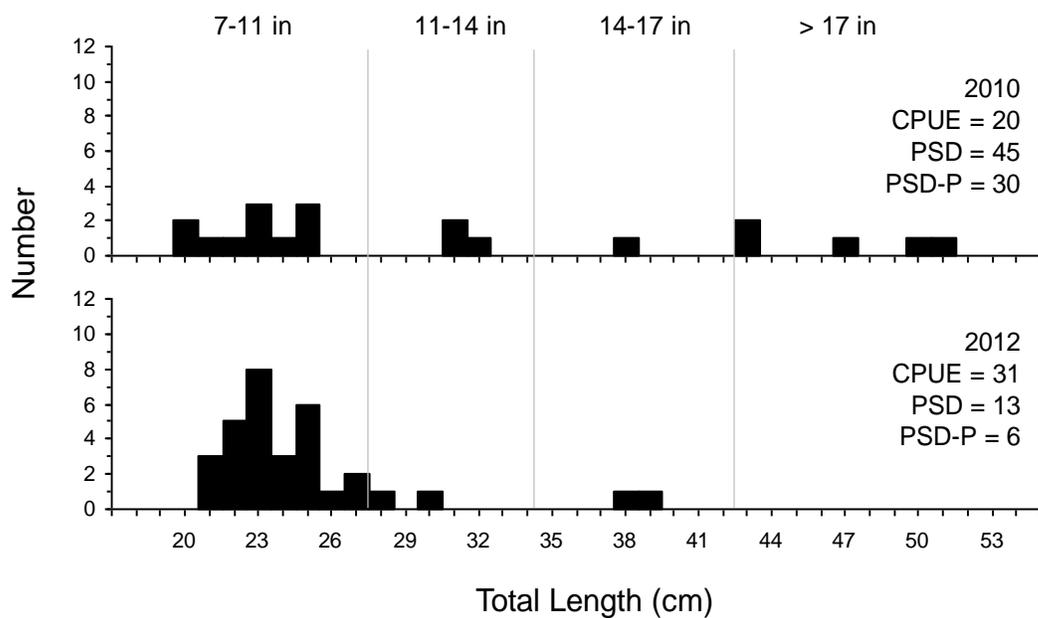


Figure 3. Length-frequency histogram, catch rate of stock-length fish (CPUE), proportional size distribution of quality- (PSD) and preferred-length (PSD-P) fish for Smallmouth Bass captured using night electrofishing in Lake Poinsett, 2010-2012.

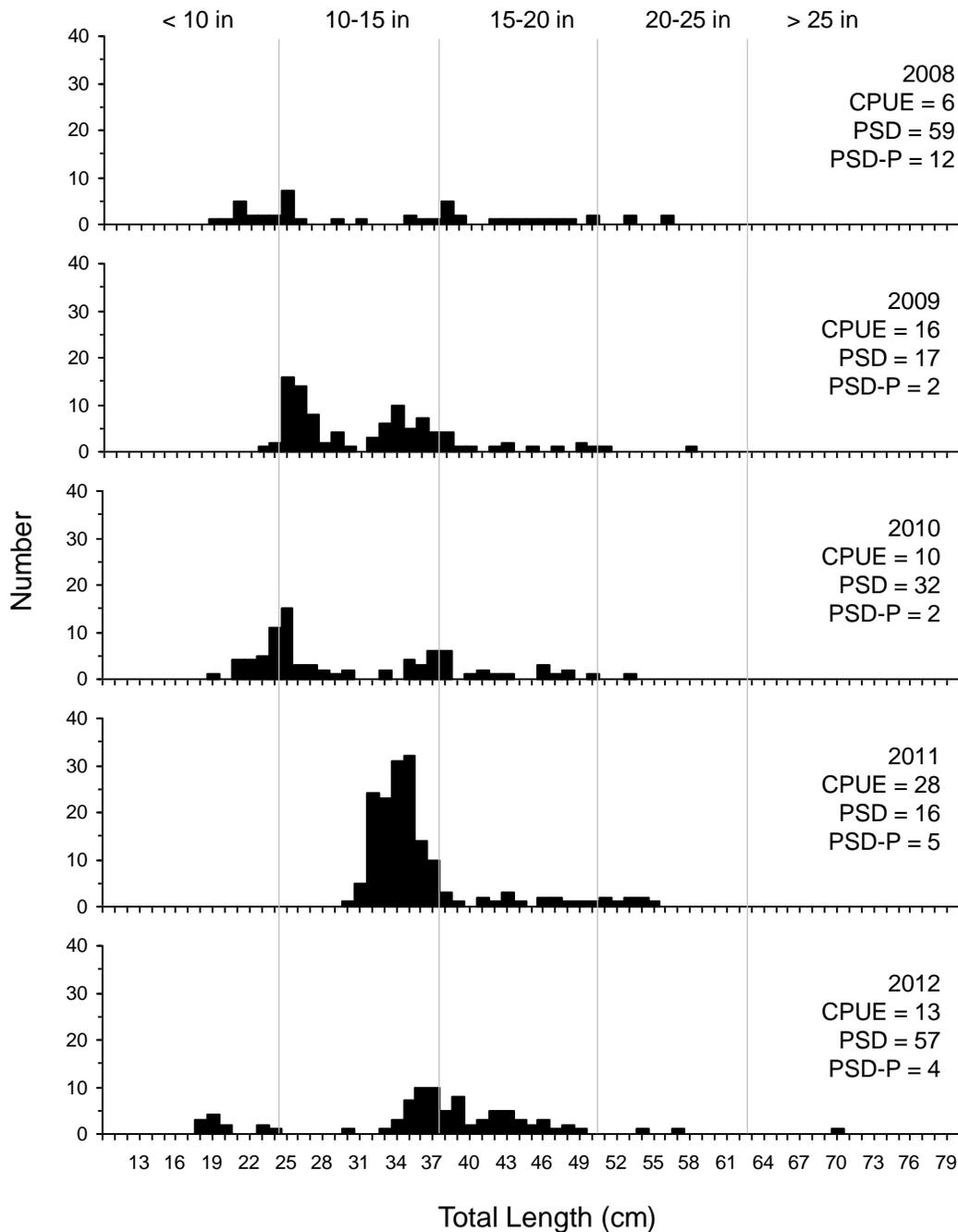


Figure 4. Length-frequency histogram, catch rate of stock-length fish (CPUE), proportional size distribution of quality- (PSD) and preferred-length (PSD-P) fish for Walleye captured using experimental gill nets in Lake Poinsett, 2008-2012.

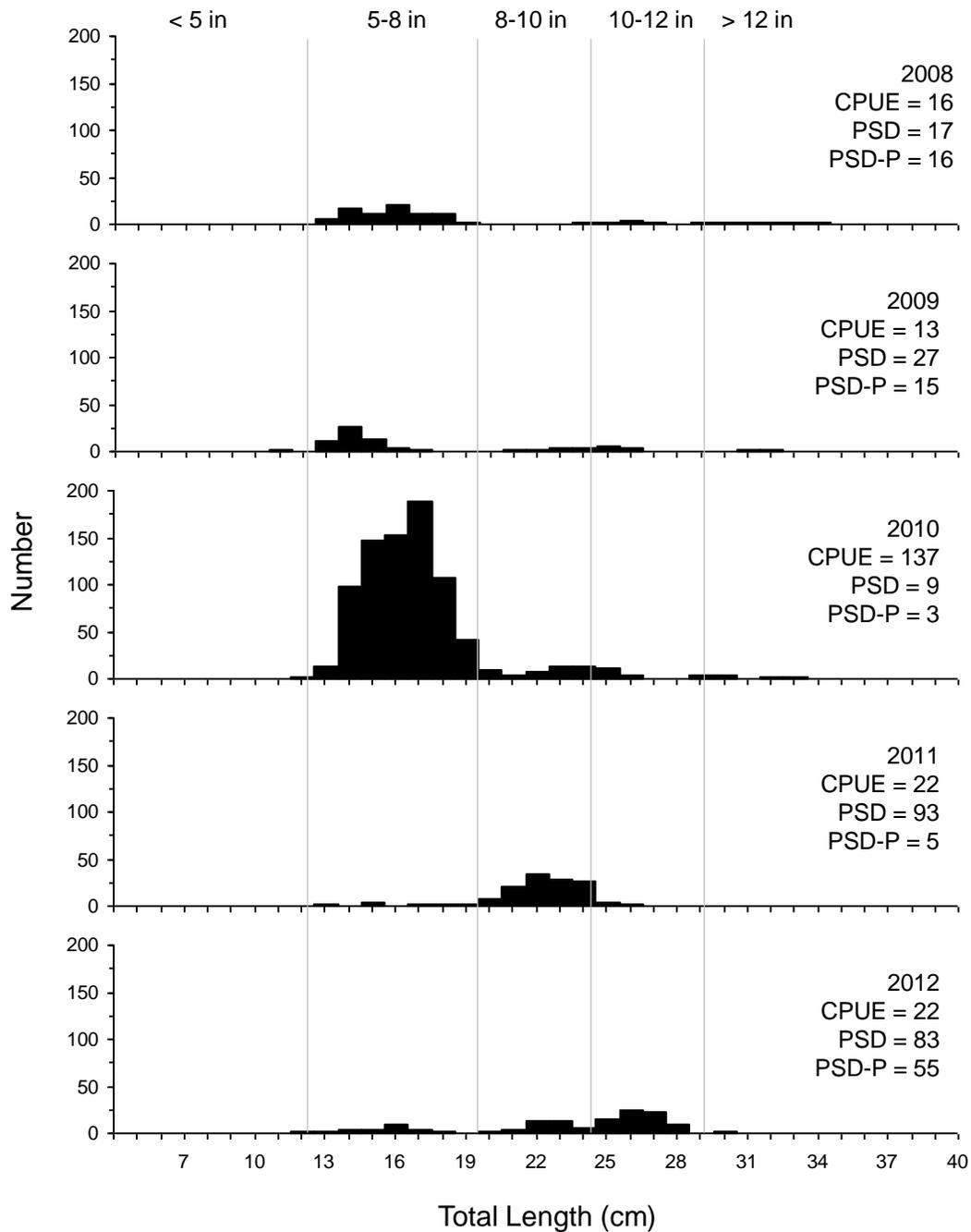


Figure 5. Length-frequency histogram, catch rate of stock-length fish (CPUE), proportional size distribution of quality- (PSD) and preferred-length (PSD-P) fish for Yellow Perch captured using experimental gill nets in Lake Pointsett, 2008-2012.

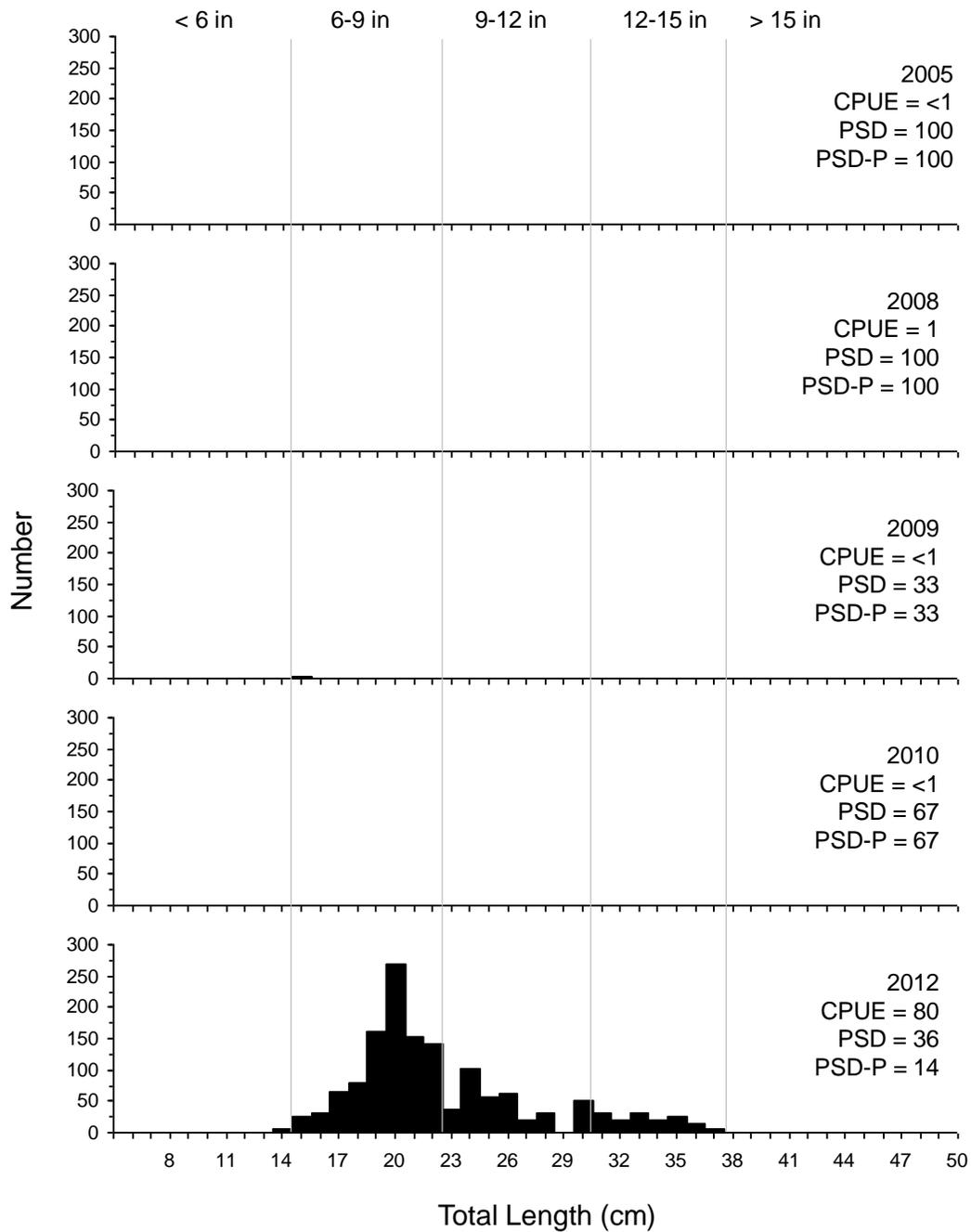


Figure 6. Length-frequency histogram, catch rate of stock-length fish (CPUE), proportional size distribution of quality- (PSD) and preferred-length (PSD-P) fish for Black Bullhead captured using frame nets in Lake Pointsett, 2005-2012.