

Creel and Lake Information

Lake Information

Lake Name: Stockade
Lake Code: MCS-Lake-12-000
Surface Area: 52.04 Hectares
County: Custer
Start Date: 5/11/2019
End Date: 7/31/2019
Months Included: May, June, July

Table 1. Percent of angling parties interviewed primarily targeting a species (or any species) by month and overall for Stockade during 2018 - 2019. Any Species (ANY), Black Crappie (BLC), Bluegill (BLG), Largemouth Bass (LMB), Northern Pike (NOP), Rainbow Trout (RBT).

Year	Month	# of Interviews	Percent of Anglers Targeting					
			ANY	BLC	BLG	LMB	NOP	RBT
2018	May	37	48.6	16.2	10.8	0.0	8.1	5.4
	June	18	72.2	5.6	5.6	0.0	0.0	5.6
	July	18	66.7	0.0	5.6	0.0	11.1	0.0
	Overall	73	58.9	9.6	8.2	0.0	6.8	4.1
2019	May	18	33.3	16.7	16.7	27.8	0.0	5.6
	June	40	42.5	2.5	17.5	35.0	2.5	0.0
	July	23	73.9	13.0	0.0	8.7	0.0	4.3
	Overall	81	49.4	8.6	12.3	25.9	1.2	2.5

Table 2. Monthly and overall number of interviews, angler hours, angler days, mean trip length, mean party size, percent of parties interviewed that were South Dakota residents, percent of angling activity from a boat or shack and percent of angling activity that occurred on weekends and holidays at Stockade (80% confidence interval).

Year	Month	# Interviews	Angler Hours	Angler Days	Trip Length (h)	Party Size	% SD Residents	% Boat or Shack	% Weekend/Holidays
2018	May	37	3,763 (888)	515	7.31 (4.10)	1.67 (0.43)	86.49	8	59
	June	18	2,904 (1,302)	1,338	2.17 (1.14)	2.42 (0.43)	72.22	17	17
	July	18	4,521 (903)	1,570	2.88 (1.13)	2.39 (0.59)	66.67	33	61
	Overall	73	11,189 (1,816)	2,703	4.14 (1.48)	2.16 (0.28)	78.08	16	49
2019	May	18	1,039 (682)	619	1.68 (0.34)	2.06 (0.26)	88.89	17	28
	June	40	5,862 (1,092)	2,229	2.63 (1.36)	1.98 (0.50)	77.50	33	58
	July	23	3,256 (479)	1,565	2.08 (0.88)	2.61 (0.33)	60.87	22	13
	Overall	81	10,157 (1,374)	4,791	2.12 (0.55)	2.22 (0.22)	75.31	26	38

Table 3. Estimated fishing pressure (angler hours) by month during the summer season 2019 daylight period on Stockade (80% confidence interval).

Lake	Month			Total
	May	June	July	
Stockade (Custer)	1,039 (682)	5,862 (1,092)	3,256 (479)	10,157 (1,374)

Table 4. Estimated number of fish harvested, by species and month, for the summer season 2019 daylight period on Stockade (80% confidence interval).

Species	Month			Total
	May	June	July	
Black Crappie	104 (129)	521 (571)	20 (18)	644 (586)
Bluegill	564 (702)	997 (770)	59 (55)	1,620 (1,044)
Largemouth Bass	0	0	20 (18)	20 (18)
Northern Pike	0	283 (52)	20 (18)	302 (55)
Rainbow Trout	0	0	0	0
Total	668 (831)	1,800 (1,393)	118 (109)	2,586 (1,703)

Table 5a. Estimated monthly and overall angler catch rate per hour fished (C/h) for all anglers by species at Stockade (80% confidence interval). Abbreviations for species are as follows: Black Crappie (BLC), Bluegill (BLG), Largemouth Bass (LMB), Northern Pike (NOP), Rainbow Trout (RBT) and other species (Other).

Year	Month	BLC	BLG	LMB	NOP	RBT
		C/h	C/h	C/h	C/h	C/h
2018	May	0.18	0.51	0.10 (0.02)	0.01	0.00
	June	0.06 (0.12)	0.42 (0.25)	0.02 (0.02)	0.00	0.00
	July	0.19 (0.18)	0.75 (0.44)	0.03 (0.01)	0.04 (0.02)	0.00
	Overall	0.15 (0.08)	0.58 (0.17)	0.05 (0.01)	0.02 (<0.01)	0.00
2019	May	0.55 (1.34)	0.79 (1.66)	0.00	0.00	0.00
	June	1.10 (0.92)	1.06 (0.62)	0.21	0.08	<0.01 (<0.01)
	July	1.57 (1.12)	0.94 (0.72)	0.35 (0.25)	0.01 (<0.01)	0.00
	Overall	1.19 (0.67)	0.99 (0.46)	0.24 (0.07)	0.05	<0.01 (<0.01)

Table 5b. Estimated monthly and overall angler harvest rate per hour fished (H/h) for all anglers by species at Stockade (80% confidence interval). Abbreviations for species are as follows: Black Crappie (BLC), Bluegill (BLG), Largemouth Bass (LMB), Northern Pike (NOP), Rainbow Trout (RBT) and other species (Other).

Year	Month	BLC	BLG	LMB	NOP	RBT
		H/h	H/h	H/h	H/h	H/h
2018	May	0.04	0.03	0.00	0.00	0.00
	June	0.03 (0.06)	0.11 (0.10)	0.00	0.00	0.00
	July	0.08 (0.08)	0.00	0.00	0.01 (<0.01)	0.00
	Overall	0.05 (0.03)	0.04 (<0.01)	0.00	0.01 (<0.01)	0.00
2019	May	0.10 (0.26)	0.54 (1.28)	0.00	0.00	0.00
	June	0.09 (0.10)	0.17 (0.14)	0.00	0.05 (0.01)	0.00
	July	0.01 (<0.01)	0.02 (0.02)	0.01 (<0.01)	0.01 (<0.01)	0.00
	Overall	0.06 (0.06)	0.16 (0.12)	<0.01 (<0.01)	0.03 (<0.01)	0.00

Table 6a. Estimated monthly and overall angler catch rate per hour fished (C/h) only for anglers primarily targeting a species at Stockade. (80% confidence interval). Abbreviations for species are as follows: Black Crappie (BLC), Bluegill (BLG), Largemouth Bass (LMB), Northern Pike (NOP), Rainbow Trout (RBT) and Other Species (Other).

Year	Month	BLC	BLG	LMB	NOP	RBT
		C/h	C/h	C/h	C/h	C/h
2018	May	0.65 (0.31)	13.36	0.00	0.00	0.00
	June	0.00	0.91	0.00	0.00	0.00
	July	0.00	0.83	0.00	0.00	0.00
	Overall	0.39 (0.18)	6.18	0.00	0.00	0.00
2019	May	1.46 (10.64)	7.64	0.00	0.00	0.00
	June	2.48	3.10 (3.80)	0.72 (0.93)	0.45	0.00
	July	3.97 (6.75)	0.00	1.29 (2.10)	0.00	0.00
	Overall	2.67 (5.13)	5.41 (1.87)	0.61 (0.64)	0.45	0.00

Table 6b. Estimated monthly and overall angler harvest rate per hour fished (H/h) only for anglers primarily targeting a species at Stockade. (80% confidence interval). Abbreviations for species are as follows: Black Crappie (BLC), Bluegill (BLG), Largemouth Bass (LMB), Northern Pike (NOP), Rainbow Trout (RBT) and Other Species (Other).

Year	Month	BLC	BLG	LMB	NOP	RBT
		H/h	H/h	H/h	H/h	H/h
2018	May	0.06 (0.05)	13.31	0.00	0.00	0.00
	June	0.00	0.46	0.00	0.00	0.00
	July	0.00	0.00	0.00	0.00	0.00
	Overall	0.04 (0.03)	5.78	0.00	0.00	0.00
2019	May	0.40 (0.73)	5.46	0.00	0.00	0.00
	June	1.80	0.71 (2.23)	0.00	0.45	0.00
	July	0.00	0.00	0.00	0.00	0.00
	Overall	0.50 (0.30)	3.12 (1.09)	0.00	0.45	0.00

Table 7a. Estimated monthly and overall angler catch (C) for all anglers by species at Stockade (80% confidence interval). Abbreviations for species are as follows: Black Crappie (BLC), Bluegill (BLG), Largemouth Bass (LMB), Northern Pike (NOP), Rainbow Trout (RBT) and other species (Other).

Year	Month	BLC	BLG	LMB	NOP	RBT
		C	C	C	C	C
2018	May	684 (361)	1,922 (659)	372 (8)	23	0
	June	180 (175)	1,219 (279)	53 (52)	0	0
	July	862 (780)	3,394 (1,977)	148 (64)	162 (75)	0
	Overall	1,727 (877)	6,536 (2,102)	573 (83)	185 (75)	0
2019	May	574 (532)	823 (994)	0	0	0
	June	6,452 (4,832)	6,193 (2,523)	1,251 (239)	453	20 (2)
	July	5,106 (3,412)	3,047 (1,877)	1,151 (785)	20 (18)	0
	Overall	12,132 (5,939)	10,064 (3,298)	2,403 (820)	473	20 (2)

Table 7b. Estimated monthly and overall angler harvest (H) for all anglers by species at Stockade (80% confidence interval). Abbreviations for species are as follows: Black Crappie (BLC), Bluegill (BLG), Largemouth Bass (LMB), Northern Pike (NOP), Rainbow Trout (RBT) and other species (Other).

Year	Month	BLC	BLG	LMB	NOP	RBT
		H	H	H	H	H
2018	May	143 (114)	129 (178)	0	0	0
	June	84 (90)	333 (198)	0	0	0
	July	377 (354)	0	0	62 (51)	0
	Overall	604 (383)	463 (266)	0	62 (51)	0
2019	May	104 (129)	564 (702)	0	0	0
	June	521 (571)	997 (770)	0	283 (52)	0
	July	20 (18)	59 (55)	20 (18)	20 (18)	0
	Overall	644 (586)	1,620 (1,044)	20 (18)	302 (55)	0

Table 8. Estimated number and rate (number per hour) of Black Crappie (BLC), Bluegill (BLG), Largemouth Bass (LMB), Northern Pike (NOP), Rainbow Trout (RBT) caught and harvested by anglers during the summer and winter fisheries on Stockade, (80% confidence interval).

Black Crappie

Season	Year	Catch	Harvest	Catch Rate	Harvest Rate
Summer	2011	13,525 (2,488)	3,900 (1,959)	1.27 (0.42)	0.37 (0.19)
Summer	2013	0	0	0.00	0.00
Summer	2014	0	0	0.00	0.00
Summer	2018	1,727 (877)	604 (383)	0.15 (0.08)	0.05 (0.03)
Summer	2019	12,132 (5,939)	644 (586)	1.19 (0.67)	0.06 (0.06)

Bluegill

Season	Year	Catch	Harvest	Catch Rate	Harvest Rate
Summer	2011	7,232 (1,409)	1,452 (518)	0.68 (0.25)	0.14 (0.06)
Summer	2013	0	0	0.00	0.00
Summer	2014	0	0	0.00	0.00
Summer	2018	6,536 (2,102)	463 (266)	0.58 (0.17)	0.04 (<0.01)
Summer	2019	10,064 (3,298)	1,620 (1,044)	0.99 (0.46)	0.16 (0.12)

Largemouth Bass

Season	Year	Catch	Harvest	Catch Rate	Harvest Rate
Summer	2011	1,718 (795)	2 (2)	0.16	<0.01 (<0.01)
Summer	2013	0	0	0.00	0.00
Summer	2014	0	0	0.00	0.00
Summer	2018	573 (83)	0	0.05 (0.01)	0.00
Summer	2019	2,403 (820)	20 (18)	0.24 (0.07)	<0.01 (<0.01)

Northern Pike

Season	Year	Catch	Harvest	Catch Rate	Harvest Rate
Summer	2011	122 (64)	13 (9)	0.01 (<0.01)	<0.01 (<0.01)
Summer	2013	0	0	0.00	0.00
Summer	2014	0	0	0.00	0.00
Summer	2018	185 (75)	62 (51)	0.02 (<0.01)	0.01 (<0.01)
Summer	2019	473	302 (55)	0.05	0.03 (<0.01)

Rainbow Trout

Season	Year	Catch	Harvest	Catch Rate	Harvest Rate
Summer	2014	0	0	0.00	0.00
Summer	2019	20 (2)	0	<0.01 (<0.01)	0.00

Table 9. The number of fish harvested with each species by length group (mm) for the winter and summer fisheries at Stockade. Abbreviations for species are as follows: Black Crappie (BLC), Bluegill (BLG), Largemouth Bass (LMB), Northern Pike (NOP), Rainbow Trout (RBT).

Summer 2019					
Length Group (mm)	BLC (N=21)	BLG (N=64)	LMB (N=1)	NOP (N=4)	RBT (N=0)
160		3			
170	3	9			
180	5	13			
190		13			
200		16			
210	4	4			
220	1	4			
230	1				
240	5				
250	1	2			
260	1				
340			1		
520				1	
530				1	
540					
550				1	
560					
570					
580					
590					
600				1	

Figure 1a. Length frequency of angler-harvested Black Crappie measured by the creel clerk during creel surveys on Stockade.

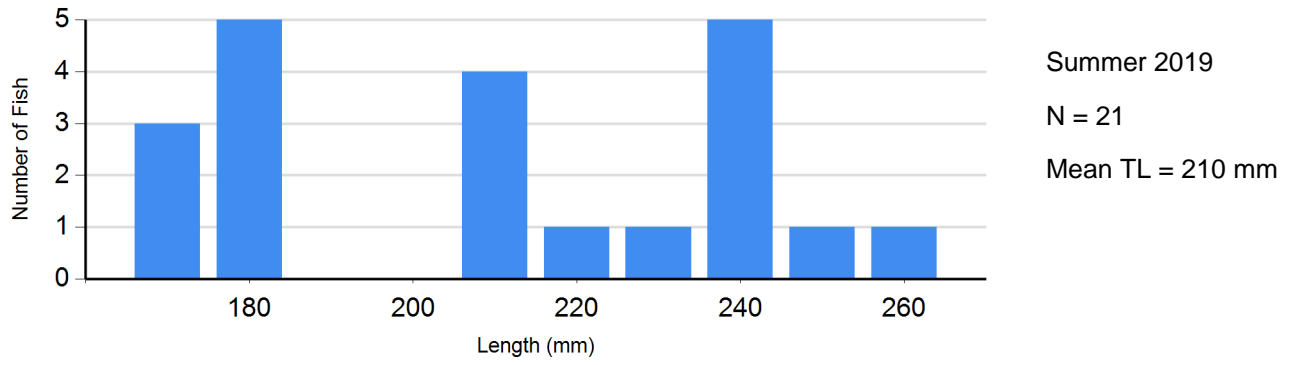


Figure 1b. Length frequency of angler-harvested Bluegill measured by the creel clerk during creel surveys on Stockade.

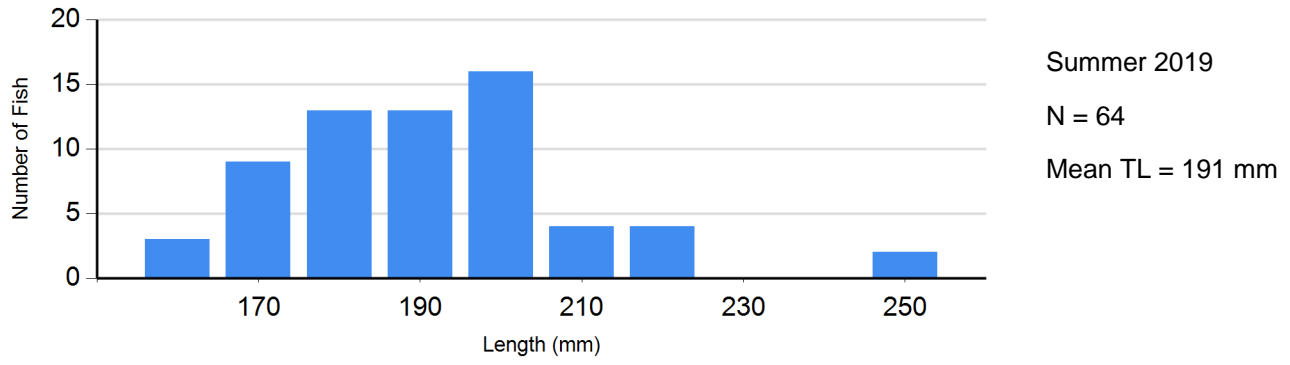


Figure 2. South Dakota county of residence for winter and summer resident anglers fishing Stockade, South Dakota between May 2018 and July 2019.

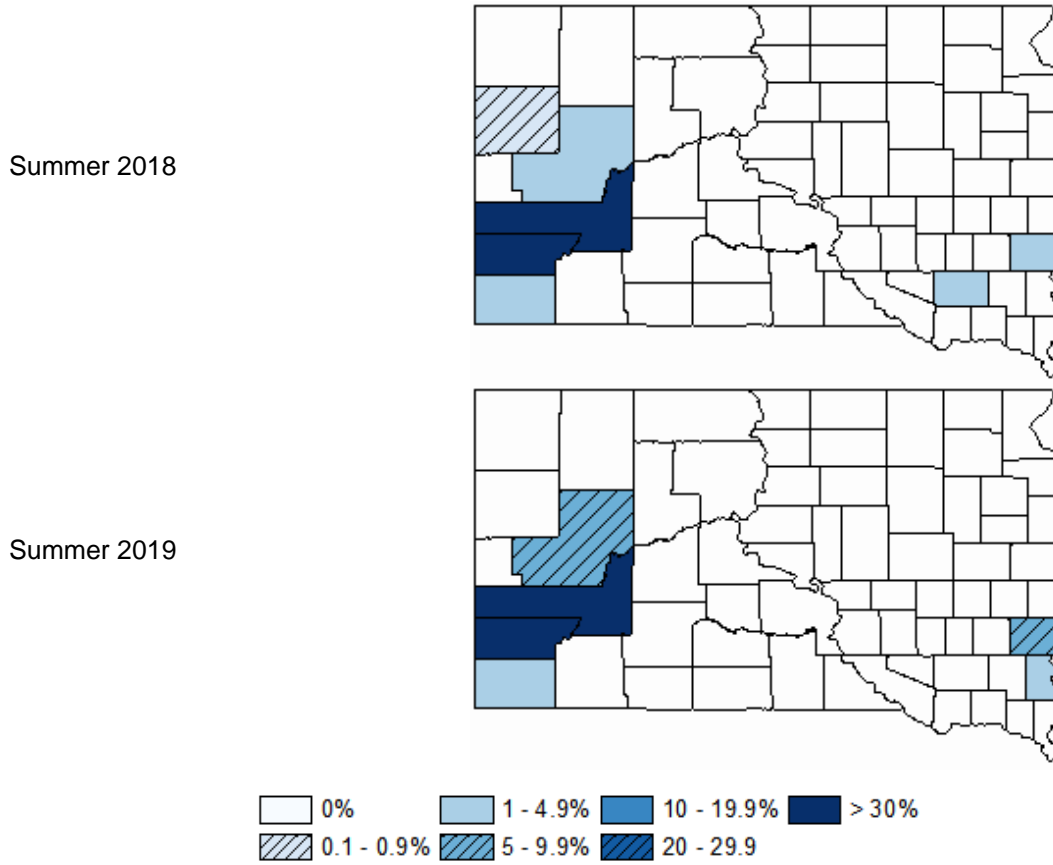


Table 10. Number of parties interviewed that harvested (or caught) a specified number of fish totaled over selected strata for a species.

Angler Harvest	Counts				
	BLC (n=73)	BLG (n=73)	LMB (n=73)	NOP (n=73)	RBT (n=73)
0.00	67	66	73	71	73
0.33	0	0	0	2	0
0.50	0	3	0	0	0
1.00	0	1	0	0	0
1.33	0	1	0	0	0
1.40	2	0	0	0	0
1.50	1	0	0	0	0
1.60	0	1	0	0	0
2.00	2	0	0	0	0
2.50	0	1	0	0	0
5.00	1	0	0	0	0

Angler Harvest	Counts				
	BLC (n=81)	BLG (n=81)	LMB (n=81)	NOP (n=81)	RBT (n=81)
0.00	76	71	80	78	81
0.10	0	1	0	0	0
0.50	1	1	1	2	0
0.67	0	1	0	0	0
1.50	1	3	0	0	0
2.00	1	0	0	1	0
4.00	1	2	0	0	0
5.50	1	0	0	0	0
10.00	0	1	0	0	0
15.00	0	1	0	0	0

Table 11 The number (N) and percent of total interviews in supplemental-response categories by question asked during interviews at Stockade.

Question: What is the method of angling?

Response	Summer 2019 (n = 1)
Spin	100%

Question: Considering all factors, how satisfied are you with your fishing trip today?

Response	Summer 2019 (n = 1)
Very Satisfied	100%

Question: Would you support special regulations for Norther Pike?

Response	Summer 2019 (n = 1)
Yes	100%

Question: Would you support special regulations for Norther Pike?

Response	Summer 2019 (n = 80)
No	19%
No Opinion	33%
Yes	49%