



Walleyes were Present in Cobblestone Lake, Apple Valley, 2021

Fish Survey of Cobblestone Lake (ID# 19-0456), Apple Valley, Minnesota in 2021

Survey Dates: September 29 to October 1, 2021

Permit Number: 32508

Prepared for:
City of Apple Valley and
MnDNR



Prepared by:
Steve McComas
Jo Stuckert
Blue Water Science
St. Paul, MN 55116

November 2021

Fish Survey of Cobblestone Lake (ID# 19-0456), Apple Valley, Minnesota in 2021

Summary

Cobblestone Lake, a 35-acre lake, located in Apple Valley. On September 29, 2021 4 standard-sized trapnets were deployed and then sampled for the next two days in Cobblestone Lake.

Bluegill sunfish were the most abundant species and walleyes were above the MnDNR typical range (Table S1).

Since the fish survey conducted in Cobblestone Lake in 2005, there have been several positive fish community changes in 2021. In 2005, black bullheads were well above regional ranges with few predators found in the lake. However, in 2010, black bullhead numbers were within the regional range and in 2021 their numbers were low.

Conclusions: It would appear that the bullhead population in Cobblestone is under control. As part of the fish management plan in 2020, 150 adult walleyes were stocked by the MnDNR. Historically over 600 pounds of walleyes including fry to adults have been stocked in Cobblestone Lake since 2011. Currently the fish community in Cobblestone Lake has a satisfactory recreational fishery and does not appear to have an adverse impact on lake water quality.

Table S1. Comparison of trapnet fish surveys for Cobblestone Lake from 2005 to 2021.

	Cobblestone Lake (fish per trapnet)					
	2005 (MnDNR)	2010 (MnDNR)	2015 (MnDNR)	2020 (MnDNR)	2021 (BWS)	MnDNR Typical Range
Black bullhead	147.40	19.60	5.60	0.20	1.5	1.1-25.2
Black crappie		20.20	16.00	1.60	3.5	1.2-4.8
Bluegills	9.20	16.80	30.60	6.00	34	4.9-49.8
Goldfish			0.20			NA
Green sunfish	1.80		0..20	0.40		0.2-2.1
Hybrid sunfish	51.20	5.80	4.40	1.80	0.4	NA
Largemouth bass		0.20	0.60		0.4	0.3-1.3
Pumpkinseed sunfish		0.20	3.20	0.20	0.8	1.7-10.3
Walleye		0.80	0.20		3.5	0.3-1.0
White suckers					0.9	NA
Yellow perch				1.00	6.6	0.5-5.3

Cobblestone Lake Fish Survey Highlights



Walleyes are abundant



Mouth width of a walleye is large enough to control small forage fish



Most panfish are greater than 6 inches in length



Yellow perch were stocked in 2018

Fish Survey of Cobblestone Lake (ID# 19-0456), Apple Valley, Minnesota in 2021

Introduction

In 2021, the City of Apple Valley contracted for a fish survey (MnDNR permit number 32508). The objectives were to characterize the existing fish community and determine if fish could be contributing to poor water quality in Cobblestone Lake.

Methods

Trapnets were used to survey fish in Cobblestone Lake. Two MnDNR-style trapnets with a 3 x 5 feet square frame with five hoops, two funnel mouth openings and a 50-foot lead. Net mesh size was 3/8 inch (bar length). Also, two MnDNR-style trapnets with a 4 x 6 feet square frame with five hoops, two funnel mouth openings and a 50-foot lead. Net mesh size was 1/2 inch (bar length). In Cobblestone Lake, trapnets were set on Wednesday morning September 29, 2021. The 4 nets were fished for the following 2 days (September 30 and October 1). Trapnet locations are shown in Figure 1.



Figure 1. Map of trapnet sets.

Results

Trapnet Results: The number of fish for each trapnet lift over the two day survey are shown in Table 1. Bluegill sunfish were the most abundant fish followed by yellow perch and black crappies. Walleyes were above the regional average and largemouth bass were present and within MnDNR typical range for a lake like Cobblestone Lake.

Table 1. Number of fish caught in trapnets for the fish survey conducted September 30-October 1, 2021.

Net	Black bullhead		Black crappie		Bluegill sunfish		Hybrid sunfish		Largemouth bass		Pumpkin-seed		Walleye		White sucker		Yellow perch		
	Day 1	Day 2	Day 1	Day 2	Day 1	Day 2	Day 1	Day 2	Day 1	Day 2	Day 1	Day 2	Day 1	Day 2	Day 1	Day 2	Day 1	Day 2	
1	4	1	17	8	85	47	1				3	1	7		5		4	1	
2	1	1			19	24				1		2	5	2					11
3	3	1	2		46	30	1	1					9	2	2		9	26	
4		1	1		5	16			2				1	2					2
Total fish caught	8	4	20	8	155	117	2	1	2	1	3	3	22	6	7	0	13	40	
Average number/lift	1.5		3.5		34.0		0.4		0.4		0.8		3.5		0.9		6.6		
MnDNR Typical Range	1.1-25.2		1.2-4.8		4.9-49.8		NA		0.3-1.3		1.7-10.3		0.3-1.0		NA		0.5-5.3		



Figure 2. Tub of fish sampled in Cobblestone Lake in September 2021.

Length Distribution: The length distribution of fish from Cobblestone Lake is shown in Table 2. In Cobblestone Lake, bluegills were averaging over 7-inches in length (92% of the fish measured were 7-inches or larger). This is a very nice bluegill community. Crappies ranged from 3 to 10 inches, indicating the crappies are able to spawn successfully in Cobblestone Lake. Only one black bullhead was captured in 2021 and it measured 12 inches in length. Black crappies and bluegills along with walleyes may be controlling the bullhead population. Walleyes were abundant and several year classes represented.

Table 2. Length frequency of fish from the 2021 survey.

	Black bullhead	Black crappie	Bluegill	Hybrid sunfish	LM Bass	Pumpkin-seed	Walleye	White sucker	Yellow perch
<3									
3					1				1
3.5									
4					2				
4.5			1						
5									
5.5			2						7
6			18						3
6.5		1	52						2
7		1	52			1			1
7.5		10	45	2					4
8		7	18	1		2			16
8.5		4	13			3			14
9		3	2						3
9.5	2	2							2
10	3								
10.5	1								
11	3						2		
11.5	2								
12	1						1		
12.5							1		
13							1		
13.5									
14							1		
14.5							3		
15							4		
15.5							3		
16								1	
16.5							1	2	
17							5		
17.5							2		
18							2	1	
18.5								1	
19									
19.5								1	
20							1		
20.5							1		
21									
21.5									
22								1	
Measured	12	28	203	3	3	6	28	7	53
Counted	0	0	69	0	0	0	0	0	0
TOTAL	12	28	272	3	3	6	28	7	53



Figure 3. Examples of fish sampled in Cobblestone Lake in 2021. Black bullhead (top-left), mix of fish including walleyes, black bullhead, and bluegills (top-right), largemouth bass (bottom-left) and a yellow perch (bottom-right)

MnDNR Stocking Records for the Last 10 Years (source: MnDNR)

Cobblestone (19045600)

Fish Stocked (<https://www.dnr.state.mn.us/lakefind/surveys.html#stocking>) by Species for the Last Ten Years

Year	Species	Size	Number	Pounds
2020	Walleye	adults	150	200.0
2019	Walleye	fingerlings	1,500	75.0
	Walleye	yearlings	29	12.5
2018	Walleye	fry	400,000	3.9
	Walleye	adults	49	66.5
	Walleye	yearlings	261	76.0
	Yellow Perch	adults	436	109.0
2017	Walleye	yearlings	71	31.0
	Walleye	fingerlings	17	8.5
	Walleye	adults	90	90.0
2015	Walleye	fingerlings	1,722	76.0
2013	Bluegill Sunfish	adults	897	39.0
	Walleye		10,540	9.2
2011	Walleye		289	0.2
	Walleye		9,886	4.0

Stocking Notes

- 1 - indicates fish purchased and stocked by private citizens and sporting groups.
- 2 - indicates fish purchased by the DNR for stocking.

Stocking Fish Sizes

Fry - Newly hatched fish that are ready to be stocked usually called "swim-ups". Walleye fry are 1/3 of an inch or around 8 mm.

Fingerling - Fingerlings are one to six months old and can range from a size of one to twelve inches depending on the species. Walleye fingerlings range from three to eight inches each fall.

Yearling - Yearling fish are at least one year old. A one-year-old fish can range from three to twenty inches depending on the species. Walleye yearlings average from six to twelve inches.

Adult - Adult fish are fish that have reached maturity. Depending on the species, maturity can be reached at two years of age. Walleye reach maturity between the ages of four and six years.

Appendix: Notification of MnDNR of Fish Survey

From: Steve McComas [mailto:mccomas@pclink.com]
Sent: Monday, September 27, 2021 9:26 AM
To: DeBates, TJ (DNR); Capt. Jason Peterson
Cc: 'Samantha Berger'
Subject: Fish surveys for Cobblestone Lake and Farquar Lake, Apple Valley, Dakota County

Hello all,

Blue Water Science will be conducting a fish survey in Cobblestone Lake (MN ID 19-045600) and Farquar Lake (MN ID 19002300), Dakota County, starting on Wednesday, September 29, 2021. We will set 4 trap nets in each lake. The nets will be monitored daily and removed on Friday (October 1, 2021) and all fish will be weighed, measured, and returned to the lake. The nets will be removed from the lake on Friday, October 1, 2021. The fish survey is sponsored by the City of Apple Valley with the objectives of characterizing the existing fish community structure and assessing potential impacts of fish on water quality.

This survey is being conducted under the permit number: 32508.

Thank you,

Steve McComas

BLUE WATER SCIENCE

550 South Snelling Avenue

St. Paul, MN 55116

651 690 9602

mccomas@pclink.com