

**Lake Name: Big Pine**

**Survey Type: Standard Survey**

**DOW Number: 01-0157-00**

**Survey ID Date: 08/26/2024**

**Lake Identification**

Alternate Lake Name: N/A  
Primary Lake Class ID: 23

DNR Sounding Map Number: C0018  
Alternate Lake Class ID: N/A

**Lake Location**

Primary County: Aitkin

Nearest Town: Cutler

**Legal Descriptions**

Lake Center: Township - 45N Range - 27W Section - 29  
PLS Section Lake Center: 4502729

**All Legal Descriptions:**

Aitkin County: Township - 45N Range - 27W Sections - 20, 21, 28, 29

**Area Office**

Area Name: Aitkin  
Region Name: Northeast

ORG Code: F211  
Region Number: 2

**Lake Access**

(Information based on Re-Survey dated 08/26/1996)

Station ID	Ownership	Public Use	Type	Location / Comments
AC - 1	DNR	Open to Public use	Concrete	The state owned public access; with cement log ramp; is on the south side of the lake in Section 29.

**Lake Characteristics**

Lake Area (planimetered acres): 614.00	GIS Shoreline Length (miles): 6.44
GIS Lake Area (acres): 638.03	Maximum Fetch (miles): 1.66
DOW Lake Area (acres): 646.00	Fetch Orientation (degrees): 225
Littoral Area (acres): 259.00	USGS Quad Map Number: M14d
Area in MN (acres): 638.03	USGS Quad 24K GIS Index: 2528
Maximum Depth (feet): 78.0	
Mean Depth (feet): N/A	

**Watershed Characteristics**

**Major Watershed**

Name: Rum River  
Watershed Number: 21  
Watershed size (acres): 1,013,790

**Minor Watershed**

Name: From Round L  
Watershed Number: 1  
Watershed size (acres): 7,025

**Surveys and Investigations**

**Initial Survey:** 07/30/1941.  
**Re-Survey:** 08/26/1996, 08/25/1970, 06/20/1956, 08/26/1946.  
**Population Assessment:** 08/29/2011, 08/27/2007, 08/26/2002, 08/26/1991, 08/18/1986, 08/25/1980.  
**Special Assessment:** 08/26/2013, 06/24/1977, 09/10/1974, 06/17/1969, 08/21/1964, 09/10/1956.  
**Standard Survey:** 08/30/2021, 08/29/2016.  
**Targeted Survey:** 07/06/2021.

**Dissolved Oxygen and Temperature Profile of Lake Water**

<u>Station ID</u>	<u>Sampling Date</u>	<u>Bottom Depth (Feet)</u>	<u>Sample Depth (Feet)</u>	<u>Water Temperature (°F)</u>	<u>Dissolved Oxygen (ppm)</u>
WQ - 1	08/26/2024	80.0	Surface	75.2	7.8
			3.0	75.2	7.9
			6.0	74.8	7.9
			9.0	74.3	7.9
			12.0	73.8	8.0
			15.0	73.2	7.8
			18.0	72.1	7.3
			21.0	70.7	4.9
			22.0	70.0	3.6
			23.0	68.7	1.5
			24.0	67.1	0.7
			25.0	66.0	0.4
			26.0	65.1	0.3
			27.0	63.3	0.3
			28.0	61.3	0.3
			29.0	59.9	0.3
			30.0	58.6	0.3
			31.0	56.8	0.2
			32.0	55.9	0.2
			33.0	55.4	0.2
			36.0	53.8	0.2
			39.0	52.7	0.2
			42.0	52.0	0.2
			45.0	51.4	0.2
			48.0	51.3	0.2
			51.0	51.1	0.2
			54.0	50.9	0.2
			57.0	50.7	0.2
			60.0	50.5	0.2
			63.0	50.4	0.2
			66.0	50.2	0.2
			69.0	50.2	0.2
			72.0	50.2	0.2
			75.0	50.2	0.2
			78.0	50.0	0.2

**Field Measurements of Water Quality**

<u>Station ID</u>	<u>Sampling Date</u>	<u>Sample Depth (Feet)</u>	<u>Secchi Depth (Feet)</u>	<u>Field pH</u>	<u>Alkalinity (ppm)</u>	<u>Water Color</u>	<u>Color Cause</u>
WQ - 1	08/26/2024	Surface	22.5	N/A	N/A	N/A	N/A

**Net Catch Summary by Numbers for GN**

Standard gill net sets

**Number of Sets:** 12  
**First Set Date:** 08/26/2024  
**Last Lift Date:** 08/29/2024  
**Target Species:** N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 23 <sup>1</sup>		
				25%	50%	75%
BLC	Black Crappie	5	0.42	0.33	0.78	1.67
BLG	Bluegill	40	3.33	N/A	N/A	N/A
BRB	Brown Bullhead	1	0.08	0.25	0.67	1.83
GSF	Green Sunfish	1	0.08	0.25	0.33	0.92
HSF	Hybrid Sunfish	23	1.92	N/A	N/A	N/A
LMB	Largemouth Bass	30	2.50	0.50	0.79	1.67
NOP	Northern Pike	27	2.25	2.19	5.00	8.70
PMK	Pumpkinseed	9	0.75	N/A	N/A	N/A
RKB	Rock Bass	33	2.75	0.67	2.00	4.45
WAE	Walleye	13	1.08	1.00	2.37	5.00
YEB	Yellow Bullhead	6	0.50	1.00	2.58	6.00
YEP	Yellow Perch	5	0.42	1.48	4.55	13.81
Total Fish/Set:			16.08	<sup>1</sup> Quartiles for Number Per Set		

**Net Catch Summary by Weight for GN**

Standard gill net sets

Abbr	Species	Total Weight (Pounds)	Pounds Per Set	Mean Weight <sup>2</sup>	Quartiles for Lake Class 23 <sup>1</sup>		
					25%	50%	75%
BLC	Black Crappie	2.61	0.22	0.52	0.20	0.30	0.50
BLG	Bluegill	3.24	0.27	0.08	N/A	N/A	N/A
BRB	Brown Bullhead	0.92	0.08	0.92	0.50	0.76	1.15
GSF	Green Sunfish	0.05	0.00	0.05	N/A	N/A	N/A
HSF	Hybrid Sunfish	5.45	0.45	0.24	N/A	N/A	N/A
LMB	Largemouth Bass	22.72	1.89	0.76	0.55	0.78	1.15
NOP	Northern Pike	67.79	5.65	2.51	1.55	2.21	3.21
PMK	Pumpkinseed	1.31	0.11	0.15	N/A	N/A	N/A
RKB	Rock Bass	12.61	1.05	0.38	0.23	0.30	0.44
WAE	Walleye	22.70	1.89	1.75	1.23	1.81	2.95
YEB	Yellow Bullhead	5.27	0.44	0.88	0.44	0.59	0.74
YEP	Yellow Perch	0.82	0.07	0.16	0.10	0.13	0.20
Total Pounds Fish/Set:			12.12	<sup>1</sup> Quartiles for Mean Weight			

<sup>2</sup> Mean Weights are based on measured fish counts only.

**Length Frequency Distribution for GN**

**Standard gill net sets**

(Field work conducted between 08/26/2024 and 08/29/2024)

	<u>BLC</u>	<u>BLG</u>	<u>BRB</u>	<u>GSF</u>	<u>HSF</u>	<u>LMB</u>	<u>NOP</u>	<u>PMK</u>	<u>RKB</u>	<u>WAE</u>	<u>YEB</u>	<u>YEP</u>
< 3.00	-	-	-	-	-	-	-	-	-	-	-	-
3.00 - 3.49	-	-	-	-	-	-	-	-	-	-	-	-
3.50 - 3.99	-	3	-	-	1	-	-	1	-	-	-	-
4.00 - 4.49	-	17	-	1	3	-	-	3	-	-	-	-
4.50 - 4.99	1	5	-	-	3	-	-	1	1	-	-	-
5.00 - 5.49	-	10	-	-	1	-	-	1	7	-	-	-
5.50 - 5.99	-	3	-	-	2	1	-	-	2	-	-	-
6.00 - 6.49	-	1	-	-	1	1	-	-	-	-	-	-
6.50 - 6.99	1	-	-	-	3	-	-	1	2	-	-	4
7.00 - 7.49	-	-	-	-	4	1	-	2	2	-	-	-
7.50 - 7.99	-	1	-	-	3	-	-	-	3	-	-	-
8.00 - 8.49	-	-	-	-	2	2	-	-	4	-	-	1
8.50 - 8.99	-	-	-	-	-	2	-	-	6	-	-	-
9.00 - 9.49	-	-	-	-	-	2	-	-	3	-	-	-
9.50 - 9.99	-	-	-	-	-	3	-	-	1	-	-	-
10.00 - 10.49	1	-	-	-	-	3	-	-	1	-	2	-
10.50 - 10.99	-	-	-	-	-	2	-	-	1	-	-	-
11.00 - 11.49	1	-	-	-	-	2	-	-	-	-	1	-
11.50 - 11.99	1	-	-	-	-	3	-	-	-	-	1	-
12.00 - 12.99	-	-	1	-	-	1	-	-	-	1	1	-
13.00 - 13.99	-	-	-	-	-	3	-	-	-	1	1	-
14.00 - 14.99	-	-	-	-	-	3	-	-	-	2	-	-
15.00 - 15.99	-	-	-	-	-	1	-	-	-	-	-	-
16.00 - 16.99	-	-	-	-	-	-	2	-	-	-	-	-
17.00 - 17.99	-	-	-	-	-	-	1	-	-	3	-	-
18.00 - 18.99	-	-	-	-	-	-	3	-	-	3	-	-
19.00 - 19.99	-	-	-	-	-	-	2	-	-	-	-	-
20.00 - 20.99	-	-	-	-	-	-	2	-	-	2	-	-
21.00 - 21.99	-	-	-	-	-	-	4	-	-	1	-	-
22.00 - 22.99	-	-	-	-	-	-	3	-	-	-	-	-
23.00 - 23.99	-	-	-	-	-	-	2	-	-	-	-	-
24.00 - 24.99	-	-	-	-	-	-	-	-	-	-	-	-
25.00 - 25.99	-	-	-	-	-	-	2	-	-	-	-	-
26.00 - 26.99	-	-	-	-	-	-	1	-	-	-	-	-
27.00 - 27.99	-	-	-	-	-	-	2	-	-	-	-	-
28.00 - 28.99	-	-	-	-	-	-	-	-	-	-	-	-
29.00 - 29.99	-	-	-	-	-	-	3	-	-	-	-	-
30.00 - 30.99	-	-	-	-	-	-	-	-	-	-	-	-
31.00 - 31.99	-	-	-	-	-	-	-	-	-	-	-	-
32.00 - 32.99	-	-	-	-	-	-	-	-	-	-	-	-
33.00 - 33.99	-	-	-	-	-	-	-	-	-	-	-	-
34.00 - 34.99	-	-	-	-	-	-	-	-	-	-	-	-
35.00 - 35.99	-	-	-	-	-	-	-	-	-	-	-	-
= > 36.00	-	-	-	-	-	-	-	-	-	-	-	-

	<u>BLC</u>	<u>BLG</u>	<u>BRB</u>	<u>GSF</u>	<u>HSF</u>	<u>LMB</u>	<u>NOP</u>	<u>PMK</u>	<u>RKB</u>	<u>WAE</u>	<u>YEB</u>	<u>YEP</u>
Total	5	40	1	1	23	30	27	9	33	13	6	5
Min. Length	4.72	3.94	12.13	4.02	3.70	5.71	16.06	3.86	4.92	12.68	10.24	6.54
Max. Length	11.50	7.72	12.13	4.02	8.27	15.59	29.76	7.36	10.94	21.38	13.39	8.39
Mean Length	8.97	4.74	12.13	4.02	6.20	10.78	22.48	5.23	7.52	17.40	11.58	7.08
# Measured	5	40	1	1	23	30	27	9	33	13	6	5
No Lengths for	0	0	0	0	0	0	0	0	0	0	0	0

**Note:** Unless all fish were measured in the catch, totals shown for some length-frequency distributions may differ from the total number of fish in the catch, due to rounding of fractions used in the estimation of length frequency from a subsample of measured fish.

Survey Attachments

Attachment #1: Map

Title: GN & WQ locations

File Name:

BigPine.SD.GNonly.2024.j  
pg

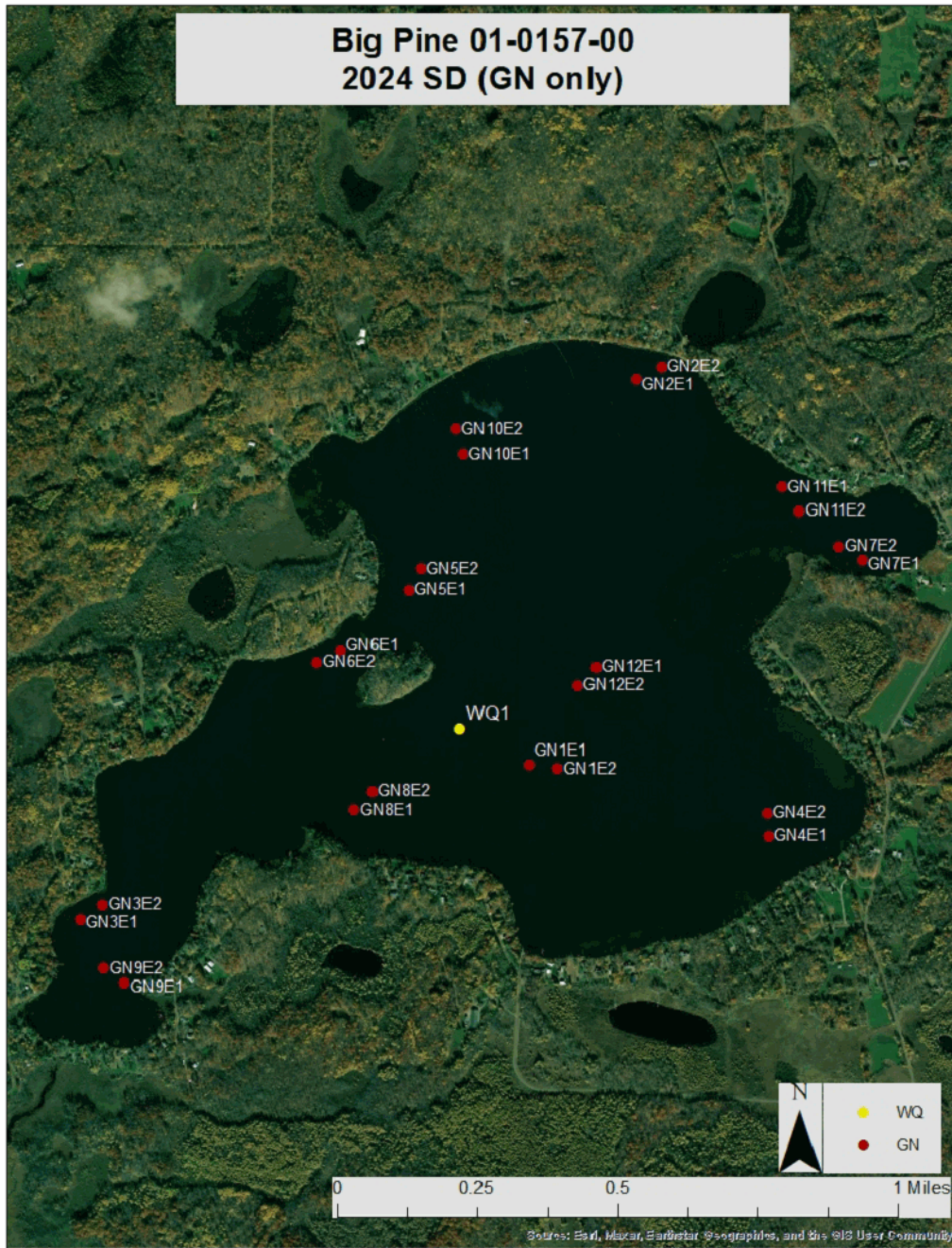
UTM Easting: -

UTM Northing: -

Date: 08/26/2024

Time: 1:13 pm

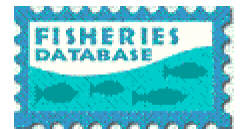
Notes: -



**Approval Dates And Notices**

Date Approved By Aitkin Area Fisheries Supervisor: \_\_\_\_\_  
Date Approved By Northeast Region Fisheries Manager: \_\_\_\_\_

**This DRAFT VERSION of the Lake Survey Report contains preliminary data (as of 08/30/2024), and is therefore subject to change at any time.**



Minnesota Department of Natural Resources

By accepting the data in this report, the user agrees the data will be used for personal benefit and not for profit. Any other uses or publication of the data needs the consent of the Department. The Minnesota Department of Natural Resources assumes no responsibility for actual or consequential damage incurred as a result of any user's reliance on the data.

---

Lake Survey Report revision: 20230207-RJE. Data Date: 08/30/2024 at 8:30 am .



# REPORT OVERVIEW - FOR OFFICE USE ONLY

(This page is not part of the Lake Survey Report and should be discarded)

Lake Name: Big Pine

Survey Type: Standard Survey

DOW Number: 01-0157-00

Survey ID Date: 08/26/2024

Survey Status: Proposed

The following 25 (of 34) report components are not included in this Lake Survey Report:

1. Current Water Level
2. Benchmark And Gauge Descriptions / Locations
3. Water Level History<sup>1</sup>
4. Water Level History - Readings\*
5. Water Level History - Station Summary\*
6. Lake Inlets
7. Additional Inlet Information
8. Lake Outlets
9. Additional Outlet Information
10. Water Control Structure (Dam)
11. Surrounding Watershed Characteristics, Shoreline Characteristics, and Riparian Landscape Observations<sup>2</sup>
12. Resorts And Campgrounds
13. Fish Spawning Conditions
14. Erosion And Pollution
15. Fish Diseases And Parasites
16. Aquatic Vegetation And Shoalwater Substrates
17. Water Quality (Winter Observations) (added to revision 01/21/2010)
18. Laboratory Analysis Of Water Chemistry
19. Zooplankton Sampling (added to revision 20221130)
20. Catch Summary (Pre-1993 Format) (added to revision 20201001)
21. Length At Capture With Last Incremental Length\*
22. Back-Calculated Lengths
23. Age Class Frequency Distributions
24. Other Species (added to revision 03/24/2009)
25. Status Of Fishery And Field Notes

<sup>1</sup> Water Level History report: This data has not yet been migrated into the Fisheries LSM database. On 01/08/2009, two additional Water Level History report components (Readings and Station Summary) were added.

<sup>2</sup> Effective 03/25/2014, the Surrounding Watershed Characteristics, Shoreline Characteristics, and Riparian Landscape Observations report component was modified to be included in the Lake Survey report if it did not include any Watershed and Shoreline characteristics and only consisted of Riparian Landscape Observations.

\* Length At Capture With Last Incremental Length report: The following criteria must be met for a report to be generated:

1. The fish species must have an assigned body scale constant.
2. Fish must have an "official" age assigned.
3. Fish must have a digitized measurement marked for back calculation use.

**Note: The data source for Length and Age Class Frequency Distribution tables is updated twice daily - once at noon and once overnight. Any changes to the data made before noon on 08/30/2024 may not be reflected in the Distribution tables until after 12:30 pm on 08/30/2024.**

**FOR OFFICE USE ONLY:** As of revision 20150622, this page is automatically suppressed on signed versions of this report (area supervisor, region manager, research biologist, research supervisor, program staff, or program manager signed).