

Lake Name: Kansas
DOW Number: 83-0036-00

Survey Type: Standard Survey
Survey ID Date: 06/28/2021

Lake Identification

Alternate Lake Name: N/A
Primary Lake Class ID: 43

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

Lake Location

Primary County: Watonwan

Nearest Town: Saint James

Legal Descriptions

Lake Center: Township - 105N Range - 32W Section - 8
PLS Section Lake Center: 10503208

All Legal Descriptions:

Watonwan County: Township - 105N Range - 32W Sections - 4, 5, 8, 9

Area Office

Area Name: Windom
Region Name: Southern

ORG Code: F418
Region Number: 4

Lake Access

(Information based on Re-Survey dated 07/19/1993)

Station ID	Ownership	Public Use	Type	Location / Comments
AC - 1	County	Open to Public use	Concrete	See map - T105N; R32W; S8 - Access on north side of lake.

Lake Characteristics

Lake Area (planimetered acres): 398.00	GIS Shoreline Length (miles): 3.89
GIS Lake Area (acres): 402.87	Maximum Fetch (miles): 1.10
DOW Lake Area (acres): 388.00	Fetch Orientation (degrees): 45
Littoral Area (acres): 402.87	USGS Quad Map Number: W11b
Area in MN (acres): 402.87	USGS Quad 24K GIS Index: 4421
Maximum Depth (feet): 7.0	
Mean Depth (feet): 5.0	

Watershed Characteristics

Major Watershed

Name: Watonwan River
Watershed Number: 31
Watershed size (acres): 558,963

Minor Watershed

Name: St James Cr
Watershed Number: 15
Watershed size (acres): 12,166

Surveys and Investigations

Re-Survey: 07/16/2001, 07/19/1993, 07/23/1984.
Population Assessment: 07/15/2013, 07/13/2009, 07/11/2005, 07/21/1997, 07/17/1989.
Special Assessment: 07/15/2013, 09/21/1999, 10/30/1997, 08/27/1948.
Winter Kill Assessment: 05/06/2008.
Dissolved Oxygen Check: 02/11/2016, 02/24/2015, 01/03/2014, 12/28/2012, 02/14/2012, 12/29/2010, 01/12/2010.
Standard Survey: 06/28/2021, 07/09/2017.
Targeted Survey: 09/01/2020, 02/03/2020, 09/10/2019, 01/10/2019, 10/01/2018, 01/18/2018.

Current Water Level

Station ID	Date	Level	Reading (feet)	Reading Type
BM - 1	06/29/2021	Low	-2.00	Above or below Benchmark

Benchmark and Gauge Descriptions / Locations

Station ID	Location Description
BM - 1	Below top of center I beam of outlet dam (Hodgins, 2013).

Water Level History - Readings

Station ID	Date	Level	Reading (feet)	Reading Type
BM - 1	06/29/2021	Low	-2.00	Above or below Benchmark
	07/16/2013	Normal	-3.55	Above or below Benchmark
	07/16/2009	N/A	-3.50	Above or below Benchmark
GA - 1	07/12/2017	Normal	4.30	Direct Gauge Reading

Water Level History - Station Summary

Station ID	Minimum Level		Maximum Level		Range (feet)	Average Level (feet)	Reading Type (and number of readings)
	Feet	Date	Feet	Date			
BM - 1	-3.55	07/16/2013	-2.00	06/29/2021	1.55	-3.02	Above or below Benchmark (3)
GA - 1	4.30	07/12/2017	4.30	07/12/2017	0.00	4.30	Direct Gauge Reading (1)

Dissolved Oxygen and Temperature Profile of Lake Water

Station ID	Sampling Date	Bottom Depth (Feet)	Sample Depth (Feet)	Water		Dissolved Oxygen (ppm)
				Temperature (°F)		
WQ - 1	06/28/2021	6.5	Surface	78.1	8.9	
			1.0	77.5	8.9	
			2.0	75.4	7.5	
			3.0	74.8	7.2	
			4.0	74.1	6.4	
			5.0	73.9	6.1	
			6.0	73.9	5.6	

Field Measurements of Water Quality

Station ID	Sampling Date	Sample Depth (Feet)	Secchi Depth (Feet)	Field pH	Alkalinity (ppm)	Water Color	
						Water Color	Color Cause
WQ - 1	06/28/2021	Surface	0.7	8.30	280	Brown Grn	Algae

Net Catch Summary by Numbers for GN

Standard gill net sets

Number of Sets: 2
 First Set Date: 06/28/2021
 Last Lift Date: 06/30/2021
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 43*		
				25%	50%	75%
BIB	Bigmouth Buffalo	1	0.50	0.75	2.58	6.96
BLB	Black Bullhead	219	109.50	30.34	75.58	150.62
BLC	Black Crappie	111	55.50	1.41	3.71	13.75
CAP	Common Carp	36	18.00	1.00	3.33	13.75
FRD	Freshwater Drum	97	48.50	0.50	2.56	8.33
NOP	Northern Pike	3	1.50	1.08	3.00	8.00
WAE	Walleye	107	53.50	2.28	6.83	18.06
WTS	White Sucker	1	0.50	0.81	2.33	6.50
YEP	Yellow Perch	89	44.50	2.65	8.00	25.00
Total Fish/Set:			332.00	* 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	Quartiles for Lake Class 43*		
					25%	50%	75%
BIB	Bigmouth Buffalo	8.49	4.24	8.49	N/A	N/A	N/A
BLB	Black Bullhead	47.17	23.59	0.22	0.17	0.26	0.39
BLC	Black Crappie	10.89	5.45	0.10	0.16	0.25	0.35
CAP	Common Carp	34.79	17.40	0.97	0.81	1.98	3.70
FRD	Freshwater Drum	14.39	7.19	0.15	0.40	0.82	1.67
NOP	Northern Pike	13.62	6.81	4.54	1.82	2.50	3.35
WAE	Walleye	221.72	110.86	2.07	1.01	1.53	2.30
WTS	White Sucker	0.62	0.31	0.62	0.93	1.58	2.02
YEP	Yellow Perch	14.97	7.48	0.17	0.13	0.21	0.31
Total Pounds Fish/Set:			183.33	* Quartiles for Mean Weight			

Net Catch Summary by Numbers for TN

Standard 3/4-in mesh, double frame trap net sets

Number of Sets: 9
 First Set Date: 06/28/2021
 Last Lift Date: 07/01/2021
 Target Species: N/A

Abbr	Species	Total Fish	Number Per Set	Quartiles for Lake Class 43*		
				25%	50%	75%
BIB	Bigmouth Buffalo	5	0.56	0.17	0.38	1.04
BLB	Black Bullhead	180	20.00	11.50	42.00	132.61
BLC	Black Crappie	65	7.22	1.17	4.88	20.50
BLG	Bluegill	8	0.89	1.17	3.89	20.00
CAP	Common Carp	19	2.11	1.00	2.44	5.51
FRD	Freshwater Drum	85	9.44	0.23	0.92	3.25
GSF	Green Sunfish	2	0.22	0.15	0.25	1.94
NOP	Northern Pike	2	0.22	N/A	N/A	N/A
OSS	Orangespotted Sunfish	5	0.56	N/A	N/A	N/A
WAE	Walleye	1	0.11	0.50	1.33	2.95
WTS	White Sucker	1	0.11	0.34	0.88	2.58
YEB	Yellow Bullhead	1	0.11	0.50	1.13	2.50
YEP	Yellow Perch	39	4.33	0.33	1.37	3.76
Total Fish/Set:			45.89	* Quartiles for Number Per Set		

Net Catch Summary by Weight for TN

Standard 3/4-in mesh, double frame trap net sets

Abbr	Species	Total Weight (Pounds)	Pounds Per Set	Mean Weight	Quartiles for Lake Class 43*		
					25%	50%	75%
BIB	Bigmouth Buffalo	25.85	2.87	5.17	2.56	3.75	5.83
BLB	Black Bullhead	151.99	16.89	0.84	0.18	0.28	0.40
BLC	Black Crappie	10.34	1.15	0.16	0.22	0.34	0.50
BLG	Bluegill	2.73	0.30	0.34	0.13	0.24	0.39
CAP	Common Carp	10.82	1.20	0.57	1.42	2.92	4.58
FRD	Freshwater Drum	23.53	2.61	0.28	0.28	0.60	0.95
GSF	Green Sunfish	0.25	0.03	0.12	0.09	0.11	0.24
NOP	Northern Pike	6.17	0.69	3.09	N/A	N/A	N/A
OSS	Orangespotted Sunfish	0.12	0.01	0.02	N/A	N/A	N/A
WAE	Walleye	2.43	0.27	2.43	0.82	1.44	2.28
WTS	White Sucker	1.54	0.17	1.54	1.05	1.47	2.04
YEB	Yellow Bullhead	0.81	0.09	0.81	0.31	0.48	0.67
YEP	Yellow Perch	6.52	0.72	0.17	0.11	0.18	0.30
Total Pounds Fish/Set:			27.01	* Quartiles for Mean Weight			

Length Frequency Distribution for GN

Standard gill net sets

(Field work conducted between 06/28/2021 and 06/30/2021)

	<u>BIB</u>	<u>BLB</u>	<u>BLC</u>	<u>CAP</u>	<u>FRD</u>	<u>NOP</u>	<u>WAE</u>	<u>WTS</u>	<u>YEP</u>
< 3.00	-	-	-	-	-	-	-	-	-
3.00 - 3.49	-	-	-	-	-	-	-	-	-
3.50 - 3.99	-	-	-	-	-	-	-	-	-
4.00 - 4.49	-	9	22	-	-	-	-	-	-
4.50 - 4.99	-	82	11	-	-	-	-	-	-
5.00 - 5.49	-	47	8	-	-	-	-	-	-
5.50 - 5.99	-	17	43	-	-	-	-	-	2
6.00 - 6.49	-	10	16	-	-	-	-	-	12
6.50 - 6.99	-	5	8	-	7	-	-	-	21
7.00 - 7.49	-	1	1	-	50	-	-	-	22
7.50 - 7.99	-	2	-	-	34	-	-	-	12
8.00 - 8.49	-	3	-	-	6	-	-	-	9
8.50 - 8.99	-	1	-	2	-	-	-	-	4
9.00 - 9.49	-	-	-	6	1	-	-	-	4
9.50 - 9.99	-	-	-	1	-	-	-	-	2
10.00 - 10.49	-	2	-	2	-	-	-	-	-
10.50 - 10.99	-	8	-	4	-	-	-	-	-
11.00 - 11.49	-	15	-	5	-	-	1	1	-
11.50 - 11.99	-	10	1	5	-	-	-	-	-
12.00 - 12.99	-	6	-	8	-	-	1	-	-
13.00 - 13.99	-	-	-	1	-	-	-	-	-
14.00 - 14.99	-	-	-	-	-	-	2	-	-
15.00 - 15.99	-	-	-	-	-	-	20	-	-
16.00 - 16.99	-	-	-	-	-	-	29	-	-
17.00 - 17.99	-	-	-	-	-	-	9	-	-
18.00 - 18.99	-	-	-	-	-	-	17	-	-
19.00 - 19.99	-	-	-	-	-	-	12	-	-
20.00 - 20.99	-	-	-	1	-	-	10	-	-
21.00 - 21.99	-	-	-	-	-	-	3	-	-
22.00 - 22.99	-	-	-	-	-	1	2	-	-
23.00 - 23.99	-	-	-	-	-	-	1	-	-
24.00 - 24.99	1	-	-	-	-	-	-	-	-
25.00 - 25.99	-	-	-	1	-	-	-	-	-
26.00 - 26.99	-	-	-	-	-	-	-	-	-
27.00 - 27.99	-	-	-	-	-	-	-	-	-
28.00 - 28.99	-	-	-	-	-	1	-	-	-
29.00 - 29.99	-	-	-	-	-	1	-	-	-
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>BIB</u>	<u>BLB</u>	<u>BLC</u>	<u>CAP</u>	<u>FRD</u>	<u>NOP</u>	<u>WAE</u>	<u>WTS</u>	<u>YEP</u>
Total	1	218	110	36	98	3	107	1	88
Min. Length	24.06	4.29	4.02	8.90	6.54	22.20	11.02	11.22	5.98
Max. Length	24.06	12.64	11.89	25.35	9.09	29.37	23.82	11.22	9.80
Mean Length	24.06	7.64	5.57	11.64	7.47	26.68	17.63	11.22	7.37
# Measured	1	115	97	36	67	3	105	1	84
No Lengths for	0	104	14	0	30	0	2	0	5

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

Length Frequency Distribution for TN

Standard 3/4-in mesh, double frame trap net sets

(Field work conducted between 06/28/2021 and 07/01/2021)

	<u>BIB</u>	<u>BLB</u>	<u>BLC</u>	<u>BLG</u>	<u>CAP</u>	<u>FRD</u>	<u>GSF</u>	<u>NOP</u>	<u>OSS</u>	<u>WAE</u>	<u>WTS</u>	<u>YEB</u>	<u>YEP</u>
< 3.00	-	-	-	-	-	-	-	-	-	-	-	-	-
3.00 - 3.49	-	-	-	1	-	-	-	-	4	-	-	-	-
3.50 - 3.99	-	-	-	1	-	-	-	-	1	-	-	-	-
4.00 - 4.49	-	-	-	-	-	-	-	-	-	-	-	-	-
4.50 - 4.99	-	5	1	-	-	-	1	-	-	-	-	-	-
5.00 - 5.49	-	4	4	-	-	-	-	-	-	-	-	-	-
5.50 - 5.99	-	5	9	-	-	1	1	-	-	-	-	-	5
6.00 - 6.49	-	-	33	1	-	5	-	-	-	-	-	-	6
6.50 - 6.99	-	2	13	-	-	6	-	-	-	-	-	-	3
7.00 - 7.49	-	-	2	1	-	40	-	-	-	-	-	-	11
7.50 - 7.99	-	2	-	1	-	26	-	-	-	-	-	-	2
8.00 - 8.49	-	1	-	-	2	4	-	-	-	-	-	-	4
8.50 - 8.99	-	-	-	3	1	-	-	-	-	-	-	-	3
9.00 - 9.49	-	-	-	-	1	-	-	-	-	-	-	-	2
9.50 - 9.99	-	-	1	-	2	-	-	-	-	-	-	-	-
10.00 - 10.49	-	1	-	-	4	-	-	-	-	-	-	-	1
10.50 - 10.99	-	9	1	-	2	-	-	-	-	-	-	-	1
11.00 - 11.49	-	45	-	-	6	-	-	-	-	-	-	1	-
11.50 - 11.99	-	59	1	-	1	-	-	-	-	-	-	-	-
12.00 - 12.99	-	46	-	-	-	-	-	-	-	-	-	-	-
13.00 - 13.99	-	2	-	-	-	-	-	-	-	-	-	-	-
14.00 - 14.99	-	1	-	-	-	-	-	-	-	-	-	-	-
15.00 - 15.99	-	-	-	-	-	-	-	-	-	-	-	-	-
16.00 - 16.99	-	-	-	-	-	-	-	-	-	-	1	-	-
17.00 - 17.99	-	-	-	-	-	-	-	-	-	-	-	-	-
18.00 - 18.99	1	-	-	-	-	3	-	-	-	-	-	-	-
19.00 - 19.99	-	-	-	-	-	-	-	1	-	1	-	-	-
20.00 - 20.99	3	-	-	-	-	-	-	-	-	-	-	-	-
21.00 - 21.99	-	-	-	-	-	-	-	-	-	-	-	-	-
22.00 - 22.99	1	-	-	-	-	-	-	-	-	-	-	-	-
23.00 - 23.99	-	-	-	-	-	-	-	-	-	-	-	-	-
24.00 - 24.99	-	-	-	-	-	-	-	-	-	-	-	-	-
25.00 - 25.99	-	-	-	-	-	-	-	1	-	-	-	-	-
26.00 - 26.99	-	-	-	-	-	-	-	-	-	-	-	-	-
27.00 - 27.99	-	-	-	-	-	-	-	-	-	-	-	-	-
28.00 - 28.99	-	-	-	-	-	-	-	-	-	-	-	-	-
29.00 - 29.99	-	-	-	-	-	-	-	-	-	-	-	-	-
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>BIB</u>	<u>BLB</u>	<u>BLC</u>	<u>BLG</u>	<u>CAP</u>	<u>FRD</u>	<u>GSF</u>	<u>NOP</u>	<u>OSS</u>	<u>WAE</u>	<u>WTS</u>	<u>YEB</u>	<u>YEP</u>
Total	5	182	65	8	19	85	2	2	5	1	1	1	38
Min. Length	18.62	4.65	4.65	3.39	8.23	5.75	4.76	19.76	3.03	19.69	16.10	11.42	5.51
Max. Length	22.91	14.09	11.81	8.98	11.81	18.94	5.55	25.28	3.62	19.69	16.10	11.42	10.94
Mean Length	20.55	11.03	6.42	6.82	10.34	7.79	5.16	22.52	3.27	19.69	16.10	11.42	7.43
# Measured	5	117	64	8	19	73	2	2	4	1	1	1	36
No Lengths for	0	63	1	0	0	12	0	0	1	0	0	0	3

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

Other Species

Gear Type (1)	Other Species (Gender) (2)	Total Num	Number Measured	Length (inches) Min - Mean - Max	Number Weighed	Weight (pounds) Min - Mean - Max
TN	Painted Turtle	30	0	N/A	0	N/A
	Snapping Turtle	11	11	9.45 - 13.81 - 16.54	0	N/A

(1) Key to sampling gear abbreviations:

TN = Standard 3/4-in mesh, double frame trap net sets

(2) Gender: If identified and reported.

Approval Dates And Notices

Date Approved By Windom Area Fisheries Supervisor: _____

Date Approved By Southern Region Fisheries Manager: _____

This DRAFT VERSION of the Lake Survey Report contains preliminary data (as of 07/01/2021), 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: 20210209-RJE. Data Date: 07/01/2021 at 3:29 pm .

REPORT OVERVIEW - FOR OFFICE USE ONLY

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

Lake Name: Kansas

Survey Type: Standard Survey

DOW Number: 83-0036-00

Survey ID Date: 06/28/2021

Survey Status: Field Work Complete

The following 20 (of 33) report components are not included in this Lake Survey Report:

1. Water Level History¹
2. Lake Inlets
3. Additional Inlet Information
4. Lake Outlets
5. Additional Outlet Information
6. Water Control Structure (Dam)
7. Surrounding Watershed Characteristics, Shoreline Characteristics, and Riparian Landscape Observations²
8. Resorts And Campgrounds
9. Fish Spawning Conditions
10. Erosion And Pollution
11. Fish Diseases And Parasites
12. Aquatic Vegetation And Shoalwater Substrates
13. Water Quality (Winter Observations) (added to revision 01/21/2010)
14. Laboratory Analysis Of Water Chemistry
15. Catch Summary (Pre-1993 Format) (added to revision 20201001)
16. Length At Capture With Last Incremental Length*
17. Back-Calculated Lengths
18. Age Class Frequency Distributions
19. Status Of Fishery And Field Notes
20. Survey Attachments (added to revision 20150622)

¹ 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.

² 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 after noon on 07/01/2021 may not be reflected in the Distribution tables until 07/02/2021.

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