

544ms
11/20/24

gauge moved 6/20/24
3.0
2.02

8.06-8.07

Jack 2.06
3.00

6/20/2024

2.02

Wisconsin DNR – Lake Level Monitoring Staff Gauge Survey Data Sheet

Lake Information

Lake Name

Vincent Lake

County

Polk

Data Collectors

Primary Data Collector

Email

Phone No.

Additional Data Collector(s)

Reference Mark and Staff Gauge Information

Reference Mark #1 (RM1)

Reference Mark Type:

NW Cor. concrete patio

Latitude:

Longitude:

Mean Sea Level Yes ☐ No ☐

Elevation: 1195.85 Photograph ☐

Location Description:

Reference Mark #2 (RM2)

Reference Mark Type:

High point on boulder

Latitude:

Longitude:

Mean Sea Level Yes ☐ No ☐

Elevation: 1191.07 Photograph ☐

Location Description:

Reference Mark #3 (RM3)

Reference Mark Type:

Latitude:

Longitude:

Mean Sea Level Yes ☐ No ☐

Elevation: Photograph ☐

Location Description:

Owner readings from April to June 20th

Staff Gauge

Original Gauge Reading 3.04 Elev. = 1189.22

Moved Gauge

Latitude:

Longitude:

Mean Sea Level Yes ☐ No ☐

Elevation: 1190.22 Photograph ☐

Location Description:

Date:

Time:

AM/PM

Check one: Install ☐

Midseason ☐

Removal ☐

Survey Stage 1 - Instrument at first height*

	Reference Mark 1		Fore sight (FS1)	Calculated Elevation (CE1)	Water FS1 7.83 Elev. = 1188.56 - 3 = 1185.56 - 2.02 = 1186.54
Given Elevation (GE _{RM1})	1195.85				
Back sight 1 (BS1)	+ 0.54				
Height of Instrument (HI1)	1196.39	- Staff Gauge	6.17	= 1190.22	
	HI1	- Ref Mark 2	5.32	= 1191.07	
	HI1	- Ref Mark 3		=	

Survey Stage 2 – Reset instrument at different height

	Staff Gauge		Fore sight (FS2)	Calculated Elevation (CE2)	
Calculated Elevation1	1190.22				
Back sight 2 (BS2)	+ 6.01				
Height of Instrument (HI2)	1196.23	- Ref Mark 1	0.38	= 1195.85	
	HI2	- Ref Mark 2	5.16	= 1191.07	
	HI2	- Ref Mark 3		=	

Quality Assurance Checks:

Reference Mark 1:

BS1 0.54

FS1 6.17

GE = CE2

BS2 + 6.01

FS2 + 0.38

6.55

= 6.55

QA Equations:

BS1 + BS2 = FS1_{SG} + FS2_{RM1}

GE_{RM1} = CE2_{RM1}

EGAD # 3200-2018-45

Enter 6/20/24 2.02

marked yes



Wisconsin DNR – Lake Level Monitoring Staff Gauge Survey Data Sheet

Revised 2016

Lake Level Reading: 2.02 ft

Site Diagram (including Staff Gauge and Reference Marks)



Notes

1. What is the main purpose of the study?
 2. What are the research objectives?
 3. What is the research methodology?
 4. What are the results of the study?
 5. What are the conclusions and recommendations?

Data Management

Survey Data uploaded to SWIMS? Yes ☐ No ☐ Date: _____ Name: _____

Data Sheet scan uploaded to SWIMS? Yes ☐ No ☐ **Date:** _____ **Name:** _____

Equipment Maintenance

Replace bolts/screws on staff gauge? Yes ☐ No ☐ Date: _____ Name: _____

Replace gauge plate on staff gauge? Yes ☐ No ☐ Date: _____ Name: _____

Replace post or wooden board? Yes ☐ No ☐ Date: _____ Name: _____



SWW
11/26/24

8:06-8:07

1.44

Wisconsin DNR – Lake Level Monitoring Staff Gauge Survey Data Sheet

9/26/2024

Lake Information

Lake Name

Vincent Lake

County

Polk

Data Collectors

Primary Data Collector

Email

Phone No.

Additional Data Collector(s)

Reference Mark and Staff Gauge Information

Reference Mark #1 (RM1)

Reference Mark Type: NW Cor. concrete patio

Latitude: Longitude: Mean Sea Level Yes ☐ No ☐ Elevation: 1195.85 Photograph ☐

Location Description:

Reference Mark #2 (RM2)

Reference Mark Type: High point on boulder

Latitude: Longitude: Mean Sea Level Yes ☐ No ☐ Elevation: 1191.07 Photograph ☐

Location Description:

Reference Mark #3 (RM3)

Reference Mark Type:

Latitude: Longitude: Mean Sea Level Yes ☐ No ☐ Elevation: Photograph ☐

Location Description:

Staff Gauge

Latitude: Longitude: Mean Sea Level Yes ☐ No ☐ Elevation: 1190.22 Photograph ☐

Location Description:

Date: Time: AM/PM

Check one: Install ☐ Midseason ☐ Removal ☐

Survey Stage 1 - Instrument at first height*

	Reference Mark 1		Fore sight (FS1)	Calculated Elevation (CE1)	Water FS1 9.43 Elev. = 1186.97 - 1.44
Given Elevation (GE _{RM1})	1195.85				
Back sight 1 (BS1)	+ 0.55				
Height of Instrument (HI1)	1196.40	- Staff Gauge	6.18	= 1190.22	
	HI1	- Ref Mark 2	5.33	= 1191.07	
	HI1	- Ref Mark 3		=	

Survey Equations:

HI1 = GE_{RM1} + BS1

CE1 = HI1 - FS1

Survey Stage 2 – Reset instrument at different height

	Staff Gauge		Fore sight (FS2)	Calculated Elevation (CE2)	
Calculated Elevation1	1190.22				
Back sight 2 (BS2)	+ 6.22				
Height of Instrument (HI2)	1196.44	- Ref Mark 1	0.59	= 1195.85	
	HI2	- Ref Mark 2	5.36	= 1191.08	
	HI2	- Ref Mark 3		=	

Survey Equations:

HI2 = CE_{SG1} + BS2

CE2 = HI2 - FS2

Quality Assurance Checks:

Reference Mark 1:	BS1	0.55	FS1	6.18
GE = CE2	BS2 +	6.22	FS2 +	0.59
		6.77	=	6.77

QA Equations:

BS1 + BS2 = FS1_{SG} + FS2_{RM1}

GE_{RM1} = CE2_{RM1}

*Accept Survey Stage 1 if QA checks within 0.01 ft. Use calculated elevations 1 for the rest of the season unless the gauge moves.



Wisconsin DNR – Lake Level Monitoring
Staff Gauge Survey Data Sheet

Lake Level Reading: 1.44 ft

Revised 2016

Site Diagram (including Staff Gauge and Reference Marks)



Notes

Data Management

Survey Data uploaded to SWIMS? Yes ☐ No ☐ Date: _____ Name: _____
Data Sheet scan uploaded to SWIMS? Yes ☐ No ☐ Date: _____ Name: _____

Equipment Maintenance

Replace bolts/screws on staff gauge? Yes ☐ No ☐ Date: _____ Name: _____
Replace gauge plate on staff gauge? Yes ☐ No ☐ Date: _____ Name: _____
Replace post or wooden board? Yes ☐ No ☐ Date: _____ Name: _____

