

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

WATER LEVEL NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Atlantic Marine Center: MOA231

Hourly heights are approved for

Water Level Station Used: Ashland, Wisconsin (909-9050)

Period: July 21, 1984 through October 10, 1984

HYDROGRAPHIC SHEET: H-10147

OPR- 2137-WH-84

Locality: Lake Superior

Plane of reference: Low Water Datum (IGLD 1955: 600.0 Feet)

Remarks:

Zoning not required, data from other gages on Lake Superior indicates no unusual water level movement during the survey period.

for Harry G. Hippin
Chief, Water Levels Section

Field Water Level Note

There were no predicted water levels applied to survey H-10147 or H-10148. Water level records were recorded in Central Standard Time (+6). Fisher Porter modified ADR gages were used at all sites.

<u>Site</u>		<u>Location</u>	<u>Period</u>
Saxon Harbor, WI	909-9048	46°34.0'N 90°26.5'W	2 July - 9 Oct
Ashland, WI	909-9050	46°34.5'N 90°54.0'W	3 July - 11 Oct
Bayfield, WI	909-9052	46°48.5'N 90°48.5'W	7 July - 11 Oct

Saxon Harbor

Gage R6604A5297M2 was installed on a pre-existing well on 2 July. The tape annotations were started in CDT (+5) and were changed to CST (+6) on 13 July. There were no interruptions in data. The gage zero was 10.01 ft above staff zero, which was at 590.825 ft above IGLD (1955) on 2 July 84. The staff was installed 2 July 84 and removed 8 Oct 84. Level run comparison showed movement of -.001ft. A gage/staff comparison was performed on 8 Oct wherein a staff reading was taken to compare with each punched value every six minutes for an hour. The stilling well was left in place.

Ashland

Gage R6511A632M14 was installed on a pre-existing well on 3 July 84. Data were annotated in CDT (+5) until 9 July and then in CST (+6). There were no interruptions in data. The only problems in operation were several 12-minute "jumps" caused by damp paper and excess drive tension. No data were lost because of these jumps. The gage zero was 10.00 ft above the staff zero. The staff zero was leveled at 598.234 ft above IGLD (1955) on 6 July. The staff was installed on 3 July and left in place after leveling on 11 October. Comparison of level runs indicated a change of +.013 ft between 6 July and 11 October. A staff/gage comparison was made every six minutes for one hour on 12 October. The stilling well was left in place.

Bayfield

Gage SN6804A4960M18 was installed on a pre-existing well on 7 July 84. A water level staff was installed on 6 July. Data were annotated in CDT (+5) until 9 July and then in CST (+6). There were numerous 12-minute "jumps" in the data tape due to over tension in the drive spring. There should be no data lost because of this. On 22 July, the original gage failed due to an electrical

short and was replaced by gage 6602A4447M4. Data was lost from 0606 CST to 1548 CST on 22 July (1206-2148 GMT, JD 204). The second gage performed continuously until its removal on 11 October 84. The comparison recorded readings every six minutes for an hour and indicated that the gage zero was 9.99 ft above the staff zero which is 599.225 ft above IGLD. It must be noted that the staff was reportedly hit by a small boat on 10 Oct with damage to the lower mounting. This probably has effected a change in the gage staff relationship. An opening level run was performed on 11 October. There was a difference of $-.022$ ft between these runs. The staff and well were left in place.

Zoning

Water level correctors from Ashland, WI (sta 909-9050) should be applied to surveys H-10147 and H-10148 for all work performed this season. Water levels from Saxon Harbor (909-9048) and Bayfield (909-9052) do not apply to these surveys.