

Brule River nr Hovland, MN61
STATION ID: H01022001
NWS ID: BRLM5
USGS ID: 04011000
EQUIS ID: S000-251

LOCATION:

Lat:	47°49'07.0" N	UTMX:	720690.8	Township:	Unknown township				
Long:	90°03'06.1" W	UTMY:	5300348.4	PLS:	TWP	RNG	SEC	Q	QQ
					62	3E	27	SW	SE

County: Cook

USGS Quad: G29d Marr Island

Delorme MN Atlas & Gazetteer (pg.): 78

Driving directions: From Grand Marais, travel north on MN 61 for ~14 miles. The location is right after the Manitoo Trail (59), travel on trail ~1mile to trail bridge. Gage is located on east side of bridge.

History: MPCA milestone site for stage only started in 2002. Permanent Long-term Design Analysis Gage installed on downstream side of bridge with DNR on 8/7/2013 for MPCA WPLMN. DNR will start collecting regular open-water flows and maintain equipment starting spring of 2014 and will continue for the proposed 10 years.

Cooperation: MN Pollution Control Agency, MN Department of Natural Resources

Drainage area (acres): 168,960

GAGE: Base gage is a wire-weight gage attached to downstream side of bridge; checkbar elevation of 22.20 ft., gage datum. A Design Analysis H-350XL Pressure Transducer and H-355 Gas Purge System are housed in a 2' x 1.5' x 6' Hoffman look-in type shelter. Instruments are powered by a 1.2 ampere solar panel run to a deep cycle marine battery through a Sun saver power regulator. Solar panel and a rain gage are attached to side of shelter on a 10' mast. Data collected at 15-minute intervals and transmitted via Goes satellite at 1-hour intervals.

Goes ID:	D550B3BE
Primary Channel:	95
Transmit Time (GMT):	00:59:05
Random Channel:	119
Azimuth:	156
Elevation:	32

CHANNEL AND CONTROL:

DISCHARGE MEASUREMENTS:

Low flow:

High flow:

REFERENCE MARKS:

B.M. 1: MNDOT Geodetic disk 1602, 2007 (coordinates & elevation from MNDOT disk reference 720716 5300276, Elevation = 633.696 ft. NAD83 with vertical accuracy of 0.016 ft.)
 Elevation = 48.96 ft. assumed datum

R.M. 1: Spray painted dot (and small crack in bridge) located on bottom bevel of concrete rail, immediately next to sensor mount
 Elevation: 50.00 ft. assumed datum

Checkbar: Wire weight on DS of bridge 7/31/2012
 Elevation: 48.82 ft. assumed datum

Primary reference: Checkbar (48.82 ft. assumed datum)