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Probabilistic Hydrologic Outlook
National Weather Service Eastern Grand Forks ND
1123 AM CDT Thu Sep 24 2026

...RED RIVER BASIN OUTLOOK FOR RIVER FLOOD POTENTIAL...

This outlook covers the Red River of the North
and its Minnesota and North Dakota tributaries.

Probabilistic Hydrologic Outlooks use 70 years (1949-2019) of past weather, temperature, and precipitation for the ensemble predictive hydrographs used in calculating the probabilities of exceeding a river level for the valid period of the outlook.

Outlook Schedule - The National Weather Service in Grand Forks, North Dakota provides Long-Range Probabilistic Hydrologic Outlooks for the Red River of the North and its Minnesota and North Dakota tributaries according to the following schedule:

- Near the end of the month throughout the year, except for...

- Spring Flood and Water Resources Outlooks that are issued prior to the spring snowmelt season beginning in mid-to-late February.

The following message has three river data sections:

- The first (Table 1) gives the current and normal/historical chances of river locations reaching their minor, moderate, and major flood categories.

- The second (Table 2) gives the current chances of river locations rising above the river stages listed.

- The third (Table 3) gives the current chances of river locations falling below the river flows listed.

In Table 1 below, the current (CS) and historical (HS), or normal, probabilities of exceeding minor, moderate, and major flood stages are listed for the valid time period.

- CS values indicate the probability of reaching a flood category based on current conditions.

- HS values indicate the probability of reaching a flood category based on historical, or normal, conditions.

- When the value of CS is greater than HS, the probability of exceeding that level is higher than normal. When the value of CS is less than HS, the probability of exceeding that level is lower than normal.

...Table 1--Probabilities for Minor, Moderate, and Major Flooding...
Valid Period: 09/28/2026 - 12/27/2026

Location	Categorical Flood Stages (ft) Minor	Mod	Major	Current and Historical Chances of Exceeding Flood Categories as a Percentage (%) Minor CS	Minor HS	Moderate CS	Moderate HS	Major CS	Major HS
Red River of the North.....									
Wahpeton	11.0	13.0	15.0	11	11	6	<5	<5	<5
Hickson	30.0	34.0	38.0	<5	<5	<5	<5	<5	<5
Fargo	18.0	25.0	30.0	13	19	<5	6	<5	<5
Halstad	26.0	32.0	37.5	<5	<5	<5	<5	<5	<5
Grand Forks	28.0	40.0	46.0	6	7	<5	<5	<5	<5
Oslo	26.0	30.0	36.0	8	11	<5	6	<5	<5
Drayton	32.0	38.0	42.0	<5	<5	<5	<5	<5	<5
Pembina	39.0	44.0	49.0	<5	<5	<5	<5	<5	<5

Location	Categorical Flood Stages (ft) Minor	Mod	Major	Current and Historical Chances of Exceeding Flood Categories as a Percentage (%) Minor CS	Minor HS	Moderate CS	Moderate HS	Major CS	Major HS
Minnesota Tributaries.....									
Sabin	13.0	15.0	19.0	10	12	<5	<5	<5	<5
Hawley	8.0	9.0	11.0	<5	<5	<5	<5	<5	<5
Dilworth	13.0	20.0	26.0	10	16	<5	<5	<5	<5
Twin Valley	10.0	12.0	14.0	<5	<5	<5	<5	<5	<5
Hendrum	20.0	28.0	32.0	<5	9	<5	<5	<5	<5
Shelly	14.0	20.0	23.0	<5	<5	<5	<5	<5	<5
Climax	20.0	25.0	30.0	<5	<5	<5	<5	<5	<5
High Landing	12.0	12.5	13.0	<5	<5	<5	<5	<5	<5
Crookston	15.0	20.0	23.0	6	7	<5	<5	<5	<5
Above Warren	67.0	71.0	75.0	<5	<5	<5	<5	<5	<5
Alvarado	106.0	108.0	110.0	6	<5	<5	<5	<5	<5
Hallock	802.0	806.0	810.0	5	5	<5	<5	<5	<5
Roseau	16.0	18.0	19.0	<5	<5	<5	<5	<5	<5

Current and Historical Chances of Exceeding

Location	Categorical Flood Stages (ft) Minor	Mod	Major	Flood Categories as a Percentage (%) Minor CS	Minor HS	Moderate CS	Moderate HS	Major CS	Major HS
North Dakota Tributaries.....									
Abercrombie	20.0	22.0	28.0	9	9	<5	<5	<5	<5
Valley City	15.0	16.0	17.0	<5	<5	<5	<5	<5	<5
Lisbon	15.0	17.0	19.0	<5	<5	<5	<5	<5	<5
Kindred	16.0	19.0	20.5	<5	<5	<5	<5	<5	<5
West Fargo Dvsn	18.0	20.0	21.0	<5	<5	<5	<5	<5	<5
Harwood	84.0	86.0	91.0	<5	<5	<5	<5	<5	<5
Enderlin	9.5	12.0	14.0	<5	<5	<5	<5	<5	<5
Mapleton	18.0	21.0	23.0	<5	<5	<5	<5	<5	<5
Hillsboro	10.0	13.0	16.0	<5	<5	<5	<5	<5	<5
Minto	6.0	8.0	11.0	<5	<5	<5	<5	<5	<5
Walhalla	11.0	16.0	18.0	<5	<5	<5	<5	<5	<5
Neche	18.0	19.0	20.5	<5	<5	<5	<5	<5	<5

LEGEND:
CS = Conditional Simulation (current outlook)
HS = Historical Simulation
ft = Feet

In Table 2 below, the 95 through 5 percent columns indicate the probability of exceeding the listed stage levels (ft) for the valid time period at the locations listed.

...Table 2--Exceedance Probabilities...
Chance of Exceeding Stages (ft) at Specific Locations
Valid Period: 09/28/2026 - 12/27/2026

LOCATION	95%	90%	75%	50%	25%	10%	05%
Red River of the North.....							
Wahpeton	5.3	5.3	5.3	6.5	8.5	11.8	13.1
Hickson	11.3	11.3	11.3	12.4	14.5	22.5	26.3
Fargo	14.7	14.7	14.7	15.4	16.4	21.3	23.5
Halstad	4.7	4.7	4.7	6.7	9.8	16.6	20.8
Grand Forks	15.8	15.8	15.9	16.8	18.2	22.1	28.8
Oslo	7.0	7.0	7.2	9.0	12.5	20.9	29.2
Drayton	12.1	12.1	12.2	13.3	15.2	20.2	26.7
Pembina	11.7	11.7	11.8	14.4	20.2	26.1	35.7

Minnesota Tribs:	95%	90%	75%	50%	25%	10%	05%
South Fork Buffalo River.....							
Sabin	4.9	4.9	4.9	7.2	10.2	13.0	13.6
Buffalo River.....							
Hawley	3.6	3.6	3.6	4.0	5.1	5.9	6.5
Dilworth	3.2	3.2	3.3	4.9	8.4	13.1	15.1
Wild Rice River.....							

Twin Valley	1.9	1.9	1.9	2.6	4.6	6.1	7.1
Hendrum	2.2	2.2	2.4	4.2	9.7	15.9	19.4
Marsh River.....							
Shelly	3.9	3.9	3.9	4.1	4.9	6.6	9.0
Sand Hill River.....							
Climax	4.3	4.3	4.6	6.2	7.5	9.3	12.0
Red Lake River.....							
High Landing	1.1	1.1	1.1	1.7	2.5	4.0	5.6
Crookston	4.4	4.4	4.4	5.8	7.5	13.0	15.7
Snake River.....							
Above Warren	61.1	61.1	61.1	61.8	62.5	64.0	65.6
Alvarado	97.2	97.2	97.2	98.2	99.8	103.1	106.5
Two Rivers River.....							
Hallock	793.1	793.1	793.3	794.7	796.7	800.0	802.3
Roseau River.....							
Roseau	5.2	5.2	5.2	5.9	6.7	8.4	10.4

North Dakota Tribs:	95%	90%	75%	50%	25%	10%	05%
Wild Rice River.....							
Abercrombie	10.1	10.1	10.1	10.9	12.1	18.2	21.2
Sheyenne River.....							
Valley City	4.4	4.4	4.4	4.5	5.5	7.5	9.1
Lisbon	3.0	3.0	3.0	3.1	4.3	6.6	8.6
Kindred	3.2	3.2	3.2	3.3	5.2	7.7	10.4
West Fargo Dvsn	6.8	6.8	6.8	7.0	8.7	10.8	12.7
Harwood	68.0	68.0	68.0	68.9	71.1	75.4	77.4
Maple River.....							
Enderlin	1.7	1.7	1.7	1.7	2.4	6.1	7.4
Mapleton	7.9	7.9	7.9	7.9	9.1	13.3	15.5
Goose River.....							
Hillsboro	1.8	1.8	1.8	1.8	2.6	4.0	5.2
Forest River.....							
Minto	1.4	1.4	1.4	1.4	1.9	2.6	3.2
Pembina River.....							
Walhalla	1.9	1.9	1.9	1.9	2.2	3.7	4.7
Neche	3.2	3.2	3.2	3.2	3.8	6.4	8.5

In Table 3 below, the 95 through 5 percent columns indicate the probability of falling below the listed flow levels (kcfs) for the valid time period at the locations listed.

...Table 3--Non-Exceedance Probabilities...
Chance of Falling Below Flow (kcfs) at Specific Locations

Valid Period: 09/28/2026 - 12/27/2026

LOCATION	95%	90%	75%	50%	25%	10%	05%
Red River of the North.....							
Wahpeton	0.7	0.6	0.5	0.4	0.3	0.3	0.3
Hickson	0.7	0.6	0.5	0.4	0.3	0.3	0.3
Fargo	0.7	0.7	0.5	0.4	0.4	0.3	0.3
Halstad	0.9	0.9	0.8	0.7	0.6	0.6	0.6

Grand Forks	1.1	1.1	1.1	0.9	0.7	0.7	0.7
Oslo	1.2	1.2	1.1	0.9	0.7	0.7	0.7
Drayton	1.3	1.3	1.2	1.0	0.8	0.8	0.8
Pembina	1.7	1.6	1.4	1.1	0.9	0.9	0.9

Minnesota Tribs:	95%	90%	75%	50%	25%	10%	05%
South Fork Buffalo River.....							
Sabin	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buffalo River.....							
Hawley	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dilworth	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wild Rice River.....							
Twin Valley	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Hendrum	0.1	0.1	0.1	0.1	0.1	0.0	0.0
Marsh River.....							
Shelly	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sand Hill River.....							
Climax	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Lake River.....							
High Landing	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crookston	0.2	0.2	0.1	0.1	0.1	0.1	0.1
Snake River.....							
Above Warren	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alvarado	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Two Rivers River.....							
Hallock	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Roseau River.....							
Roseau	0.0	0.0	0.0	0.0	0.0	0.0	0.0

North Dakota Tribs:	95%	90%	75%	50%	25%	10%	05%
Wild Rice River.....							
Abercrombie	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sheyenne River.....							
Valley City	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lisbon	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kindred	0.0	0.0	0.0	0.0	0.0	0.0	0.0
West Fargo Dvsn	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Harwood	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Maple River.....							
Enderlin	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mapleton	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goose River.....							
Hillsboro	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forest River.....							
Minto	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pembina River.....							
Walhalla	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Neche	0.1	0.1	0.1	0.0	0.0	0.0	0.0

.THE OUTLOOK PRODUCTION PROCESS...

This long-range probabilistic outlook is based on a series of peak river levels taken from the forecast hydrograph results of the NWS Community Hydrologic Prediction System (CHPS). The model is run for multiple scenarios starting at current river, snow, and soil conditions using 70 years of past precipitation and temperatures that were experienced for those past years during the timeframe of the outlook period. The crests are then ranked from lowest to highest and assigned an exceedance probability.

A YouTube video on "How to Interpret River Outlook Products" can be found at:

www.youtube.com/watch?v=pSoEgvsnpv4

These probabilities can be used for risk management as an indication of the range of crests that may be possible during the valid period of the outlook. However, note that it is possible that river levels may still reach levels below the 95th percentile, or above the 5th percentile, values.

.ADDITIONAL INFORMATION SOURCES...

Exceedance information is also presented as graphs of the probability of stage exceedance for the full period and for weekly intervals throughout the period. These graphs, together with explanations that help in interpreting them, can be found on the NWS Grand Forks NWPS web page by clicking on "Rivers and Lakes" above the map at www.weather.gov/fgf.

Current river levels across the Red River of the North and Devils/Stump Lake basins are available on our web site. Additionally, 7-day deterministic forecasts are issued at least once a day when river forecast locations are expected to reach or exceed their designated action stage throughout that period.

Refer to the separate Probabilistic Hydrologic Outlook for Devils and Stump Lakes probability of exceedance levels and/or low-water non-exceedance levels.

If you have any questions, please contact NWS Grand Forks at 701-772-0720.

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