



Red River and Devils Lake Basins - 2025 Spring Flood Outlook

NWS Grand Forks • North Central River Forecast Center • January 23, 2025

This outlook is for the US portion of the basin and based on conditions through Monday, January 20, 2025. Visit our website at weather.gov/fgf/currentfloodoutlook for associated exceedance graphics, probabilities, and related discussions. Additional spring flood outlooks will be issued on February 13th, February 27th, and March 13th.

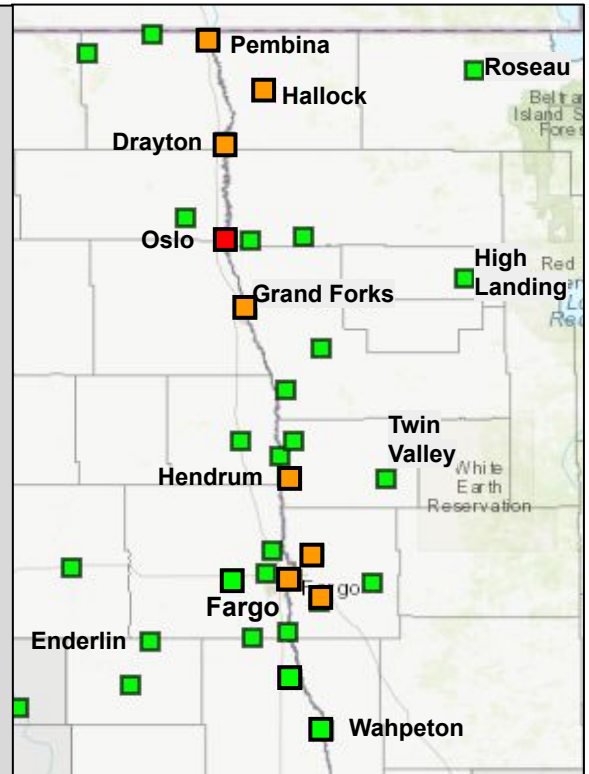
Key Message: The risk for significant (moderate or higher) spring flooding is low with this outlook issuance, running below long-term historical averages across the the Red River Basin (US portion).

Key Points:

- Minor to isolated moderate spring flooding in this outlook (50% exceedance probability) for some locations.
- Well above normal precipitation last November saturated soils and elevated river levels before freeze-up. However, snowfall/precipitation has been well below normal thus far this winter (except near the international border).
- Minimal snowpack early in the winter followed by below normal temperatures has led to a deep frost layer. Below normal temperatures are expected to continue into spring and may lead to a delayed snowmelt.
- Late winter and spring precipitation, along with the timing/thaw cycle of any snowpack will be the most important spring flood risk factors.

Flood Risk Indicated as > 50% of category:

- Major
- Moderate
- Minor
- < 50%



Valid January 27, 2025 - April 27, 2025

Snowmelt Flood Components:

- 1. Fall + Early Winter Precipitation and Soil Moisture: Below normal to near normal.** Overall, fall precipitation (Sep-Nov 2024) was below normal for much of the basin. However, the fall season did end with November precipitation being well above normal. This allowed soils to become fairly saturated before freezing up, especially across northeastern North Dakota. Abnormally dry to moderate drought conditions have persisted throughout the winter across much of the basin (exception being the Devils Lake basin and far northern Red River Valley).
- 2. Base Streamflow: Above normal.** At the end of December, USGS analyses indicated that the Red River mainstem and its tributaries were flowing higher than normal, primarily due to the above normal November precipitation.
- 3. Frost Depth: Deeper than normal.** Minimal to no snowpack early in the winter, followed by stretches of below normal temperatures, has led to the formation of a deep frost layer. Frost depth values of 25-35 inches are common across much of the basin. Deeper frost may contribute to greater runoff of snowmelt and spring precipitation.
- 4. Snowpack and Associated Water Content: Below normal.** Snowfall (and associated water content) since Dec. 1st is running 50-75 percent of normal, lowest across the far southern basin up into northwestern Minnesota. The exception is northern portions of the Devils Lake basin and into far northeastern North Dakota where a deeper snowpack is present..
- 5. Future Conditions:** Climate outlooks indicate continued below normal temperatures into spring which could lead to a delayed snowmelt runoff period. Additional precipitation late this winter and into spring, along with the timing/thaw cycle of any snowpack, will continue to be important spring flood risk factors.

DEVILS LAKE AND STUMP LAKE

Valid January 20, 2025 - September 30, 2025

DEVILS LAKE	95%	90%	75%	50%	25%	10%	5%
Creel Bay	1450.6	1450.6	1450.9	1451.2	1451.8	1452.4	1452.8
Eastern Stump Lake	1450.6	1450.6	1450.9	1451.2	1451.8	1452.4	1452.8

Devils Lake and Stump Lake are currently at ~1449.4 ft (zero datum 1400.00 NGVD29).

RED RIVER AND TRIBUTARIES

Valid January 27, 2025 - April 27, 2025

RED RIVER MAINSTEM	95%	90%	75%	50%	25%	10%	5%
Wahpeton	8.8	8.9	9.6	10.9	12.0	14.2	14.5
Hickson	15.3	16.8	18.6	22.7	26.2	32.3	33.7
Fargo	17.1	17.4	19.4	22.4	26.4	33.6	35.1
Halstad	11.9	14.6	17.2	20.5	26.5	32.4	37.1
Grand Forks	21.2	22.6	26.5	33.0	37.9	42.0	45.5
Oslo	18.5	20.6	26.1	32.5	34.1	35.4	36.9
Drayton	19.6	22.2	26.4	32.1	37.6	40.5	41.2
Pembina	28.6	30.1	36.1	41.3	46.8	49.7	50.2

Note:
Probabilities for all river points do not take into account effects due to ice, jamming, etc. Higher stages than depicted may occur.

MINNESOTA TRIBUTARIES	95%	90%	75%	50%	25%	10%	5%
South Fork Buffalo River							
Sabin	11.3	12.1	13.0	13.7	14.4	14.8	16.4
Buffalo River							
Hawley	4.8	5.1	5.9	6.7	7.9	8.8	9.6
Dilworth	10.1	11.4	13.8	16.1	18.3	19.7	22.3
Wild Rice River							
Twin Valley	3.9	4.4	4.8	5.8	6.9	8.0	9.4
Hendrum	11.2	15.7	18.0	20.8	24.2	27.4	30.3
Marsh River							
Shelly	6.4	7.5	8.9	10.1	12.1	13.5	15.1
Sand Hill River							
Climax	8.3	10.2	11.3	12.0	15.7	18.2	22.5
Red Lake River							
High Landing	3.3	3.6	4.1	5.5	7.1	9.1	9.9
Crookston	9.1	9.8	11.2	14.0	16.3	19.0	22.0
Snake River							
Above Warren	62.4	62.5	63.1	63.8	64.8	65.7	66.1
Alvarado	99.2	99.6	100.8	102.4	105.1	107.5	108.0
Two Rivers River							
Hallock	799.0	799.4	800.5	803.1	805.7	807.4	808.0
Roseau River							
Roseau	7.9	8.5	9.3	10.8	13.1	15.3	16.1

Legend:
Below Flood Stage
Minor
Moderate
Major
Flood of Record

NORTH DAKOTA TRIBUTARIES	95%	90%	75%	50%	25%	10%	5%
Wild Rice River							
Abercrombie*	13.5	14.1	15.8	19.3	23.7	28.8	31.1
Sheyenne River							
Valley City	6.5	6.8	7.6	8.9	11.4	12.0	13.0
Lisbon	6.2	6.4	7.5	9.0	11.2	12.4	15.5
Kindred	7.3	7.8	9.0	11.1	13.9	16.1	19.4
West Fargo Diversion	10.6	10.8	10.9	13.0	14.1	16.1	19.3
Harwood	74.8	75.5	77.0	79.0	82.5	87.9	91.2
Maple River							
Enderlin	5.8	6.7	7.3	8.7	10.2	11.3	13.0
Mapleton	12.8	13.1	15.1	17.8	20.1	21.6	22.6
Goose River							
Hillsboro	3.8	4.1	5.1	6.0	8.4	12.9	13.8
Forest River							
Minto	3.2	3.6	4.0	4.8	5.7	7.6	8.1
Pembina River							
Walhalla	5.5	6.2	7.1	8.5	10.6	12.3	14.1
Neche	10.1	11.8	13.0	15.9	20.1	21.1	21.2

* Flood stages increased by 10.0 ft October 2023