



Red River and Devils Lake Basin – 2017 Spring Flood Outlook

Discussion Points 3/22/2017

prepared by

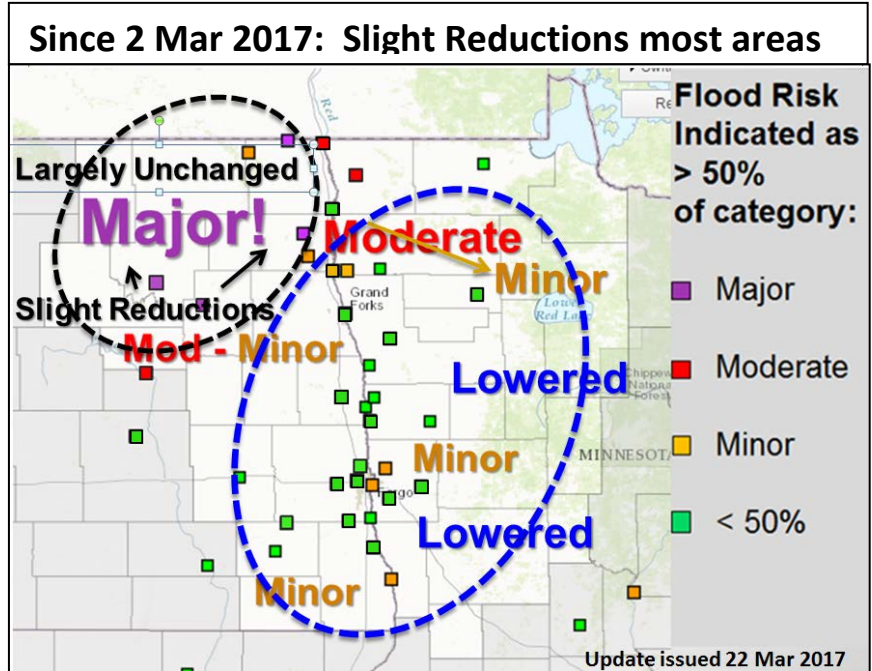


NWS - Weather Forecast Office, Grand Forks ND
 NWS - North Central River Forecast Center, Chanhassen MN

This outlook is for the U.S. portion of the basin based on conditions as of Wednesday, 3/22/17. All graphics and related discussion will be posted to weather.gov/fgf. The next update for Devils Lake is due by 4/21/17.

Bottom Line up Top!

- Early and gentle thaw conditions continue to ease overall flood threat.
- Slight reductions in risk now extend into Park River and Devils Lake Basins.
- The threat for significant, impactful snowmelt flooding still remains very high for the Devils Lake Basin, where near record runoff is projected.
- The threat remains moderate to high, above the historical risk along the Park and Pembina Rivers.
- Most areas still subject to early spring snow and rain. South and central basin locations are near long term normal flood risk... and those areas are still prone to minor or low-end moderate spring flooding.



What's Changed since early March?

Southern and Central Valley, Oslo/Grand Forks and points south. [Overall Risk Reduced] Most runoff has now moved into the mainstem Red and some has pushed (under the ice) across the border at Pembina. All South Basin and Red Lake River flows are now substantially reduced based on previous early melt and runoff.

Northern Valley, north of Oslo MN. [Mixed Adjustments] Expected flows in far northwest MN tribs and along the mainstem Red are also reduced due to gentle thaw and early runoff, with low late winter precipitation.

- **Two Rivers (MN).** Largely regulated low from Lake Bronson, holding near Minor to Moderate Flood Stage.
- **Park River (ND).** Some local runoff near Grafton has moved downstream. Additional runoff is poised to move to the river in the coming week. Slow but progressive melt is expected with risk now slightly lower.
- **Pembina River (ND).** Little local runoff evident (yet), overall conditions/expectations relatively unchanged.

Devils Lake Basin. [Slight Risk Reduction] Some moisture losses due to evaporation and absorption, else runoff risk remains very high.

DEVILS AND STUMP LAKES LONG-RANGE PROBABILISTIC OUTLOOK

VALID MARCH 19, 2017 - SEPTEMBER 30, 2017

LOCATION	95%	90%	75%	50%	25%	10%	05%
CREEL BAY	1452.8	1452.8	1453.1	1453.4	1453.8	1454.3	1454.9
EAST STUMP LAKE	1452.8	1452.8	1453.1	1453.4	1453.8	1454.3	1454.8

THE CURRENT HEIGHT OF DEVILS LAKE AT CREEL BAY IS NEAR 1450.3 FEET
 THE CURRENT HEIGHT OF STUMP LAKE NEAR LAKOTA IS NEAR 1450.0 FEET

Color code: Below Minor Moderate Major Flood of Record

CHANCE OF EXCEEDING STAGES AT MAINSTEM RED RIVER LOCATIONS [Updated]

VALID 3/26/2017 - 6/24/2017

LOCATION	95%	90%	75%	50%	25%	10%	05%
WAHPETON	8.1	8.2	9.4	11.0	12.8	14.1	14.6
HICKSON	15.0	15.3	17.6	21.8	27.4	30.8	32.8
FARGO	16.6	16.7	17.3	20.6	26.1	29.1	32.9
HALSTAD	12.9	13.2	14.8	19.2	25.9	30.5	33.3
GRAND FORKS	20.1	20.4	21.6	27.9	35.0	42.3	43.9
OSLO	17.8	18.4	20.6	28.6	33.6	35.5	36.2
DRAYTON	27.7	28.0	29.6	31.6	37.9	40.2	41.3
PEMBINA	40.5	41.0	42.5	44.1	47.6	49.8	51.4

Minnesota Tributaries:

South Fork Buffalo River.....							
SABIN	8.6	9.1	10.4	12.8	13.9	15.0	15.4
Buffalo River.....							
HAWLEY	5.1	5.1	5.3	5.8	7.4	8.9	9.3
DILWORTH	8.1	8.3	9.7	14.1	17.9	19.8	21.4
Wild Rice River.....							
TWIN VALLEY	4.5	4.8	5.2	6.3	8.3	10.2	10.5
HENDRUM	11.0	11.6	14.5	18.5	23.7	28.4	29.3
Marsh River.....							
SHELLY	5.3	5.3	6.5	8.8	11.2	15.1	15.9
Sand Hill River.....							
CLIMAX	6.5	7.1	7.9	10.3	12.7	19.5	22.0
Red Lake River.....							
HIGH LANDING	5.0	5.0	5.2	6.0	7.8	9.2	9.8
CROOKSTON	9.8	10.0	11.4	13.6	16.5	20.9	22.1
Snake River.....							
ABOVE WARREN	63.4	63.5	63.9	64.7	65.5	67.2	67.9
ALVARADO	103.3	103.3	104.0	105.2	107.2	108.8	109.3
Two Rivers River.....							
HALLOCK	804.7	804.8	804.9	806.0	807.4	808.0	808.9
Roseau River.....							
ROSEAU	12.0	12.2	12.5	13.2	14.5	16.2	17.2

North Dakota Tributaries:

Wild Rice River.....							
ABERCROMBIE	2.2	2.2	2.9	7.2	12.7	16.3	17.3
Sheneye River.....							
VALLEY CITY	10.9	11.0	11.6	11.8	13.5	16.8	19.8
LISBON	10.4	10.6	11.3	11.7	13.0	16.8	19.6
KINDRED	12.7	13.0	13.9	14.9	16.3	20.4	21.1
WEST FARGO DVRSN	16.1	16.2	16.4	17.4	19.4	22.8	23.1
HARWOOD	876.8	877.0	877.6	879.7	885.8	890.1	890.7
Maple River.....							
ENDERLIN	3.3	4.2	5.2	6.5	7.9	10.1	12.1
MAPLETON	897.0	897.5	897.8	900.7	906.1	907.7	908.4
Goose River.....							
HILLSBORO	2.8	2.8	3.0	4.1	5.8	9.0	10.0
Forest River.....							
MINTO	5.5	5.7	5.9	6.2	6.6	7.1	7.3
Park River.....							
GRAFTON	14.0	15.0	15.4	15.6	16.1	16.7	17.7
Pembina River.....							
WALHALLA	12.7	13.0	13.7	14.5	15.0	15.5	16.3
NECHE	21.2	21.3	21.4	21.5	21.5	21.5	21.6