Probabilistic Hydrologic Outlook
National Weather Service La Crosse WI
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...Second Spring Hydrologic Summary and Outlook...

This is the second of two planned hydrologic outlooks providing
spring snow melt and flood potential information for 2017. Optional
outlooks may be issued after this release.

This outlook contains information which was collected from a number
of sources, including the United States Geological Survey /USGS/,
the US Army Corps of Engineers /USACE/, and Midwest Regional Climate
Center /MRCC/, High Plains Regional Climate Center /HPRCC/, and US
Drought Monitor /NIDIS/, and the National Operational Remote Sensing
Center /NOHRSC/.

This outlook is a summary of the past and present basin conditions
for parts of southeast Minnesota, northeast Iowa, and southwest into
central Wisconsin.

Flood Potential Highlights

Overall, the flood potential for this springs looks to be near to
slightly above normal. The Mississippi River and some Wisconsin
Tributaries /especially the Black, Kickapoo, and Wisconsin Rivers/
are the main areas that have experienced flooding already this
spring and continue to have an elevated flood risk.

Soil moisture across the region is high due to heavy rains last
summer and early fall. Many rivers are experiencing above normal
levels for this time of year. Due to the recent snow, the snowpack
covers mainly southeast Minnesota and western Wisconsin. Additional
rainfall or any heavy snows would be the main driver of flooding
concerns going into this spring.

We are expecting above normal temperatures over the next couple of
weeks and this will melt the snowpack over southeast Minnesota and
western Wisconsin. This will cause some river rises across these
areas.

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: 03/05/2017 - 06/03/2017

				:	Current and Historical Chances of Exceeding Flood Categories as a Percentage (%)					
	Categorical Flood Stages (FT)			:	MINOR		MODERATE		MAJOR	
Location	Minor	Mod	Major	:	CS	HS	CS	HS	CS	HS
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:Mississippi River										
Lake City	16.0	18.0	20.0	:	15	25	8	9	<5	5
Wabasha	12.0	14.0	16.0	:	53	57	14	19	<5	9
Alma Dam 4	16.0	17.0	18.0	:	<5	8	<5	6	<5	<5
MN City Dam 5	660.0	662.0	665.0	:	18	27	11	12	<5	6
Winona Dam 5A	655.0	659.0	661.0	:	25	39	6	9	<5	5
Winona	13.0	15.0	18.0	:	34	45	15	22	<5	9
Trempealeau	647.0	649.0	651.0	:	24	37	12	14	<5	7
La Crescent	641.0	643.0	645.0	:	20	32	9	12	<5	7
La Crosse	12.0	13.0	15.5	:	32	45	15	26	<5	8
Genoa	631.0	634.0	636.0	:	41	49	9	11	<5	7
Lansing	17.0	19.0	20.0	:	7	10	<5	8	<5	<5
Lynxville	625.0	628.0	631.0	:	15	23	6	9	<5	<5
McGregor	16.0	19.0	22.0	:	57	52	15	26	7	9
Guttenberg	15.0	18.0	21.0	:	39	44	13	13	<5	<5
:Zumbro River										
Zumbro Falls	18.0	24.0	26.0	:	5	7	<5	<5	<5	<5
:South Fork Zumbro River										
Rochester	14.0	18.0	20.0	:	<5	<5	<5	<5	<5	<5
:Root River										
Houston	15.0	17.0	18.0	:	8	12	<5	<5	<5	<5
:South Branch Root River										
Lanesboro	12.0	16.0	18.0	:	<5	16	<5	<5	<5	<5
:Cedar River										
Lansing	18.0	20.0	22.0	:	<5	7	<5	<5	<5	<5
Austin	15.0	18.0	20.0	:	<5	10	<5	7	<5	5
Osage	22.0	24.0	27.0	:	7	14	<5	6	<5	<5
Charles City	12.0	15.0	18.0	:	11	21	<5	10	<5	6
:Turtle Creek										
Austin	10.5	12.0	14.0	:	8	15	<5	6	<5	<5
:Turkey River										
Elkader	12.0	16.0	20.0	:	24	44	12	17	<5	<5
Garber	17.0	20.0	23.0	:	26	38	17	22	11	11
:Upper Iowa River										

Location										
Decorah	12.0	13.0	14.0	:	<5	<5	<5	<5	<5	<5
Dorchester	14.0	17.0	19.0	:	15	23	10	8	6	<5
:Trempealeau River										
Arcadia	8.0	9.0	10.0	:	7	7	<5	<5	<5	<5
Dodge	9.0	11.0	12.0	:	44	61	<5	7	<5	<5
:Black River										
Neillsville	18.0	20.0	22.0	:	<5	<5	<5	<5	<5	<5
Black River Falls	47.0	51.0	55.0	:	37	61	14	27	<5	<5
Galesville	12.0	13.0	15.0	:	35	56	17	38	<5	<5
:Kickapoo River										
La Farge	12.0	13.0	14.0	:	<5	<5	<5	<5	<5	<5
Viola	14.0	16.0	18.0	:	48	33	<5	<5	<5	<5
Readstown	11.0	14.0	16.0	:	55	38	<5	<5	<5	<5
Soldiers Grove	13.0	16.0	19.0	:	39	24	<5	<5	<5	<5
Gays Mills	13.0	15.0	17.0	:	69	48	12	8	<5	<5
Steuben	12.0	13.0	15.0	:	62	39	25	14	<5	<5
:Wisconsin River										
Muscoda	9.0	10.0	11.0	:	8	15	<5	7	<5	<5
:Yellow River										
Necedah	15.0	16.5	18.0	:	67	86	28	56	<5	15

Legend
CS = Conditional Simulation (Current Outlook)
HS = Historical Simulation
FT = Feet

*** Climate Information ***

Due to the unusually warm February, much of the snow pack has melted across the region. The only snow still on the ground at this time is located from southeast Minnesota northeastward into north-central Wisconsin and in central and southwest Wisconsin. This snow contains up to three-quarters of an inch of water. With well above-normal temperatures expected this weekend, this snow is expected to melt and produce elevated river levels.

As we head into Spring, there will be enhanced chances for warmer-than-normal temperatures across the Upper Mississippi River Valley. Meanwhile, there will be a near-normal risk of precipitation for March and enhanced chances for above-normal precipitation.

Flood Potential Information

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.

...Table 2--Exceedance Probabilities...

Chance of Exceeding Stages
At Specific Locations
Valid Period: 03/05/2017 - 06/03/2017

Location	95%	90%	75%	50%	25%	10%	5%
:Mississippi River							
Lake City	12.8	12.9	12.9	13.9	15.2	17.3	18.3
Wabasha	11.5	11.5	11.5	12.1	12.9	14.6	15.6
Alma Dam 4	9.7	9.8	9.8	10.8	12.1	14.3	15.3
MN City Dam 5	656.8	656.8	656.9	657.9	659.3	662.1	663.3
Winona Dam 5A	652.4	652.5	652.5	653.5	655.0	657.9	659.1
Winona	10.9	10.9	11.0	12.0	13.5	16.6	17.8
Trempealeau	645.0	645.0	645.0	645.7	646.8	649.2	650.0
La Crescent	638.8	638.8	638.9	639.5	640.4	642.8	643.7
La Crosse	10.6	10.7	10.7	11.3	12.1	14.2	15.0
Genoa	630.0	630.0	630.1	630.6	631.6	633.9	634.8
Lansing	11.8	11.8	11.9	12.3	13.7	16.5	17.7
Lynxville	622.1	622.1	622.1	622.6	623.9	626.8	628.1
McGregor	15.6	15.7	15.7	16.4	18.1	21.5	23.0
Guttenberg	14.0	14.0	14.1	14.5	15.9	18.4	20.0
:Zumbro River							
Zumbro Falls	10.2	10.4	10.9	12.1	13.6	15.0	18.8
:South Fork Zumbro River							
Rochester	5.6	5.6	6.1	6.9	8.1	9.0	13.5
:Root River							
Houston	6.8	6.9	8.1	9.2	12.3	14.6	16.2
:South Branch Root River							
Lanesboro	3.8	3.9	4.5	5.4	7.7	10.3	11.6
:Cedar River							
Lansing	13.7	13.8	14.2	14.9	15.6	16.1	16.8
Austin	7.6	7.8	8.4	9.6	10.7	11.9	12.8
Osage	18.0	18.1	18.4	19.1	20.4	21.3	22.2
Charles City	6.4	6.6	7.1	8.2	10.3	12.8	14.8
:Turtle Creek							
Austin	5.9	6.1	6.2	6.9	8.1	9.5	11.7
:Turkey River							
Elkader	8.3	8.7	9.2	10.3	11.9	17.8	18.6
Garber	10.1	10.7	12.1	14.4	17.3	24.0	29.0
:Upper Iowa River							
Decorah	3.9	4.1	4.6	5.1	6.0	7.9	8.9
Dorchester	9.5	9.8	10.6	11.4	12.6	16.8	19.7
:Trempealeau River							
Arcadia	4.3	4.8	5.4	6.2	6.8	7.6	8.2
Dodge	6.7	7.4	8.2	8.9	9.5	10.1	10.9
:Black River							
Neillsville	6.4	7.0	8.3	9.6	11.2	13.0	13.5
Black River Falls	40.2	41.2	43.2	45.0	48.7	51.9	52.8
Galesville	7.7	8.1	9.8	11.1	12.6	13.4	13.9
:Kickapoo River							
La Farge	5.6	6.7	7.7	8.7	10.3	11.2	11.4
Viola	11.3	12.2	12.9	13.7	14.8	15.6	15.8
Readstown	7.9	8.7	10.1	11.2	12.1	13.0	13.6
Soldiers Grove	10.4	10.8	11.8	12.8	13.6	14.5	15.3
Gays Mills	11.3	11.7	12.8	13.6	14.2	15.2	16.0
Steuben	10.8	11.2	11.6	12.4	13.0	13.7	14.0

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:Wisconsin River
Muscoda                    4.1    4.2    5.7    6.9    8.1    8.8    9.9
:Yellow River
Necedah                   13.8   13.9   14.2   15.4   16.5   17.4   18.0
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These long-range probabilistic outlooks contain forecast values that
are calculated using multiple season scenarios from 30 or more years
of climatologicial data, including current conditions of the river,
soil moisture, snow cover and 30 and 90 day long-range outlooks of
temperature and precipitation. By providing a range of
probabilities, the level of rise associated with long-range planning
decisions can be determined. These probabilistic forecasts are part
of the National Weather Service's Advanced Hydrologic Prediction
Service.

All of this information is also available in graphical format on the
internet at:

http://www.weather.gov/lacrosse