Probabilistic Hydrologic Outlook
National Weather Service La Crosse WI
117 PM CST Thu Feb 16 2017

...First Spring Hydrologic Summary and Outlook...

The following information is the first of two planned hydrologic
outlooks providing spring snow melt and flood potential information.
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.

The next outlook will be issued on Thursday March 2nd.

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 are the main areas that have above normal flood
potential.

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. Snowpack across the area is below
normal. Additional rainfall or any heavy snows would be the main
driver of flooding concerns going into this spring.

We are expecting much above normal temperatures going into this
weekend and this will likely melt much of the remaining snowpack
across the local area. This will result in river rises and breakup
of river ice in many locations. This may result in a few ice jams
especially in typical areas such as near bridges and other
constrictions in the rivers, or where the river makes sharp turns or
meanders, leading to jams and potential flooding. Since we haven't
had extended cold this winter, resulting in less ice thickness, the
overall threat for ice jams may be less than normal.

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: 02/19/2017 - 05/20/2017

				:	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	:	22	25	14	9	<5	5
Wabasha	12.0	14.0	16.0	:	65	56	18	19	12	9
Alma Dam 4	16.0	17.0	18.0	:	10	8	5	6	<5	<5
MN City Dam 5	660.0	662.0	665.0	:	24	26	16	12	6	6
Winona Dam 5A	655.0	659.0	661.0	:	32	39	14	9	6	5
Winona	13.0	15.0	18.0	:	39	43	18	21	13	9
Trempealeau	647.0	649.0	651.0	:	32	37	17	14	7	7
La Crescent	641.0	643.0	645.0	:	27	32	15	12	8	7
La Crosse	12.0	13.0	15.5	:	43	44	22	25	11	8

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Genoa                 631.0  634.0  636.0 :  53   48   15   11    8    7
Lansing                17.0   19.0   20.0 :  15   10    8    8   <5   <5
Lynxville             625.0  628.0  631.0 :  23   23   14    9   <5   <5
McGregor               16.0   19.0   22.0 :  66   52   31   26   15    9
Guttenberg             15.0   18.0   21.0 :  53   44   16   13    8   <5
:Zumbro River
Zumbro Falls           18.0   24.0   26.0 :   7    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 :  15   11   <5   <5   <5   <5
:South Branch Root River
Lanesboro              12.0   16.0   18.0 :  <5   13   <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 :   6   13   <5    6   <5   <5
Charles City           12.0   15.0   18.0 :  12   19    5    9   <5    6
:Turtle Creek
Austin                 10.5   12.0   14.0 :   8   15   <5    5   <5   <5
:Turkey River
Elkader                12.0   16.0   20.0 :  26   45   10   16   <5   <5
Garber                 17.0   20.0   23.0 :  25   39   14   22    9   11
:Upper Iowa River
Decorah                12.0   13.0   14.0 :  <5   <5   <5   <5   <5   <5
Dorchester             14.0   17.0   19.0 :  12   20    6    7   <5   <5
:Trempealeau River
Arcadia                 8.0    9.0   10.0 :  <5    7   <5   <5   <5   <5
Dodge                   9.0   11.0   12.0 :  37   53   <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 :  55   57   23   24   <5   <5
Galesville             12.0   13.0   15.0 :  54   54   36   37   <5   <5
:Kickapoo River
La Farge               12.0   13.0   14.0 :  10   <5   <5   <5   <5   <5
Viola                  14.0   16.0   18.0 :  51   31   <5   <5   <5   <5
Readstown              11.0   14.0   16.0 :  62   36   <5   <5   <5   <5
Soldiers Grove         13.0   16.0   19.0 :  45   21   <5   <5   <5   <5
Gays Mills             13.0   15.0   17.0 :  78   45   10    7   <5   <5
Steuben                12.0   13.0   15.0 :  67   36   26   12   <5   <5
:Wisconsin River
Muscoda                 9.0   10.0   11.0 :  21   15   14    7   <5   <5
:Yellow River
Necedah                15.0   16.5   18.0 :  86   85   38   54    9   15
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Legend
CS = Conditional Simulation (Current Outlook)
HS = Historical Simulation
FT = Feet

*** Climate Information ***

Like the autumn, temperatures have averaged above normal (1 to 3F)
for the winter. However some brief cold periods have resulted in
frost depths ranging from 4 to 19 inches. In addition with many
areas having a very wet 2016 (ranging from 6 to 18 inches above
normal), soils are saturated.

For the second half of February, expect above-normal temperatures to
melt the remaining snow pack across the region. With a frozen
ground, this snow melt will work its way into area rivers and
streams. In addition, above-normal precipitation is expected for
this time period which usually averages anywhere from a quarter to a
half inch.

For the month of March, the Climate Prediction Center is forecasting
equal chances for above, below, and near-normal for both
temperatures and precipitation. Typically during the month,
temperatures average from 30 to 35F and precipitation ranges from
1.50 to 2 inches.

For the spring, the Climate Prediction Center is forecasting
enhanced chances for a warmer and wetter-than normal conditions. The
average temperature for spring ranges from 43 to 48F. Precipitation
for the spring averages 7 to 9 inches north of Interstate 90 and 9
to 12 inches south of Interstate 90.

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...

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                       Chance of Exceeding Stages
                          At Specific Locations
                  Valid  Period: 02/19/2017 - 05/20/2017
Location              95%    90%    75%    50%    25%    10%     5%
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:Mississippi River
Lake City            11.4   12.3   13.4   14.5   15.5   19.0   19.8
Wabasha              10.2   11.0   11.8   12.4   13.2   16.4   17.2
Alma Dam 4            8.4    9.2   10.2   11.3   12.4   16.2   17.1
MN City Dam 5       655.0  656.0  657.2  658.5  659.8  664.2  665.3
Winona Dam 5A       650.5  651.5  652.8  654.1  655.6  660.1  661.2
Winona                9.1   10.1   11.2   12.6   14.1   18.7   19.6
Trempealeau         643.4  644.2  645.2  646.2  647.4  650.6  651.2
La Crescent         636.9  637.7  638.9  640.0  641.0  644.5  645.6
La Crosse             8.8    9.6   10.8   11.8   12.7   15.6   16.5
Genoa               627.9  628.9  630.0  631.1  632.2  635.6  636.7
Lansing              10.0   10.7   11.6   13.0   14.6   18.5   19.7
Lynxville           619.8  620.5  621.8  623.3  624.8  629.1  630.4
McGregor             13.0   13.8   15.1   17.0   19.3   23.8   25.4
Guttenberg           11.9   12.5   13.7   15.2   17.0   20.6   21.7
:Zumbro River
Zumbro Falls         11.9   12.0   12.1   12.9   14.5   15.8   19.4
:South Fork Zumbro River
Rochester             8.0    8.1    8.2    8.3    9.1   10.2   11.3
:Root River
Houston              10.5   10.6   10.7   11.5   13.9   15.6   16.1
:South Branch Root River
Lanesboro             5.5    5.6    5.9    7.2    8.5   10.6   11.5
:Cedar River
Lansing              14.1   14.1   14.3   14.9   15.5   16.2   16.7
Austin                8.1    8.2    8.4    9.6   10.8   12.0   14.0
Osage                18.2   18.3   18.4   19.1   20.1   21.2   23.1
Charles City          6.8    6.9    7.0    8.4    9.9   12.8   15.5
:Turtle Creek
Austin                5.5    5.5    6.0    6.6    7.9    9.9   11.1
:Turkey River
Elkader               8.8    8.9    9.4   10.5   12.0   16.1   17.9
Garber               11.0   11.1   12.4   14.5   17.0   21.3   27.3
:Upper Iowa River
Decorah               4.6    4.6    4.7    5.2    6.0    7.1    8.1
Dorchester           10.5   10.5   10.7   11.4   12.5   14.6   17.7
:Trempealeau River
Arcadia               4.5    4.6    5.1    6.1    6.8    7.3    7.9
Dodge                 6.9    7.0    8.0    8.8    9.3   10.0   10.8
:Black River
Neillsville           8.0    8.3    9.0   11.2   12.9   13.7   14.6
Black River Falls    42.0   43.1   44.3   48.0   50.4   53.3   54.2
Galesville            9.0    9.7   10.9   12.2   13.3   14.1   14.4
:Kickapoo River
La Farge              7.3    7.6    8.6    9.7   11.2   12.0   12.1
Viola                12.5   12.6   13.4   14.0   14.9   15.7   15.8
Readstown             9.0    9.3   10.3   11.4   12.1   12.9   13.0
Soldiers Grove       11.1   11.2   12.1   12.9   13.6   14.4   14.5
Gays Mills           11.9   12.1   13.1   13.6   14.2   15.0   15.2
Steuben              11.3   11.4   11.8   12.4   13.0   13.6   13.7
:Wisconsin River
Muscoda               4.6    5.6    7.0    8.0    8.3   10.2   10.9
:Yellow River
Necedah              14.0   14.6   15.4   16.1   17.2   18.0   18.5
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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 climatological 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

The next outlook will be issued on Thursday March 2nd.