...Spring Flood and Water Resources Outlook Number 1...

This flood outlook is for the National Weather Service Omaha area. This area includes eastern Nebraska and portions of southwest Iowa. It includes portions of the following rivers and their tributaries. Click a river basin on the next page to jump to that sub-section. Questions regarding this outlook can be directed **here**.

Current flood outlook highlights

* The risk of flooding for the remainder of winter and into mid spring is near to below normal at most locations. Locally heavy spring rains will cause flooding in localized areas as is the case every year. This outlook is directed towards flooding on a larger scale.

* Current conditions are not conducive to major, large-scale flooding.

* The National Weather Service in Omaha will issue its next updated outlook on Thursday March 7.

* Graphics for select river gauges are available on our website at: http://water.weather.gov/ahps2/index.php?wfo=oax, once a gauge is selected click on the graph and choose "chance of exceeding levels during entire period."

Overview: Based on current conditions there is a low threat for snowmelt flooding across eastern nebraska and southwest iowa. The primary reason for this is a lack of appreciable snow cover, drier than normal soil moisture conditions and lower than normal fall precipitation. As this outlook is being issued a winter storm is impacting the central plains including Nebraska and Iowa. At this time it appears this storm could add one half to one inch of liquid equivalent to the area. This precipitation is much needed as the area is also experiencing a severe drought. While this will not be enough to elminate the drought it is certainly a step in the right direction.

Mountain snow pack: For the Missouri River snow water equivalent values are 95% of normal through February 21. For the Platte River snow water equivalent values are 69% of normal.

Plains snow pack: A significant winter storm will be impacting the area today. This storm is forecast to bring up to 8 to 10 inches of snow to some areas. This snow will translate into a liquid equivalent of one half to one inch. Across the Dakotas snow water equivalent values range from 1 to 3 inches.

Ice jam threat: This year the threat for ice jam flooding is low. River ice thickness has been minimal this winter and what ice did form early in the

winter has already flushed out or melted. The Lower Platte River flushed its ice out the weekend of February 9th and the Elkhorn River on the 13th of February. This means for ice jams to occur we are essentially starting over, more or less, and given the limited time left for cold weather, the ice jam threat is low.

Frost depths: Value are averaging around 6 inches across the area. With colder than normal temperature temperatures expected over the next week frost depths should increase. Though with snow cover expected, these depths should not increase significantly.

Current river conditions: See sub-sections below. Where available streamflows have been compared to the long-term mean.

Climate outlook for March through May: The Climate Prediction Center indicates a 40 to 50 percent chance for temperatures to reach the above normal third across the area compared to 1981 to 2010 climatology. This leaves a 33 percent chance for temperatures to reach the near normal third, and a 17 to 27 percent chance for temperatures in the below normal third. The Climate Prediction Center also indicates equal chances for precipitation this spring to be in the above, near and below normal categories for the spring. The precipitation outlook for March does include a 33 to 40 percent chance for conditions similar to the wettest third of 1981 to 2010 climatology in western Iowa, with a 33 percent chance of conditions in the normal third and a 27 to 33 percent chance of conditions in the driest third. Equal chances is forecast for march precipitation in eastern Nebraska.

Click on a river basin to jump to it:

To follow are sections describing the threat for flooding for select River basins.

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* Missouri River from Decatur to Rulo *
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Overview: The Missouri River has been running lower than normal below Gavins Point this winter. This is a function of conservation measures taken by the US Army Corps of Engineers, as well as the lack of appreciable tributary contributions downstream of Gavins Point Dam.

	Current Streamflow	Long-term mean flow	Current streamflow as a % of long-term mean
Missouri river:			
at Decatur	14,000	20,600	69%
at Omaha	15,500	22,000	78%
at Nebraska City	21,400	29,900	78%
at Rulo	21,500	32,000	67%

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* Niobrara River *
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	Chance of Reaching Flood Stage Compared to Normal	Chance of Minor Flooding
Niobrara River:		
at Verdel	near normal	<5%
Ponca Creek:		
at Verdel	13% greater	25%

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* Big Blue River Basin *
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	Chance of Reaching Flood Stage Compared to Normal	Chance of Minor Flooding
Big Blue River:		
at Surprise	5% less	<5%
at Seward	5% less	<5%
at Crete	20% less	27%
at Beatrice	20% less	9%
at Barneston	8% less	5%
Lincoln Creek:		
at Seward	14% less	9%
W Fk Big Blue River:		
at Dorchester	19% less	7%
Turkey Creek:		
at Wilber	15% less	24%
Little Blue River:		
at Deweese	4% less	10%
at Fairbury	3% less	5%

	Current streamflow as a percent of long-term mean
Big Blue River:	
at Crete	15%
Little Blue River:	
at Fairbury	26%

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* Elkhorn River Basin *
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	Chance of Reaching Flood Stage Compared to Normal	Chance of Minor Flooding
Elkhorn River:		
at Neligh	near normal	<5%
at Norfolk	near normal	<5%
at Pilger	near normal	<5%
at West Point	7% greater	12%
at Hooper	2% greater	8%
at Waterloo	near normal	<5%
N Fk Elkhorn River:		
at Pierce	7% less	<5%
Maple Creek:		
at Nickerson	5% less	<5%
Logan Creek:		
at Uehling	near normal	<5%

	Current streamflow as a percent of long-term mean
Elkhorn River:	
at Norfolk	16%
at Waterloo	52%

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* Platte River Basin *
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	Chance of Reaching Flood Stage Compared to Normal	Chance of Minor Flooding
Platte River:		
at Duncan	3% less	<5%
at North Bend	12% less	<5%
at Leshara	14% less	6%
at Ashland	7% less	5%
at Louisville	2% less	<5%
Shell Creek:		
at Columbus	2% greater	7%
Salt Creek:		
at Roca	2% less	8%
at Lincoln	1% less	8%
at Greenwood	4% less	10%
at Ashland	near normal	31%
Wahoo Creek:		
at Ithaca	9% greater	43%

	Current streamflow as a percent of long-term mean
Platte River:	
near Duncan	33%
at North Bend	37%
near Leshara	unavailable
near Ashland	57%
at Louisville	63%

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* Other tributaries to the Missouri River *
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	Chance of Reaching Flood Stage Compared to Normal	Chance of Minor Flooding
Maple River at Mapleton	near normal	<5%
Little Sioux River at Turin	2% less	<5%
Soldier River at Pisgah	near normal	<5%
Boyer River at Logan	1% less	<5%
Weeping Water Creek at Union	near normal	11%
Nishnabotna River:		
East Nishnabotna at Red Oak	7% less	21%
West Nishnabotna at Hancock	18% less	12%
West Nishnabotna at Randolph	15% less	14%
Nishnabotna at Hamburg	18% less	13%
Little Nemaha River at Auburn	7% less	<5%
N Fk Big Nemaha River at Humboldt	near normal	<5%
Big Nemaha River at Falls City	4% less	<5%
Nodaway River at Clarinda	near normal	<5%

	Current streamflow as a percent of long-term mean
Maple River at Mapleton	15%
Little Sioux River at Turin	9%
Soldier River at Pisgah	44%
Boyer River at Logan	23%
West Nishnabotna at Hancock	39%
East Nishnabotna at Red Oak	21%
Nishnabotna at Hamburg	15%
Nodaway River at Clarinda	1%

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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...

				current and historical chances of exceeding flood catergories as a percentage (%)					
	categorical flood stages (ft)			minor		moderate		major	
Location	minor	mod	major	CS	HS	CS	HS	CS	HS
:Ponca Creek									
Verdel	12.0	15.0	17.0	25	12	10	7	5	<5
:Niobrara River									
Verdel	7.0	9.0	10.0	<5	<5	<5	<5	<5	<5
:North Fork Elkhorn River									
Pierce	12.0	14.0	16.0	<5	12	<5	7	<5	<5
:Elkhorn River									
Neligh	11.0	12.0	14.0	<5	<5	<5	<5	<5	<5
Norfolk	12.0	13.0	17.0	<5	<5	<5	<5	<5	<5
Pilger	12.0	14.0	15.0	<5	<5	<5	<5	<5	<5
West point	12.0	16.0	18.7	12	5	<5	<5	<5	<5
Hooper	14.0	18.0	19.0	8	6	<5	<5	<5	<5
Waterloo	17.0	18.0	21.0	<5	<5	<5	<5	<5	<5
:Logan Creek									
Uehling	18.0	19.0	21.0	<5	<5	<5	<5	<5	<5
:Shell Creek									
Columbus	20.0	21.0	22.0	7	5	<5	<5	<5	<5
:Platte River									
Duncan	8.0	9.0	10.0	<5	8	<5	<5	<5	<5
North bend	8.0	12.0	15.0	<5	17	<5	<5	<5	<5
Leshara	8.0	10.0	12.0	6	20	<5	<5	<5	<5

:Maple Creek									
Nickerson	11.5	13.0	17.0 :	<5	10	<5	<5	<5	<5
:Platte River									
Ashland	20.0	22.0	26.0 :	5	12	<5	<5	<5	<5
Louisville	9.0	11.0	12.0 :	<5	7	<5	<5	<5	<5
:Wahoo Creek									
Ithaca	19.0	22.0	23.0 :	43	34	6	6	<5	<5
:Salt Creek									
Roca	19.0	23.0	26.0 :	8	10	<5	<5	<5	<5
Lincoln	20.5	26.5	33.0 :	8	9	<5	<5	<5	<5
Greenwood	20.0	22.0	26.0 :	10	14	8	9	5	5
Ashland	16.0	20.0	23.0 :	31	31	<5	<5	<5	<5
:Big Blue River									
Surprise	7.0	11.0	16.0 :	<5	10	<5	<5	<5	<5
Seward	18.0	22.0	27.0 :	<5	11	<5	<5	<5	<5
Crete	18.0	24.0	29.0 :	27	47	<5	11	<5	<5
Beatrice	16.0	26.0	32.0 :	9	29	<5	<5	<5	<5
Barneston	20.0	27.0	34.0 :	5	13	<5	6	<5	<5
:Lincoln Creek									
Seward	15.0	17.0	20.0 :	9	23	<5	8	<5	<5
:West Fork Big Blue River									
Dorchester	15.0	22.0	24.4 :	7	26	<5	<5	<5	<5
:Turkey Creek									
Wilber	12.5	16.0	21.0 :	24	39	<5	<5	<5	<5
:Little Blue River									
Fairbury	18.5	20.0	26.0 :	5	8	<5	<5	<5	<5
:Weeping Water Creek									
Union	25.0	28.0	30.0 :	8	9	<5	<5	<5	<5
:Little Nemaha River									
Auburn	22.0	23.0	27.0 :	<5	12	<5	11	<5	<5
:North Fork Big Nemaha River									
Humboldt	28.0	29.5	31.0 :	<5	<5	<5	<5	<5	<5
:Big Nemaha River									
Falls City	27.0	33.0	36.0 :	<5	9	<5	<5	<5	<5
:Maple River									
Mapleton	21.0	24.0	27.0 :	<5	<5	<5	<5	<5	<5
:Little Sioux River									
Turin	25.0	28.0	34.5 :	<5	7	<5	<5	<5	<5
:Soldier River									
Pisgah	28.0	29.0	30.0 :	<5	<5	<5	<5	<5	<5

:Boyer River									
Logan	19.0	22.0	25.0 :	<5	6	<5	<5	<5	<5
:West Nishnabotna River									
Hancock	14.0	19.0	23.0 :	12	30	8	13	<5	<5
Randolph	19.0	22.0	24.0 :	14	29	7	12	<5	<5
:East Nishnabotna River									
Red Oak	18.0	22.0	27.0 :	21	28	<5	8	<5	<5
:Nishnabotna River									
Hamburg	25.0	27.0	33.0 :	13	31	8	16	<5	<5
:Nodaway River									
Clarinda	23.0	26.0	29.0 :	<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.

...table 2--exceedance probabilities...

	chance of exceeding stages at specific locations						
Location	95%	90%	75%	50%	25%	10%	5%
:Ponca Creek							
Verdel	5.7	5.7	6.3	8.6	12.0	14.9	17.0
:Niobrara River							
Verdel	3.5	3.5	3.6	3.8	4.2	4.7	5.1
:North Fork Elkhorn River							
Pierce	4.2	4.4	4.7	5.3	7.4	8.7	10.1
:Elkhorn River							
Neligh	4.6	4.9	5.2	5.7	6.9	8.1	8.4
Norfolk	3.5	3.7	3.9	4.2	5.3	6.2	8.2
Pilger	8.5	8.6	8.8	9.1	10.0	11.1	11.8
West point	8.5	8.6	8.8	9.1	10.9	12.2	12.8
Hooper	6.8	7.0	7.3	8.3	11.4	13.2	14.7
Waterloo	5.8	6.0	6.5	8.0	11.5	13.5	14.8
:Logan Creek							
Uehling	5.9	6.0	6.6	8.4	11.3	13.6	16.0

:Shell Creek							
Columbus	2.7	3.9	6.2	10.9	16.3	19.3	20.6
:Platte River							
Duncan	3.8	3.8	3.9	4.4	5.3	6.5	7.3
North bend	4.9	4.9	5.1	5.7	6.4	7.4	7.7
Leshara	5.0	5.1	5.2	6.1	6.8	8.0	8.2
:Maple Creek							
Nickerson	5.5	5.6	5.9	6.7	7.5	9.0	9.3
:Platte River							
Ashland	16.6	16.8	17.0	17.7	18.5	19.2	19.9
Louisville	4.5	4.7	5.1	6.2	7.5	8.4	8.7
:Wahoo Creek							
Ithaca	8.9	9.1	10.8	16.5	21.2	21.7	22.1
:Salt Creek							
Roca	3.9	4.1	4.6	6.6	13.0	18.1	19.8
Lincoln	3.9	4.1	4.9	7.1	12.9	16.9	22.8
Greenwood	5.2	5.6	6.7	10.5	16.5	20.0	25.0
Ashland	9.1	9.2	9.8	13.1	17.1	18.0	19.2
:Big Blue River							
Surprise	1.6	1.6	1.9	2.4	3.1	3.8	4.9
Seward	2.7	2.8	3.8	5.7	9.3	12.3	14.8
Crete	9.3	9.9	11.1	14.9	18.5	21.5	22.9
Beatrice	5.0	5.2	7.1	9.4	12.9	15.9	16.3
Barneston	6.1	6.3	8.0	11.3	14.7	17.4	19.7
:Lincoln Creek							
Seward	6.4	6.6	7.6	9.6	11.9	14.9	15.7
:West Fork Big Blue River							
Dorchester	4.4	4.6	5.2	7.6	10.7	11.9	17.1
:Turkey Creek							
Wilber	5.3	5.6	7.2	9.7	12.2	13.6	14.4
:Little Blue River							
Fairbury	9.6	9.7	10.7	13.3	15.4	16.3	18.5
:Weeping Water Creek							
Union	4.6	5.0	6.1	8.7	15.4	24.7	26.8
:Little Nemaha River							
Auburn	5.9	6.6	7.4	9.6	13.3	17.8	21.4
:North Fork Big Nemaha river							
Humboldt	5.2	5.4	5.9	7.3	10.5	13.6	15.5
:Big Nemaha River							
Falls City	7.3	7.8	9.1	12.1	15.9	20.9	24.9

:Maple River							
Mapleton	5.2	5.4	5.9	7.2	8.4	13.2	15.7
:Little Sioux River							
Turin	7.7	7.8	8.4	9.8	13.9	20.2	22.9
:Soldier River							
Pisgah	3.8	4.2	5.0	6.3	8.5	9.9	10.9
:Boyer River							
Logan	5.5	5.7	6.7	7.9	10.5	14.9	18.0
:West Nishnabotna River							
Hancock	4.2	4.8	6.1	7.5	9.3	18.1	20.6
Randolph	9.3	9.7	11.9	13.8	15.6	21.1	22.2
:East Nishnabotna River							
Red oak	7.3	7.8	9.2	13.6	17.7	20.2	21.3
:Nishnabotna River							
Hamburg	10.3	11.1	14.3	18.8	23.6	26.2	27.6
:Nodaway River							
Clarinda	11.3	11.5	12.1	13.0	15.3	17.6	20.3

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 to 90 day long-range outlooks of temperature and precipitation. By providing a range of probabilities, the level of risk 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://water.weather.gov/ahps2/index.php?wfo=oax

The next outlook will be issued on March 7th. For questions on this outlook, please contact:

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