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PROBABILISTIC HYDROLOGIC OUTLOOK
NATIONAL WEATHER SERVICE DES MOINES IA
200 PM CST FRI MAR 5 2010

...SPRING FLOOD AND WATER RESOURCES OUTLOOK...

** IMPORTANT...HIGH RISK OF SIGNIFICANT FLOODING CONTINUES **

SPRING FLOOD AND WATER RESOURCES OUTLOOK NUMBER 3

THIS FLOOD OUTLOOK IS FOR THE NWS DES MOINES SERVICE AREA. IT COVERS THE TIME PERIOD FROM LATE FEBRUARY THROUGH EARLY JUNE 2010. IT INCLUDES THE FOLLOWING RIVERS AND THEIR TRIBUTARIES IN NORTH CENTRAL...CENTRAL AND SOUTH CENTRAL IOWA...

IOWA...CEDAR...SKUNK...DES MOINES...RACCOON...NISHNABOTNA...
102...THOMPSON AND CHARITON RIVERS

...FLOOD OUTLOOK HIGHLIGHTS...

* THERE IS A CONTINUED HIGH RISK OF SIGNIFICANT FLOODING. THE RISK OF MAJOR FLOODING HAS INCREASED EVEN HIGHER SINCE THE SECOND OUTLOOK ON FEBRUARY 19TH...MAINLY IN THE DES MOINES RIVER BASIN ABOVE SAYLORVILLE RESERVOIR. THE RISK OF REACHING FLOOD STAGE HAS CHANGED VERY LITTLE AT MOST LOCATIONS. THE AREAS OF MOST CONCERN FOR SIGNIFICANT FLOODING INCLUDE THE DES MOINES...RACCOON...IOWA AND CEDAR RIVER BASINS...ESPECIALLY ACROSS THE NORTHWEST HALF OF THE DES MOINES SERVICE AREA. THE RISK OF FLOODING IS MUCH ABOVE NORMAL AT MANY LOCATIONS ACROSS THE ENTIRE DES MOINES SERVICE AREA.

* THE TIME PERIOD WHEN FLOODING IS MOST LIKELY EXTENDS FROM THE MIDDLE THIRD OF THIS MONTH...INTO LATE APRIL.

* THERE IS AN ABOVE NORMAL RISK OF FLASH FLOODING...ESPECIALLY FROM ICE JAMS. THIS OUTLOOK DOES NOT TAKE INTO ACCOUNT FLOODING FROM ICE JAMS. FLOODING FROM ICE JAMS WOULD BE ABOVE AND BEYOND THE FLOODING INDICATED IN THIS OUTLOOK.

* THE RISK OF FLOODING AND FLASH FLOODING WILL BE HIGHER THAN NORMAL AFTER THE SNOW MELTS...AND WILL REMAIN HIGHER THAN NORMAL AT LEAST INTO LATE SPRING. HEAVY RAINFALL MAY RESULT IN SIGNIFICANT FLOODING. IT WILL BE MORE

IMPORTANT THAN NORMAL TO CLOSELY MONITOR FOR THE RISK OF FLOODING...EVEN AFTER THE SNOW PACK IS GONE.

* WE MAY ISSUE ANOTHER UPDATED OUTLOOK ON FRIDAY...MARCH 26 2010. WE WILL NOT ISSUE THE UPDATED OUTLOOK IF FLOODING IS UNDERWAY...OR LIKELY WITHIN A FEW DAYS OF MARCH 26TH. WHENEVER FLOODING IS UNDERWAY OR LIKELY WITHIN A FEW DAYS...REFER TO OUR HAZARDOUS WEATHER OUTLOOK...FLOOD WATCHES...FLOOD WARNINGS AND 7-DAY RIVER FORECASTS FOR THE LATEST INFORMATION. ALL OF THIS INFORMATION IS AVAILABLE ON OUR WEB SITE AT...
[HTTP://WWW.WEATHER.GOV/DESMOINES](http://www.weather.gov/desmoines) .

TABLE 1 BELOW LISTS THE PROBABILITIES OF REACHING FLOOD STAGE /MINOR FLOODING/...AS WELL AS MODERATE AND MAJOR FLOOD LEVELS FOR EACH FORECAST POINT.

...TABLE 1...PROBABILITIES FOR MINOR...MODERATE AND MAJOR FLOODING...

VALID MAR. 7 2010 - JUN. 5 2010

LOCATION	-----FLOOD STAGES-----						DEP FROM NORMAL OF REACHING FLOOD STAGE	
	MINOR STG	PCT	MODERATE STG	PCT	MAJOR STG	PCT		
IOWA RIVER								
ROWAN	11	99%	14	83%	16.5	14%	46%	GREATER
MARSHALLTOWN	18	88%	19	62%	21	16%	73%	GREATER
CEDAR RIVER								
WAVERLY	11.5	24%	15	1%	17	1%	19%	GREATER
JANESVILLE	11	37%	13	18%	15	6%	27%	GREATER
CEDAR FALLS	88	99%	90	93%	93	50%	51%	GREATER
WATERLOO	12	99%	15	73%	19	29%	62%	GREATER
W FK CEDAR RIVER								
FINCHFORD	12	99%	14	80%	16	42%	52%	GREATER
WINNEBAGO RIVER								
MASON CITY	7	99%	10	52%	14	11%	60%	GREATER
SHELL ROCK RIVER								
SHELL ROCK	12	96%	13	72%	15	14%	57%	GREATER
BEAVER CREEK								
NEW HARTFORD	10	72%	12	18%	14	1%	41%	GREATER
S SKUNK RIVER								
AMES 3N	14	6%	15	3%	16	1%	5%	GREATER
AMES HWY 30	20	93%	23	45%	24	16%	61%	GREATER
COLFAX	17	91%	19	47%	21	14%	71%	GREATER

OSKALOOSA	20	90%	21	70%	24	13%	68%	GREATER
SQUAW CREEK								
AMES	9	67%	12	47%	15	6%	55%	GREATER
DES MOINES RIVER								
ESTHERVILLE	7	99%	10	99%	14	23%	44%	GREATER
EMMETSBURG	10	99%	11	99%	13	44%	62%	GREATER
HUMBOLDT	8	99%	9	99%	12	91%	50%	GREATER
FORT DODGE	10.5	99%	13	93%	14	80%	73%	GREATER
STRATFORD	14	99%	18	99%	22	95%	42%	GREATER
DSM-2ND AVE	23	59%	25	44%	27	36%	57%	GREATER
DSM-SE 6TH	24	99%	26	80%	30	36%	65%	GREATER
EDDYVILLE	61	99%	66	14%	69	8%	60%	GREATER
OTTUMWA	11	55%	12	31%	15	13%	40%	GREATER
E FK DES MOINES RIVER								
ALGONA	14	99%	17	99%	22	55%	30%	GREATER
DAKOTA CITY	20	83%	22	37%	24	11%	80%	GREATER
BOONE RIVER								
WEBSTER CITY	12	63%	15	13%	17	6%	58%	GREATER
BEAVER CREEK								
GRIMES	12	88%	14	11%	16	1%	69%	GREATER
N RACCOON RIVER								
JEFFERSON	19	41%	20	19%	21	6%	35%	GREATER
PERRY	15	99%	17	96%	20	75%	46%	GREATER
S RACCOON RIVER								
REDFIELD	20	1%	24	1%	27	1%	NEAR NORMAL	
RACCOON RIVER								
VAN METER	16	96%	19	75%	21	23%	66%	GREATER
DSM-HWY 28	32	99%	36	63%	39.5	11%	49%	GREATER
DSM-FLEUR DR	12	99%	14	93%	20	21%	49%	GREATER
NORTH RIVER								
NORWALK	18	95%	23	3%	25	1%	51%	GREATER
MIDDLE RIVER								
INDIANOLA	19	19%	24	1%	25	1%	NEAR NORMAL	
SOUTH RIVER								
ACKWORTH	26	1%	29	1%	31	1%	NEAR NORMAL	
CEDAR CREEK								
BUSSEY	18	24%	26	1%	28	1%	NEAR NORMAL	

E NISHNABOTNA RIVER							
ATLANTIC	17	17%	21	1%	22	1%	NEAR NORMAL
E FK 102 RIVER							
BEDFORD	21	20%	22	11%	23	6%	NEAR NORMAL
THOMPSON RIVER							
DAVIS CITY	9	70%	12	19%	19	1%	31% GREATER
CHARITON RIVER							
CHARITON	18	25%	21	1%	23	1%	NEAR NORMAL
MOULTON	35	9%	36	1%	37	1%	NEAR NORMAL
S FK CHARITON RIVER							
PROMISE CITY	18	55%	24	1%	27	1%	NEAR NORMAL

KEY FOR THE ABOVE TABLE...
 STG = STAGE (FEET)
 PCT = PERCENT
 DEP = DEPARTURE FROM NORMAL

THE BELOW TABLES SHOW THE PERCENTAGE CHANCES OF AREA RIVERS RISING ABOVE AND FALLING BELOW VARIOUS STAGES OVER THE NEXT 90 DAYS. THESE PROBABILITIES ARE CALLED EXCEEDANCE AND NON EXCEEDANCE PROBABILITIES RESPECTIVELY.

IN TABLE 1 BELOW...THE 90 THROUGH 10 PERCENT COLUMNS INDICATE EXCEEDANCE PROBABILITIES /THE CHANCES OF THE RIVER RISING ABOVE THE LISTED STAGE LEVELS/ FOR THE NEXT 90 DAYS.

IN TABLE 2 BELOW...THE 90 THROUGH 10 PERCENT COLUMNS INDICATE NON EXCEEDANCE PROBABILITIES /THE CHANCES OF THE RIVER FALLING BELOW THE LISTED STAGE LEVELS/ FOR THE NEXT 90 DAYS.

HERE ARE SOME EXAMPLES USING THE TABLES BELOW...

THE DES MOINES RIVER AT FORT DODGE HAS A FLOOD STAGE OF 10.5 FEET. TABLE 2 SHOWS THAT IN THE NEXT 90 DAYS THERE IS A 20 PERCENT CHANCE OF THE STAGE REACHING 17.5 FEET.

ALSO...THE CEDAR RIVER AT CEDAR FALLS HAS A FLOOD STAGE OF 88 FEET. TABLE 3 SHOWS THAT IN THE NEXT 90 DAYS THERE IS A 60 PERCENT CHANCE OF THE STAGE FALLING TO 77.5 FEET.

...TABLE 2...EXCEEDANCE PROBABILITIES...

CHANCE OF EXCEEDING STAGES AT SPECIFIC LOCATIONS
 VALID MAR. 7 2010 - JUN. 5 2010

LOCATION	FS (FT)	90%	80%	70%	60%	50%	40%	30%	20%	10%
IOWA RIVER										
ROWAN	11	13.8	14.1	14.3	14.5	14.9	15.2	15.7	16.1	16.9
MARSHALLTOWN	18	17.9	18.5	18.9	19.2	19.5	19.8	20.1	20.9	21.5
CEDAR RIVER										
WAVERLY	11.5	8.2	8.4	9.0	9.6	9.9	10.6	11.3	12.2	14.2
JANESVILLE	11	7.4	7.9	8.7	9.6	10.2	10.8	11.7	12.7	14.7
CEDAR FALLS	88	90.4	90.8	91.8	92.6	93.1	93.6	94.1	95.1	97.1
WATERLOO	12	14.0	14.7	16.0	16.9	17.5	18.3	19.3	20.1	22.6
W FK CEDAR RIVER										
FINCHFORD	12	13.2	14.1	14.7	15.2	15.7	16.3	16.7	17.4	18.9
WINNEBAGO RIVER										
MASON CITY	7	8.6	8.9	9.1	9.8	10.1	10.4	11.0	12.3	14.2
SHELL ROCK RIVER										
SHELL ROCK	12	12.5	12.9	13.2	13.5	13.6	13.8	14.5	14.9	15.9
BEAVER CREEK										
NEW HARTFORD	10	9.1	9.8	10.3	10.7	10.9	11.2	11.4	11.9	13.0
S SKUNK RIVER										
AMES 3N	14	9.4	9.8	10.0	10.3	10.7	10.8	11.2	11.7	13.4
AMES HWY 30	20	20.9	21.7	22.0	22.3	22.9	23.2	23.4	23.6	24.6
COLFAX	17	17.1	17.7	17.9	18.4	18.9	19.2	19.6	20.2	22.3
OSKALOOSA	20	20.2	20.6	21.0	21.7	22.0	22.2	22.7	23.3	24.8
SQUAW CREEK										
AMES	9	7.2	8.0	8.7	9.9	11.9	12.4	12.7	13.2	14.4
DES MOINES RIVER										
ESTHERVILLE	7	11.5	12.3	12.6	12.9	13.3	13.6	13.9	14.4	15.2
EMMETSBURG	10	11.9	12.2	12.5	12.7	12.9	13.2	13.4	13.5	14.2
HUMBOLDT	8	12.3	12.8	13.2	13.4	13.8	14.2	14.5	15.1	15.6
FORT DODGE	10.5	13.6	14.2	14.5	14.9	15.1	15.6	16.2	17.5	18.4
STRATFORD	14	22.9	23.5	24.4	24.8	25.0	26.3	27.4	28.7	32.0
DSM-2ND AVE	23	21.0	21.5	21.8	23.0	24.2	26.2	27.8	28.6	29.5
DSM-SE 6TH	24	25.0	26.0	26.5	27.6	28.2	29.4	30.6	31.1	31.8
EDDYVILLE	61	61.2	61.4	61.6	61.8	62.3	62.7	64.0	65.3	67.0
OTTUMWA	11	9.7	10.2	10.3	10.9	11.3	11.6	12.5	13.6	15.4
E FK DES MOINES RIVER										
ALGONA	14	20.0	21.0	21.4	21.7	22.2	22.5	22.7	23.3	23.7
DAKOTA CITY	20	19.5	20.2	20.5	20.9	21.4	22.0	22.9	23.2	24.4
BOONE RIVER										

WEBSTER CITY	12	11.0	11.3	11.7	12.1	12.5	13.0	13.8	14.4	16.2
BEAVER CREEK										
GRIMES	12	12.0	12.2	12.4	12.6	12.9	13.0	13.2	13.4	14.2
N RACCOON RIVER										
JEFFERSON	19	15.9	16.7	17.6	18.3	18.8	19.1	19.7	20.0	20.8
PERRY	15	18.4	19.2	20.3	21.1	21.6	22.0	22.8	24.1	26.2
S RACCOON RIVER										
REDFIELD	20	10.5	11.4	11.9	12.5	12.7	13.5	13.7	14.4	15.1
RACCOON RIVER										
VAN METER	16	17.2	18.9	19.2	19.5	19.9	20.1	20.5	21.3	22.4
DSM-HWY 28	32	34.3	35.4	35.8	36.1	36.7	37.0	37.4	38.4	40.0
DSM-FLEUR DR	12	14.7	16.1	16.8	17.1	17.9	18.4	18.9	20.1	22.0
NORTH RIVER										
NORWALK	18	20.1	21.1	21.4	21.5	21.6	21.8	22.1	22.3	22.5
MIDDLE RIVER										
INDIANOLA	19	15.1	15.7	16.3	17.1	17.3	18.0	18.7	19.0	21.8
SOUTH RIVER										
ACKWORTH	26	13.2	14.2	14.4	14.8	15.4	16.7	17.7	18.9	20.3
CEDAR CREEK										
BUSSEY	18	12.1	14.1	14.7	15.2	16.0	16.6	17.3	19.1	20.7
E NISHNABOTNA RIVER										
ATLANTIC	17	6.3	7.0	8.1	10.3	13.1	14.0	15.8	16.9	18.1
E FK 102 RIVER										
BEDFORD	21	16.4	17.4	18.1	18.9	19.2	19.6	20.1	21.0	22.1
THOMPSON RIVER										
DAVIS CITY	9	8.6	8.7	9.0	9.5	10.2	10.6	11.3	11.8	13.9
CHARITON RIVER										
CHARITON	18	15.7	16.0	16.3	16.5	16.9	17.3	17.8	18.2	18.7
MOULTON	35	26.2	26.8	28.3	29.3	31.1	33.0	33.8	34.5	34.8
S FK CHARITON RIVER										
PROMISE CITY	18	11.1	12.3	15.4	17.8	18.9	19.4	19.7	20.6	21.7

...TABLE 3...NON EXCEEDANCE PROBABILITIES...

CHANCE OF FALLING BELOW STAGES AT SPECIFIC LOCATIONS
VALID MAR. 7 2010 - JUN. 5 2010

LOCATION	FS (FT)	90%	80%	70%	60%	50%	40%	30%	20%	10%
IOWA RIVER										
ROWAN	11	4.8	4.5	4.3	3.9	3.9	3.9	3.9	3.9	3.8
MARSHALLTOWN	18	10.0	9.7	9.6	9.6	9.6	9.6	9.6	9.6	9.5
CEDAR RIVER										
WAVERLY	11.5	4.1	4.0	3.9	3.9	3.8	3.8	3.8	3.8	3.8
JANESVILLE	11	1.7	1.5	1.4	1.3	1.3	1.3	1.3	1.3	1.3
CEDAR FALLS	88	78.0	77.8	77.6	77.5	77.4	77.4	77.4	77.4	77.4
WATERLOO	12	6.5	6.4	6.3	6.3	6.2	6.2	6.2	6.2	6.2
W FK CEDAR RIVER										
FINCHFORD	12	6.5	6.4	6.2	6.2	6.2	6.2	6.2	6.2	6.1
WINNEBAGO RIVER										
MASON CITY	7	3.5	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
SHELL ROCK RIVER										
SHELL ROCK	12	8.1	7.9	7.8	7.8	7.8	7.8	7.8	7.8	7.8
BEAVER CREEK										
NEW HARTFORD	10	3.8	3.6	3.6	3.5	3.5	3.5	3.5	3.5	3.5
S SKUNK RIVER										
AMES 3N	14	3.3	3.0	2.9	2.8	2.7	2.7	2.7	2.7	2.6
AMES HWY 30	20	10.5	10.1	10.0	9.7	9.5	9.4	9.1	9.1	9.0
COLFAX	17	8.3	8.1	8.0	7.8	7.6	7.5	7.4	7.3	7.3
OSKALOOSA	20	10.0	9.5	9.2	9.0	8.8	8.7	8.5	8.4	8.3
SQUAW CREEK										
AMES	9	2.1	2.0	1.9	1.8	1.8	1.4	1.4	1.4	1.4
DES MOINES RIVER										
ESTHERVILLE	7	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1
EMMETSBURG	10	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
HUMBOLDT	8	2.8	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5
FORT DODGE	10.5	4.5	4.4	4.2	4.1	4.0	3.9	3.8	3.8	3.8
STRATFORD	14	6.7	6.3	5.8	5.3	5.0	4.9	4.5	4.4	4.4
DSM-2ND AVE	23	14.2	14.1	13.9	13.8	13.7	13.6	13.5	13.4	13.2
DSM-SE 6TH	24	13.1	12.7	12.6	12.4	12.2	11.8	11.5	11.3	10.8
EDDYVILLE	61	56.7	55.5	54.7	54.2	53.0	51.9	50.9	50.3	49.8
OTTUMWA	11	7.0	6.3	5.6	5.3	4.5	4.2	3.2	2.9	2.4
E FK DES MOINES RIVER										
ALGONA	14	7.0	7.0	7.0	7.0	7.0	7.0	7.0	6.9	6.9
DAKOTA CITY	20	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
BOONE RIVER										

WEBSTER CITY	12	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2
BEAVER CREEK										
GRIMES	12	4.4	4.1	3.8	3.7	3.6	3.5	3.4	3.3	3.2
N RACCOON RIVER										
JEFFERSON	19	6.1	5.9	5.7	5.5	5.4	5.2	5.1	5.1	5.1
PERRY	15	6.0	5.7	5.5	5.2	4.9	4.8	4.5	4.3	4.2
S RACCOON RIVER										
REDFIELD	20	4.4	4.1	4.0	3.9	3.8	3.7	3.6	3.5	3.3
RACCOON RIVER										
VAN METER	16	5.2	4.7	4.4	4.2	4.1	4.0	3.8	3.6	3.4
DSM-HWY 28	32	24.2	23.8	23.7	23.5	23.5	23.4	23.3	23.1	23.0
DSM-FLEUR DR	12	3.3	2.5	2.3	2.0	1.7	1.6	1.5	1.3	1.0
NORTH RIVER										
NORWALK	18	7.9	7.4	7.1	6.6	6.4	6.2	6.1	5.9	5.7
MIDDLE RIVER										
INDIANOLA	19	7.7	7.5	7.3	7.1	7.0	6.9	6.8	6.6	6.5
SOUTH RIVER										
ACKWORTH	26	7.4	7.0	6.8	6.6	6.4	6.3	6.2	6.2	6.1
CEDAR CREEK										
BUSSEY	18	6.1	6.0	5.8	5.8	5.7	5.7	5.7	5.6	5.5

THESE NUMBERS ARE CALCULATED USING MULTIPLE SPRING SEASON SCENARIOS FROM 30 OR MORE YEARS OF CLIMATOLOGICAL DATA. THESE NUMBERS ALSO TAKE INTO ACCOUNT CURRENT CONDITIONS OF THE RIVER...SNOW COVER AND SOIL MOISTURE...AS WELL AS 30 TO 90 DAY OUTLOOKS OF TEMPERATURE AND PRECIPITATION. BY PROVIDING THE COMPLETE RANGE OF PROBABILISTIC NUMBERS...THE LEVEL OF RISK ASSOCIATED WITH LONG-RANGE PLANNING DECISIONS CAN BE DETERMINED.

...CURRENT CONDITIONS AS OF MARCH 4 2010...ALONG WITH CHANGES SINCE THE LAST FLOOD OUTLOOK ON FEBRUARY 19...

.SNOW DEPTH...SNOW DEPTH HAS GENERALLY DECREASED SLIGHTLY SINCE THE LAST OUTLOOK. IT IS ABOVE NORMAL ACROSS THE ENTIRE DES MOINES SERVICE AREA. THE SNOW DEPTH DEPARTURES FROM NORMAL INCREASE TOWARD THE NORTHWEST. THEY ARE MUCH ABOVE NORMAL ALONG AND NORTH OF U.S. HWY 20...ESPECIALLY IN THE DES MOINES...RACCOON...CEDAR AND IOWA RIVER BASINS. DEPARTURES FROM NORMAL RANGE FROM AS MUCH AS 15 TO 25 INCHES ABOVE NORMAL IN THE NORTHWEST...TO 2 TO 4 INCHES ABOVE NORMAL IN THE EXTREME SOUTHEAST. ACTUAL SNOW DEPTHS

RANGE FROM 30 TO 40 INCHES IN THE NORTHWEST...TO 2 TO 4 INCHES IN THE EXTREME SOUTH.

.SNOW WATER EQUIVALENT...VALUES REMAINED NEARLY THE SAME SINCE THE LAST OUTLOOK...EXCEPT FOR THE EXTREME SOUTH WHERE THEY INCREASED DUE TO LAST WEEK/S SNOW STORM. THEY RANGE FROM 1 TO 2 INCHES IN THE EXTREME SOUTHEAST...TO VERY HIGH VALUES OF OVER 6 INCHES IN THE NORTHWEST. THOSE HIGH VALUES HAVE BEEN CONFIRMED WITH DIRECT MEASUREMENTS OF THE SNOW PACK.

.STREAM LEVELS...VALUES ARE NOW NEAR NORMAL. IT SHOULD BE NOTED...HOWEVER...THAT ACTUAL VALUES ARE SIMILAR TO THOSE FOR THE LAST OUTLOOK. NORMAL VALUES HAVE INCREASED SINCE THE LAST OUTLOOK.

.SOIL MOISTURE...VALUES ARE NOW NEAR NORMAL. IT SHOULD BE NOTED...HOWEVER...THAT ACTUAL VALUES ARE SIMILAR TO THOSE FOR THE LAST OUTLOOK. NORMAL VALUES HAVE INCREASED SINCE THE LAST OUTLOOK. THE GREATEST DEPARTURES FROM NORMAL ARE IN THE SOUTHEAST AND NORTHWEST PARTS OF THE DES MOINES SERVICE AREA.

.DROUGHT CONDITIONS...DROUGHT CONDITIONS WERE NOT INDICATED...AND HAVE NOT CHANGED SINCE THE LAST OUTLOOK.

.FROST DEPTH...THERE IS LITTLE IF ANY FROST IN THE GROUND. FROST DEPTHS ARE MAINLY 4 INCHES OR LESS. FROST DEPTHS HAVE CHANGED LITTLE SINCE THE LAST OUTLOOK.

.WINTER PRECIPITATION...VALUES HAVE BEEN ABOVE TO MUCH ABOVE NORMAL. THEY RANGE FROM 125 PERCENT OF NORMAL ACROSS THE EXTREME SOUTHEAST...TO 200 PERCENT OR MORE OF NORMAL ACROSS MUCH OF THE NORTHWEST. PRECIPITATION HAS BEEN BELOW NORMAL SINCE THE LAST OUTLOOK.

.WINTER TEMPERATURES...VALUES HAVE BEEN BELOW NORMAL. THEY RANGE FROM AROUND 4.5 DEGREES ABOVE NORMAL IN THE NORTHEAST...TO AROUND 6.5 DEGREES BELOW NORMAL ACROSS THE SOUTHWEST. AVERAGE TEMPERATURES HAVE BEEN MUCH BELOW NORMAL SINCE THE LAST OUTLOOK.

...ONE AND THREE MONTH CLIMATE OUTLOOKS...

.ONE MONTH OUTLOOK /FOR MARCH/...BELOW NORMAL TEMPERATURES ACROSS THE EXTREME SOUTHERN DES MOINES SERVICE AREA...AND EQUAL CHANCES FOR ABOVE...BELOW...AND NEAR NORMAL TEMPERATURES ELSEWHERE. BELOW NORMAL PRECIPITATION ACROSS THE EASTERN TWO THIRDS...AND EQUAL CHANCES ACROSS THE WESTERN ONE THIRD. EQUAL CHANCES MEANS THAT THERE ARE NO STRONG INDICATORS OF ABOVE...BELOW OR NEAR NORMAL CONDITIONS.

.THREE MONTH OUTLOOK /FOR MARCH THROUGH MAY/...EQUAL CHANCES FOR BOTH TEMPERATURES AND PRECIPITATION.

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