

11/13/2012

*Earl Lewis*

Winter Outlook and  
Drought of 2012

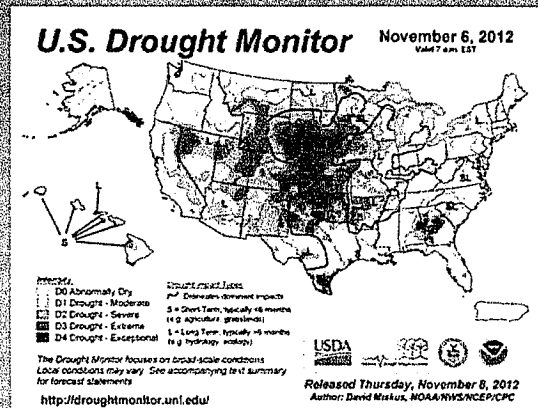
Kansas Water Authority  
Manhattan, KS  
October 29, 2012

National Drought Status, Oct 2011

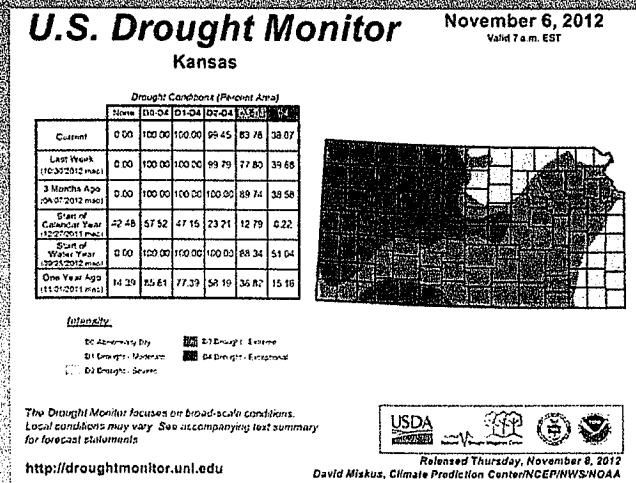


*( Mary Knapp )*

# Current National Drought Status



# Kansas Conditions



# Kansas October Temperatures

10/29/2012  
October Summary ending on 10/28/2012

Divisional Avgs.	Max	Min	Ave	Dep	HI	Day	Lo	Day
Northwest	64.7	34.6	49.7	-4.3	95	4	18	28
West Central	66.3	35.6	51.0	-3.8	90	24	18	27
Southwest	68.6	38.5	53.6	-3.4	95	24	17	27
North Central	66.7	39.1	52.9	-3.2	87	4	21	27
Central	68.6	41.1	54.8	-2.9	87	23	21	27
SouthCentral	71.1	42.8	57.0	-1.8	93	23	18	27
Northeast	67.0	40.8	53.9	-3.0	86	24	20	27
East Central	67.4	44.2	55.8	-2.0	87	24	21	28
Southeast	69.4	45.9	57.6	-1.7	87	22	22	27
STATE	67.8	40.3	54.0	-2.9	93	4th	17	27th

# Kansas Precipitation Data

10/29/2012  
2012 Kansas Climate Division Precipitation Summary (in)  
Percent of Normal (100%=Normal)

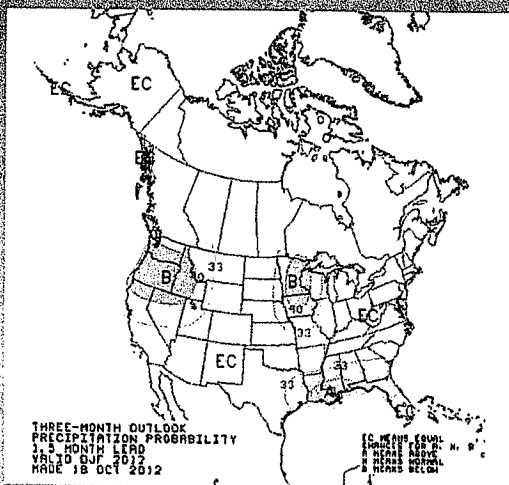
Divisional Avgs.	1-Oct to 28-Oct			1-Jan to 28-Oct			1-Apr to 28-Oct			1-Sep to 28-Oct		
	ACT.	NRM.	%	ACT.	NRM.	%	ACT.	NRM.	%	ACT.	NRM.	%
Northwest	0.67	1.08	59	11.27	18.92	59	9.68	16.67	58	1.5	2.87	52
West Central	0.54	1.03	52	11.34	18.36	61	9.23	16.11	56	1.89	2.92	64
Southwest	1.20	1.01	129	13.56	17.98	74	10.96	15.81	69	2.96	2.88	104
North Central	1.60	1.73	92	17.59	24.91	69	14.54	21.62	66	3.08	4.77	65
Central	1.07	2.05	53	18.23	26.22	69	14.27	22.56	63	2.97	5.13	58
SouthCentral	0.56	2.01	28	19.63	25.61	76	13.99	21.84	64	2.46	5.12	49
Northeast	1.80	2.65	50	21.52	31.91	67	16.72	27.78	60	3.48	7.05	49
East Central	1.25	2.93	43	21.44	32.97	65	15.49	28.24	55	5	7.28	67
Southeast	1.78	3.20	54	28.69	33.90	84	20.81	28.37	73	5.6	7.61	72
STATE	1.11	1.93	64	18.26	25.47	70	14	21.93	63	3.25	5.02	65

# Kansas Precipitation Data

10/29/2012 2012 Kansas Climate Division Precipitation Summary (In)  
Percent of Normal (100%=Normal)

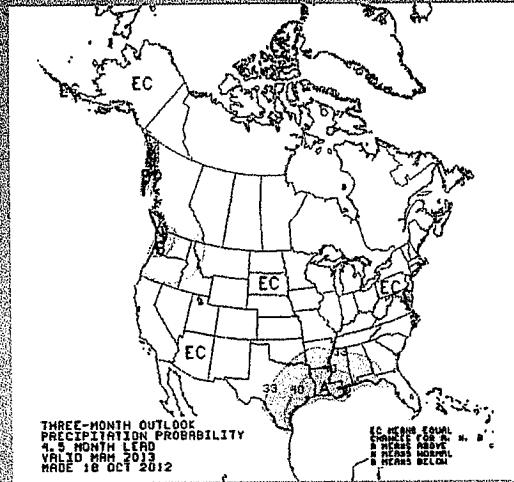
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West Central	0.54	1.03	52	11.94	18.36	61	9.23	16.11	56	1.89	2.92	64
Southwest	1.20	1.01	129	19.56	17.98	74	10.96	15.81	69	2.96	2.88	104
North Central	1.60	1.73	92	17.59	24.91	69	14.54	21.62	66	3.08	4.77	65
Central	1.07	2.05	53	18.23	26.22	69	14.27	22.56	63	2.97	5.13	58
South Central	0.56	2.01	28	19.63	25.61	76	13.99	21.84	64	2.46	5.12	49
Northeast	1.80	2.65	50	21.52	31.91	67	16.72	27.78	60	3.48	7.05	49
East Central	1.25	2.93	43	21.44	32.97	65	15.49	28.24	55	5	7.28	67
Southeast	1.78	3.20	54	28.69	33.90	84	20.81	28.37	73	5.6	7.61	72
STATE	1.11	1.95	64	18.26	25.47	70	14	21.93	63	3.25	5.02	66

# Winter Precipitation Outlook

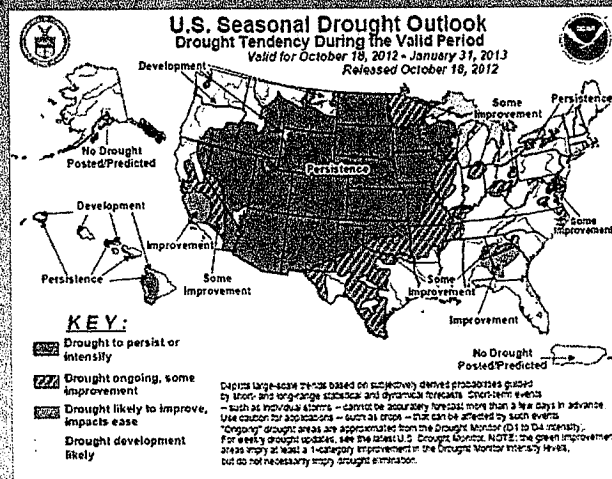




# Spring Precipitation Outlook



# Drought Outlook

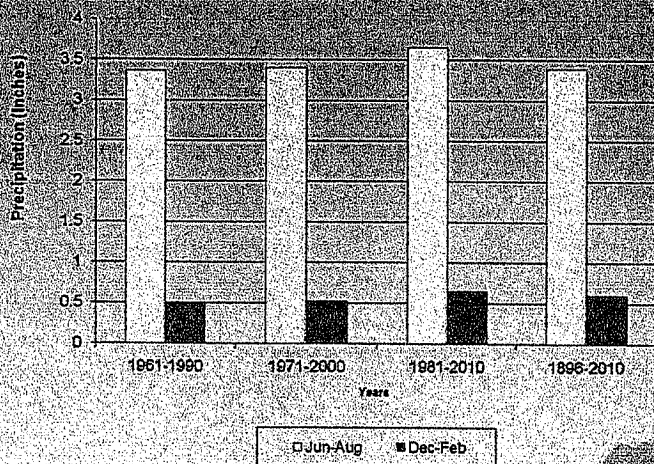


## Why?

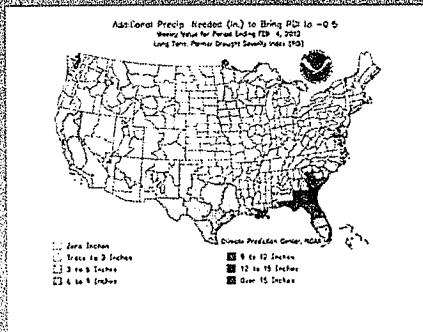
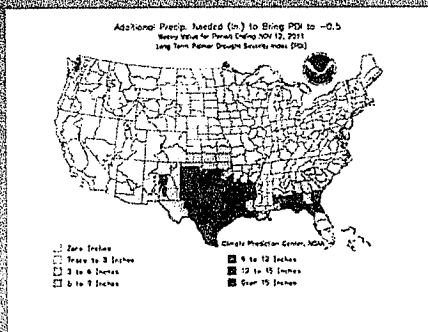
- ◆ Entering Dry Portion of Water Year
- ◆ Transition in the ENSO
  - Currently neutral ENSO signal
  - El Niño not developing
  - Expected to continue into the Winter
- ◆ Awaiting Change in Arctic Oscillation
- ◆ Awaiting Change in MJO

K-State Research & Extension

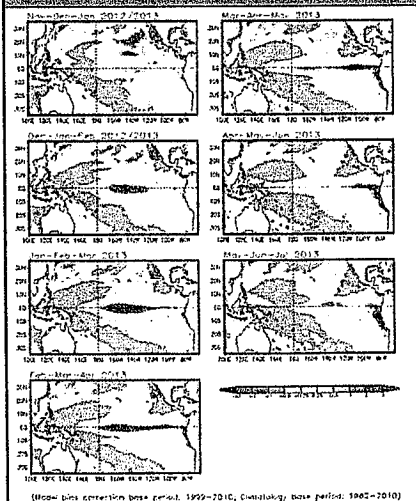
## Summer vs Winter in South Central KS



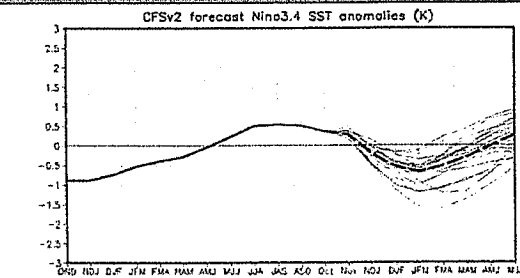
# Changes last Winter



## SST Outlook: NCEP CFS v2 Forecast Issued 28 October 2012



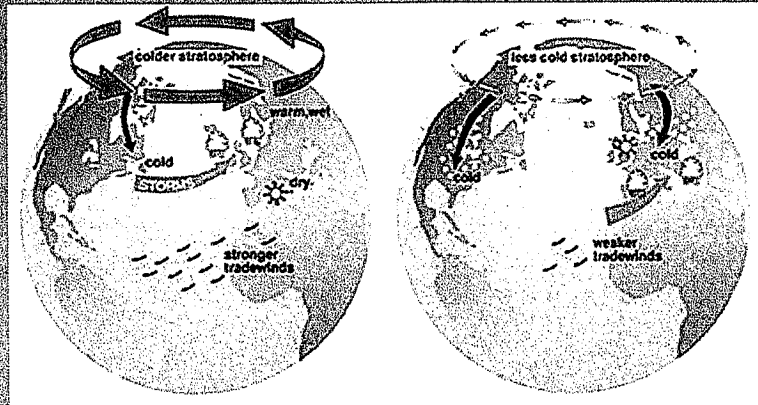
The CFS v2 ensemble mean (black dashed line) predicts below-average SSTs during N. Hemisphere winter 2012-13.





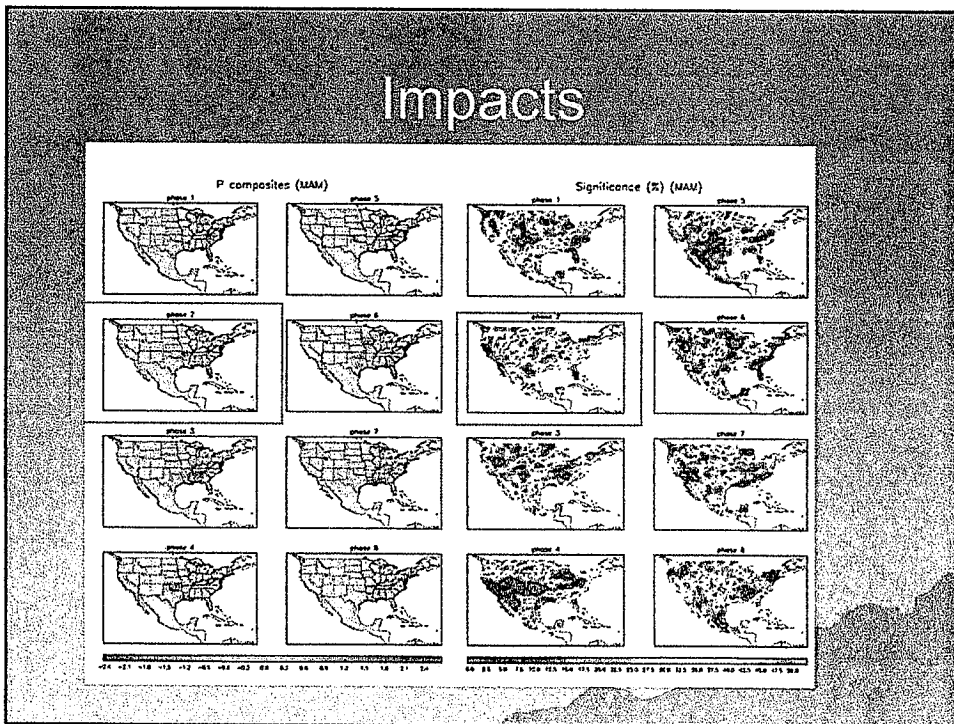
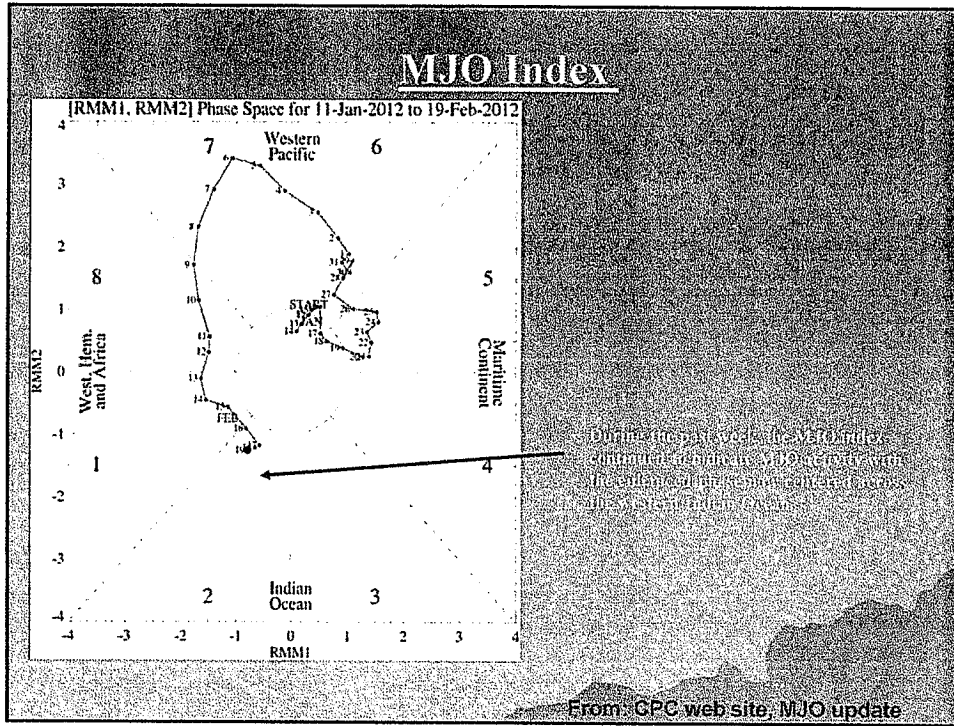


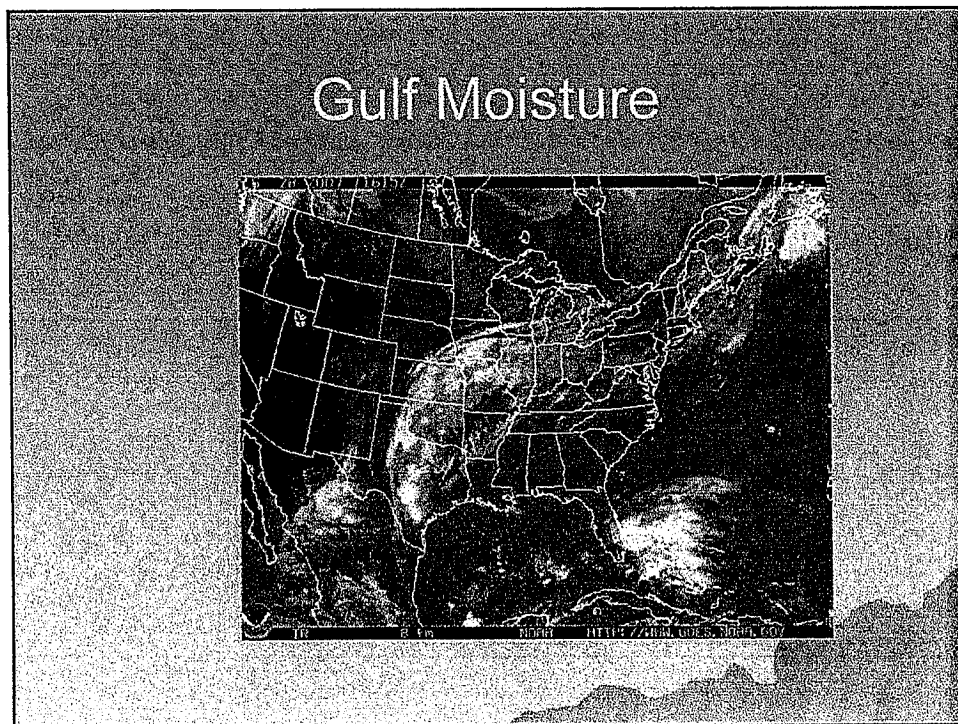
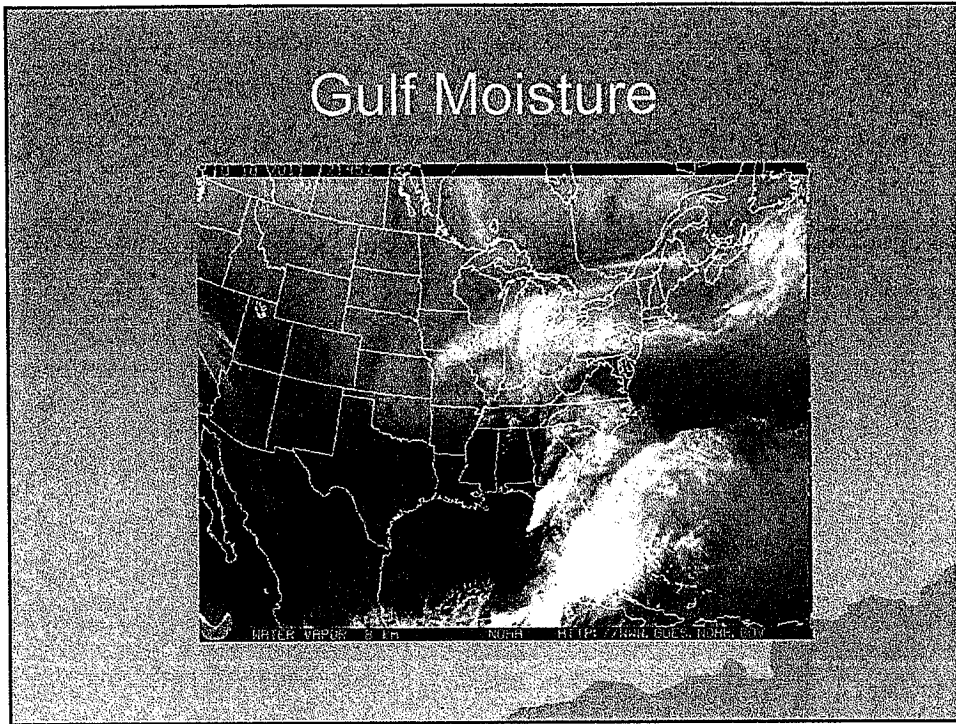
## Arctic Oscillation



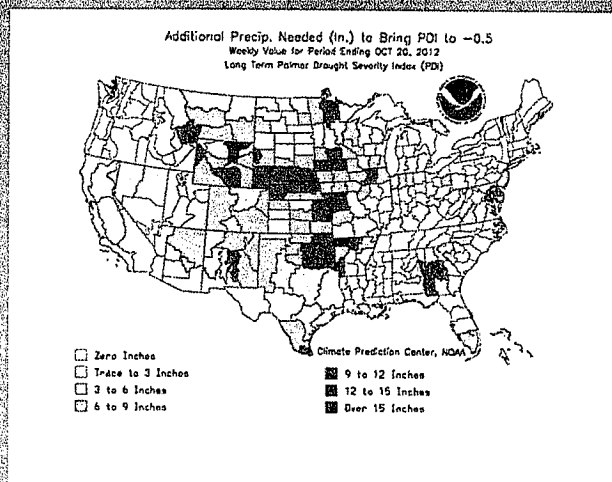
## MJO

- ◆ Madden Julian Oscillation
  - Tropical disturbance that move eastward in the Pacific
  - Cycle of 30-60 days
  - Can influence intensity, impact of ENSO
  - Highly variable
  - Greatest activity usually from Fall to early Spring





## Current Deficit



## Contact Information

- ◆ Mary Knapp
- ◆ Weather Data Library
- ◆ Department of Agronomy
- ◆ Kansas State University
- ◆ Manhattan, KS 66506
- ◆ PH: 785 532-7019
- ◆ E-mail: [Mknapp@ksu.edu](mailto:Mknapp@ksu.edu)

- ◆ URL: <http://www.ksre.ksu.edu/wdl>