

agweather connection

LA NIÑA

the girl who dried
out Oklahoma



La Niña conditions returned to the Pacific Ocean late last year, but began weakening in March. La Niña tends to give Oklahoma and the southwestern U.S. warmer and drier weather conditions.

“For our part of the world, the effects are more pronounced during winter, especially during stronger events,” said Gary McManus, Assistant State Climatologist.

La Niña is a climate pattern where the Pacific Ocean near the equator gets colder than usual and affects weather around the world. La Niña, which means “the girl,” is the counterpart to El Niño, “the boy,” which is the warming of those waters. La Niña conditions recur every few years and can persist for as long as two years.

“The current La Niña episode is actually quite weak, so it is difficult to ascribe the winter’s dryness and warmth to La Niña alone,” said McManus. “However, the winter did behave in the classical sense for La Niña impacts.”

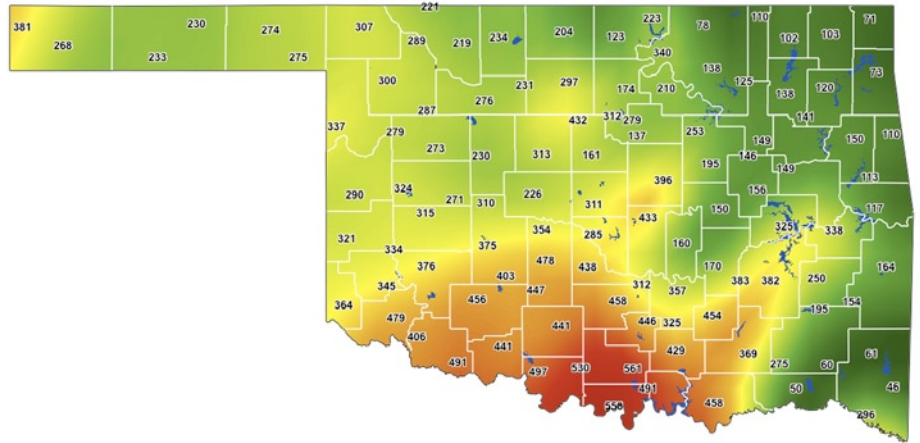
The warmth and lack of moisture intensified both drought and wildfire conditions across the state. Drought has strengthened across southern Oklahoma and spread west from there. Much of these areas are now experiencing drought conditions classified as either “moderate” or “severe” by the U.S. Drought Monitor. Oklahoma’s wheat belt also was hit particularly hard by winter’s dry conditions. Precipitation became infrequent soon after planting wheat last fall.

The current La Niña episode is forecasted to continue weakening throughout the spring and end sometime this summer.

“It is important to remember however, that there are no guarantees of any type of weather in Oklahoma,” said McManus.

Keetch-Byram Drought Index

- Start at <http://aqweather.mesonet.org>
- Click "Soil/Water"
- Next, click "DROUGHT"
- Now choose "Keetch-Byram Drought Index"
- See page 4 for more information about the Keetch-Byram Drought Index



Rainfall and Drought Update

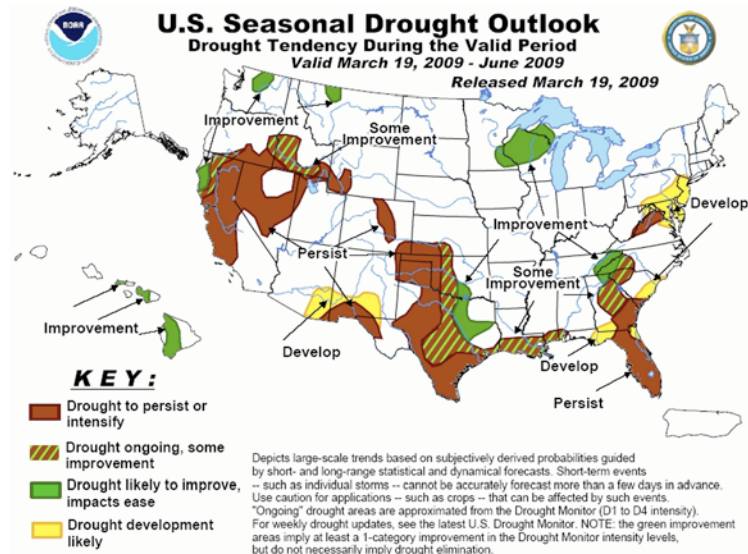
- Go to <http://aqweather.mesonet.org>
- Click "Soil/Water"
- Next, click "RAINFALL"
- Then select "Oklahoma Rainfall and Drought Update"
- Finally, choose the time frame you are interested in from the horizontal menu

Last 90 Days: Dec 24, 2008 through Mar 23, 2009

Climate Division	Total Rainfall	Departure from Normal	Pct of Normal	Driest since	Wettest since	Rank since 1921 (88 periods)
Panhandle	0.39"	-2.16"	15%	1971-72 (0.22")	2007-08 (1.93")	3rd driest
N. Central	1.33"	-3.15"	30%	1995-96 (0.86")	2007-08 (4.48")	11th driest
Northeast	4.37"	-2.49"	64%	2005-06 (3.74")	2007-08 (9.75")	24th driest
W. Central	1.23"	-2.87"	30%	1995-96 (0.59")	2007-08 (4.22")	9th driest
Central	3.60"	-2.55"	59%	2005-06 (3.05")	2007-08 (6.92")	21st driest
E. Central	5.61"	-2.76"	67%	1995-96 (3.02")	2007-08 (12.42")	22nd driest
Southwest	2.41"	-2.01"	55%	2002-03 (1.92")	2007-08 (4.01")	20th driest
S. Central	3.60"	-3.80"	49%	1995-96 (2.37")	2007-08 (8.67")	13th driest
Southeast	6.41"	-3.91"	62%	1999-00 (5.82")	2007-08 (16.51")	13th driest

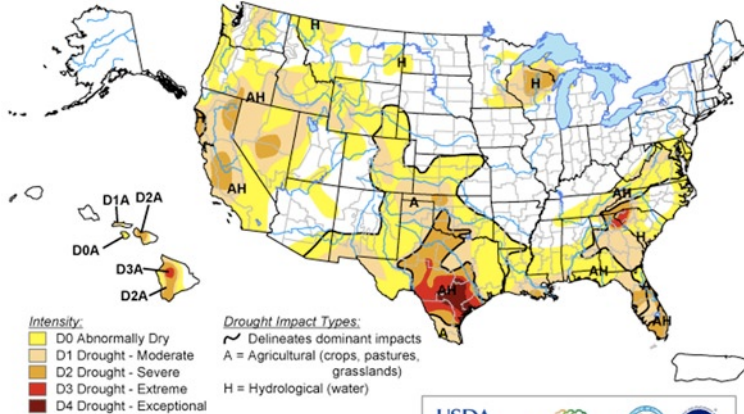
National Drought Outlook

- Start at <http://aqweather.mesonet.org>
- Click "Soil/Water"
- Next, click "DROUGHT"
- Then choose "USA Drought Outlook"



U.S. Drought Monitor

March 17, 2009
Valid 8 a.m. EDT



Intensity:
 D0 Abnormally Dry
 D1 Drought - Moderate
 D2 Drought - Severe
 D3 Drought - Extreme
 D4 Drought - Exceptional

Drought Impact Types:
 ~ Delineates dominant impacts
 A = Agricultural (crops, pastures, grasslands)
 H = Hydrological (water)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



Released Thursday, March 19, 2009

Author: Laura Edwards, Western Regional Climate Center

<http://drought.unl.edu/dm>

National Drought Monitor

- Start at <http://agweather.mesonet.org>
- Click "Soil/Water"
- Next, click "DROUGHT"
- Then choose "USA Drought Monitor"

Recent Mesonet Rainfall

- Go to <http://agweather.mesonet.org>
- Click "Soil/Water"
- Next, click "RAINFALL"
- Then select "Recent Mesonet Rainfall Table"

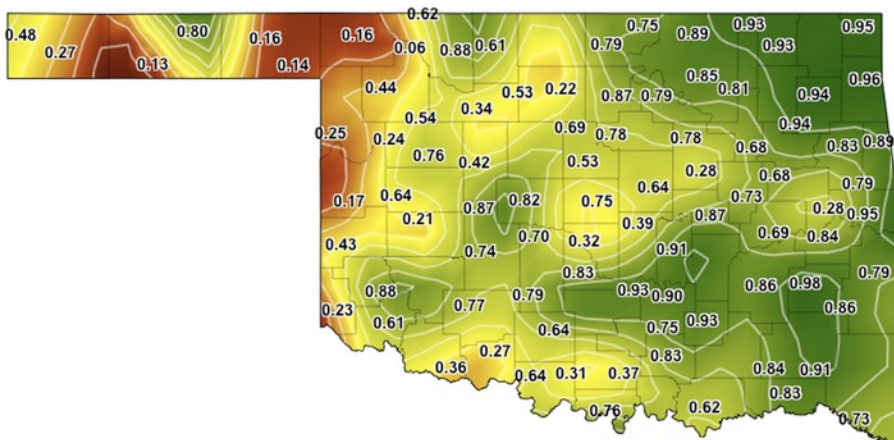
Mesonet Rainfall Totals (In Inches)

Data complete through 11:59 pm CST March 23, 2009

Station	7 Day	10 Day	14 Day	30 Day	60 Day	90 Day	March	2009	2008
Acme	0.41	0.53	0.69	0.69	2.82	3.32	0.69	2.82	25.64
Ada	0.53	0.63	0.92	0.92	4.13	4.38	0.92	4.13	*
Altus	1.17	1.37	1.62	1.68	2.36	2.36	1.68	2.36	21.13
Alva	0.00	0.00	0.00	0.61	1.12	1.24	0.61	1.13	28.98
Antlers	0.83	1.03	1.79	1.90	4.74	5.53	1.79	4.96	44.99
Apache	0.56	0.61	0.73	0.81	2.23	2.68	0.81	2.23	28.40
Ardmore	0.05	0.14	0.55	0.55	2.50	2.65	0.55	2.53	25.16
Arnett	0.00	0.00	0.00	0.00	0.25	0.25	0.00	0.25	*
Beaver	0.00	0.00	0.00	0.00	0.28	0.28	0.00	0.28	18.92
Bessie	0.50	0.50	*	*	*	*	*	*	31.96
Bixby	0.16	0.21	0.29	0.29	3.32	4.51	0.29	3.32	53.08
Blackwell	0.23	0.23	0.28	*	*	*	*	*	*
Boise City	0.03	0.03	0.05	0.05	0.47	0.47	0.05	0.47	13.10
Bowlegs	0.39	0.41	0.68	0.68	3.47	4.25	0.68	3.47	45.87
Breckinridge	0.06	0.06	0.16	0.30	1.14	1.78	0.30	1.14	*
Bristow	0.22	0.27	0.31	0.31	2.53	3.29	0.31	2.53	41.42
Broken Bow	0.02	0.14	2.45	2.62	4.73	6.19	2.45	5.56	53.88
Buffalo	0.00	0.00	0.00	0.00	0.13	0.13	0.00	0.13	23.14
Burbank	0.06	0.06	0.18	0.86	1.95	2.75	0.86	1.95	44.30
Burneyville	0.00	0.14	1.16	1.16	3.02	3.30	1.16	3.07	22.84
Butler	0.00	0.00	0.16	0.37	0.94	0.94	0.37	0.94	27.47
Byars	0.49	0.69	0.91	0.91	4.06	4.83	0.91	4.06	32.45
Calvin	*	*	*	*	*	*	*	*	36.95
Camargo	0.00	0.00	0.10	0.12	0.49	0.49	0.12	0.49	*
Centrahoma	0.72	0.88	1.33	1.33	3.67	4.04	1.33	3.71	35.52
Chandler	0.04	0.07	0.16	0.16	2.00	2.75	0.16	2.01	34.78
Cherokee	0.23	0.23	0.24	0.32	0.88	0.90	0.32	0.88	36.40
Cheyenne	0.00	0.02	0.21	0.28	0.59	0.59	0.28	0.59	28.17

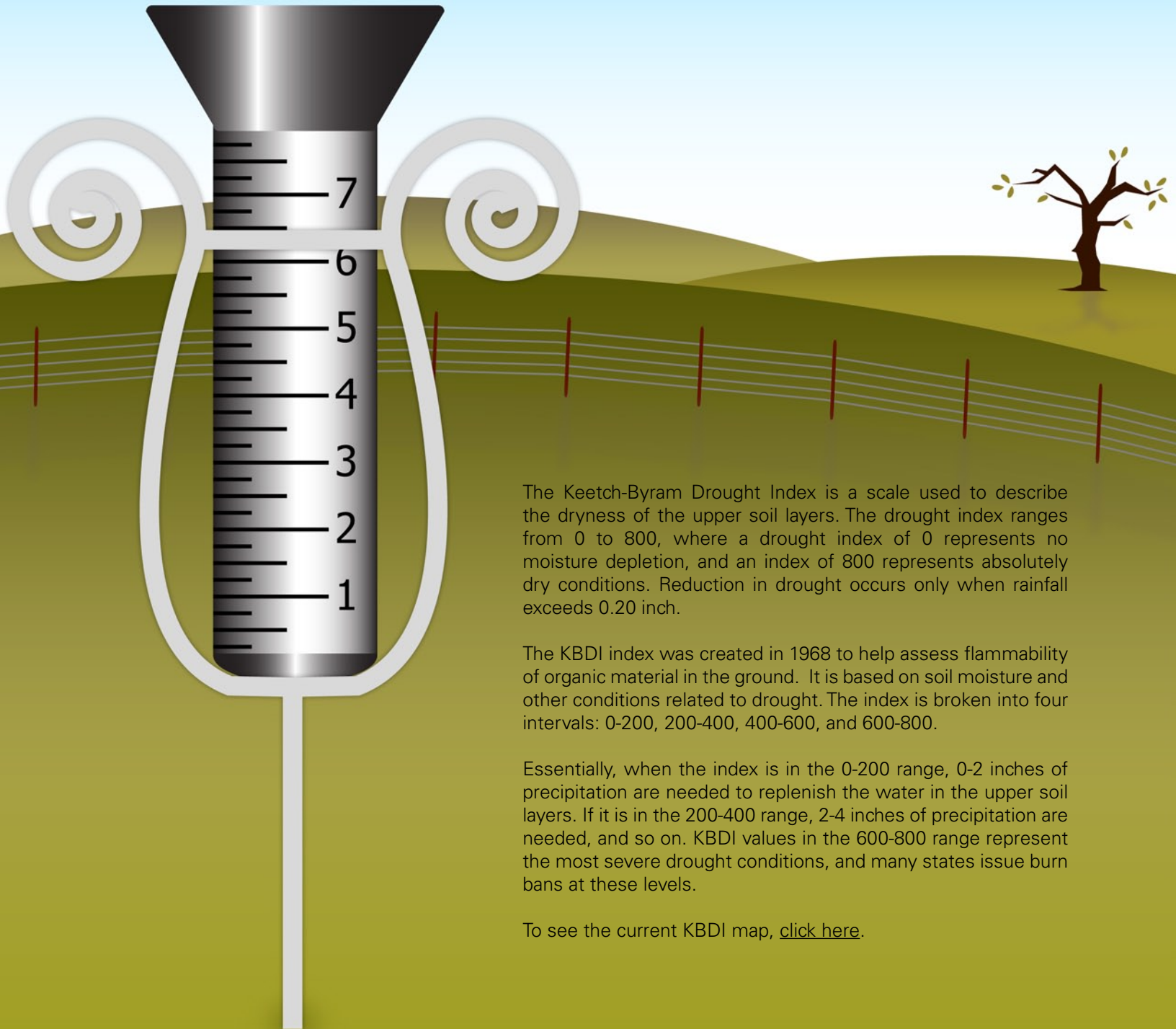
Soil Moisture

- Go to <http://agweather.mesonet.org>
- Click "Soil/Water"
- Next, click "SOIL MOISTURE"
- Then select "2-in Soil Moisture," "10-in Soil Moisture," or "24-in Soil Moisture"



Drought Index

The "No-Rain" Gauge



The Keetch-Byram Drought Index is a scale used to describe the dryness of the upper soil layers. The drought index ranges from 0 to 800, where a drought index of 0 represents no moisture depletion, and an index of 800 represents absolutely dry conditions. Reduction in drought occurs only when rainfall exceeds 0.20 inch.

The KBDI index was created in 1968 to help assess flammability of organic material in the ground. It is based on soil moisture and other conditions related to drought. The index is broken into four intervals: 0-200, 200-400, 400-600, and 600-800.

Essentially, when the index is in the 0-200 range, 0-2 inches of precipitation are needed to replenish the water in the upper soil layers. If it is in the 200-400 range, 2-4 inches of precipitation are needed, and so on. KBDI values in the 600-800 range represent the most severe drought conditions, and many states issue burn bans at these levels.

To see the current KBDI map, [click here](#).