

Oklahoma Water Resources Bulletin & Summary of Current Conditions

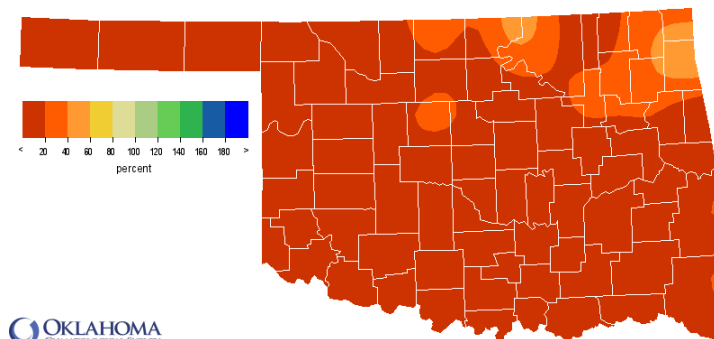


December 14, 2017

PRECIPITATION

Statewide Precipitation

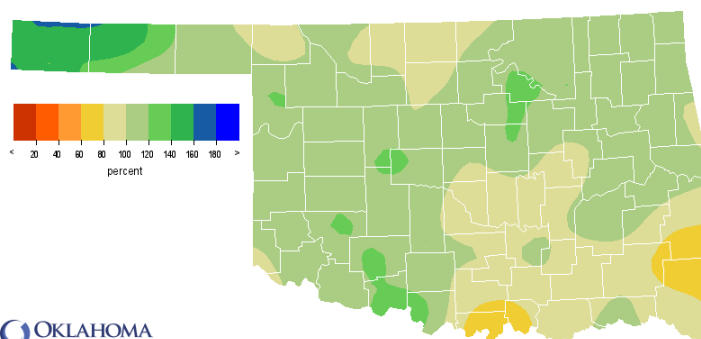
Climate Division	Last 30 Days November 14, 2017 – December 13, 2017				Last 365 Days December 14, 2016 – December 13, 2017			
	Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	Rank Since 1921	Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	RANK SINCE 1921
PANHANDLE	0.00"	-0.71"	0%	3rd driest	25.41"	+4.83"	123%	9th wettest
NORTH CENTRAL	0.16"	-1.23"	12%	16th driest	32.22"	+0.80"	103%	35th wettest
NORTHEAST	0.74"	-1.95"	27%	20th driest	47.68"	+5.01"	112%	15th wettest
WEST CENTRAL	0.01"	-1.26"	1%	5th driest	31.81"	+3.41"	112%	16th wettest
CENTRAL	0.15"	-1.90"	8%	7th driest	39.61"	+1.98"	105%	21st wettest
EAST CENTRAL	0.38"	-3.09"	11%	4th driest	48.79"	+2.65"	106%	20th wettest
SOUTHWEST	0.01"	-1.45"	1%	3rd driest	34.86"	+4.59"	115%	15th wettest
SOUTH CENTRAL	0.07"	-2.48"	3%	4th driest	37.45"	-3.26"	92%	46th driest
SOUTHEAST	0.60"	-3.85"	14%	4th driest	46.08"	-4.51"	91%	39th driest
STATEWIDE	0.24"	-1.96"	11%	5th driest	38.22"	+1.75"	105%	24th wettest



OKLAHOMA
CLIMATOLOGICAL SURVEY

Percentage of 1981-2010 Normal Rainfall
Last 30 Days

Nov 14, 2017 through Dec 13, 2017
Created: 2017-12-14 10:01:00 UTC, Copyright © 2017



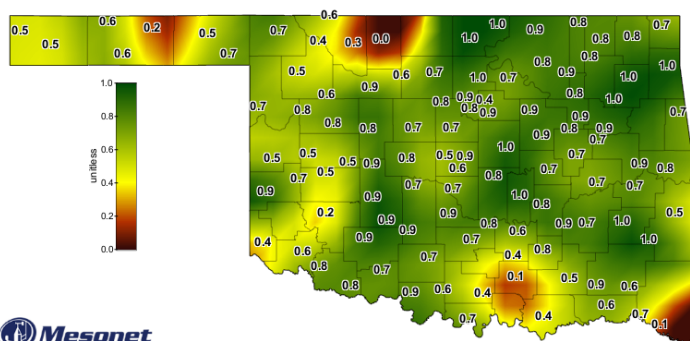
OKLAHOMA
CLIMATOLOGICAL SURVEY

Percentage of 1981-2010 Normal Rainfall
Last 365 Days

Dec 14, 2016 through Dec 13, 2017
Created: 2017-12-14 10:01:00 UTC, Copyright © 2017

SOIL MOISTURE

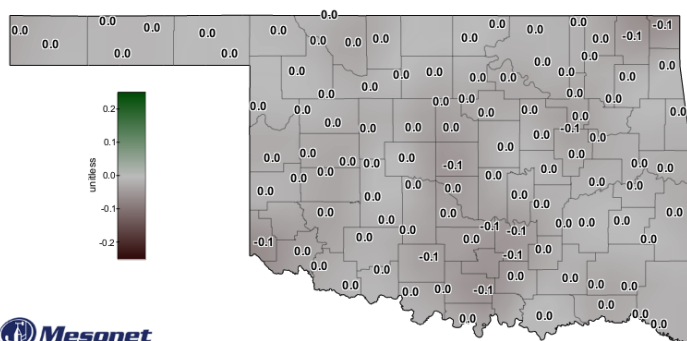
Fractional Water Index December 13, 2017



Mesonet

1-day Average 10-inch Fractional Water Index

December 13, 2017
Created: 6:30:14 AM December 14, 2017 CST, © Copyright 2017



Mesonet

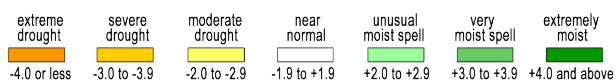
7-day 10-inch Fractional Water Index Change

December 13, 2017
Created: 5:30:01 AM December 14, 2017 CST, © Copyright 2017

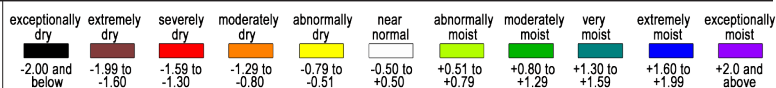
The Fractional Water Index ranges from very dry soil having a value of 0 to soil at field capacity illustrated by a value of 1.
[1.0-0.8 = Enhanced Growth; 0.8-0.5 = Limited Growth; 0.5-0.3 = Plants Wilting; 0.3-0.1 = Plants Dying; <0.1 = Barren Soil.]

DROUGHT INDICES

Palmer Drought Severity Index (PDSI)					Standardized Precipitation Index (SPI) Through November 2017		
Climate Division	Status 12/09/17	Value		Change in Value	3-month	12-month	24-month
NORTHWEST	Near Normal	2.21	0.81	1.4(-)	Near Normal	Moderately Moist	Abnormally Moist
NORTH CENTRAL	Near Normal	0.89	-0.23	1.12(-)	Near Normal	Abnormally Moist	Abnormally Moist
NORTHEAST	Near Normal	0.86	-0.05	0.91(-)	Near Normal	Moderately Moist	Abnormally Moist
WEST CENTRAL	Near Normal	1.55	0.25	1.3(-)	Near Normal	Moderately Moist	Moderately Moist
CENTRAL	Near Normal	1.26	-0.01	1.27(-)	Near Normal	Moderately Moist	Abnormally Moist
EAST CENTRAL	Near Normal	1.62	0.04	1.58(-)	Moderately Dry	Abnormally Moist	Abnormally Moist
SOUTHWEST	Near Normal	3.11	1.73	1.38(-)	Near Normal	Moderately Moist	Extremely Moist
SOUTH CENTRAL	Near Normal	0.54	-0.98	1.52(-)	Moderately Dry	Near Normal	Abnormally Moist
SOUTHEAST	Near Normal	0.19	-1.01	1.2(-)	Exceptionally Dry	Near Normal	Near Normal



The PDSI is based upon precipitation, temperature, and soil moisture, and is considered most effective for unirrigated cropland, spanning from -10 (dry) to +10 (wet). According to the latest PDSI, all climate regions in the state are experiencing near normal conditions but since November 11, the PDSI values for all regions have decreased.



The SPI provides a comparison of precipitation over several specified periods with totals from the same periods for all years included in the historical record. For the all three time periods, all regions had near normal or wetter conditions except the East Central and South Central regions, which were moderately dry for the 3-month period, and the Southeast region, which was exceptionally dry for the 3-month period.

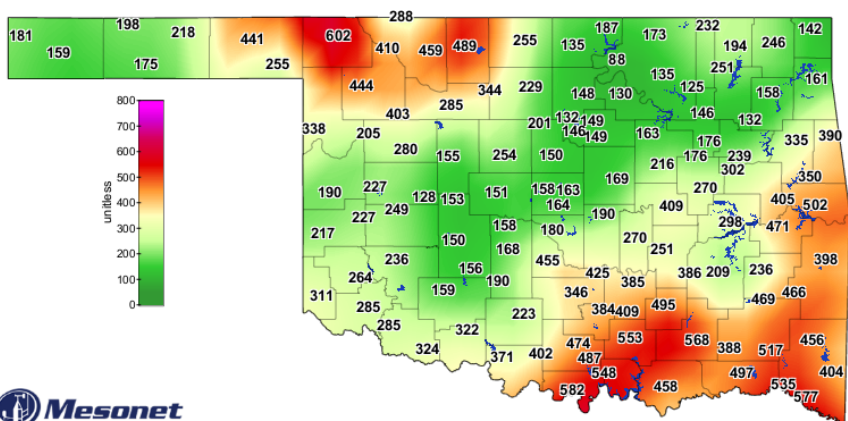
Keetch-Byram Drought Fire Index

December 14, 5:00 p.m.--1 station is above 600.

STATION	REGION	KBDI
Buffalo	Northwest	602

Zero stations were above 600 on November 17, 2017.

The Keetch-Byram Drought Index measures the state of near-surface soil moisture (within the uppermost eight inches of soil) as well as the amount of fuel available for fires. KBDI values of 600 and above are often associated with more severe drought and increased wildfire occurrence.



Keetch-Byram Drought Index

5:00 PM December 14, 2017 CST
Created 5:29:10 PM December 14, 2017 CST. © Copyright 2017

STREAMFLOW CONDITIONS

December 14, 2017

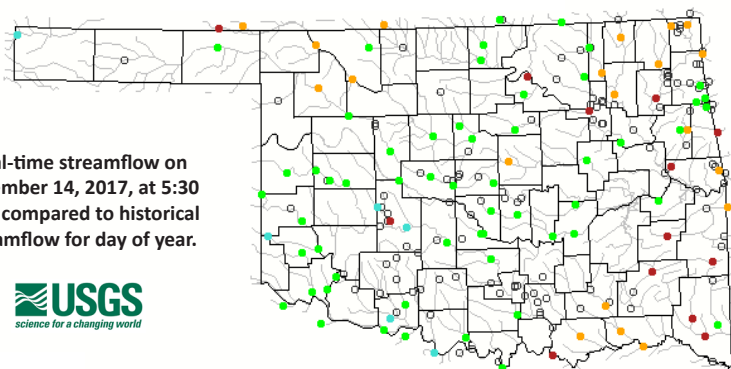
Explanation - Percentile classes						
●	●	●	●	●	●	●
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High
						Not ranked

Visit waterwatch.usgs.gov for real-time streamflow information.

Real-time streamflow on December 14, 2017, at 5:30 p.m. compared to historical streamflow for day of year.

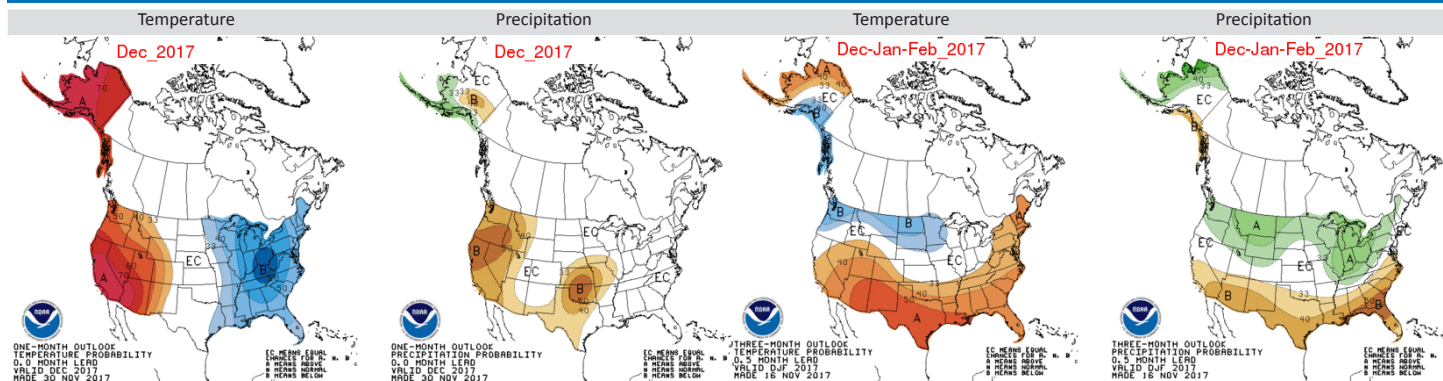


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WEATHER/DROUGHT FORECAST

Seasonal Outlook

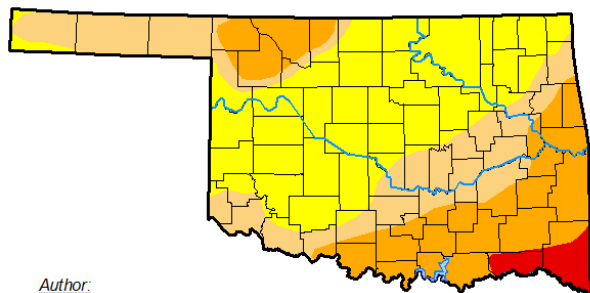


The contours on the maps show the total probability of three categories—above, indicated by the letter “A”; and below, indicated by the letter “B”. “EC” indicates “Equal Chances” for A or B.

Drought Summary & Outlook

U.S. Drought Monitor Oklahoma

December 12, 2017
(Released Thursday, Dec. 14, 2017)
Valid 7 a.m. EST



Author:
Jessica Blunden
NCEI/NOAA



<http://droughtmonitor.unl.edu/>

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	54.98	28.35	3.12	0.00
Last Week 12-05-2017	11.32	88.68	50.56	27.20	0.78	0.00
3 Months Ago 09-12-2017	80.10	19.90	2.04	0.00	0.00	0.00
Start of Calendar Year 01-03-2017	5.61	94.39	83.21	55.75	5.55	0.00
Start of Water Year 09-26-2017	64.46	35.54	0.77	0.00	0.00	0.00
One Year Ago 12-13-2016	12.75	87.25	72.27	36.42	3.14	0.00

Intensity:

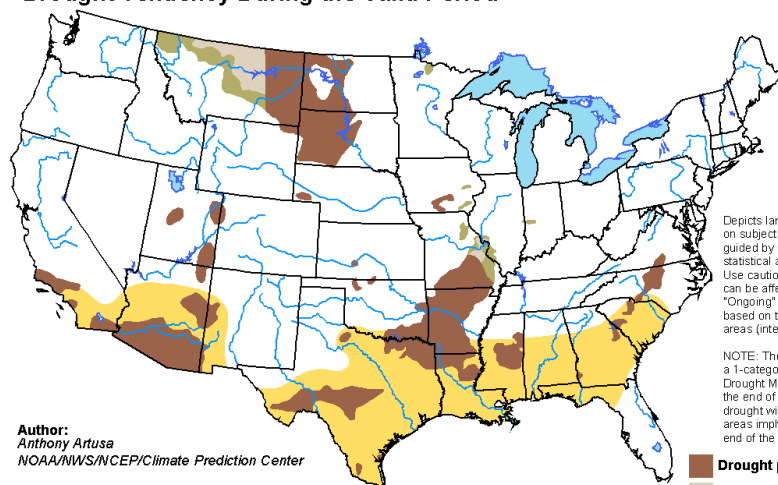
■ D0 Abnormally Dry ■ D3 Extreme Drought
■ D1 Moderate Drought ■ D4 Exceptional Drought
■ D2 Severe Drought

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

According to the latest *U.S. Drought Monitor*, as of December 12, the number of Oklahomans experiencing drought conditions has risen to 1,139,063, and the entire state has abnormally dry conditions or worse. Almost 55% of the state (in area) is experiencing moderate drought conditions (D1) or worse, while more than 28% has severe drought (D2) conditions or worse, and 3% (in the southeast corner) is in extreme drought (D3). There are no areas with exceptional drought (D4) conditions.

U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for November 16 - February 28, 2018
Released November 16, 2017



Author:
Anthony Artusa
NOAA/NWS/NCEP/Climate Prediction Center

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. “Ongoing” drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

■ Drought persists
■ Drought remains but improves
■ Drought removal likely
■ Drought development likely



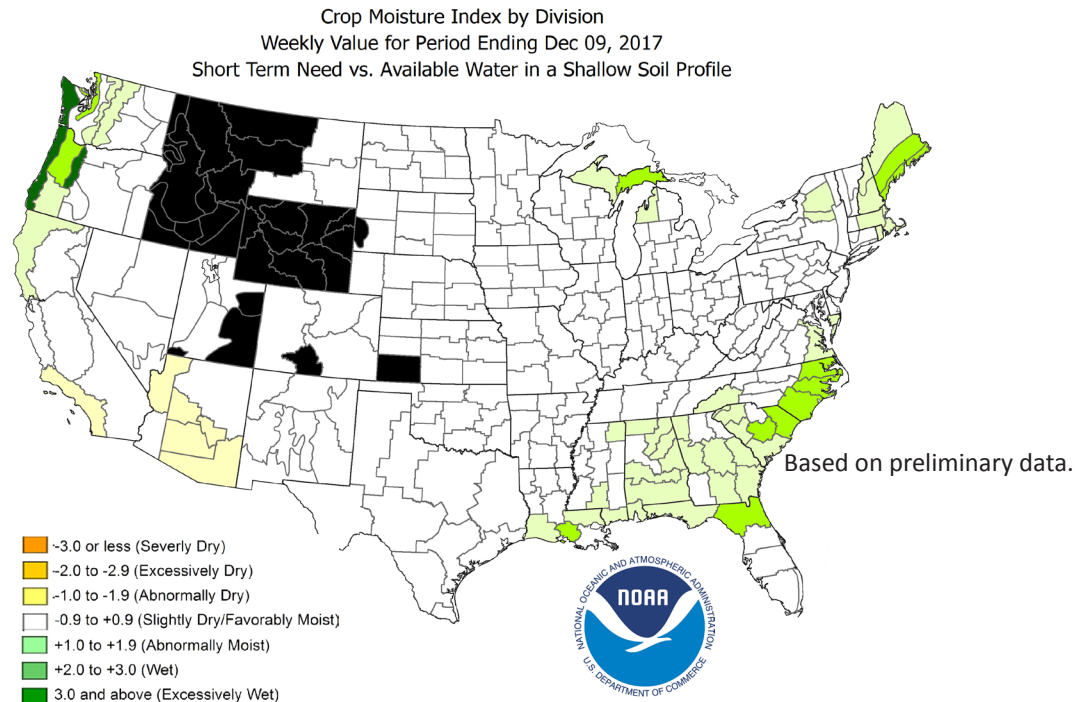
<http://go.usa.gov/3eZ73>

According to the latest seasonal drought outlook for the period of November 16, 2017, through February 28, 2018, a large portion of southeastern Oklahoma will remain in persistent drought. This area of drought stretches into most of Arkansas, southern Missouri, northeastern Texas, and northern Louisiana. Other large areas of persistent drought include southern Arizona and eastern Montana spreading into the western halves of North and South Dakota.

CROP MOISTURE INDEX

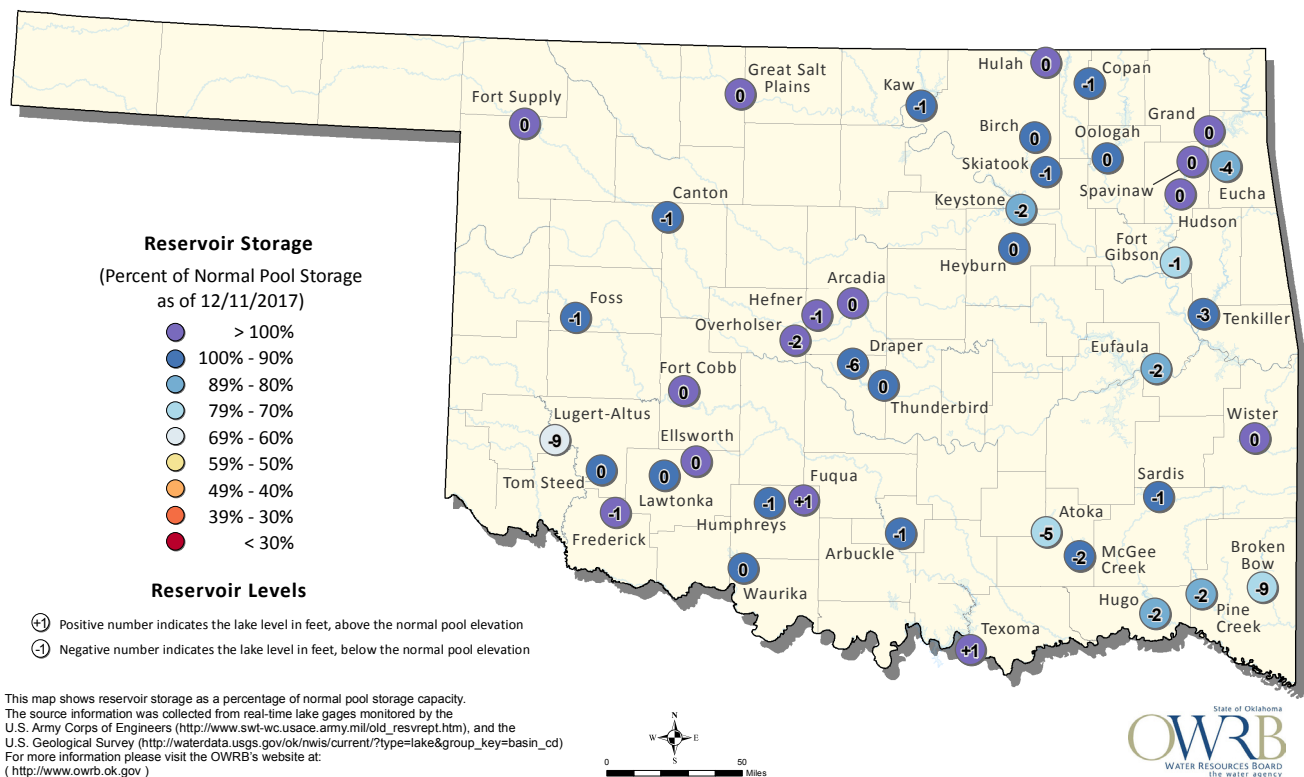
According to the NOAA Crop Moisture Index by Division, for the period ending December 9, 2017, all Oklahoma climate regions are experiencing Slightly Dry/Favorably Moist conditions (-0.9 to +0.9).

Derived from the Palmer Drought Severity Index (PDSI), the Crop Moisture Index reflects moisture supply in the short-term across major crop-producing regions. It identifies potential agricultural droughts. It is not intended to assess long-term droughts.



RESERVOIR STORAGE

Oklahoma Surface Water Resources Reservoir Levels and Storage as of 12/11/2017



The Oklahoma Water Resources Bulletin is compiled and distributed monthly by the Oklahoma Water Resources Board utilizing products and information developed by the Oklahoma Climatological Survey, Oklahoma Mesonet, National Oceanic and Atmospheric Administration, National Drought Mitigation Center, US Geological Survey, US Army Corps of Engineers, and US Department of Agriculture. For questions or comments contact Darla Whitley, Editor.