

# Oklahoma Water Resources Bulletin & Summary of Current Conditions

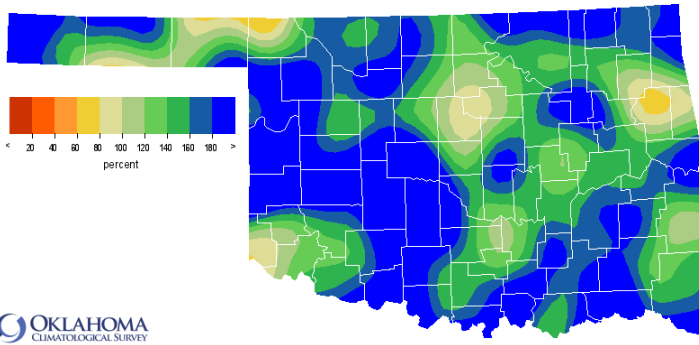


August 13, 2017

## PRECIPITATION

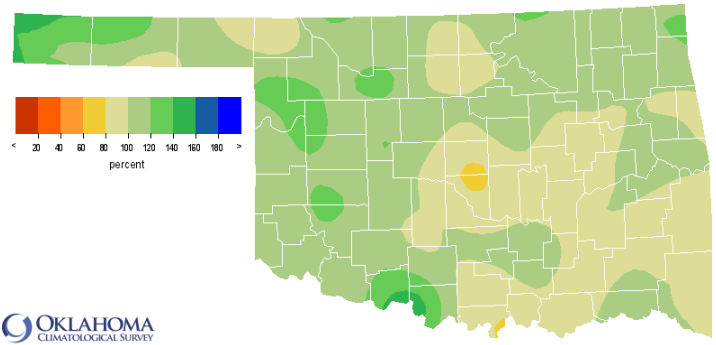
### Statewide Precipitation

Climate Division	Last 30 Days July 14, 2017 – August 12, 2017				Last 365 Days August 13, 2016 – August 12, 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	4.16"	+1.58"	161%	14th wettest	23.28"	+2.70"	113%	19th wettest
NORTH CENTRAL	4.83"	+2.06"	174%	10th wettest	34.26"	+2.84"	109%	21st wettest
NORTHEAST	5.37"	+2.23"	171%	14th wettest	46.59"	+3.92"	109%	24th wettest
WEST CENTRAL	5.09"	+2.76"	218%	7th wettest	34.13"	+5.73"	120%	15th wettest
CENTRAL	4.56"	+1.83"	167%	15th wettest	36.64"	-0.99"	97%	38th wettest
EAST CENTRAL	4.38"	+1.29"	142%	25th wettest	45.06"	-1.08"	98%	43rd wettest
SOUTHWEST	3.80"	+1.60"	173%	11th wettest	34.54"	+4.27"	114%	16th wettest
SOUTH CENTRAL	3.96"	+1.56"	165%	17th wettest	40.00"	-0.71"	98%	39th wettest
SOUTHEAST	5.57"	+2.44"	178%	16th wettest	49.63"	-0.96"	98%	42nd wettest
STATEWIDE	4.62"	+1.90"	170%	8th wettest	38.07"	+1.60"	104%	26th wettest



OKLAHOMA CLIMATOLOGICAL SURVEY  
Percentage of 1981-2010 Normal Rainfall  
Last 30 Days

Jul 14, 2017 through Aug 12, 2017  
Created 2017-08-13 10:01:01 UTC. Copyright © 2017

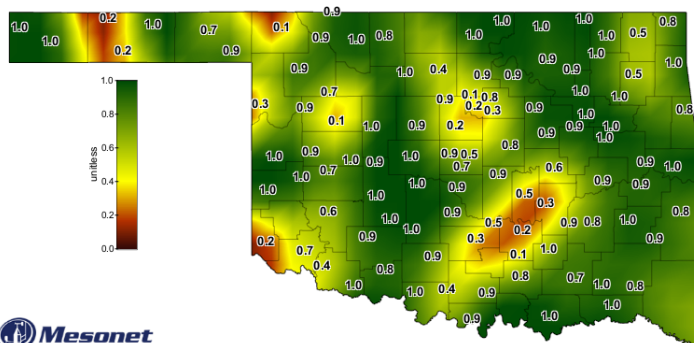


OKLAHOMA CLIMATOLOGICAL SURVEY  
Percentage of 1981-2010 Normal Rainfall  
Last 365 Days

Aug 13, 2016 through Aug 12, 2017  
Created 2017-08-13 10:01:01 UTC. Copyright © 2017

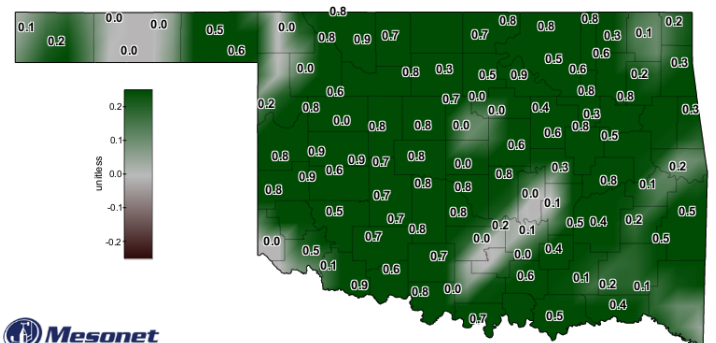
## SOIL MOISTURE

### Fractional Water Index August 12, 2017



Mesonet  
1-day Average 10-inch Fractional Water Index  
August 12, 2017

Created 7:30:14 AM August 13, 2017 CDT. © Copyright 2017



Mesonet  
7-day 10-inch Fractional Water Index Change  
August 12, 2017

Created 6:30:01 AM August 13, 2017 CDT. © 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 June 2017		
Climate Division	Status 8/5/17	Value 7/15 8/5		Change in Value	3-month	12-month	24-month
NORTHWEST	Near Normal	-0.42	-0.71	0.29 (-)	Moderately Moist	Abnormally Moist	Very Moist
NORTH CENTRAL	Near Normal	-0.3	-0.76	0.46 (-)	Near Normal	Moderately Moist	Moderately Moist
NORTHEAST	Near Normal	0.38	0.51	0.13 (+)	Very Moist	Moderately Moist	Moderately Moist
WEST CENTRAL	Near Normal	-1.3	-1.4	0.1 (-)	Near Normal	Abnormally Moist	Moderately Moist
CENTRAL	Near Normal	-1.49	-1.55	0.06 (-)	Near Normal	Near Normal	Abnormally Moist
EAST CENTRAL	Near Normal	1.25	1.59	0.34 (+)	Moderately Moist	Near Normal	Moderately Moist
SOUTHWEST	Near Normal	0.91	0.33	0.58 (-)	Near Normal	Near Normal	Moderately Moist
SOUTH CENTRAL	Near Normal	0.43	-0.04	0.47 (-)	Abnormally Dry	Moderately Dry	Moderately Moist
SOUTHEAST	Near Normal	0.51	0.52	0.01 (+)	Near Normal	Moderately Dry	Abnormally Moist

extreme drought -4.0 or less	severe drought -3.0 to -3.9	moderate drought -2.0 to -2.9	near normal -1.9 to +1.9	unusual moist spell +2.0 to +2.9	very moist spell +3.0 to +3.9	extremely moist +4.0 and above
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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.

exceptionally dry -2.00 and below	extremely dry -1.99 to -1.60	severely dry -1.59 to -1.30	moderately dry -1.29 to -0.80	abnormally dry -0.79 to -0.51	near normal -0.50 to +0.50	abnormally moist +0.51 to +0.79	moderately moist +0.80 to +1.29	very moist +1.30 to +1.59	extremely moist +1.60 to +1.99	exceptionally moist +2.0 and above
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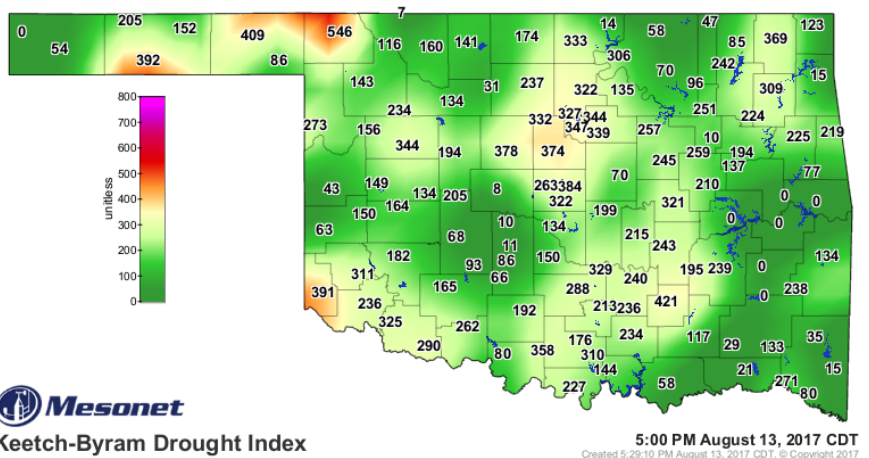
The SPI provides a comparison of precipitation over several specified periods with totals from the same periods for all years included in the historical record. For the 3-month time period, the South Central region had abnormally dry conditions, and for the 12-month period, the South Central and Southeast regions had moderately dry conditions.

## Keetch-Byram Drought Fire Index

August 13, 5:00 p.m.--0 stations are above 600.

Zero stations were above 600 on July 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.



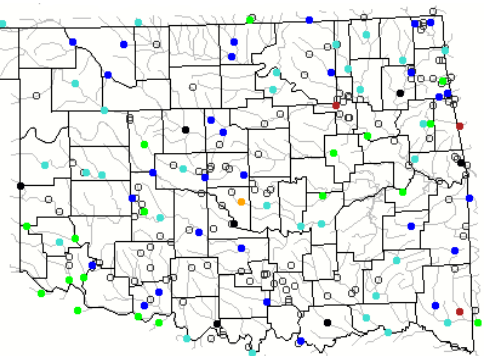
## STREAMFLOW CONDITIONS

August 13, 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

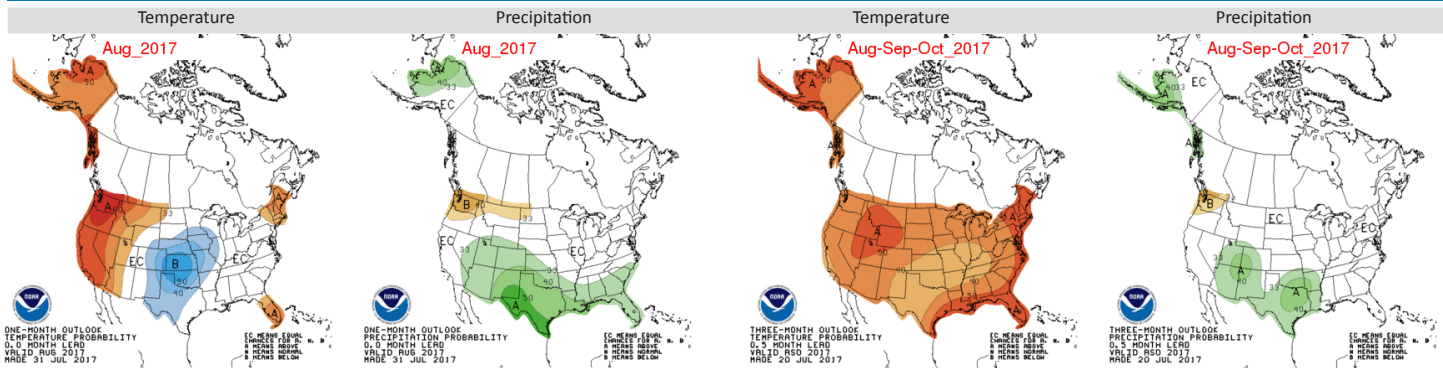
Visit [waterwatch.usgs.gov](http://waterwatch.usgs.gov) for real-time streamflow information.

Real-time streamflow on August 13, 2017, at 4:30 p.m. compared to historical streamflow for day of year.



# WEATHER/DROUGHT FORECAST

## Seasonal Outlook

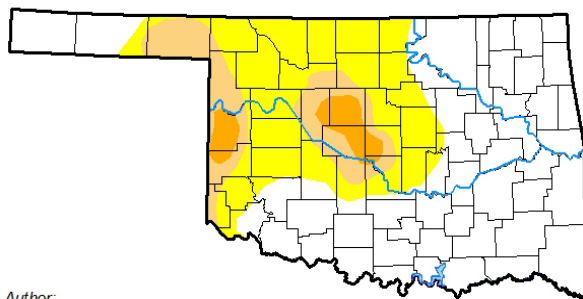


The contours on the maps show the total probability of three categories—above, indicated by the letter “A”; and below, indicated by the letter “B”. “EC” indicates “Equal Chances” for A or B.

## Drought Summary & Outlook

### U.S. Drought Monitor Oklahoma

**August 8, 2017**  
(Released Thursday, Aug. 10, 2017)  
Valid 8 a.m. EDT



Author:  
Deborah Bathke  
National Drought Mitigation Center



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

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	59.23	40.77	13.72	3.47	0.00	0.00
Last Week 08-01-2017	51.19	48.81	18.51	3.65	0.00	0.00
3 Months Ago 05-09-2017	82.75	17.25	4.26	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 09-27-2016	57.82	42.18	19.04	3.05	0.00	0.00
One Year Ago 08-09-2016	61.96	38.04	7.78	0.54	0.00	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.

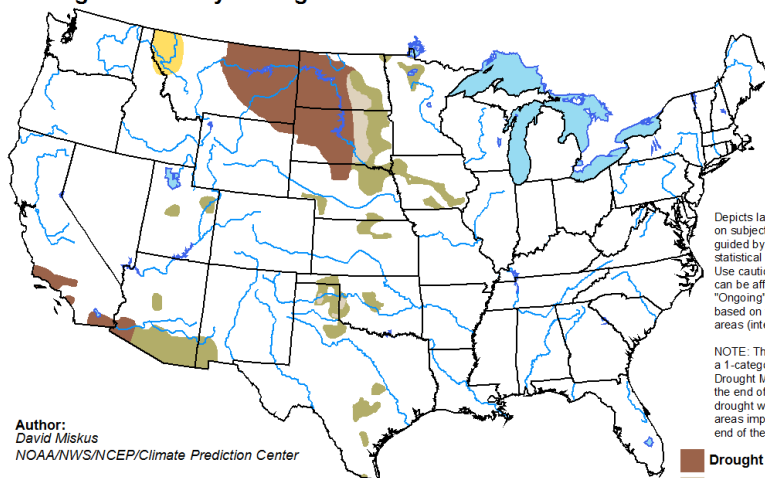
According to the latest *U.S. Drought Monitor*, the number of Oklahomans currently affected by drought is 839,380, down by about 100,000 from this time last month.

As of August 8, no areas of the state were suffering from exceptional or extreme drought (D4-D3). However, 3.47% of the state (in area) was in Severe Drought (D2), including areas in the Central and West Central regions. Another 13.72% of the state was in Moderate Drought (D1), and 40.77% was Abnormally Dry (D0).

According to the latest seasonal drought outlook for the period of July 20 through October 31, any remaining drought conditions in the state are likely to improve. A large area spanning across western South Dakota, western North Dakota and eastern Montana is expected to persist during this period, along with small areas in southern California and southwestern Arizona.

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

Valid for July 20 - October 31, 2017  
Released July 20, 2017



Author:  
David Miskus  
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

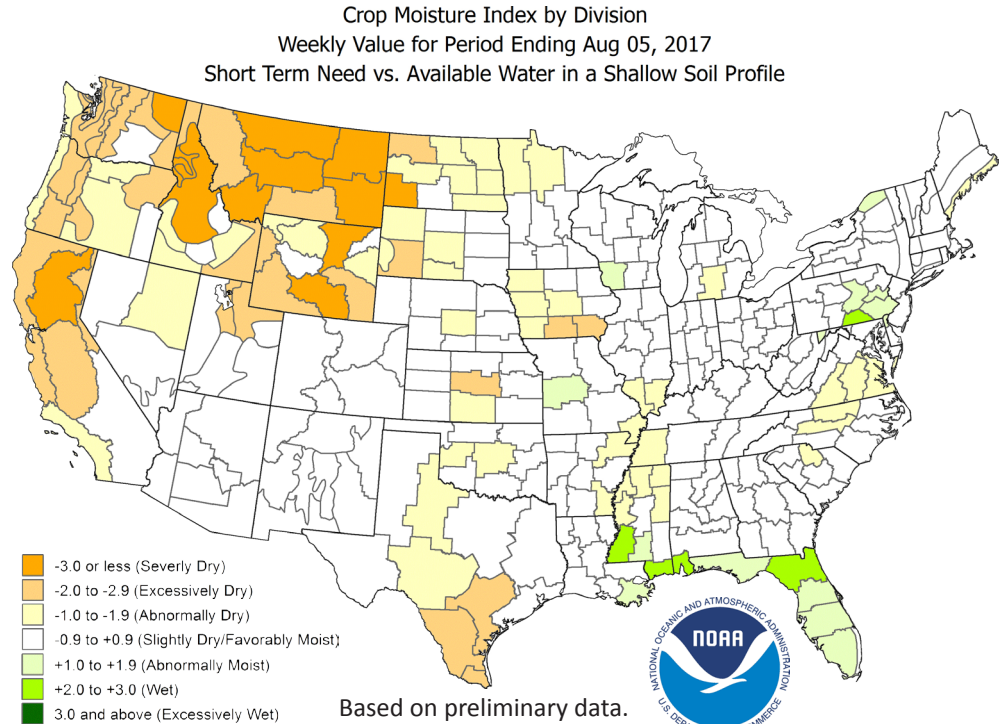
<http://go.usa.gov/3eZ73>



## CROP MOISTURE INDEX

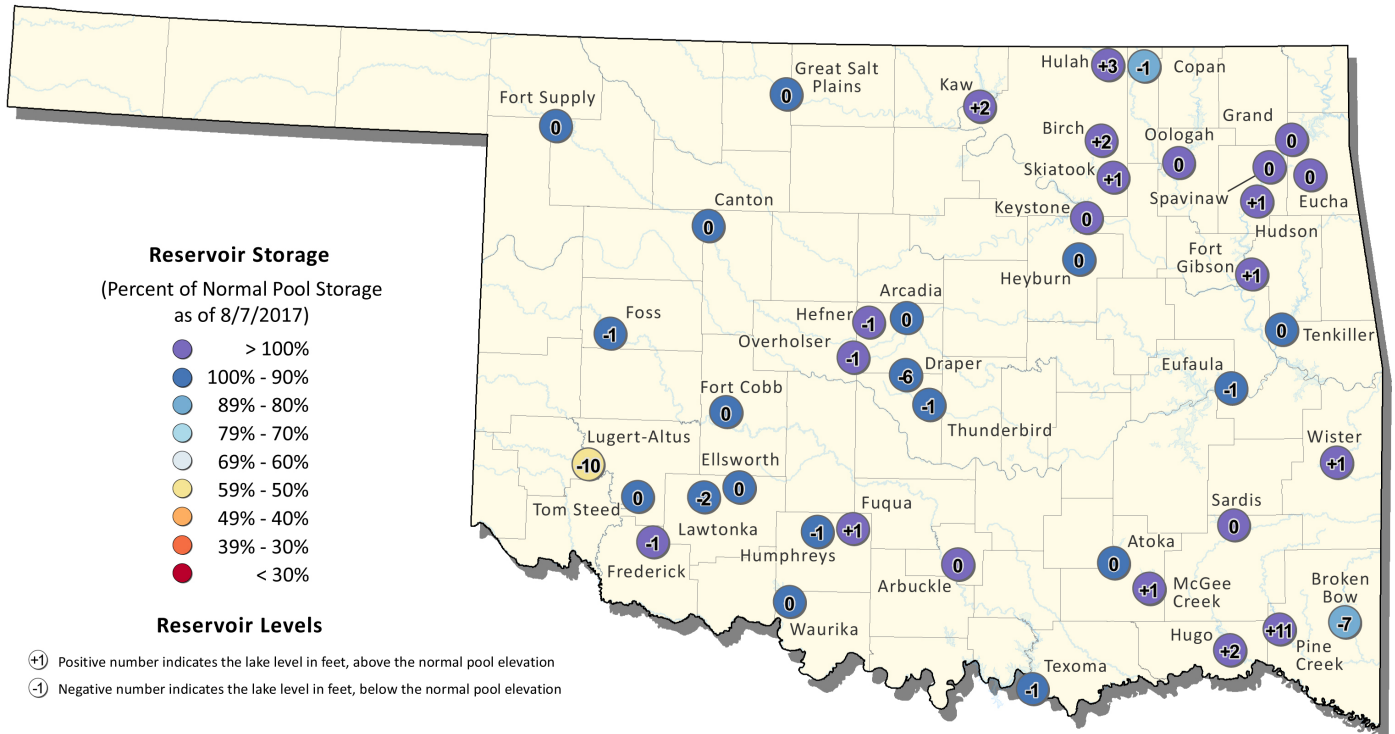
According to the NOAA Crop Moisture Index by Division, for the period ending August 5, 2017, the West Central and Central climate regions of Oklahoma are experiencing abnormally dry conditions, while all other regions of the state are Slightly Dry/Favorably Moist.

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 8/7/2017



This map shows reservoir storage as a percentage of normal pool storage capacity. The source information was collected from real-time lake gages monitored by the U.S. Army Corps of Engineers ([http://www.swt-wc.usace.army.mil/old\\_resvrep.htm](http://www.swt-wc.usace.army.mil/old_resvrep.htm)), and the U.S. Geological Survey ([http://waterdata.usgs.gov/ok/nwis/current/?type=lake&group\\_key=basin\\_cd](http://waterdata.usgs.gov/ok/nwis/current/?type=lake&group_key=basin_cd)). For more information please visit the OWRB's website at (<http://www.owrb.ok.gov>)



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