2012 Monsoon

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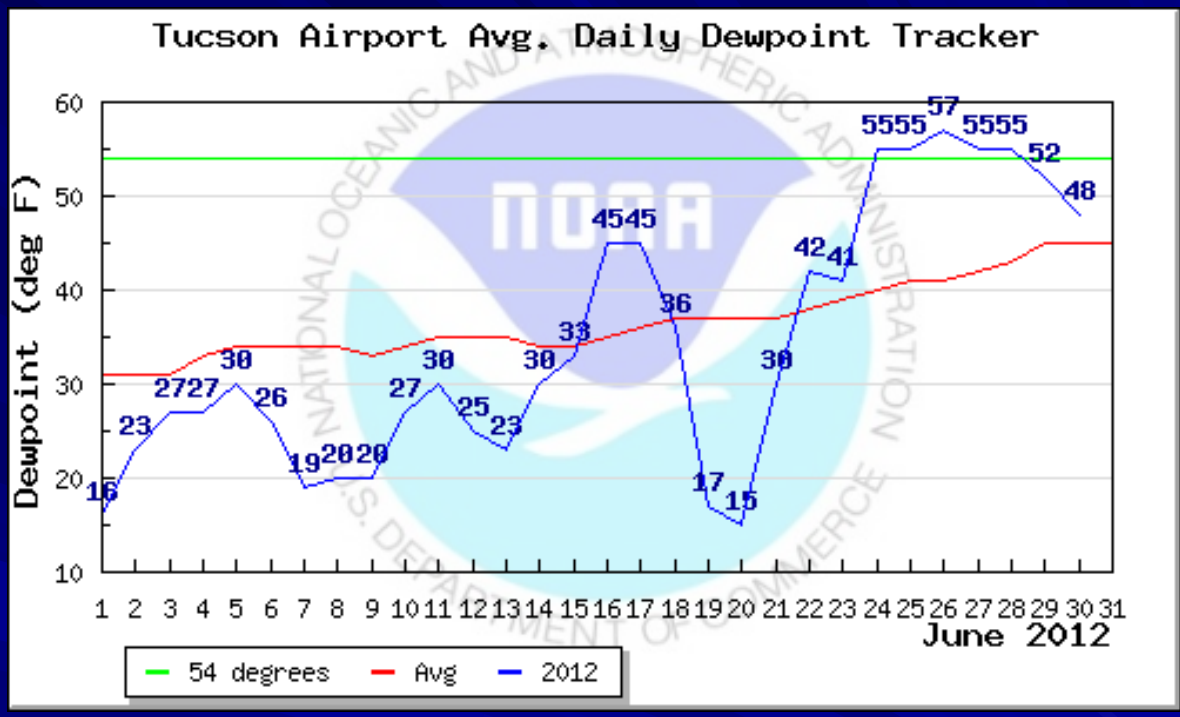
NWS Tucson
Pima County LDIG Meeting
September 12, 2012

JUNE

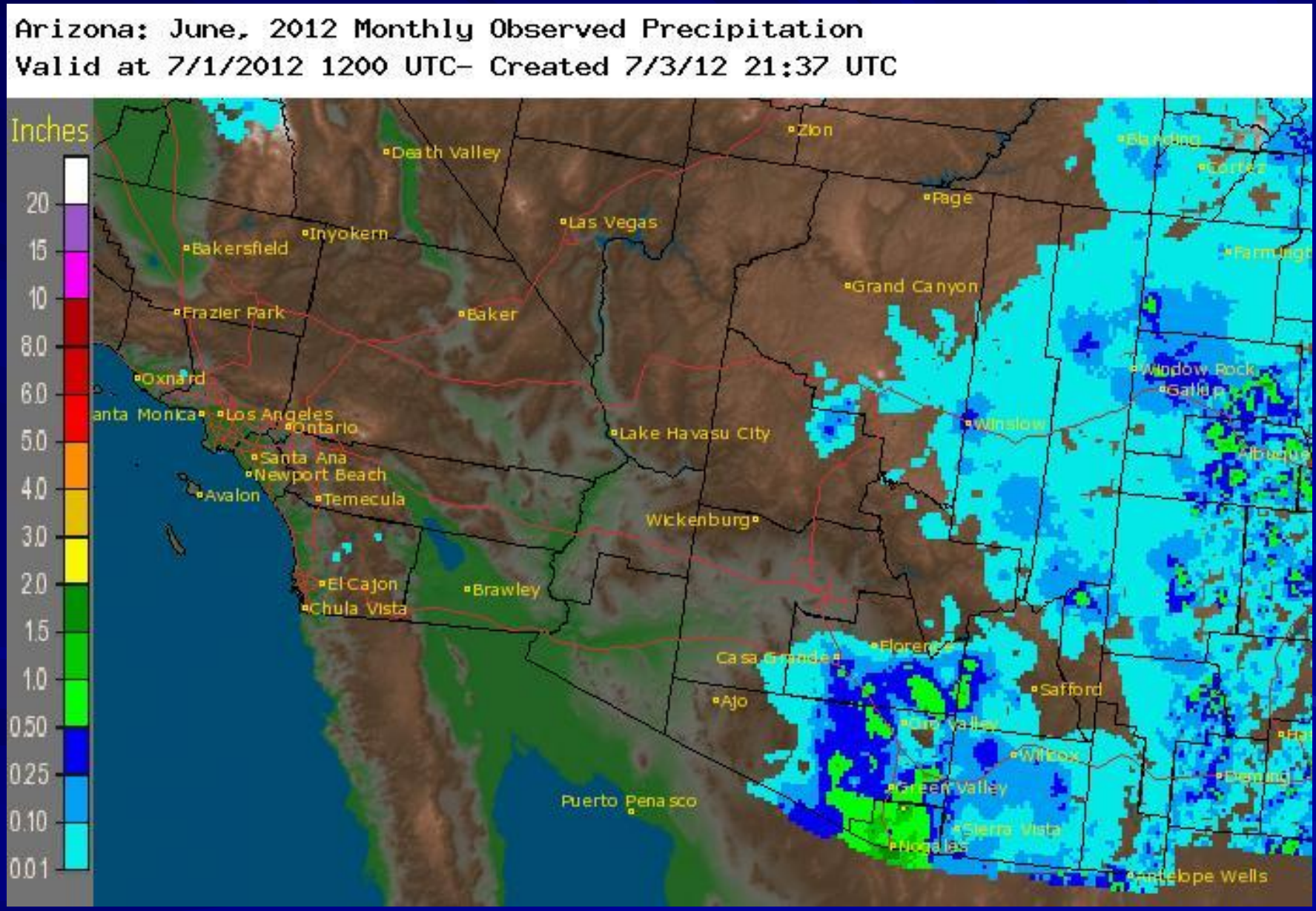
- HOT
- 20 consecutive days with triple digit highs
- Record rainfall June 16 of 0.29” at Tucson Airport



- 0.34” rain at the airport for June, above normal of 0.24”
- Rainlog.org, CoCoRaHS, and Pima CO Regional Flood Control District gages recorded a trace to 0.40”. Near 1” in and around the Tucson mountains

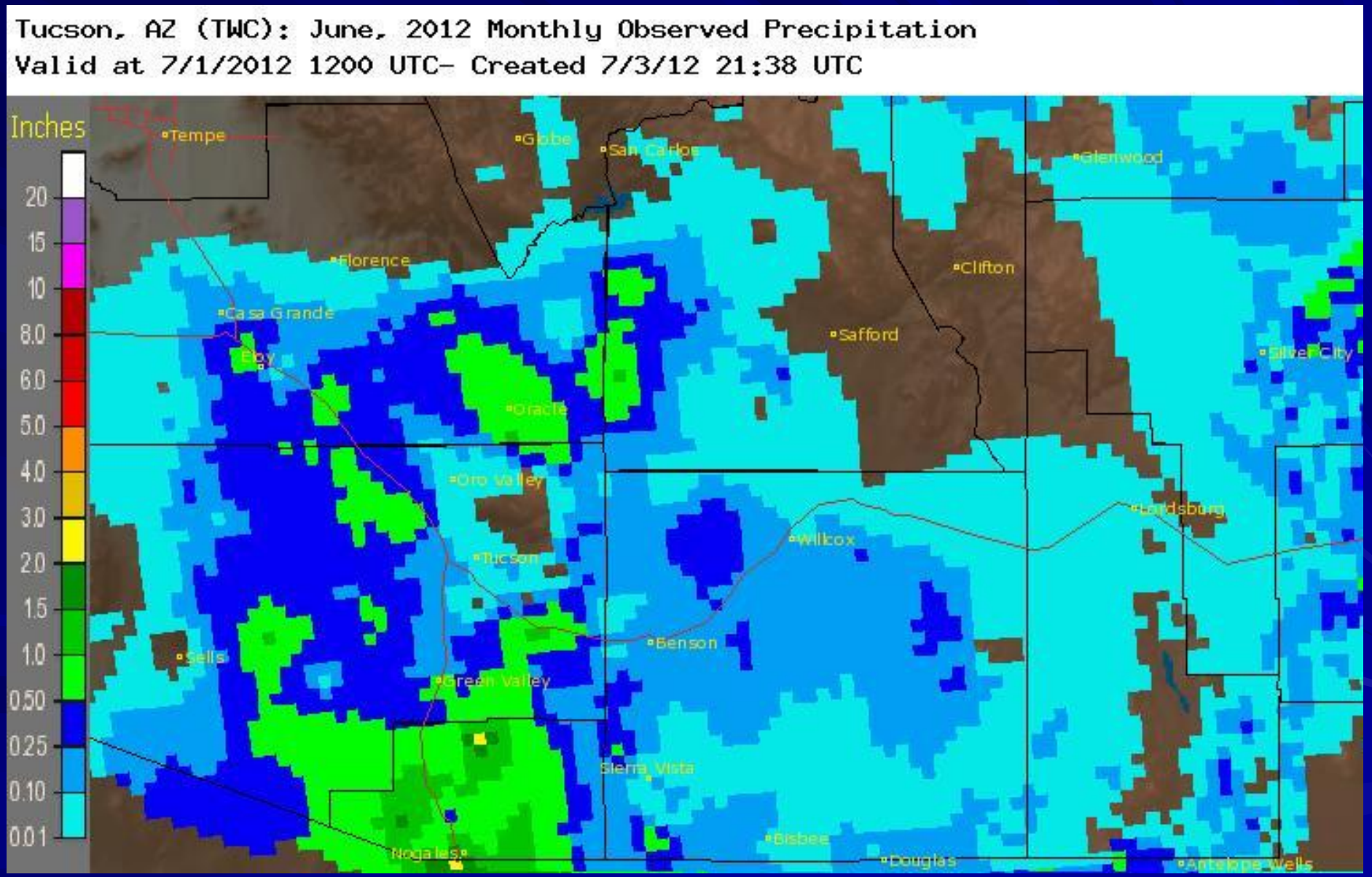
Arizona precipitation for June

Source: http://water.weather.gov



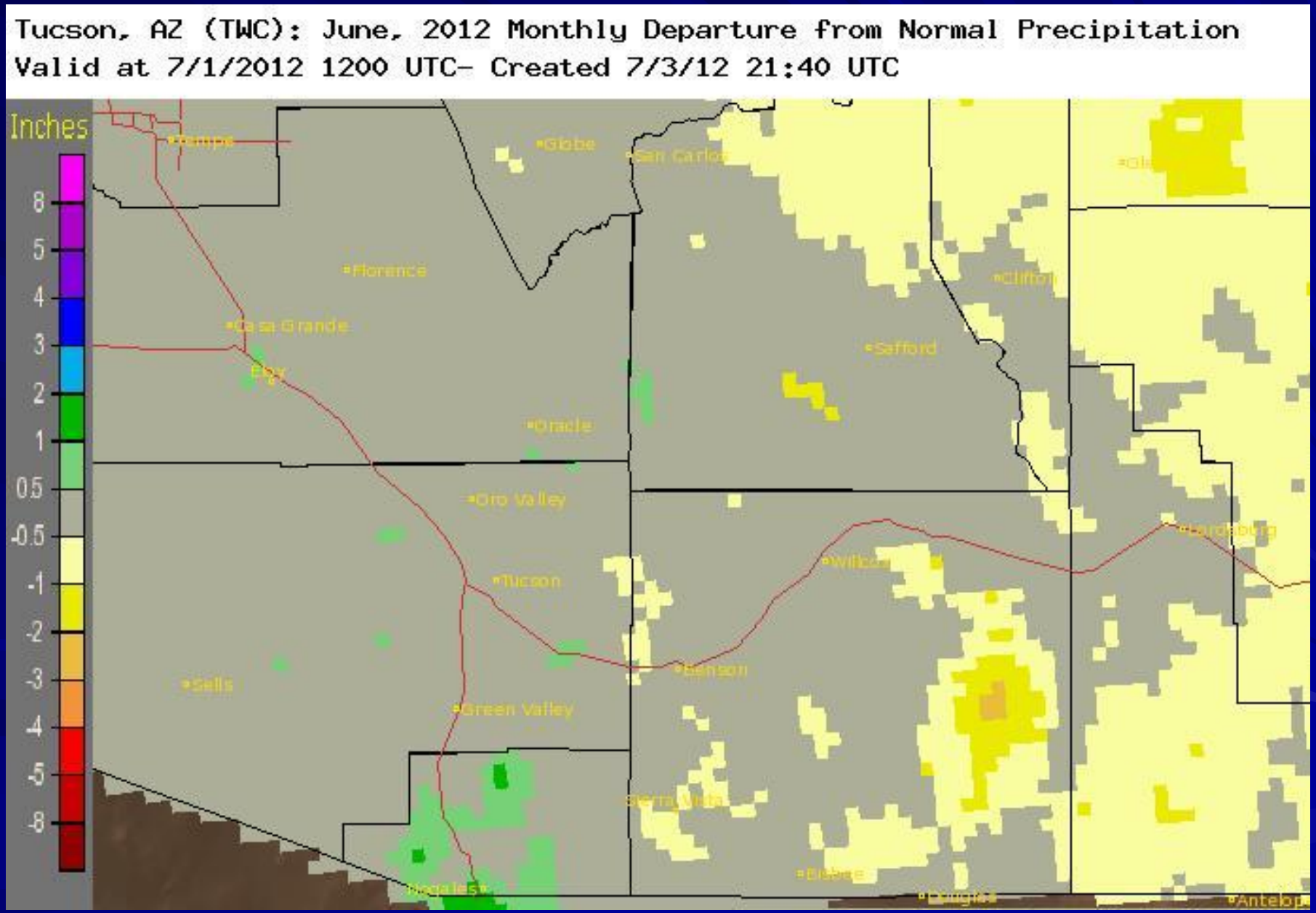
Southeast Arizona precipitation for June

Source: http://water.weather.gov

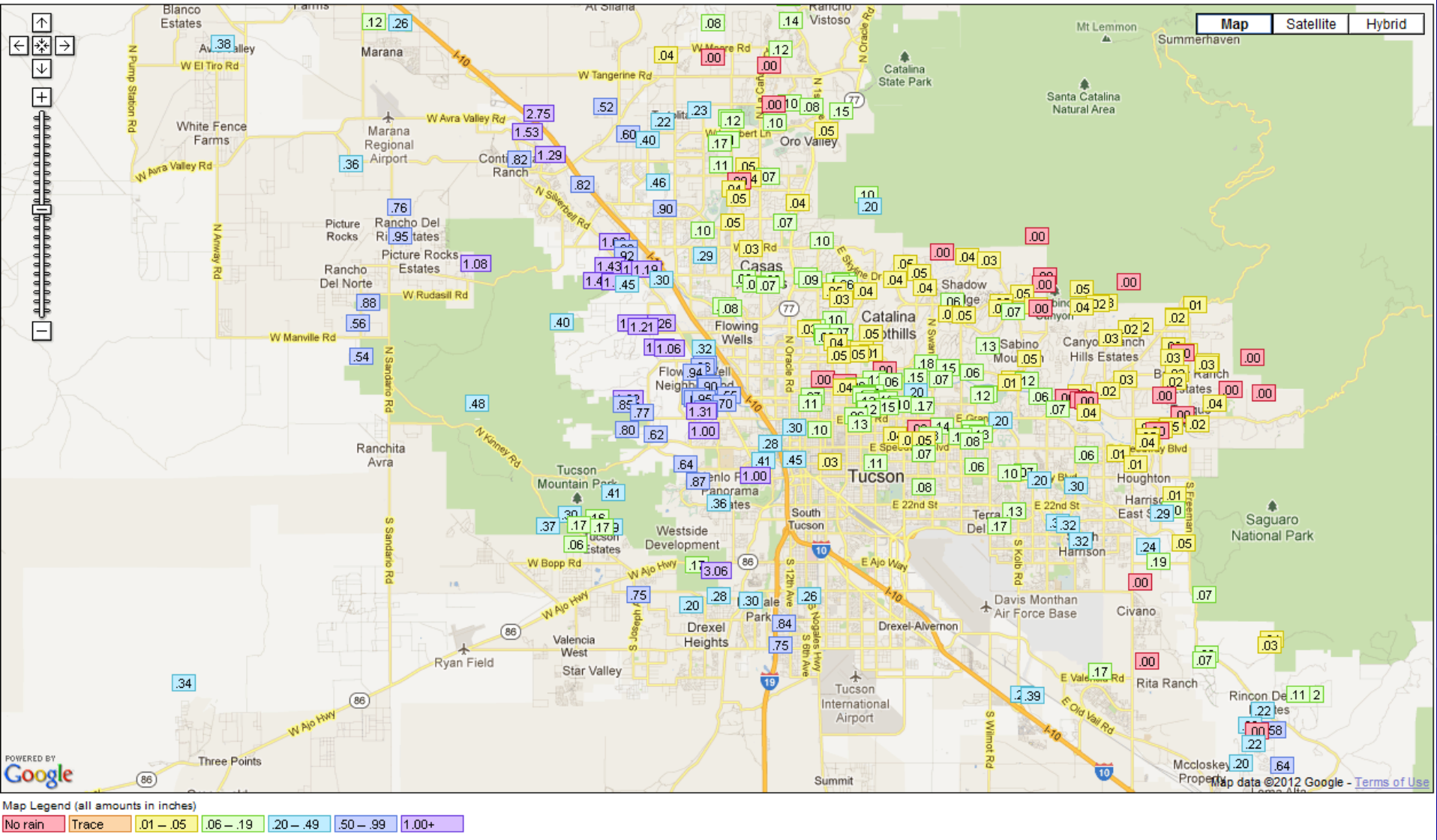


Southeast AZ June departure from normal precipitation

Source: http://water.weather.gov

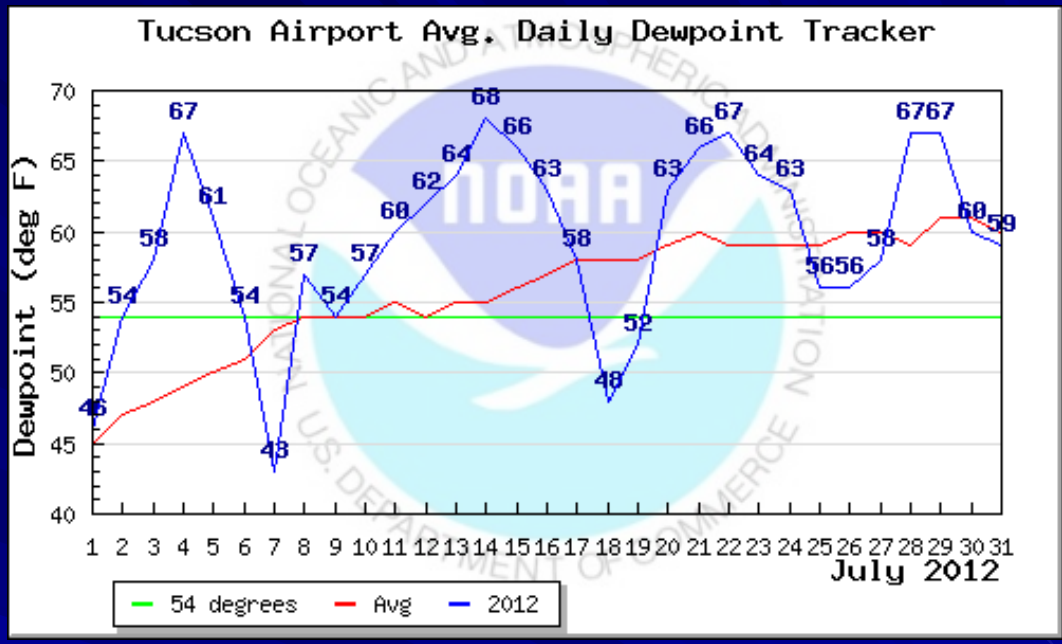


Tucson Area precipitation totals for June
Source: http://rainlog.org



JULY

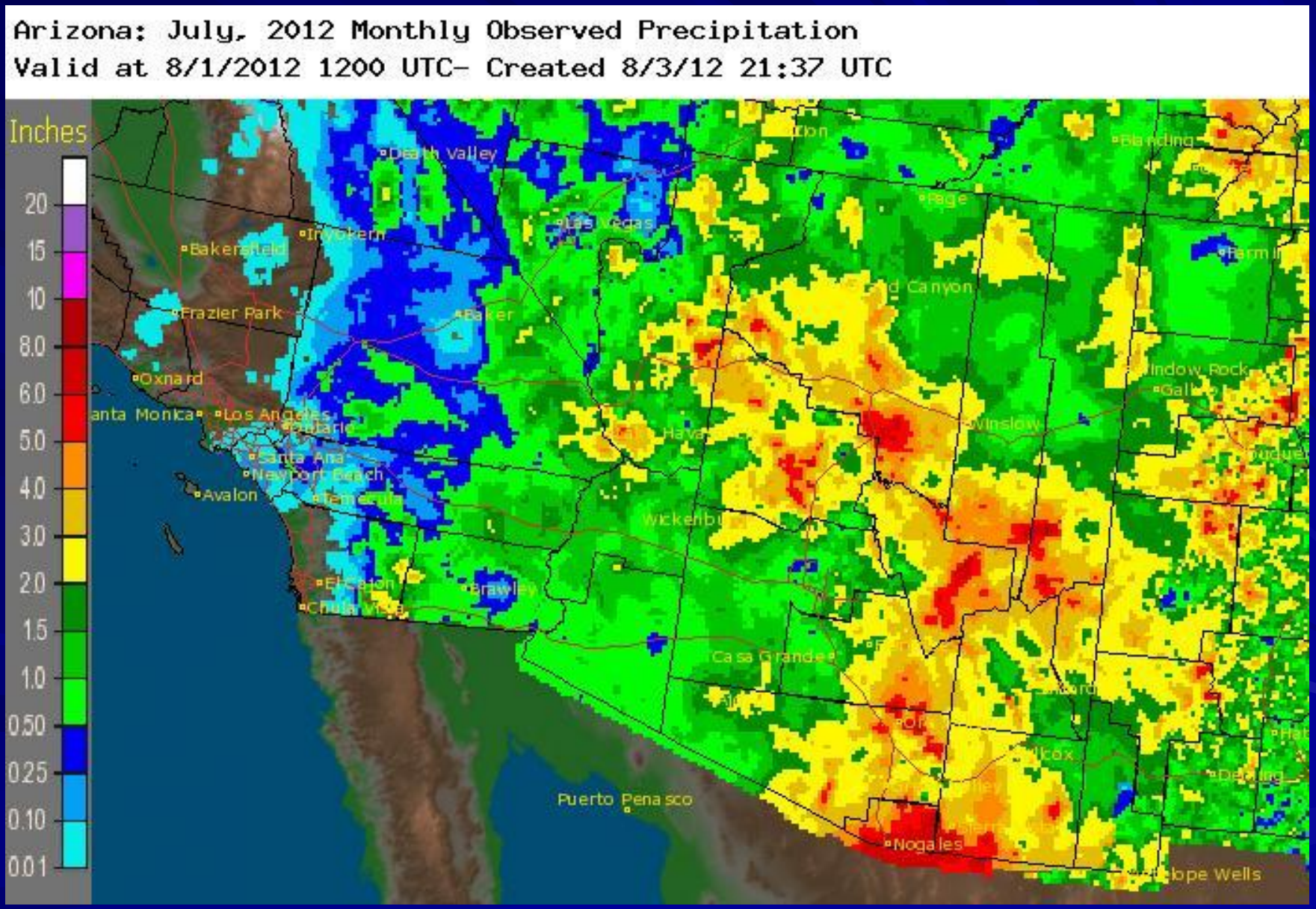
- Wet and Cool
- July 4th record low max temp 86º and 0.78” rain at the airport. Over 3”/hr in Oro Valley
- July 14-16 heavy rain and flash flooding, 2.5” rain at airport



- 4.13” rain at airport for July, well above normal of 2.25”
- Rainlog.org, CoCoRaHS, and Pima CO Regional Flood Control District gages recorded 1.5” to 8”
- Average monthly temp 85.7º, 1.3º below normal and only 10 triple digit days

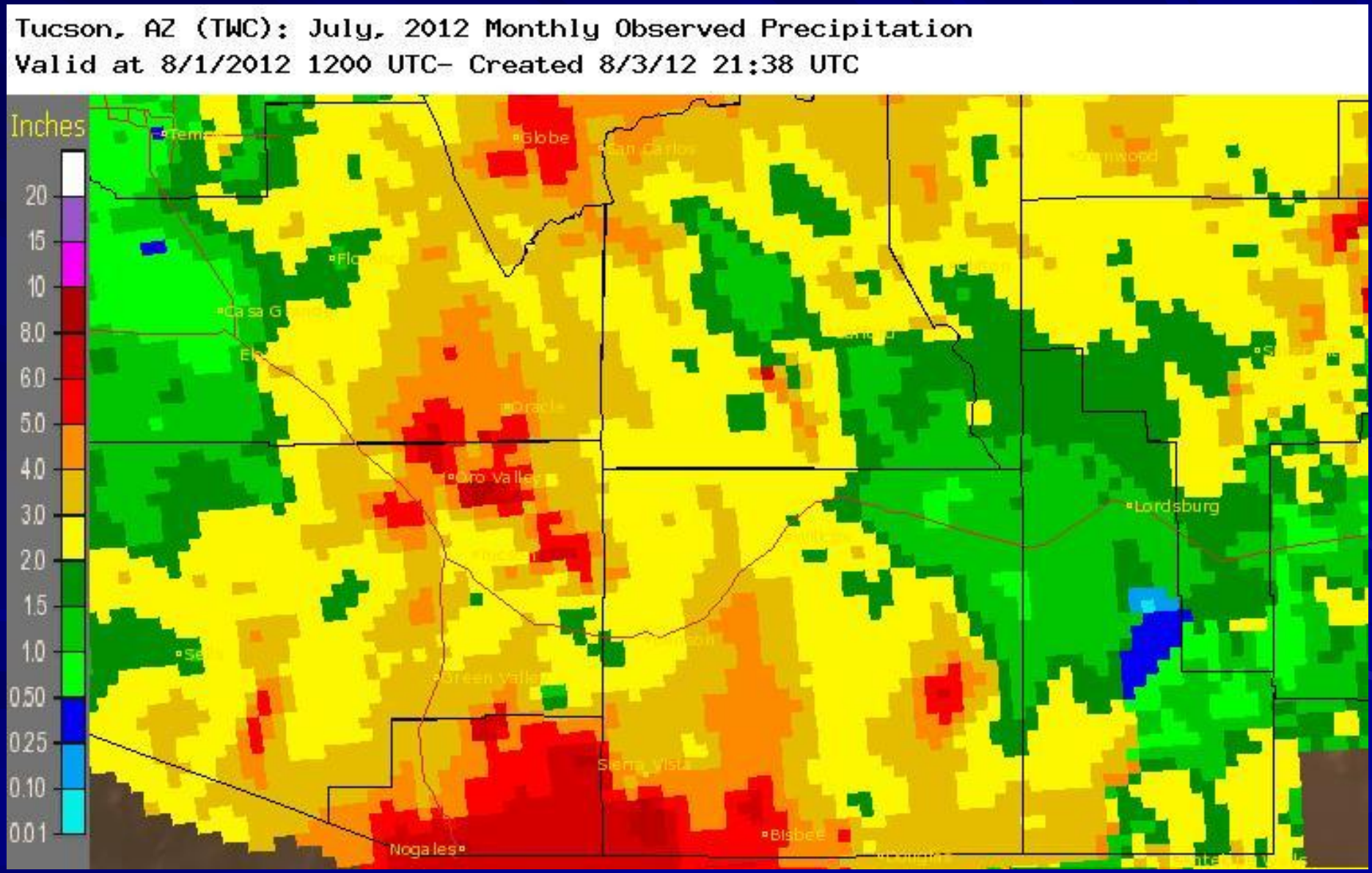
Arizona precipitation map for July

Source: http://water.weather.gov



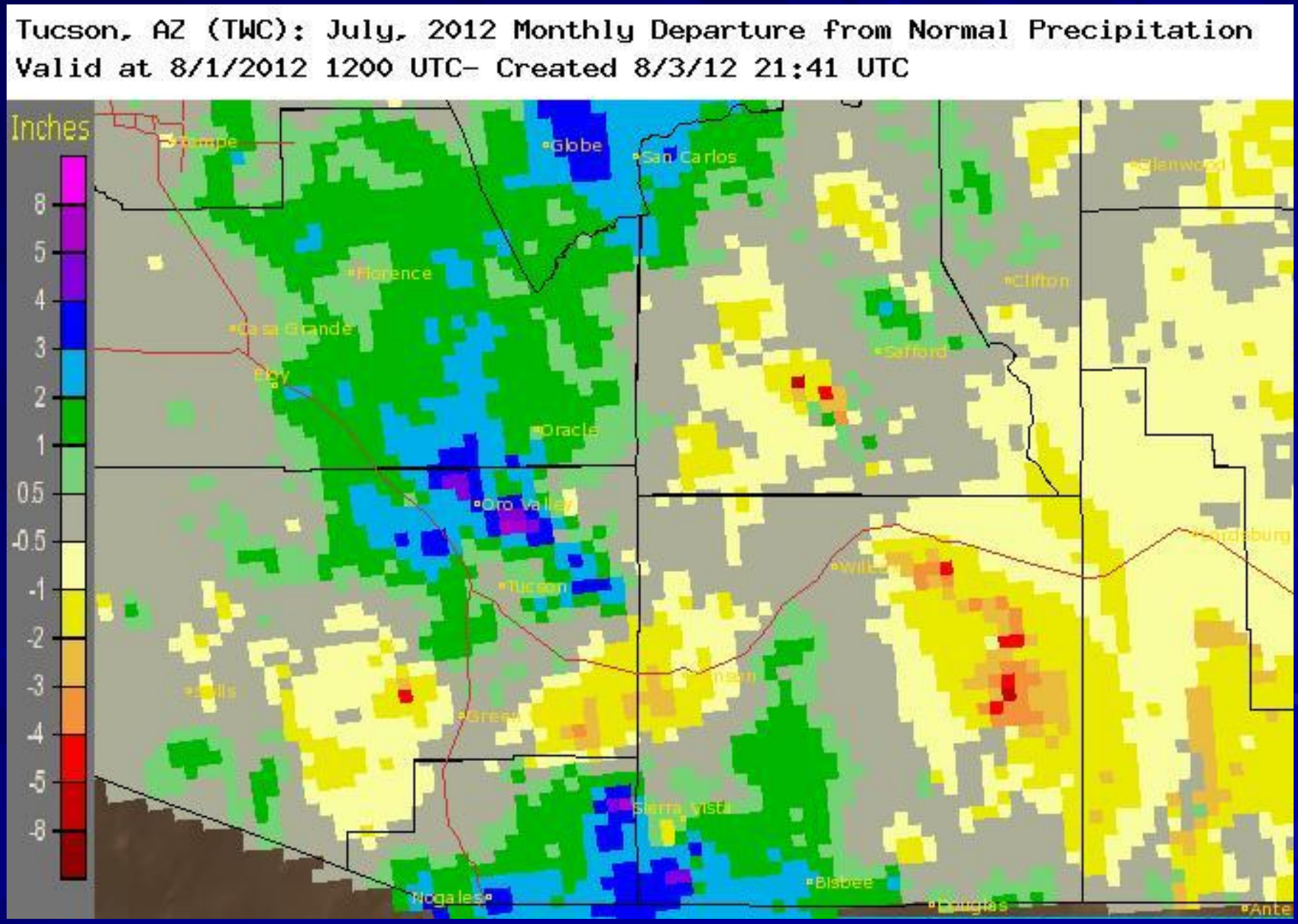
Southeast Arizona precipitation map for July

Source: http://water.weather.gov



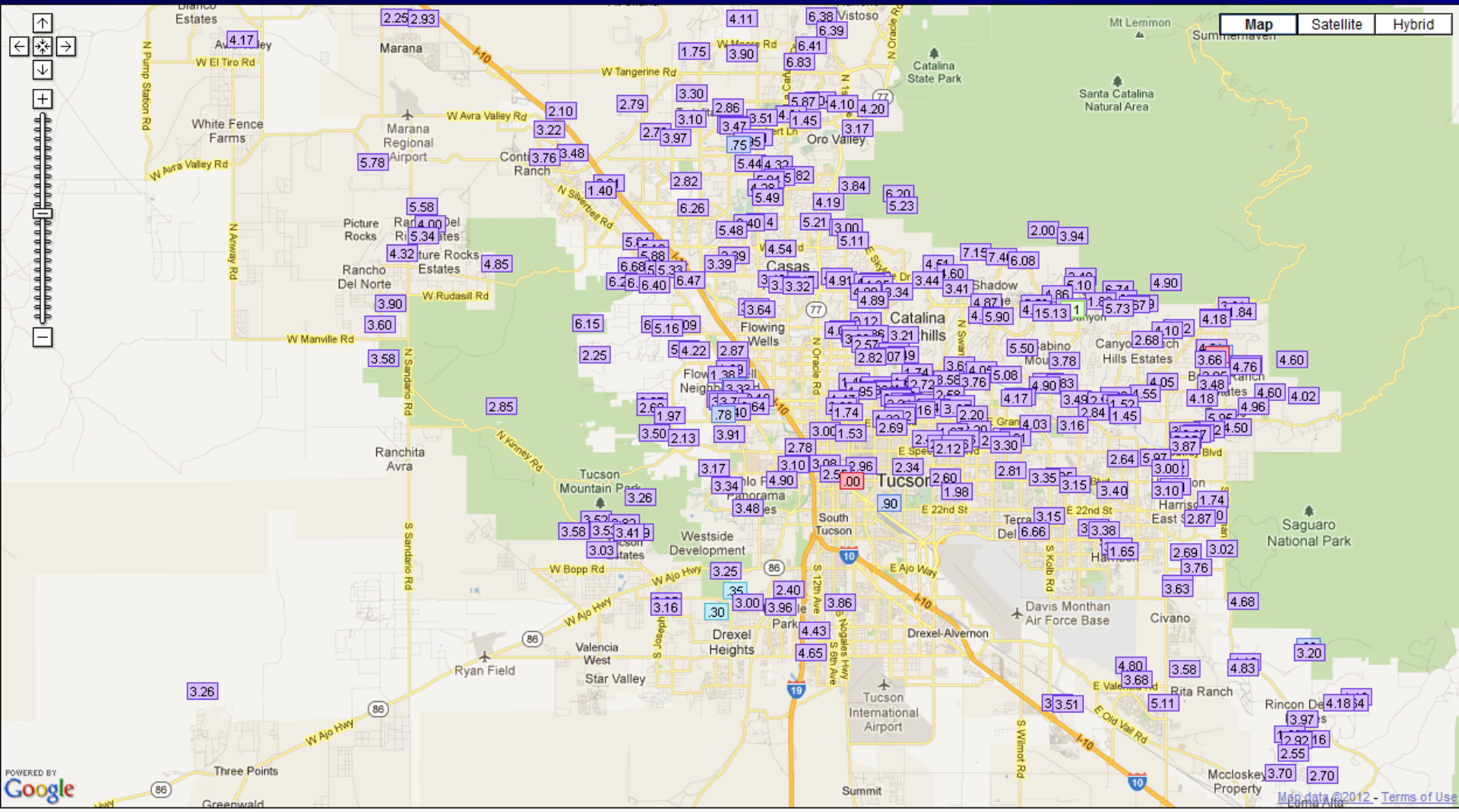
Southeast AZ July departure from normal precipitation

Source: http://water.weather.gov



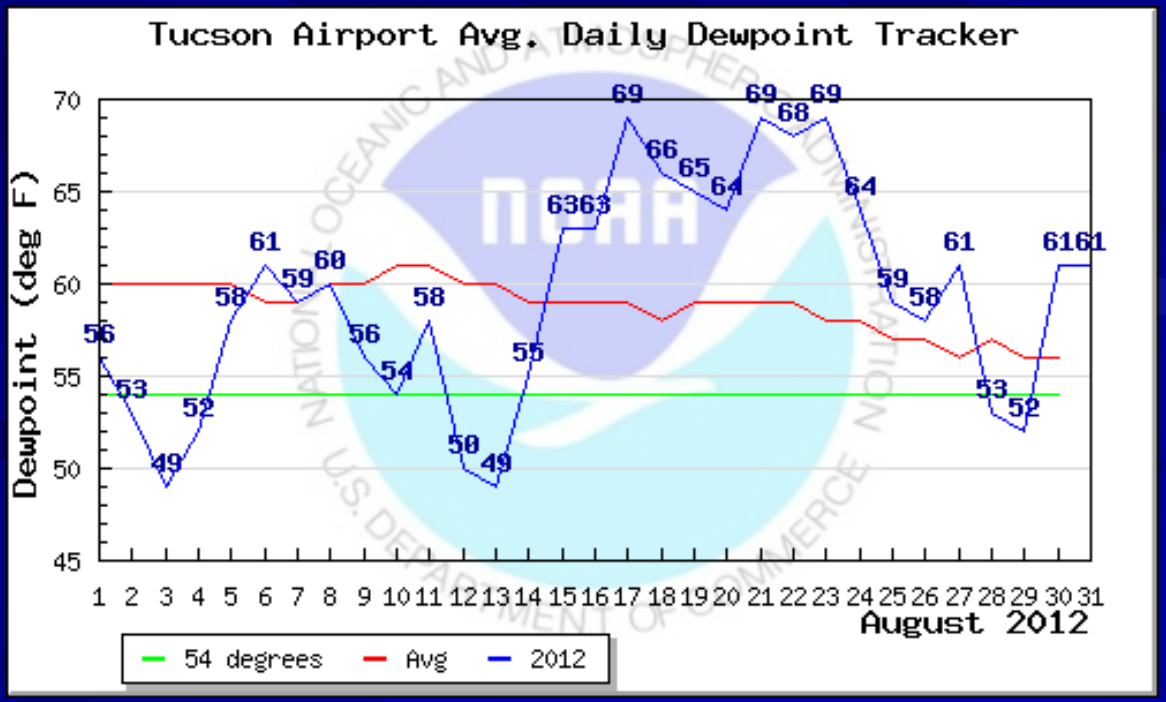
Tucson Area precipitation totals for July

Source: http://rainlog.org



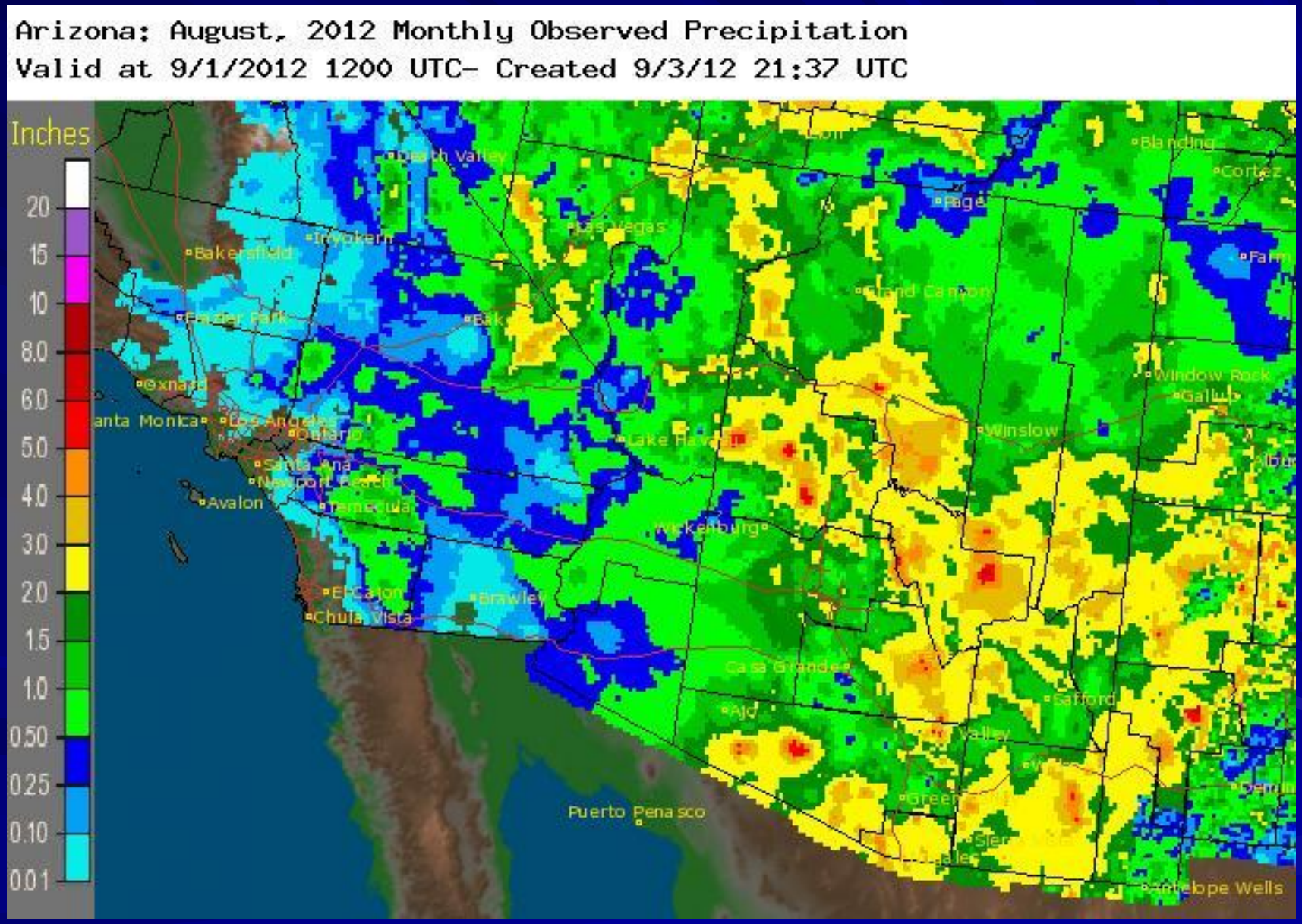
AUGUST

- Hot and Dry
- 1.17” rain at Tucson Airport for August, half the normal of 2.39”
- Rainlog.org, CoCoRaHS, and Pima CO Regional Flood Control District gages recorded 1” – 5”
- 4 days record highs temps were set/tied

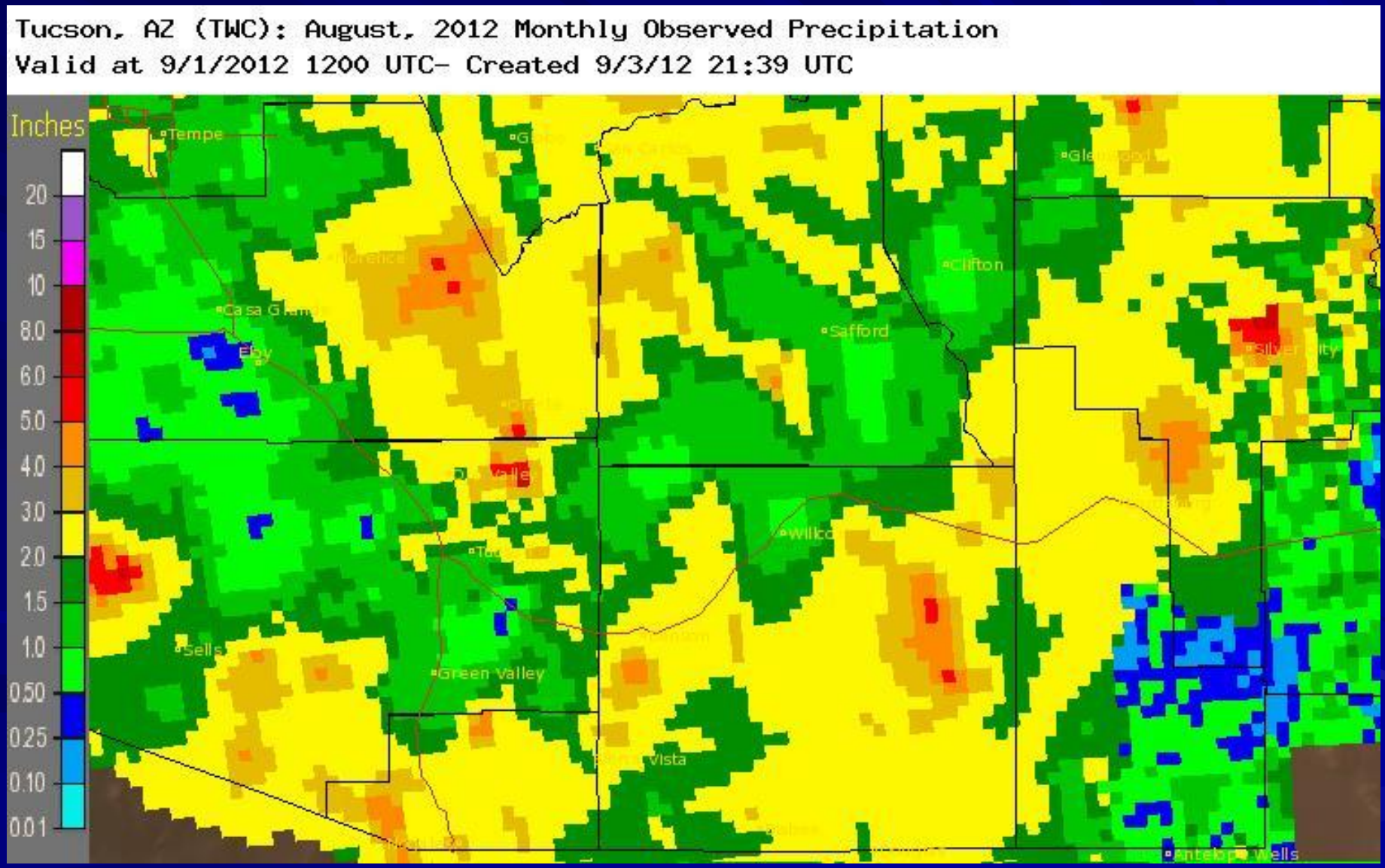


Arizona precipitation for August

Source: http://water.weather.gov

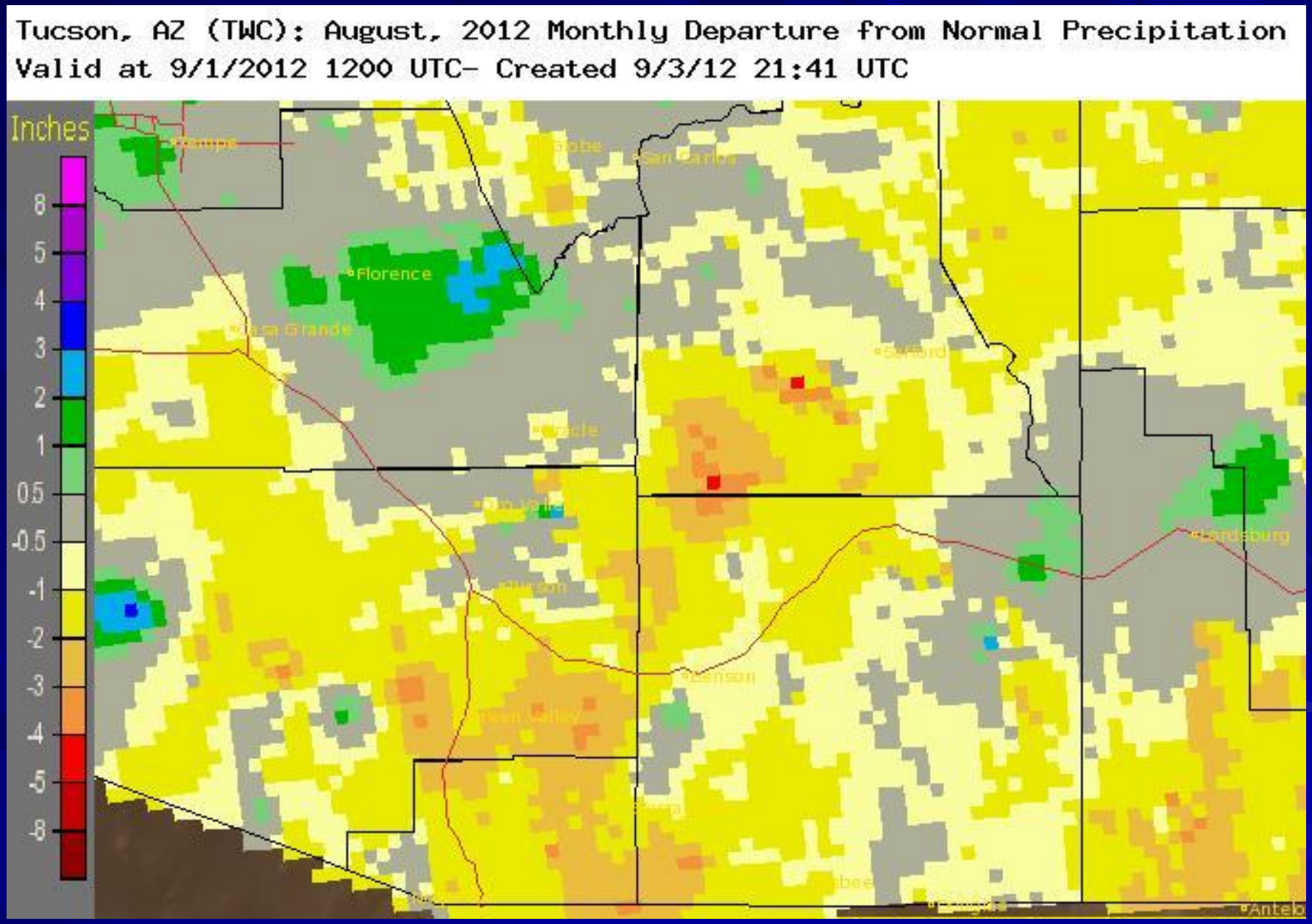


Southeast Arizona precipitation for August
Source: http://water.weather.gov



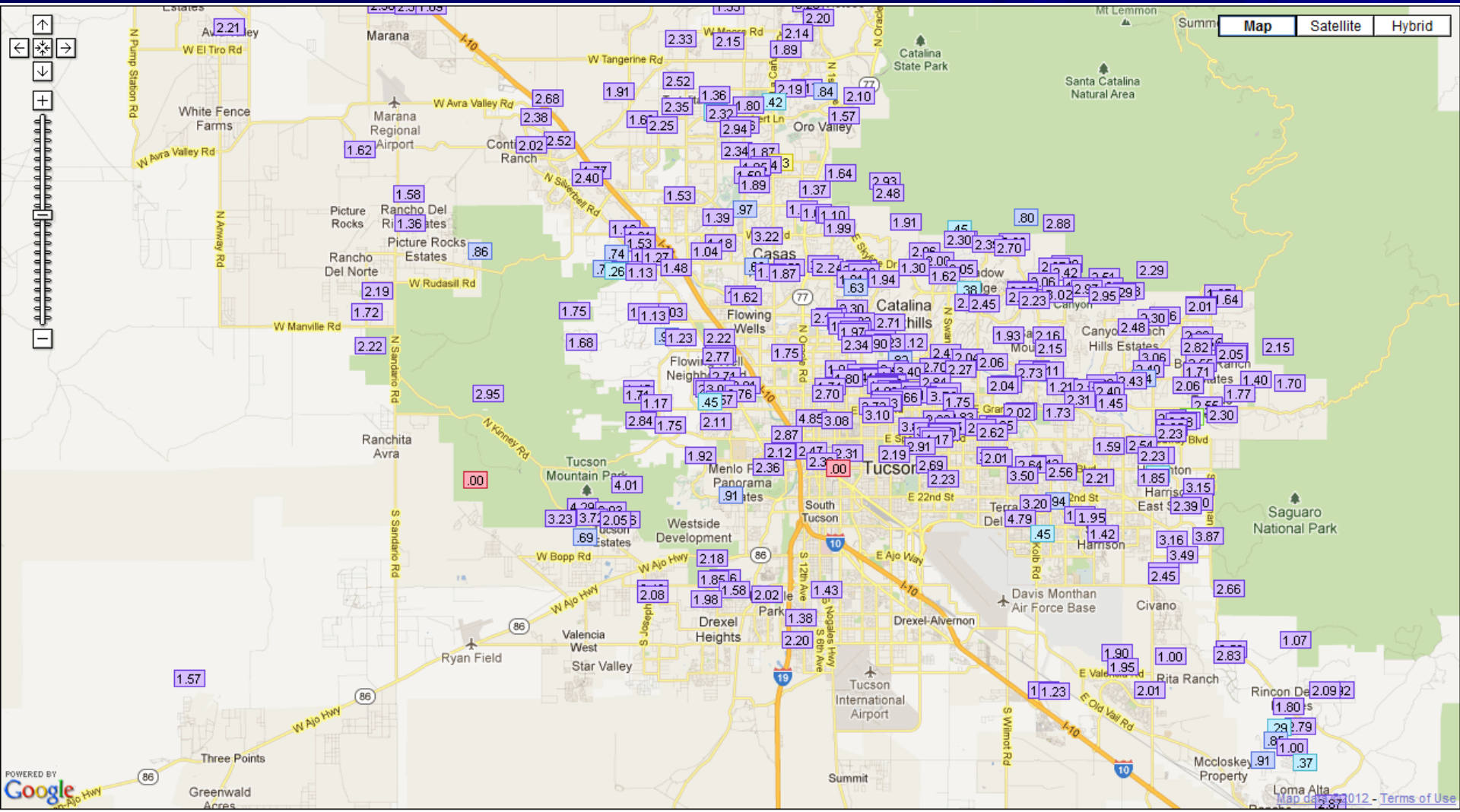
Southeast AZ August departure from normal precipitation

Source: http://water.weather.gov



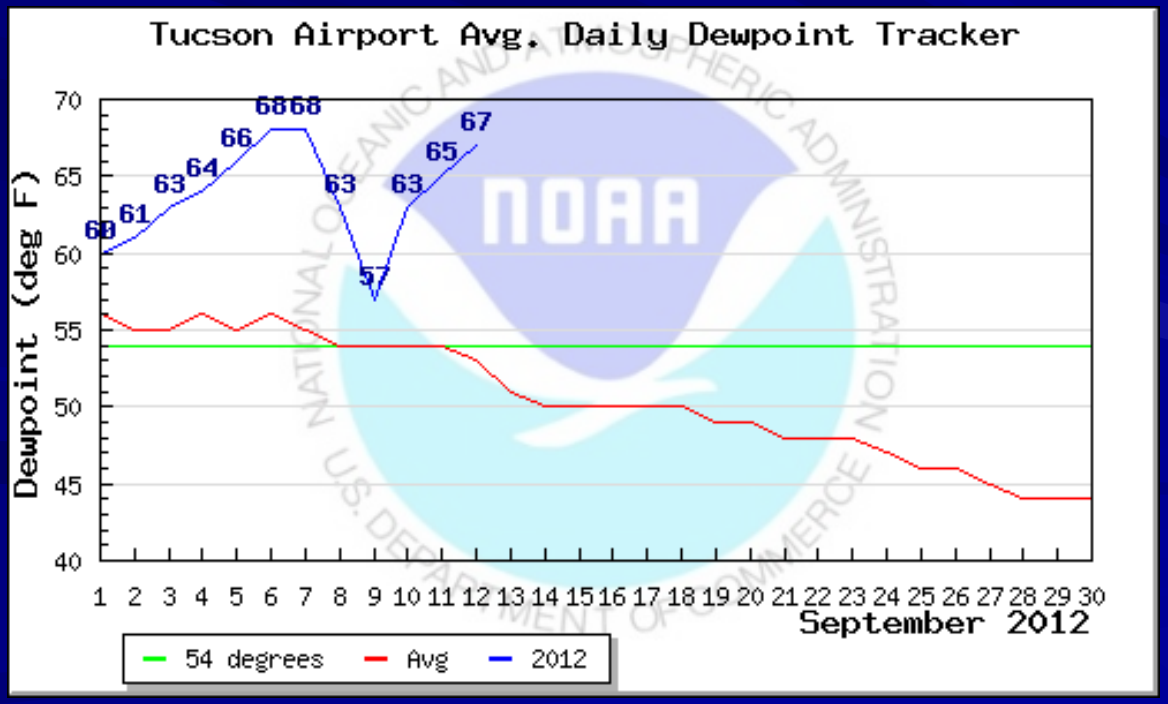
Tucson Area precipitation totals for August

Source: http://rainlog.org



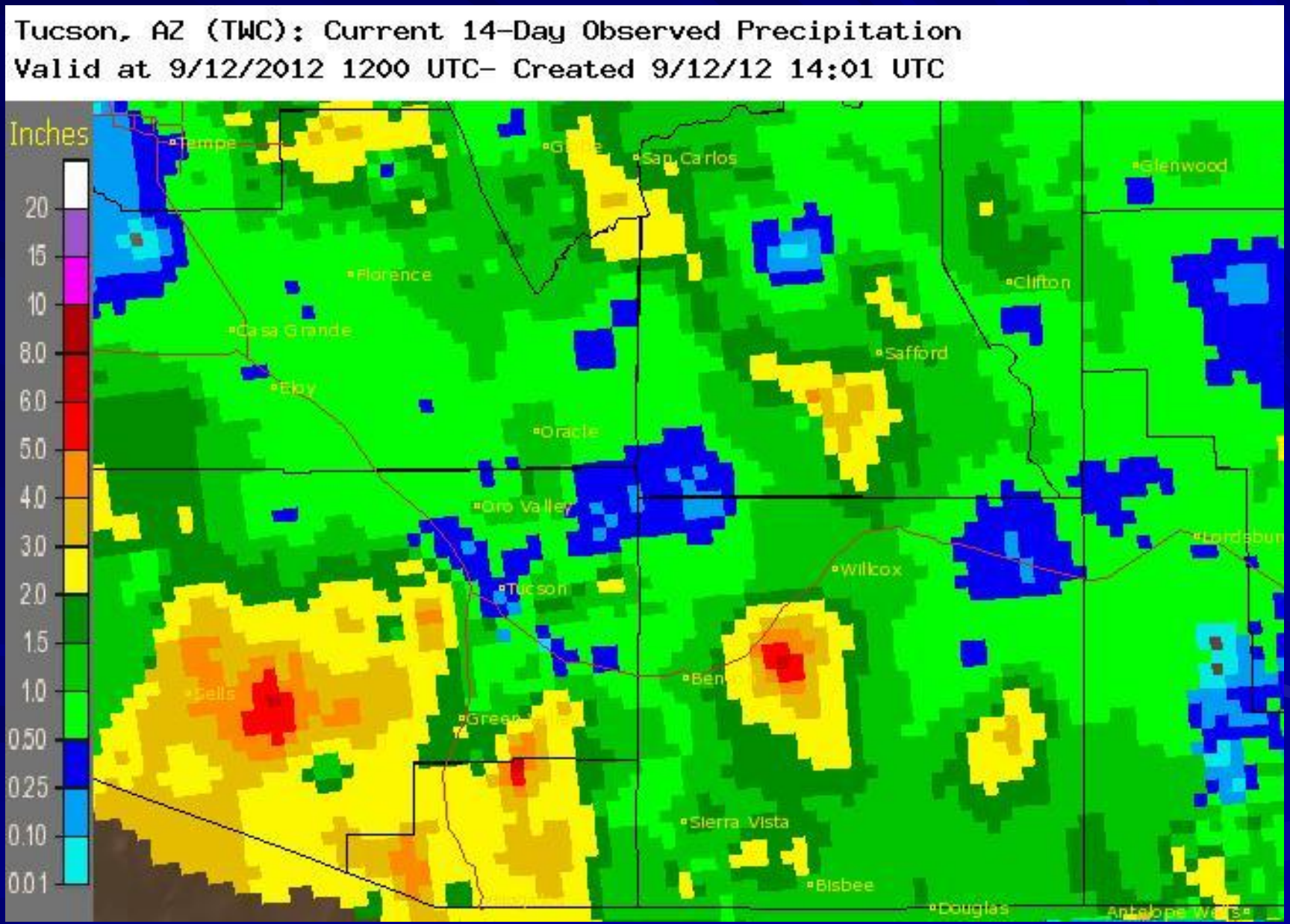
SEPTEMBER
So Far

- 0.33” of rain at the airport, below the normal of 0.61”
- Rainlog.org, CoCoRaHS, and Pima CO Regional Flood Control District gages recorded trace to over 5”



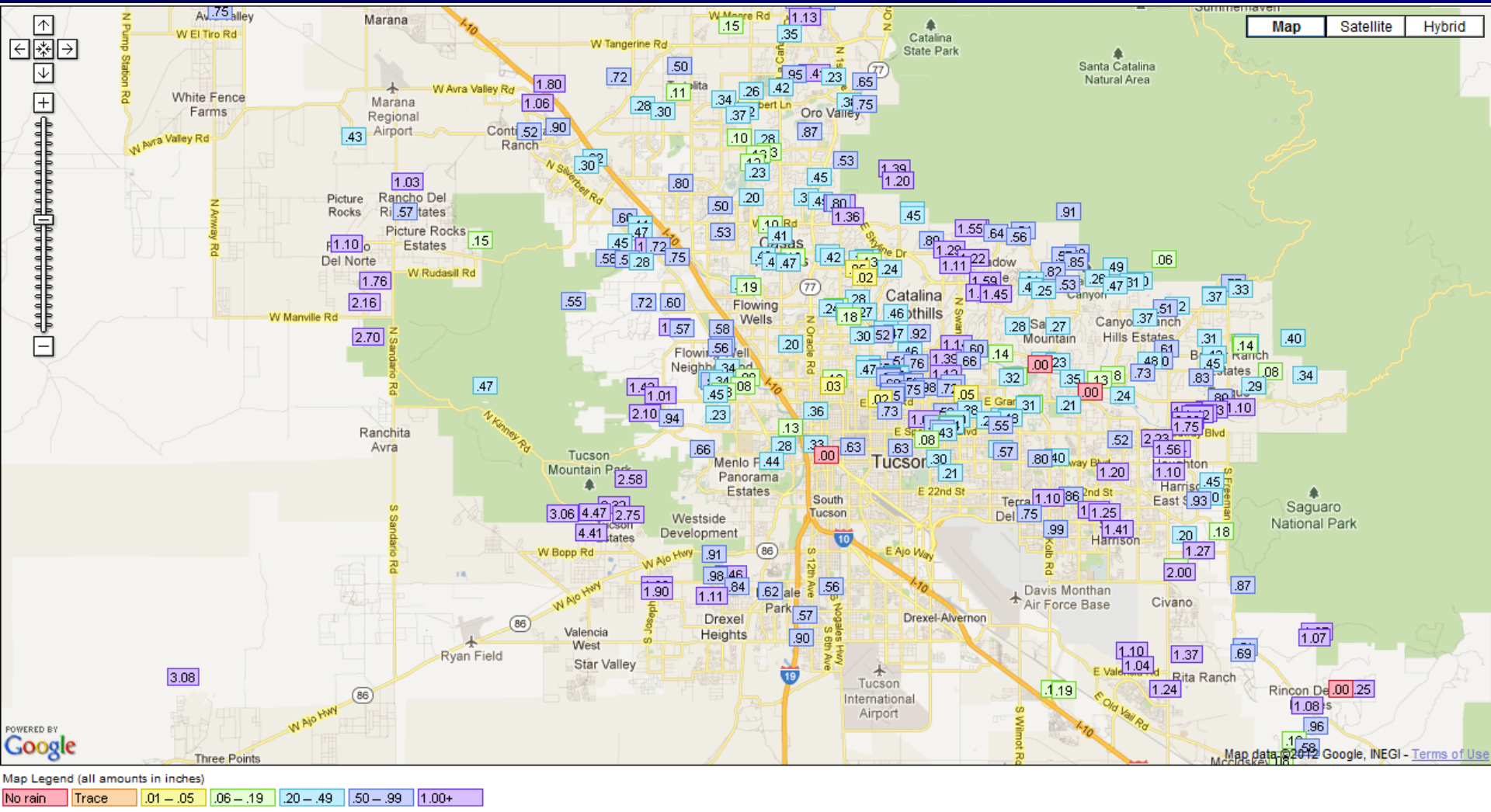
Southeast Arizona precipitation past 14 days

Source: http://water.weather.gov



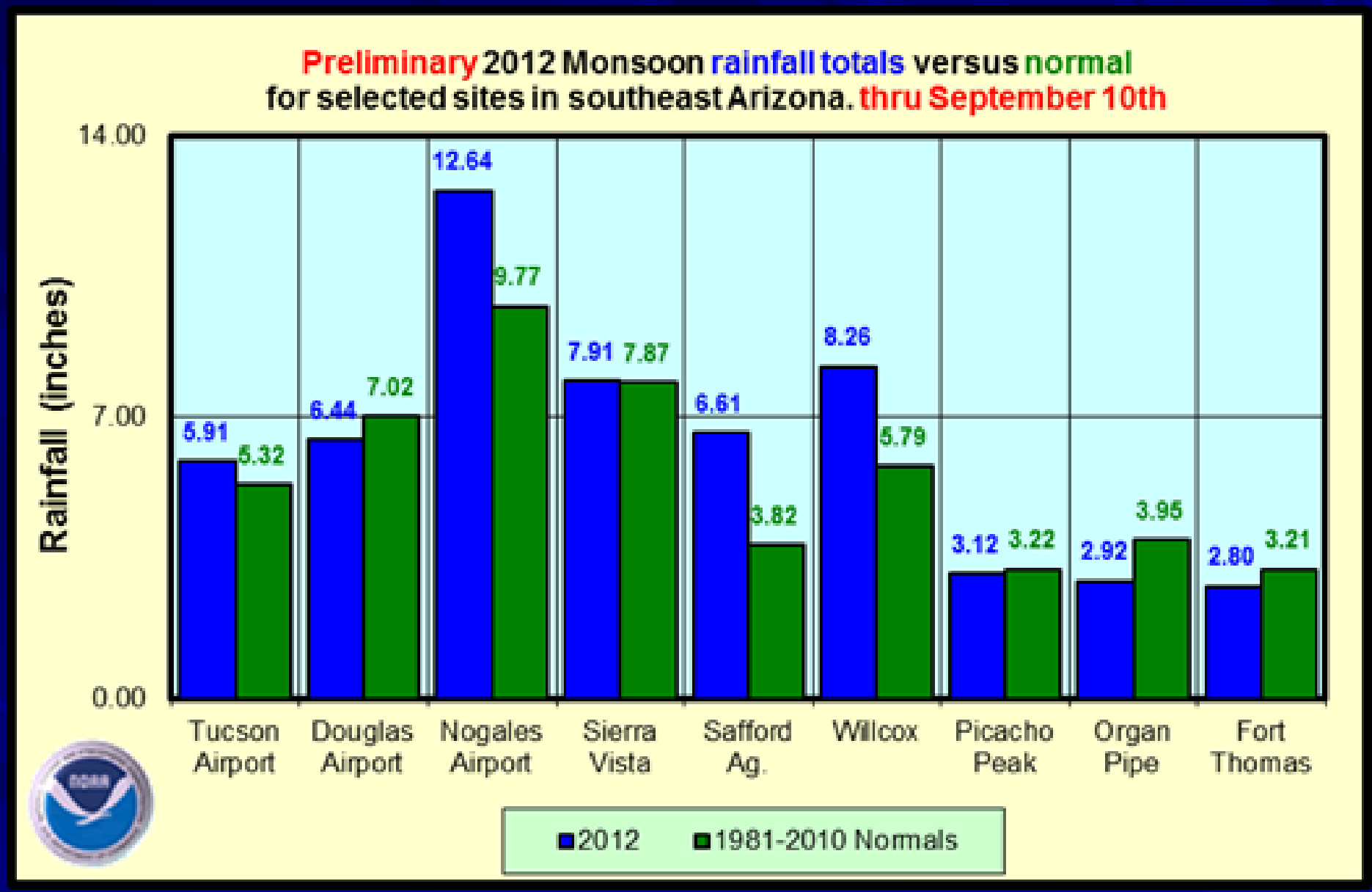
Tucson Area precipitation totals for Sept 1-11

Source: http://rainlog.org



Map Legend (all amounts in inches)

No rain	Trace	.01 – .05	.06 – .19	.20 – .49	.50 – .99	1.00+


Preliminary 2012 Monsoon rainfall totals versus normal
for selected sites in southeast Arizona. thru September 10th
Rainfall (inches)
14.00
7.00
0.00
5.91
5.32
6.44
7.02
12.64
9.77
7.91
7.87
6.61
3.82
8.26
5.79
3.12
3.22
2.92
3.95
2.80
3.21
Tucson Airport
Douglas Airport
Nogales Airport
Sierra Vista
Safford Ag.
Willcox
Picacho Peak
Organ Pipe
Fort Thomas
2012
1981-2010 Normals

Tucson Airport Rainfall Totals

2012 Monsoon Rainfall as of 9/12		
	Normal Rainfall	Observed Rainfall
June	0.2	0.34
July	2.25	4.13
August	2.39	1.17
September	0.61	0.33
Total	**5.45**	**5.97**

2012 Rainfall as of 9/12		
	Normal Rainfall	Observed Rainfall
January	0.94	0.14
February	0.86	0.08
March	0.73	0.34
April	0.31	0.12
May	0.23	0.0
June	0.2	0.34
July	2.25	4.13
August	2.39	1.17
September	0.61*	0.33
Total	**7.91**	**6.65**

* Normal for entire month of September 1.27"

Drought Conditions

Drought Conditions start of Monsoon

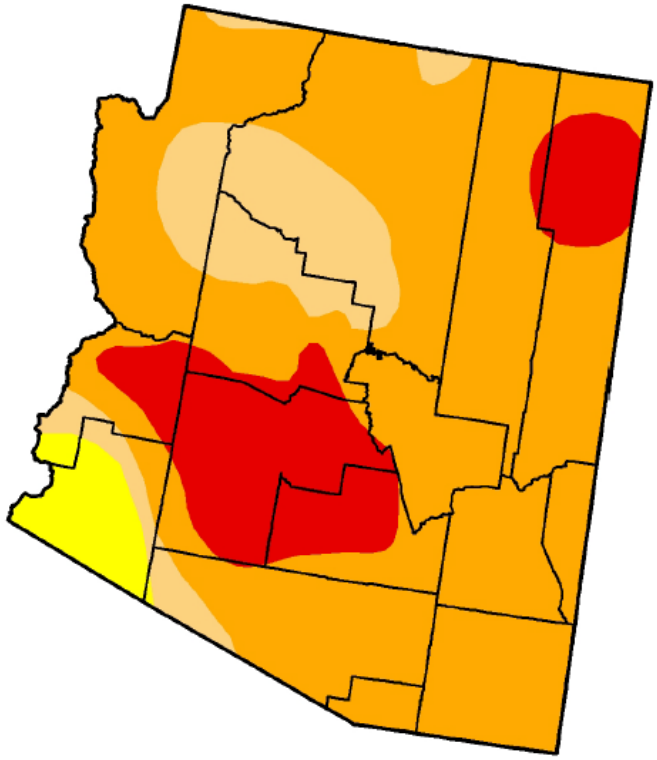
U.S. Drought Monitor

Arizona

June 12, 2012
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	96.08	83.21	16.29	0.00
Last Week (06/05/2012 map)	0.00	100.00	96.08	82.74	16.29	0.00
3 Months Ago (03/13/2012 map)	0.47	99.53	92.82	62.25	8.52	0.00
Start of Calendar Year (12/27/2011 map)	16.70	83.30	60.34	36.56	2.78	0.00
Start of Water Year (09/27/2011 map)	0.02	99.98	69.76	42.81	15.34	1.67
One Year Ago (06/07/2011 map)	22.51	77.49	56.26	28.69	18.34	0.96



Intensity:

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

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

http://droughtmonitor.unl.edu

Released Thursday, June 14, 2012

David Miskus, NOAA/NWS/NCEP/Climate Prediction Center

Current Drought Conditions

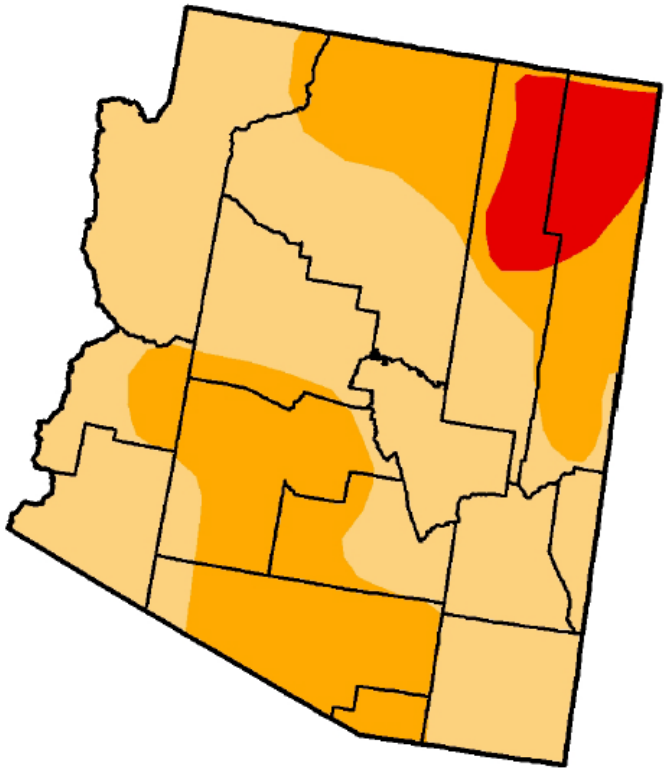
U.S. Drought Monitor

September 4, 2012
Valid 7 a.m. EST

Arizona

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	41.70	6.89	0.00
Last Week (08/28/2012 map)	0.00	100.00	100.00	41.68	7.46	0.00
3 Months Ago (06/05/2012 map)	0.00	100.00	96.08	82.74	16.29	0.00
Start of Calendar Year (12/27/2011 map)	16.70	83.30	60.34	36.56	2.78	0.00
Start of Water Year (09/27/2011 map)	0.02	99.98	69.76	42.81	15.34	1.67
One Year Ago (08/30/2011 map)	2.41	97.59	70.17	39.12	18.99	1.35



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

http://droughtmonitor.unl.edu

Released Thursday, September 6, 2012

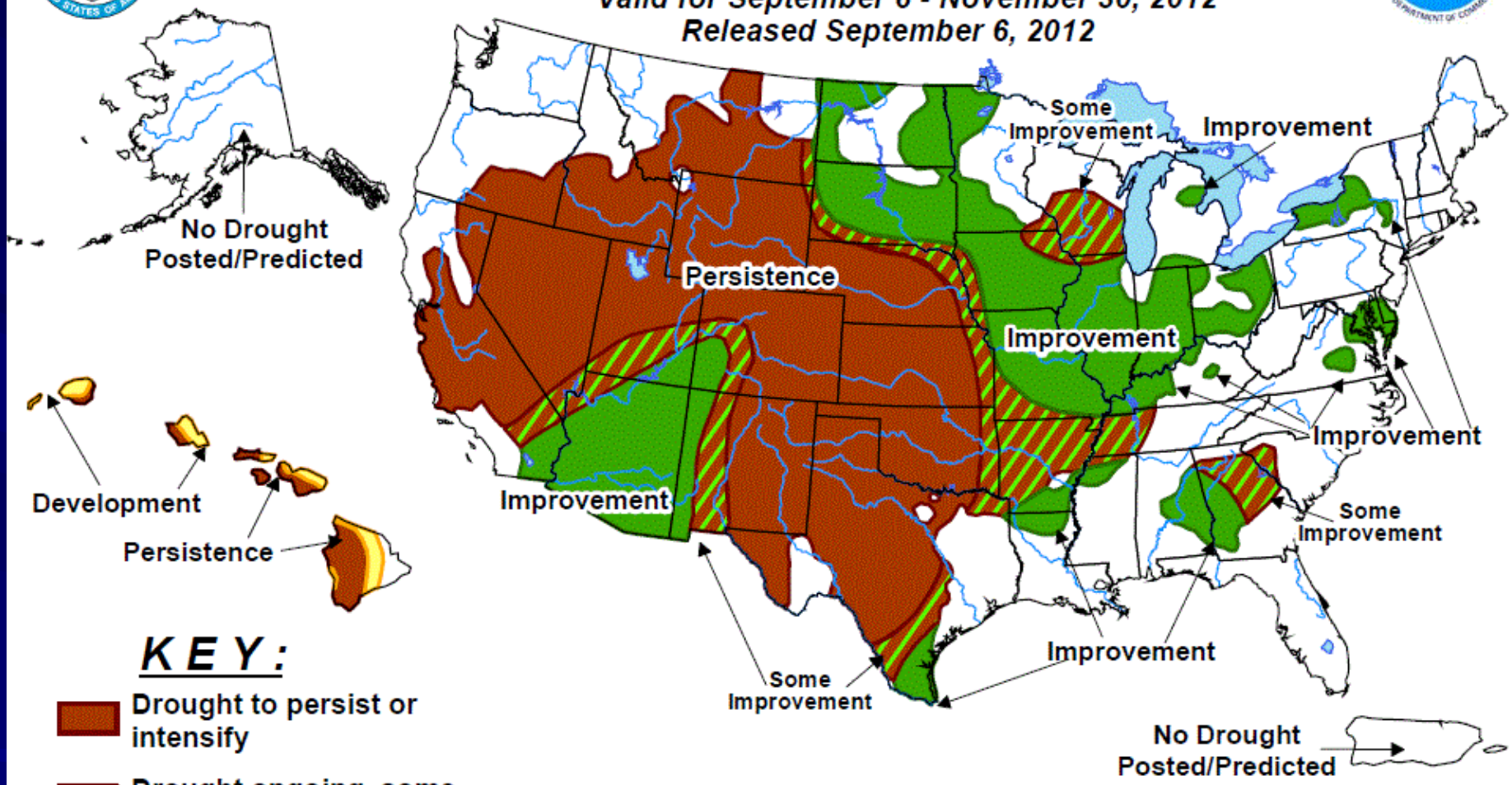
Brian Fuchs, National Drought Mitigation Center

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for September 6 - November 30, 2012

Released September 6, 2012



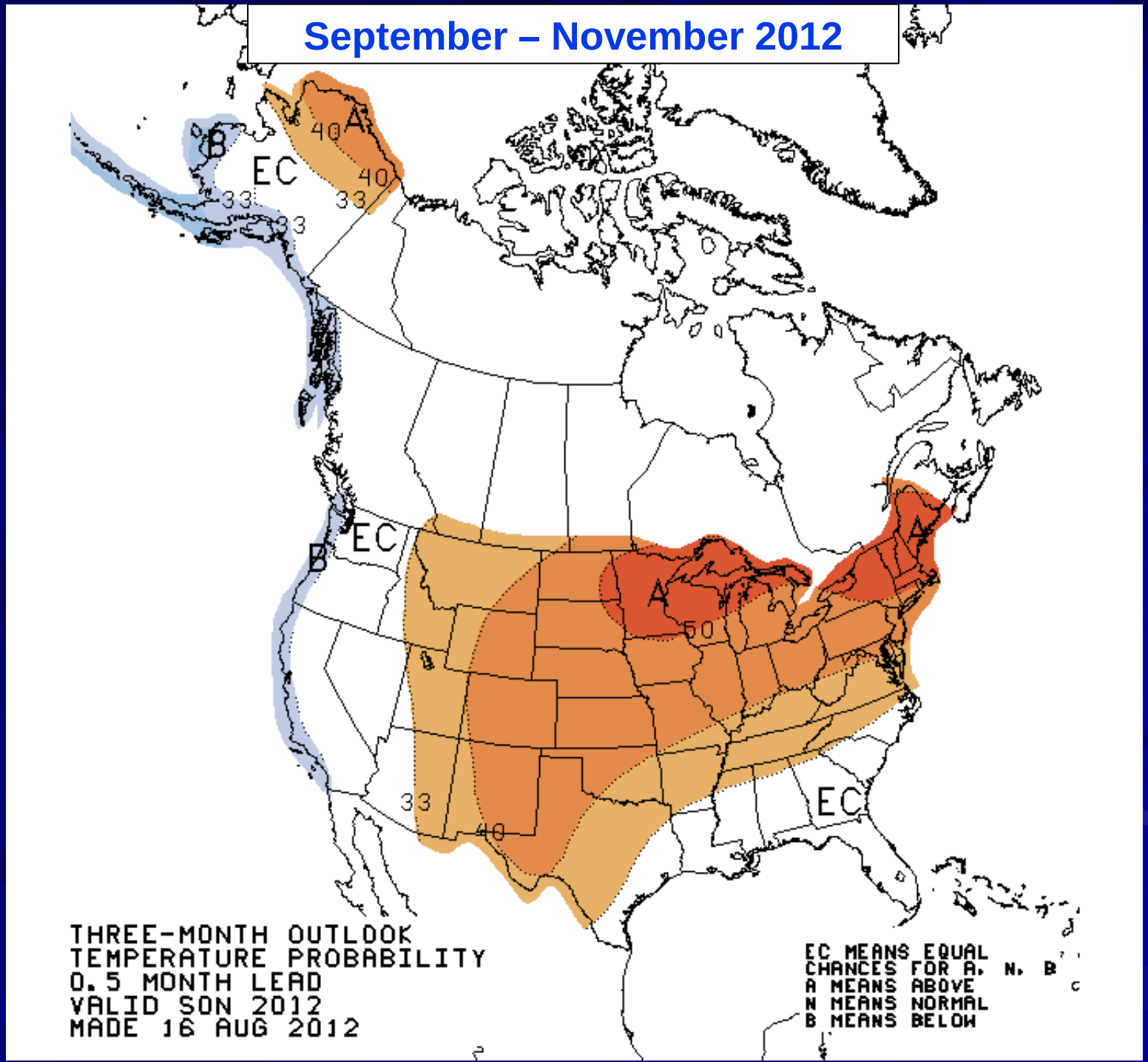
K E Y :

- **Drought to persist or intensify**
- **Drought ongoing, some improvement**
- **Drought likely to improve, impacts ease**
- **Drought development likely**

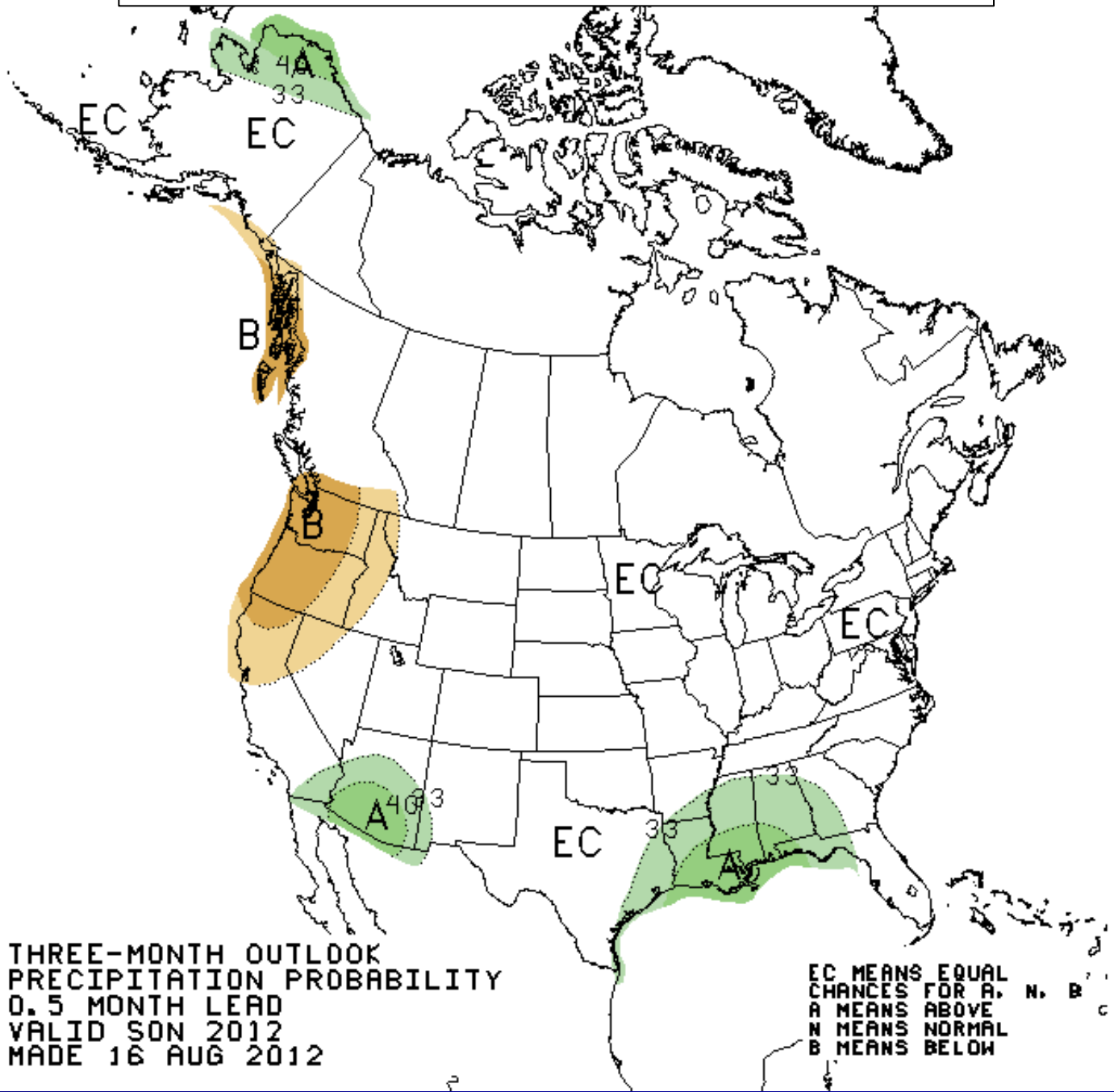
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

3 Month Outlook

September – November 2012



September – November 2012



El Niño Returning

Climate Prediction Center

- Weak El Niño conditions are likely to develop during September 2012 and persisting through December-February 2012-13
- Next ENSO Diagnostics Discussion is scheduled for October 4, 2012

CLIMAS

- In AZ between 1896 and 2002 about 50% of the winters experiencing an El Niño event received more than 115% of average precipitation, while roughly 25% of the winters received less than 85% of the average.

National Weather Service Forecast Office
Tucson, AZ

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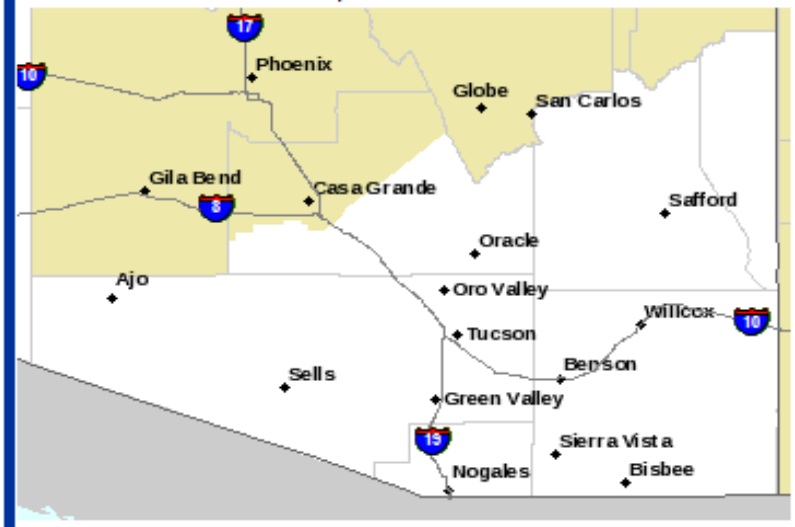
Southern Arizona Weather

Map FAQs | Glossary

Click on the map below for the latest forecast.



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Zoom Out

Hazardous Weather Outlook

Last map update: Sep, 12th 2012 at 10:05:09 am MST

Latest Conditions at Tucson, AZ

Choose Your Front Page Site

Sep 12
9:53 am MST
(12 minutes old)

A Few Clouds

78 °F
(26 °C)

Select Location:

Wind: W 6 MPH | **RH: 69%** | **DewPt: 67 °F** | More Details | XML View