Texas Water Development Board
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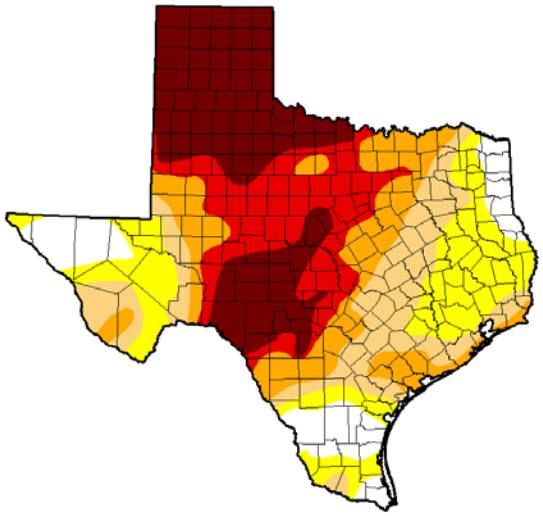
September 2014

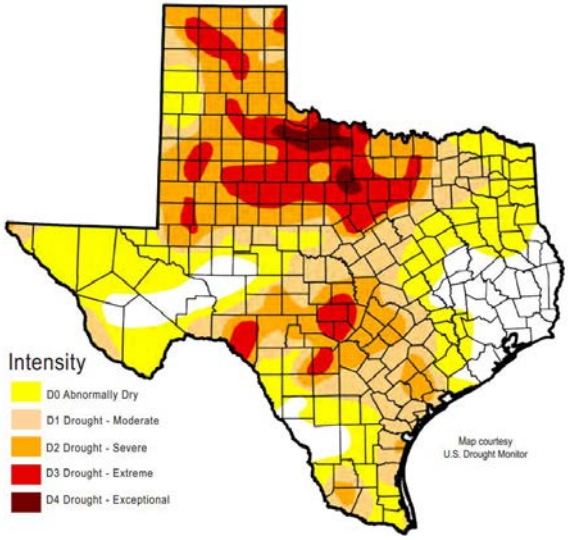
After a dry start to 2014 the High Plains has finally caught a break this summer. While most of the region remains in drought, conditions have improved significantly over the past few months, as you can see by comparing the Drought Monitor maps for May and September 2014.

The improved conditions have translated to some significant playa flooding this summer and continuing into the fall, as shown in the data table on the right. Some of the May floods in the Plainview area almost swamped our weather stations, with water more than 1.5 meters (4.5 feet) deep, but so far we have not lost any equipment. Even though the wet weather makes it tough doing our job, what with wading in the playas and driving on slick roads, we can't complain about the rain.

Our new team member, "Rain Man" Mark Olden, seems to bring the rains with him each time he's in the Panhandle. We'll make sure to keep him busy in the field!



Drought Monitor Sept 2014



Drought Monitor May 2014

Summer 2014 Playa Flood Events

SITE	FLOOD DATE	FLOOD DEPTH cm	DURATION, days	INFILTRATION RATE, mm/d	FLOOD VOLUME, acre feet
B Harrell	Jun-14	64.1	18	25	42.5
B Harrell	Aug-14	29.5	13	14.6	12.3
Durrett	Jun-14	19.6	25	0.9	15.1
Durrett	Jul-14	12.9	7	5.1	9.6
Fancher	May-14	57.7	44	22.7	53.2
Finley	Jun-14	21.9	22	5.17	267
Herring	Jun-14	19.2	13	3.1	9.7
Hollenstein	May-14	47.5	103	-0.1	23.5
Hughes 3	Jun-14	19.2	7	24.6	3.2
M Harrell	Jun-14	28.6	27	1.7	10.1
Macha	Jun-14	93.0	64	10.9	68.6
Mahagan	May-14	153	103	0.04	86.6
Minton N	Jun-14	104	148	1.3	84.6
Minton S	May-14	98.7	162	1.9	129
Moore	May-14	21.7	65	1.3	13.9
Myatt	May-14	34.2	37	9.5	8.98
Rieff 1	May-14	67.4	101	3.0	40.7
Rieff 2	May-14	34.1	56	2.2	8.7
Schacht	Apr-14	218	137	13.5	115
Wright	Jun-14	12.7	9	0.3	12.1
Younger	Jun-14	23.1	50	0.7	8.8

Life in the Playas

In June, Mark Olden and our intern Gere Tesfa were invited out to the Ogallala Commons Playa Field Day in Nazareth to give a presentation about the TWDB work and learn about the ecology of playas. The event went off successfully, despite strong thunderstorms in the area. We got to see many interesting creatures including the Great Plains Toad and the Tiger Salamander, which is pictured below.

Playa Monitoring Website

We are currently working on getting our weather stations to communicate their data in real time on the internet for others to see. We have three sites online now, with more coming soon. You can check online for the last four days of data for air temperature, precipitation, wind speed and direction, relative humidity, solar radiation, water level and water temperature, and soil moisture. IP addresses for playas now online are as follows:

Crowell: 166.130.34.45:6785
Minton: 166.130.34.40:6785
Moore: 166.130.34.54:6785

We also will be placing a link on our project web site (http://www.twdb.texas.gov/groundwater/special_projects/index.asp).

Phase 2 Playa Research

We're in the early planning stages for Phase 2 of the TWDB playa research program, which will involve constructing recharge modifications at selected playas. A request for funding is being considered by the Board and, if approved, will then move on to the Legislature for consideration during the upcoming session. While that process is moving forward, we're assessing which sites are the best candidates for recharge work and developing a Phase 2 access agreement to cover any legal issues with the construction, operation, and maintenance of recharge systems developed as part of this project. Stay tuned for more news on Phase 2.

El Nino News

El Niño is characterized by a flow of unusually warm surface water toward and along the Pacific coast of South America. This prevents upwelling of nutrient-rich cold deep water and disrupts typical regional and global weather patterns. Here in Texas, El Niño is associated with increased fall and winter precipitation as the prevailing winds pick up moisture from the warmer waters off the coast of South America. According to the National Oceanic and Atmospheric Administration, the consensus of forecasters expects El Niño to emerge during September-October and to peak at weak strength during the late fall and early winter of 2014, with the chance of El Niño at 60-65%.