



State of Rhode Island and Providence Plantations
Water Resources Board
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ASSESSMENT OF DROUGHT CONDITIONS

**Produced by the Water Resources Board in Consultation with the National
Weather Service and US Geological Survey
July 11, 2016**

Current Monthly Conditions Summary

Conditions at the end of June meet one (precipitation) of the four criteria for issuing a statewide Drought Advisory. Continued dry conditions will impact the remaining triggers (precipitation, streamflow, and the Palmer Drought Index).

Lack of Rain

June precipitation by drought region ranged from 18% to 59% of normal with Southern RI, Block Island, Eastern and Northwest regions experiencing the driest conditions. The full monthly report prepared by the National Weather Service for the Water Resources Board for June is available at http://www.wrb.ri.gov/work_programs_drought.html.

Timing

Increased evapotranspiration, agricultural irrigation, tourism and outdoor water uses are considerations impacting water use and availability for this time of year particularly in the driest regions.

Streamflow and Groundwater Responses

Current streamflow levels are well below normal across the state in response to dry conditions. The preponderance of low flows at most of the gages indicates that it is a widespread condition. Current groundwater levels across the state are generally below normal.

Forecast (from the National Weather Service)

Rhode Island will be mainly dry through the remainder of the workweek (through July 15) with a gradual warming trend. Scattered thunderstorms are possible during Thursday and Friday. There is some uncertainty in the forecast for this weekend, a front may bring rain to the region. At this time (July 11) there is a chance of showers for Saturday and Sunday.

The 8-14 day outlook for July 19-25 calls for above normal temperatures and near normal precipitation.

Recommended Actions

- Conservation messaging consistent with an advisory and convening the Drought Steering Committee if dry conditions persist into July.
- Best practices for indoor and outdoor conservation especially in Southern RI to minimize impacts on stream flows and preserve water supplies. In Southern RI conservation is key due to the lack of storage in the public systems to preserve the groundwater supplies in the event that dry conditions continue

REVIEW OF DROUGHT INDICES

Criteria for Issuing a Drought Advisory- Must meet three of the four following triggers.

<u>Precipitation</u>	<u>Streamflow</u>	<u>Groundwater</u>	<u>PDI</u>	<u>Drought Phase</u>
2 month cumulative below 65% of normal	3 consecutive months below normal	At least 2 out of 3 months below normal	-2.0 to -2.99	Advisory

Red= meets trigger Yellow= approaching trigger White= does not meet trigger

Major Indicators Summary

1. **Precipitation**-The two month cumulative deficits (May and June) are below 65% in the Southern and New Shoreham drought regions and above 65% in others. This will be re-evaluated when the July monthly report is received. **Meets Trigger in two regions and Approaching Advisory Trigger in other regions.**
2. **Stream flow**- Statewide, stream flows were normal for April and below normal for May and June. **Does not meet Advisory Trigger.**
3. **Groundwater Levels**- Groundwater levels were normal for April, and mostly normal for May, although trending towards below normal. Groundwater levels for June were below normal. **Does not meet Advisory Trigger.**
4. **Palmer Drought Index (PDI)** – The latest monthly PDI (June 19-25) is at the low end of normal (-1.88). **Does not meet the Advisory Trigger.**

Other Considerations

Forecasts The 6-10 day forecast is for below normal precipitation. For the forecasts see <http://www.cpc.ncep.noaa.gov/>

Water Supply

The July 8, 2016 Scituate Reservoir Elevation is reported at 92.7% of capacity (282.7 ft).

Timing/Seasonal Considerations

The lack of rain, low flows for surface water and downward trends in groundwater and are of continued concern for groundwater water supply and recharge during the summer tourist and high water use season.

Crop Moisture

As of July 2, the weekly crop moisture index was in the mid-range.

http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/regional_monitoring/cmi.gif

Fire Danger Level- The status (July 8) is low in District 1 (Northern) and medium in District 2 (Southern). The state contact is Olney Knight, State Forest Fire Program Coordinator (RI DEM). <https://www.facebook.com/RhodeIslandwildfire>

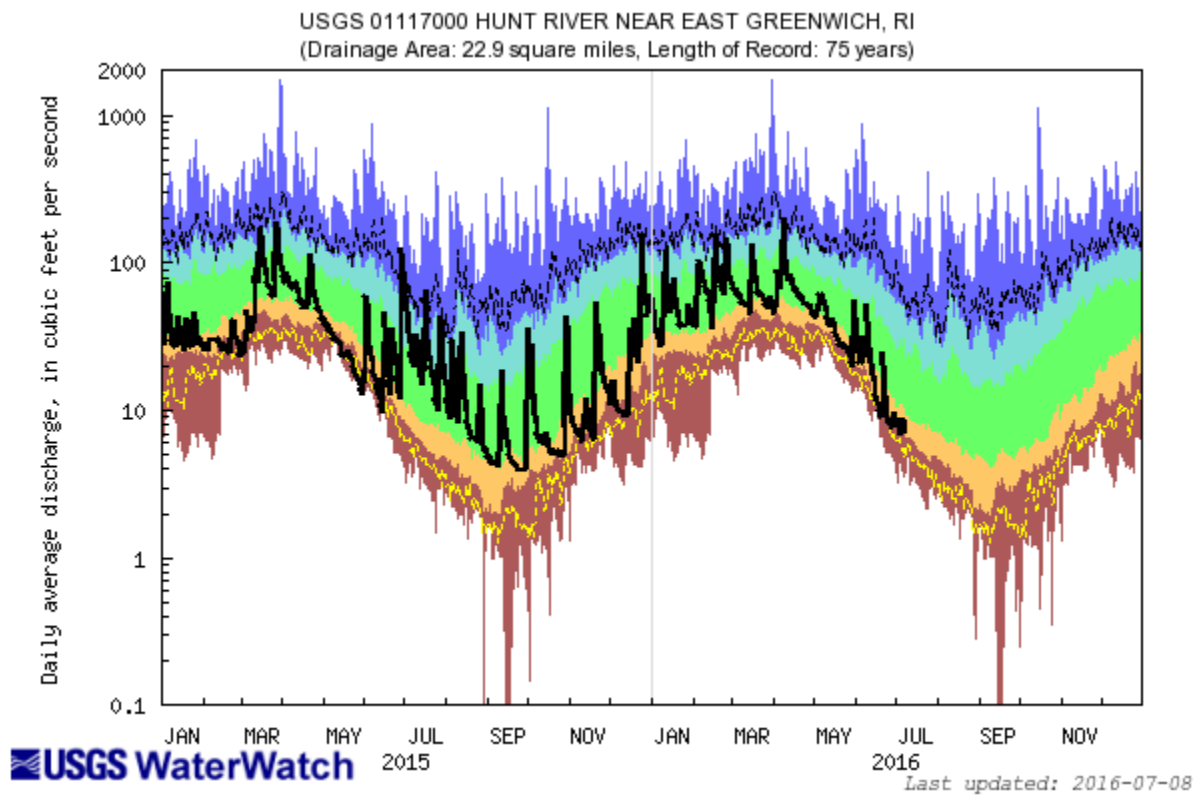
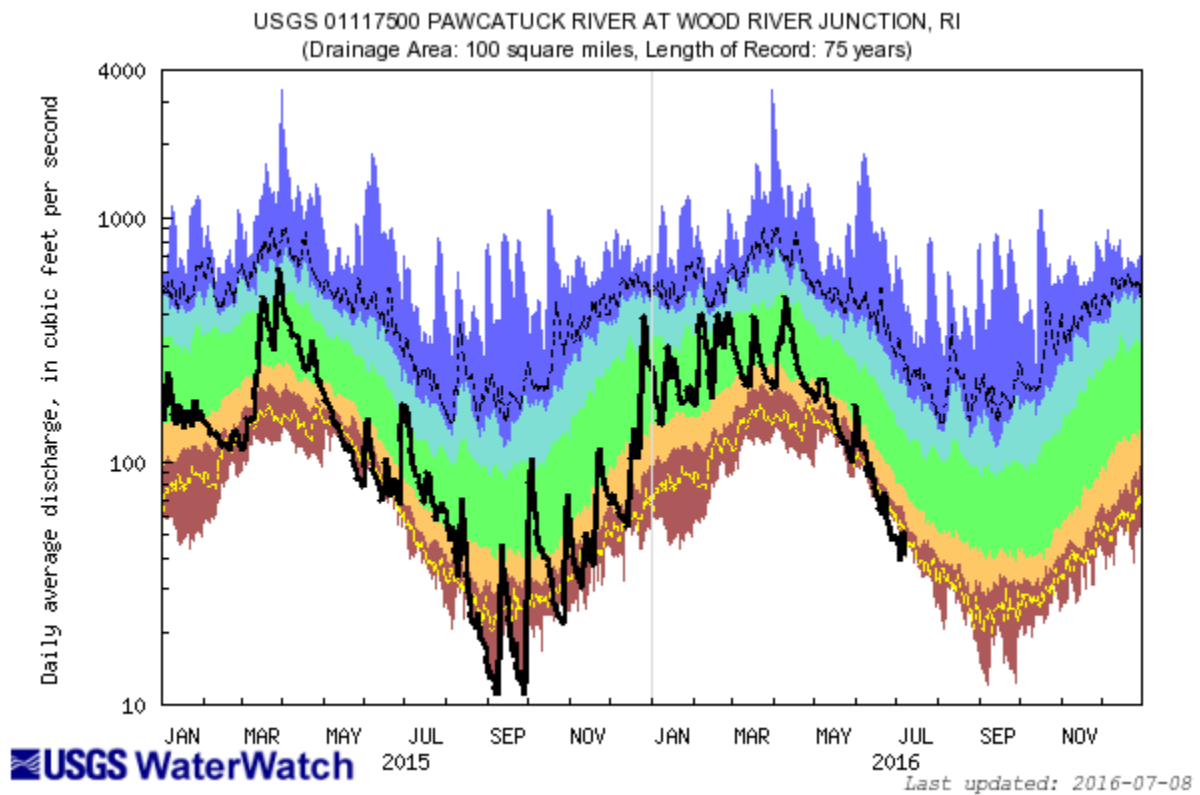
Private Wells-

No reports received/issues reported.

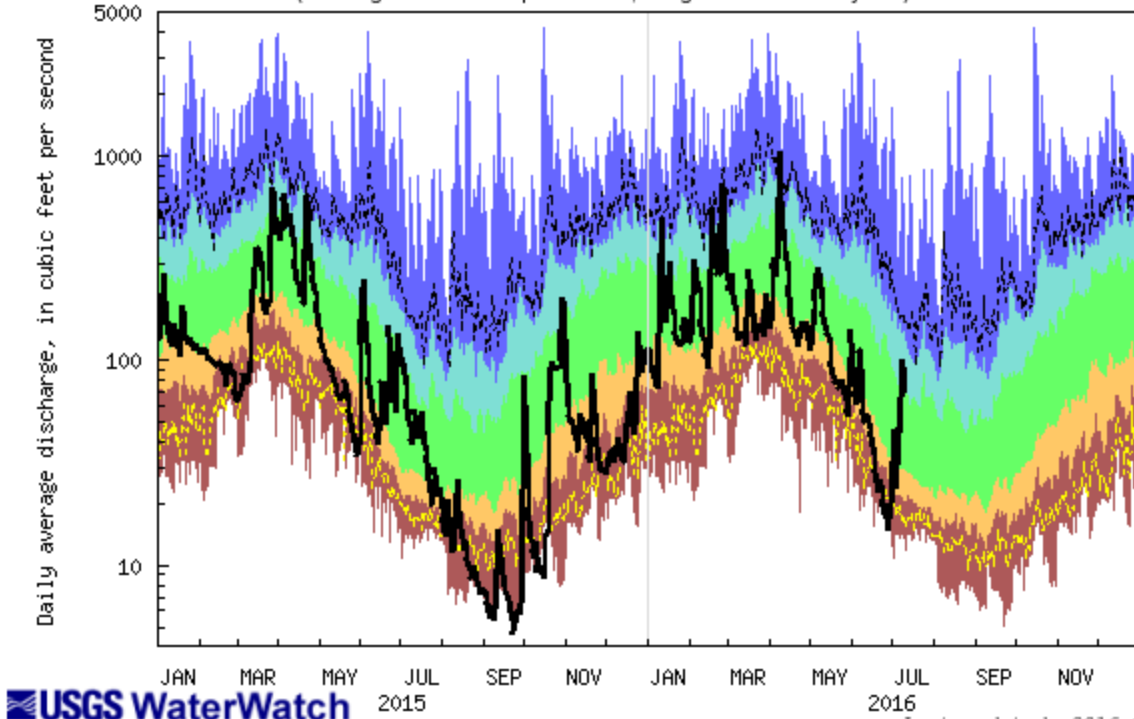
US Drought Monitor

As of May 12 hydrologic conditions are listed as abnormally dry (DO) statewide. The conditions are released and reviewed on a weekly and monthly basis.

Selected Stream Gages



USGS 01111500 BRANCH RIVER AT FORESTDALE, RI
(Drainage Area: 91.2 square miles, Length of Record: 75 years)



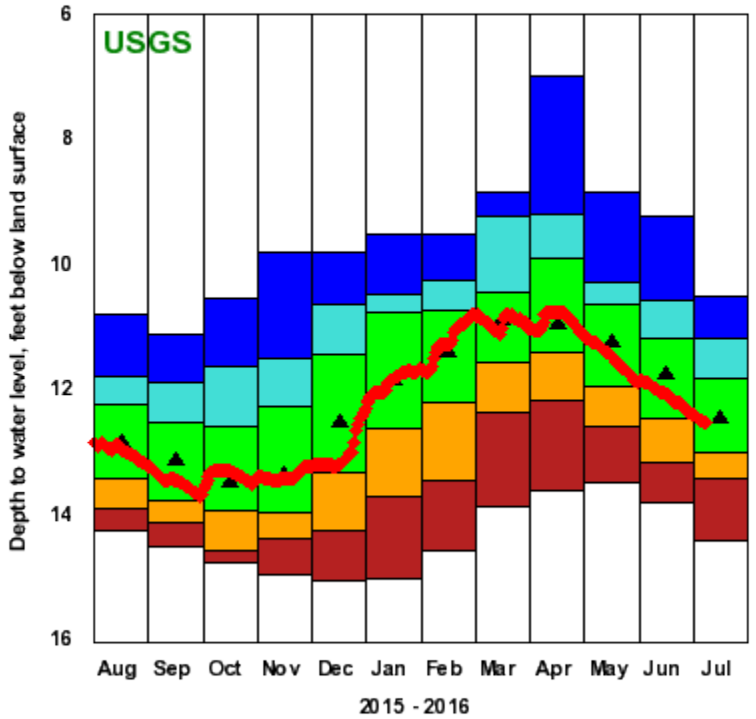
USGS WaterWatch

Last updated: 2016-07-11

Explanation - Percentile classes							
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile-highest	Flow
Much below Normal	Below normal	Normal	Above normal	Much above normal			

Selected groundwater observation wells

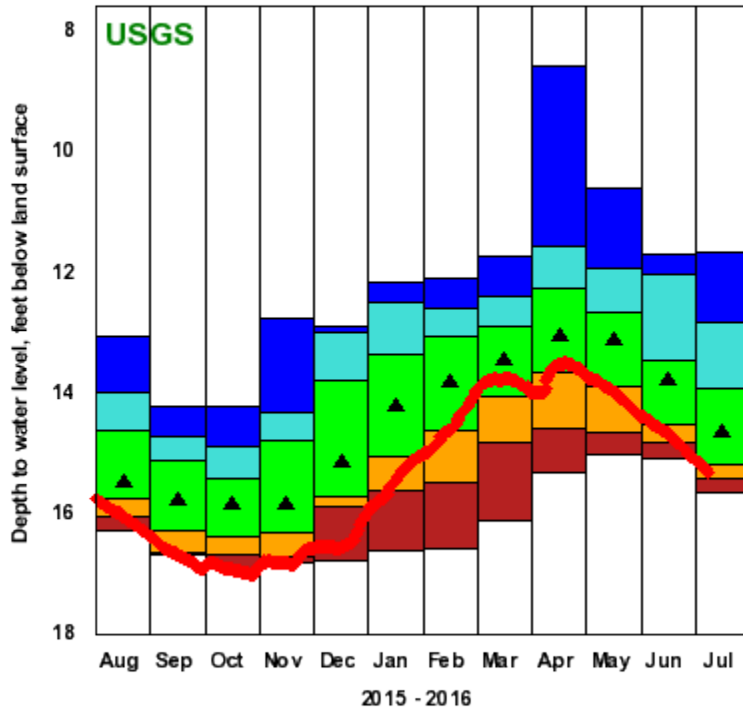
412918071321001 - RI-SNW 6 SOUTH KINGSTOWN, RI



Plot created 07/08/16 13:19

Explanation - Percentile Classes					
◆ Data Point	● <10	● 10-24	● 25-75	● 76-90	▲ Monthly Median

413358071433801 - RI-EXW 475 EXETER, RI



415710071402201 - RI-BUW 187

