

# DROUGHT MANAGEMENT IN MASSACHUSETTS

A STATEWIDE LOOK AT THE RESPONSE  
TO THE 2016 DROUGHT

---

Gabby Queenan  
Policy Specialist

Massachusetts Rivers Alliance



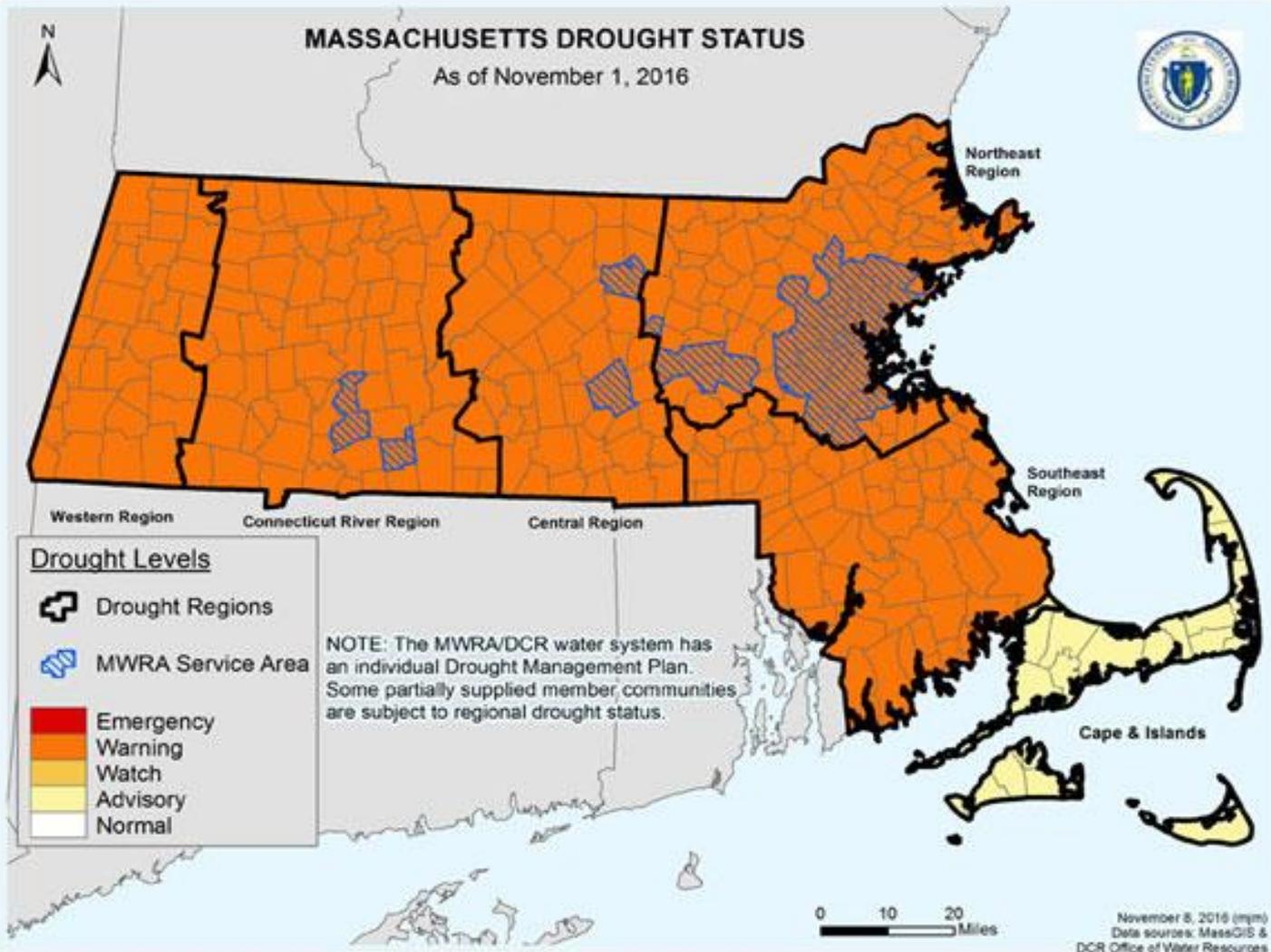
# How do we manage a drought?

- Drought Management Task Force
- Drought Management Plan
  - 7 indices to determine level of drought
    - SPI, Precipitation, Groundwater, Reservoir, Streamflow, Crop Moisture, Fire Danger
  - 5 drought levels
    - Normal, Advisory, Watch, Warning, Emergency
  - State divided into 6 regions



Martin's Brook, July 28, 2016 (Ipswich River Watershed)

# Drought Regions in Massachusetts



# U.S. Drought Monitor

## U.S. Drought Monitor Massachusetts

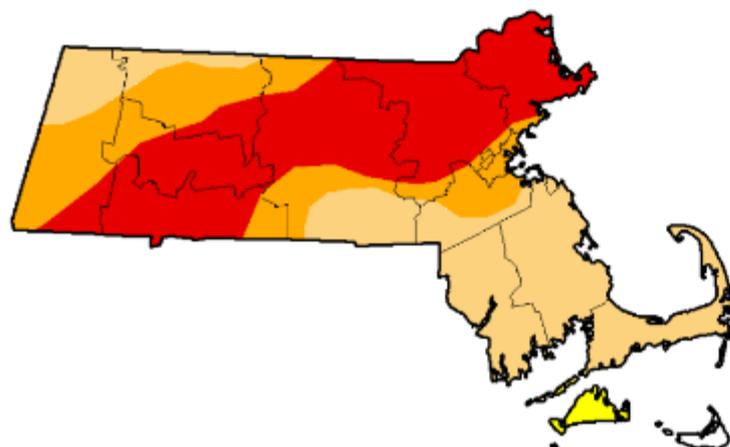
November 29, 2016

(Released Thursday December 1, 2016)

Valid 7 a.m. EST

Statistics type: Traditional Percent Area

Export table:   



Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current <a href="#">2016-11-29</a>	0.70	99.30	98.03	64.41	41.35	0.00
Last Week <a href="#">2016-11-22</a>	0.70	99.30	98.03	63.43	41.35	0.00
3 Months Ago <a href="#">2016-08-30</a>	0.00	100.00	91.12	77.38	22.67	0.00
Start of Calendar Year <a href="#">2015-12-29</a>	22.85	77.15	26.34	0.00	0.00	0.00
Start of Water Year <a href="#">2016-09-27</a>	0.00	100.00	98.15	89.95	52.13	0.00
One Year Ago <a href="#">2015-12-01</a>	29.24	70.76	23.58	0.00	0.00	0.00

Estimated Population in Drought Areas: **6,522,163**

[View More Statistics](#)

### Intensity:

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

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

# The 2016 Drought

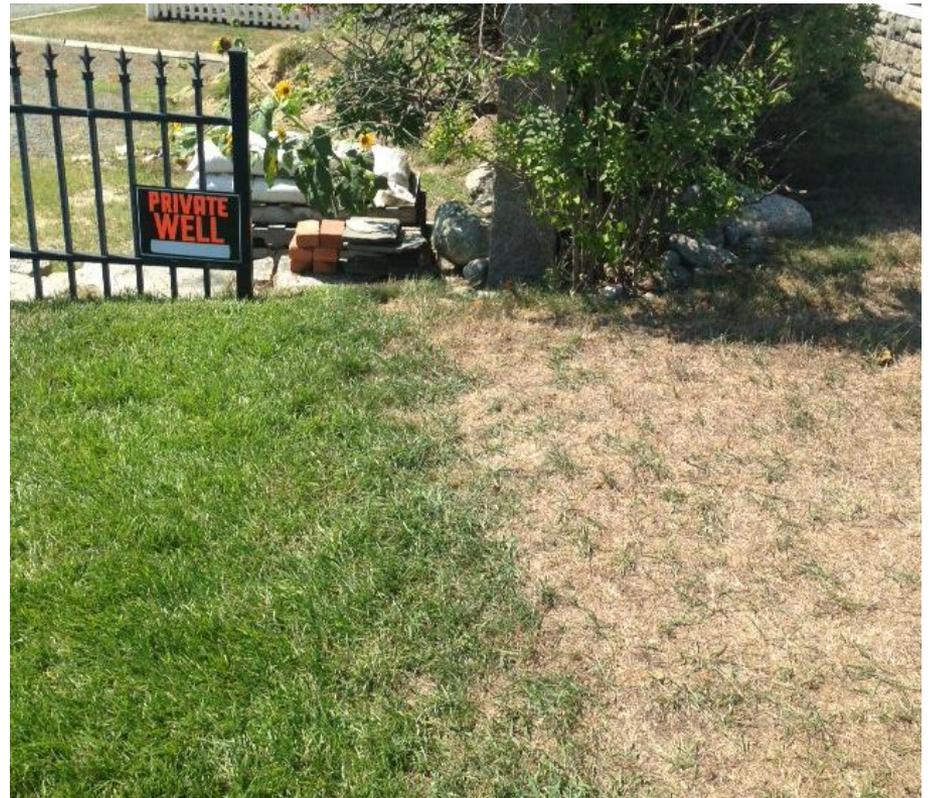


Martin's Brook, August 31, 2016 (Ipswich River Watershed)

- Perfect storm to create drought
- Slow response
- Untested plan
- Inadequate public outreach

# Patchwork Watering Restrictions

- Wide range of watering restrictions
- Where do these restrictions come from?
  - Water Management Act
    - Permitted
    - Registered
- And then there are private wells...



Sudbury, Massachusetts

# Results of the 2016 Drought

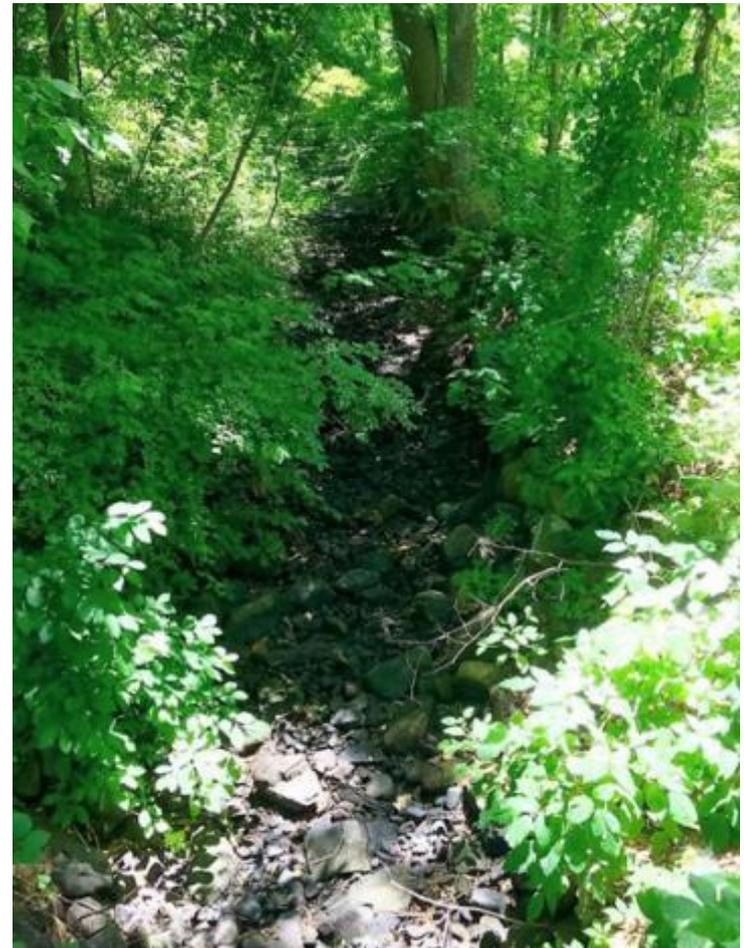


Mill River, July 27, 2016 (Parker River Watershed)

- Streams and rivers dried up
- Reservoir levels dropped
- Patchwork approach ineffective
- Missed an opportunity to protect streamflow and water supplies this summer

# What's Wrong with our Drought Response?

- Drought indices inadequate
- Drought level names
- Slow drought response
- Lack uniform watering restrictions
- Weak public outreach



Penn Brook, July 27, 2016 (Parker River Watershed)

# Updating the Plan and Task Force



Ipswich River, July 31, 2016

- Baker administration updating Plan
- Stakeholders weighing in on updates
- Drought legislation

# What can you do?

- Support your local watershed associations
- Call your local representative and/or senator
- Call your Board of Selectman
- Educate neighbors and friends



Ipswich River