

# Current Drought Conditions in New Hampshire: A Briefing for the New Hampshire Legislature

October 4, 2016



# U.S. Drought Monitor Northeast

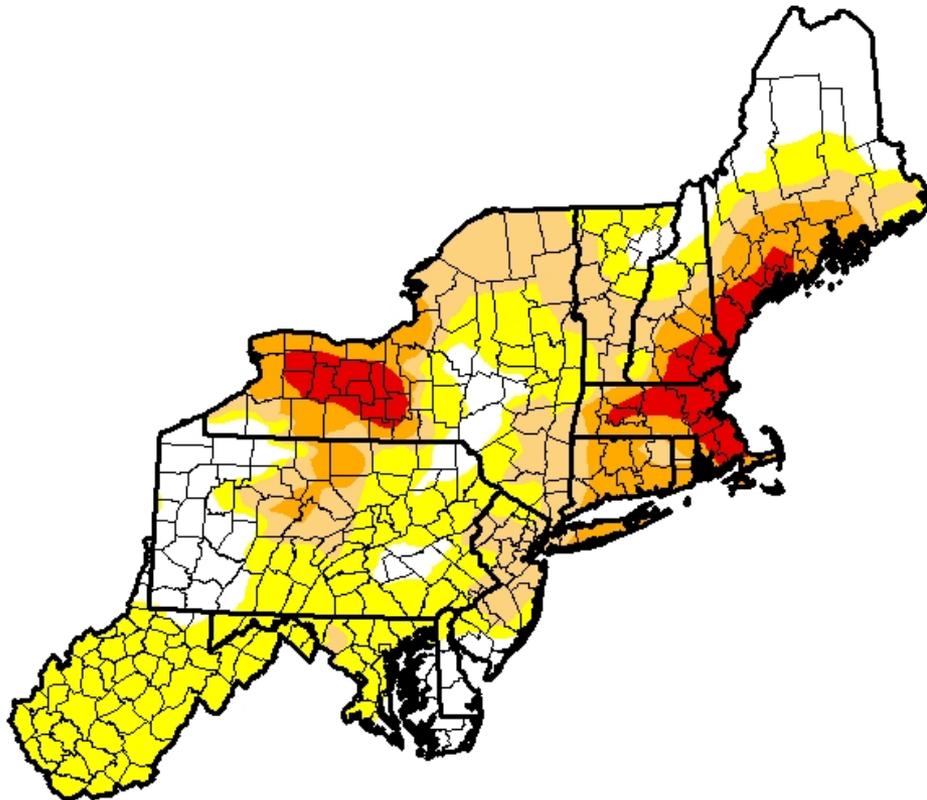
## September 27, 2016

(Released Thursday, Sep. 29, 2016)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	21.72	78.28	40.32	19.59	6.68	0.00
<b>Last Week</b> 9/20/2016	31.04	68.96	36.67	16.06	5.49	0.00
<b>3 Months Ago</b> 6/28/2016	34.90	65.10	12.43	0.00	0.00	0.00
<b>Start of Calendar Year</b> 1/22/2015	62.10	37.90	6.60	0.00	0.00	0.00
<b>Start of Water Year</b> 9/29/2015	42.41	57.59	9.00	0.00	0.00	0.00
<b>One Year Ago</b> 9/29/2015	42.41	57.59	9.00	0.00	0.00	0.00



### Intensity:



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

### Author:

Chris Fenimore  
NCEI/NESDIS/NOAA



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

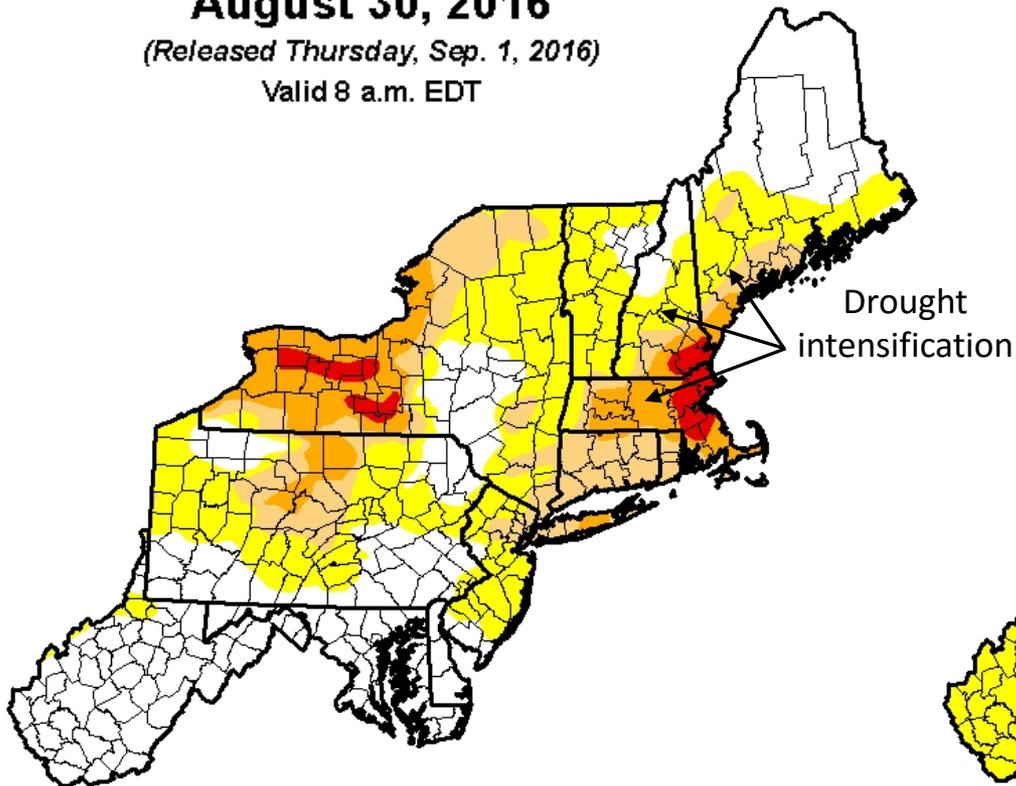


# U.S. Drought Monitor Northeast

**August 30, 2016**

(Released Thursday, Sep. 1, 2016)

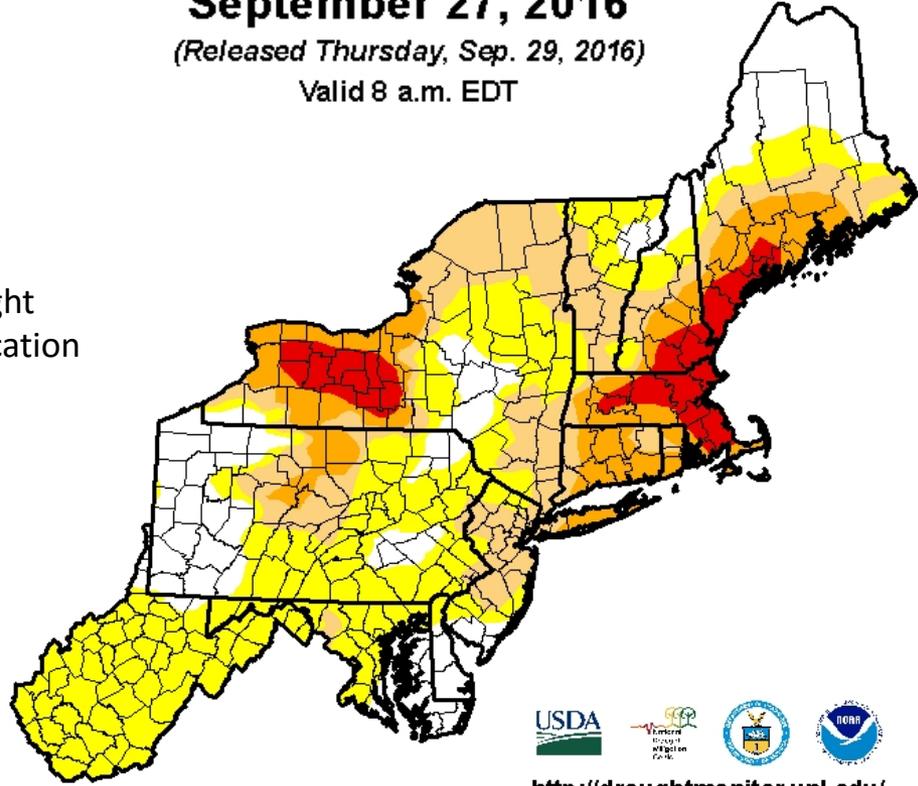
Valid 8 a.m. EDT



**September 27, 2016**

(Released Thursday, Sep. 29, 2016)

Valid 8 a.m. EDT






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

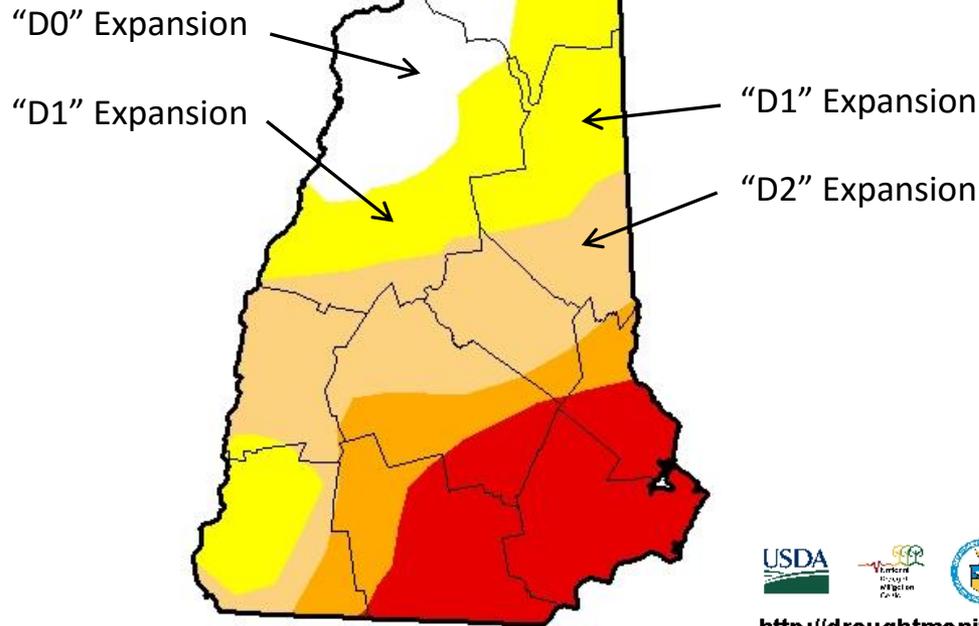
Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2016-08-30	41.51	58.49	27.29	12.82	2.52	0.00
2016-09-27	21.72	78.28	40.32	19.59	6.68	0.00



# U.S. Drought Monitor New Hampshire

**September 13, 2016**  
(Released Thursday, Sep. 15, 2016)  
Valid 8 a.m. EDT

**September 27, 2016**  
(Released Thursday, Sep. 29, 2016)  
Valid 8 a.m. EDT



USDA  
NH State Climatologist  
NH State Department of Agriculture  
NOAA

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

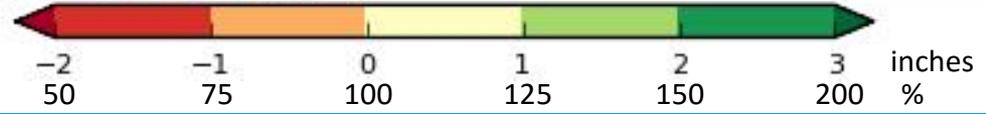
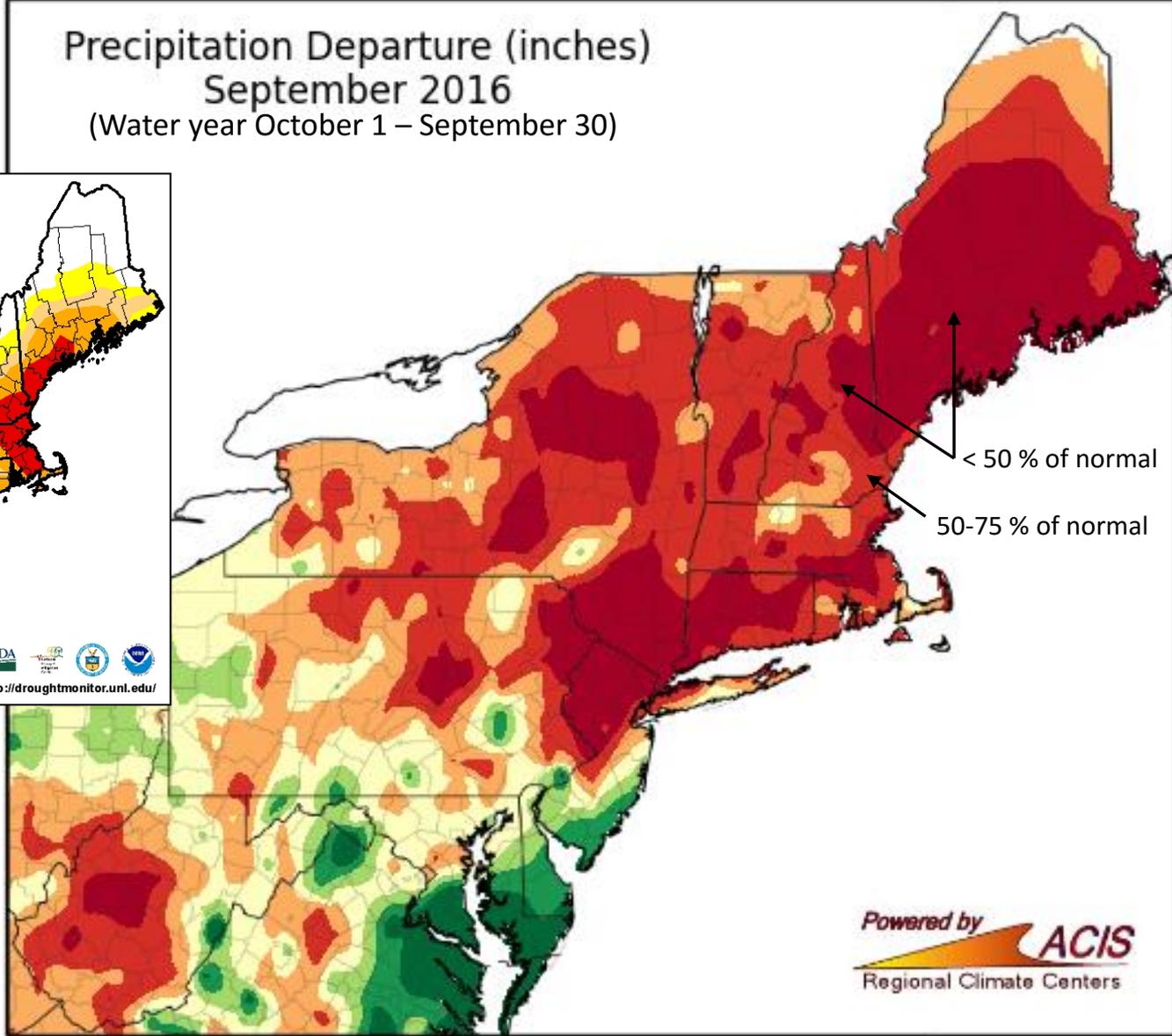
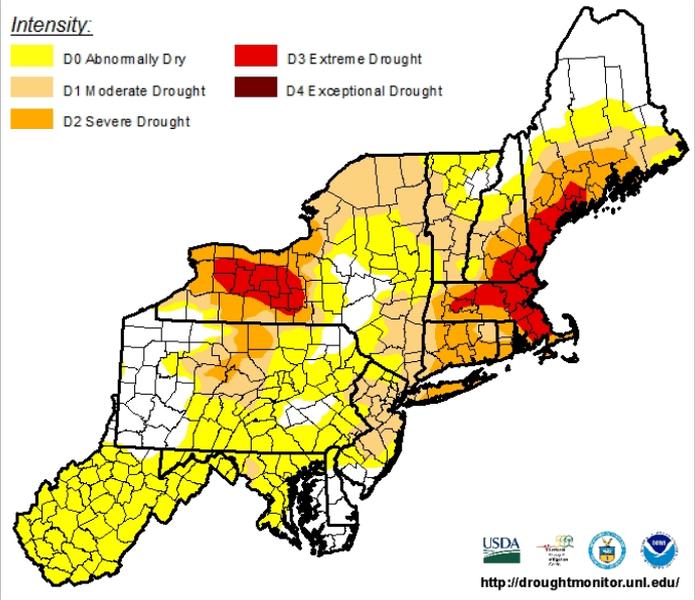
Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2016-09-13	23.66	76.34	52.44	29.12	19.21	0.00
2016-09-27	15.33	84.67	62.44	40.49	19.27	0.00



# Precipitation Departure (inches) September 2016 (Water year October 1 – September 30)

**Intensity:**

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



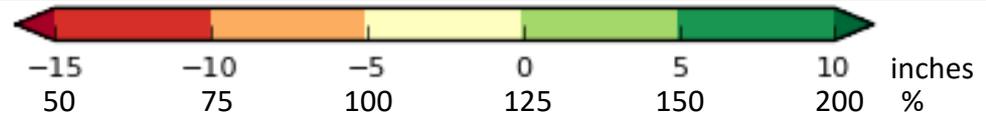
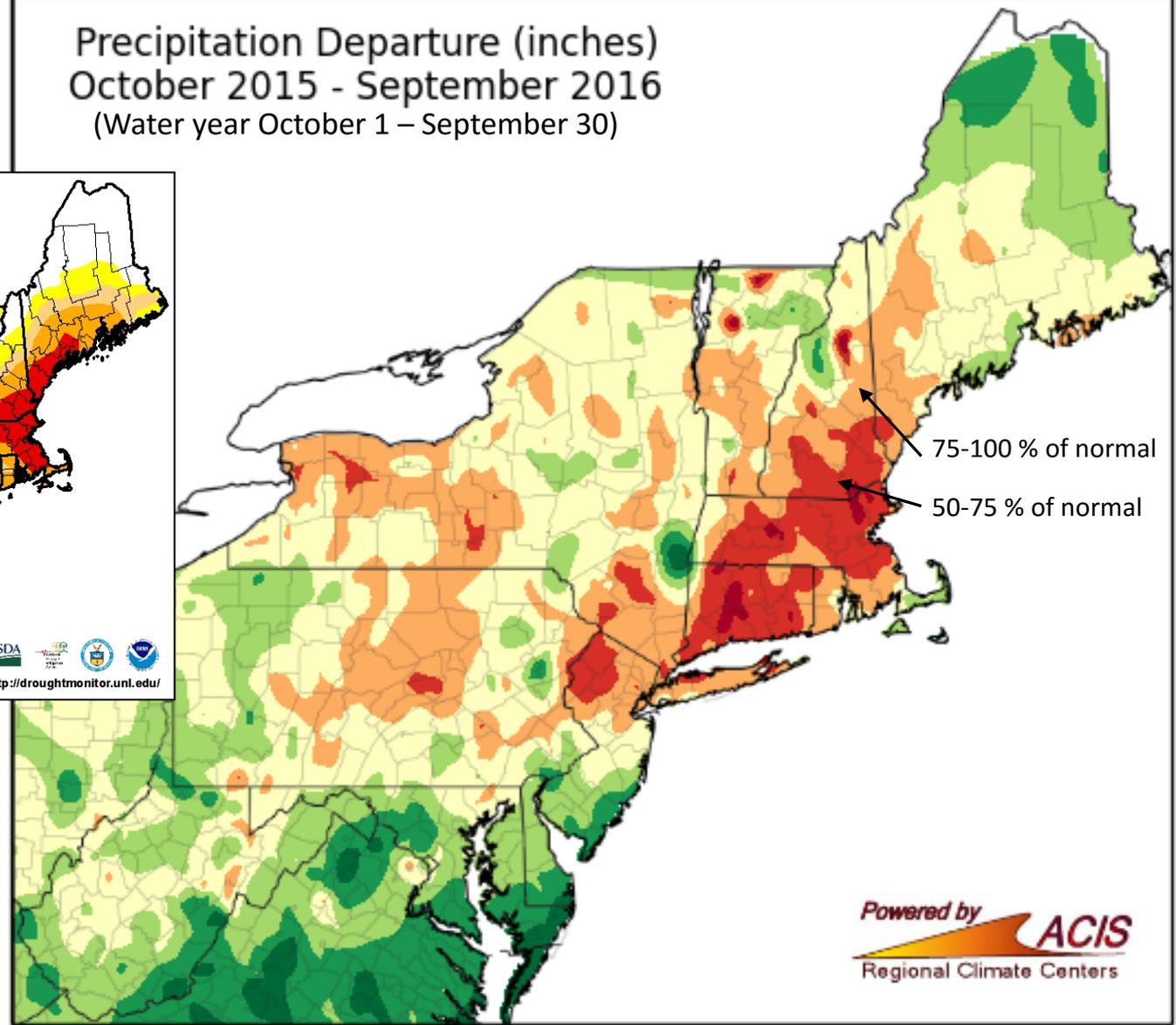
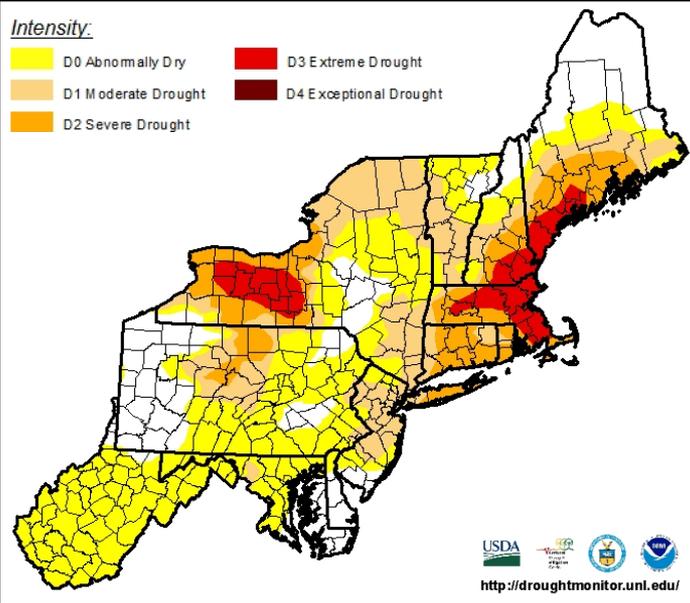
Powered by **ACIS**  
Regional Climate Centers



# Precipitation Departure (inches) October 2015 - September 2016 (Water year October 1 – September 30)

## Intensity:

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

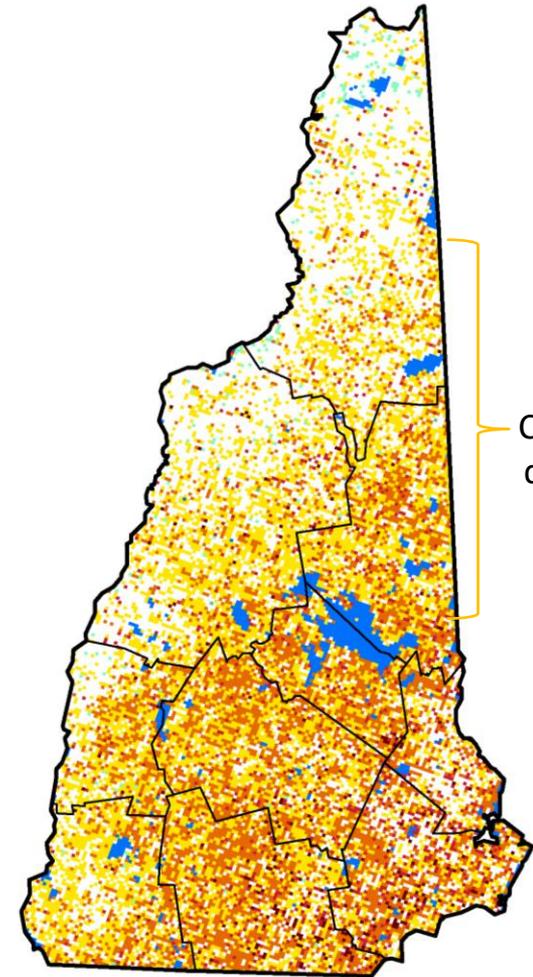
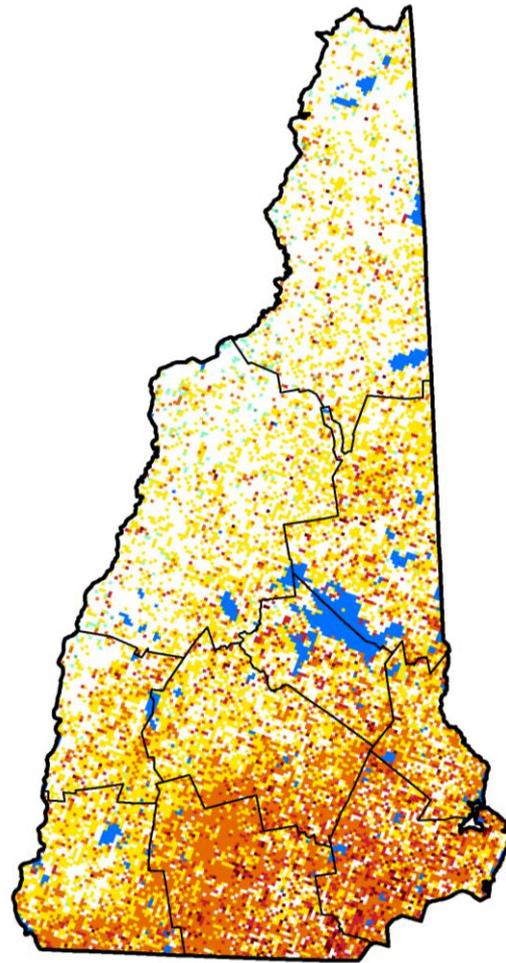


# Vegetation Drought Response Index

September 11, 2016

September 25, 2016

## Vegetation Condition



Conditions degrading

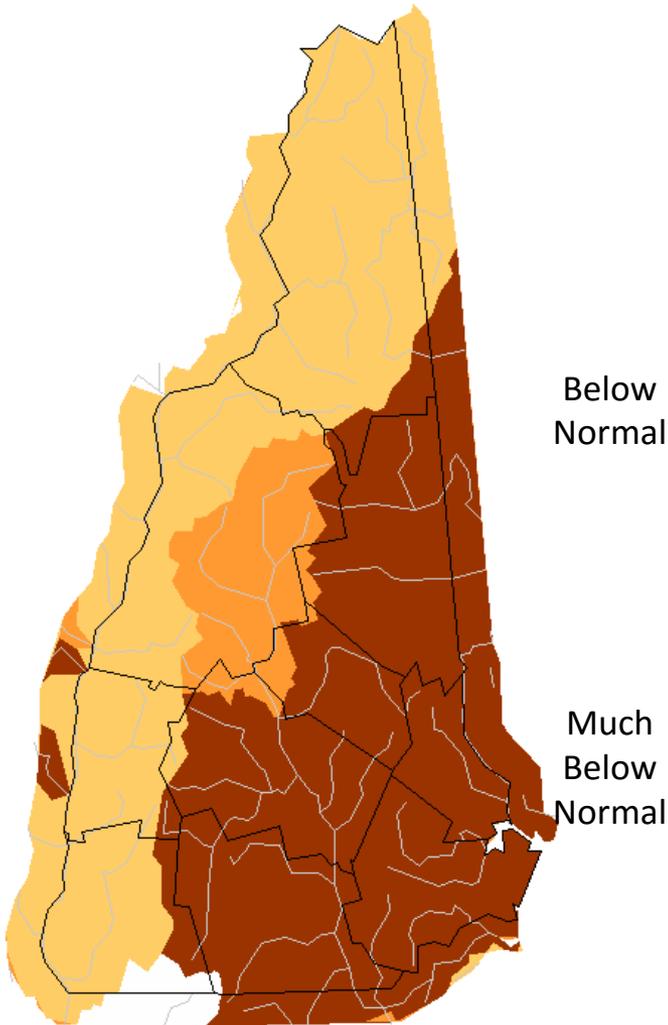


Week	Extreme Drought	Severe Drought	Moderate Drought	Pre-Drought	Near Normal	Unusually Moist	Very Moist	Extremely Moist
2016-09-25	1.09	4.03	22.12	32.10	36.10	0.74	0.03	0.00
2016-09-18	1.09	5.16	16.80	26.82	45.18	1.05	0.10	0.01
2016-09-11	1.13	5.41	18.27	27.38	43.20	0.77	0.07	0.00
2016-09-04	0.68	3.22	13.12	25.11	52.32	1.45	0.31	0.02



# Below Normal 7-day Average Streamflow

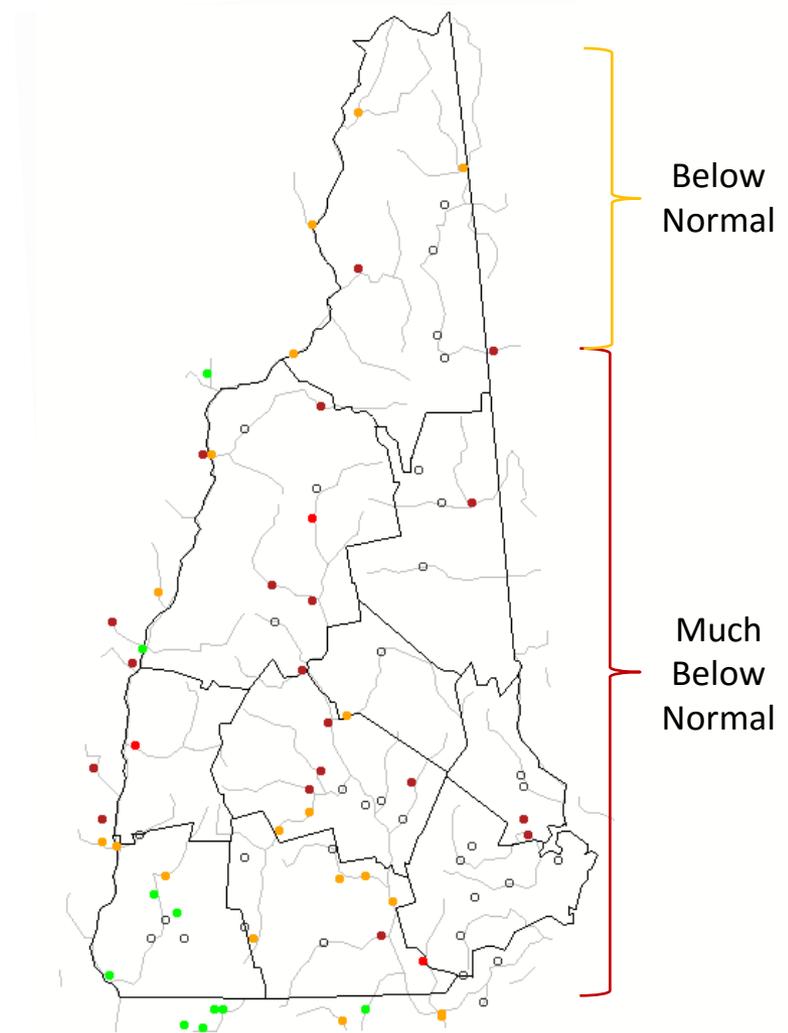
October 2, 2016



Explanation - Percentile classes				
Low	≤5	6-9	10-24	Insufficient data for a hydrologic region
Extreme hydrologic drought	Severe hydrologic drought	Moderate hydrologic drought	Below normal	

# Current Stream Flow

October 3, 2016



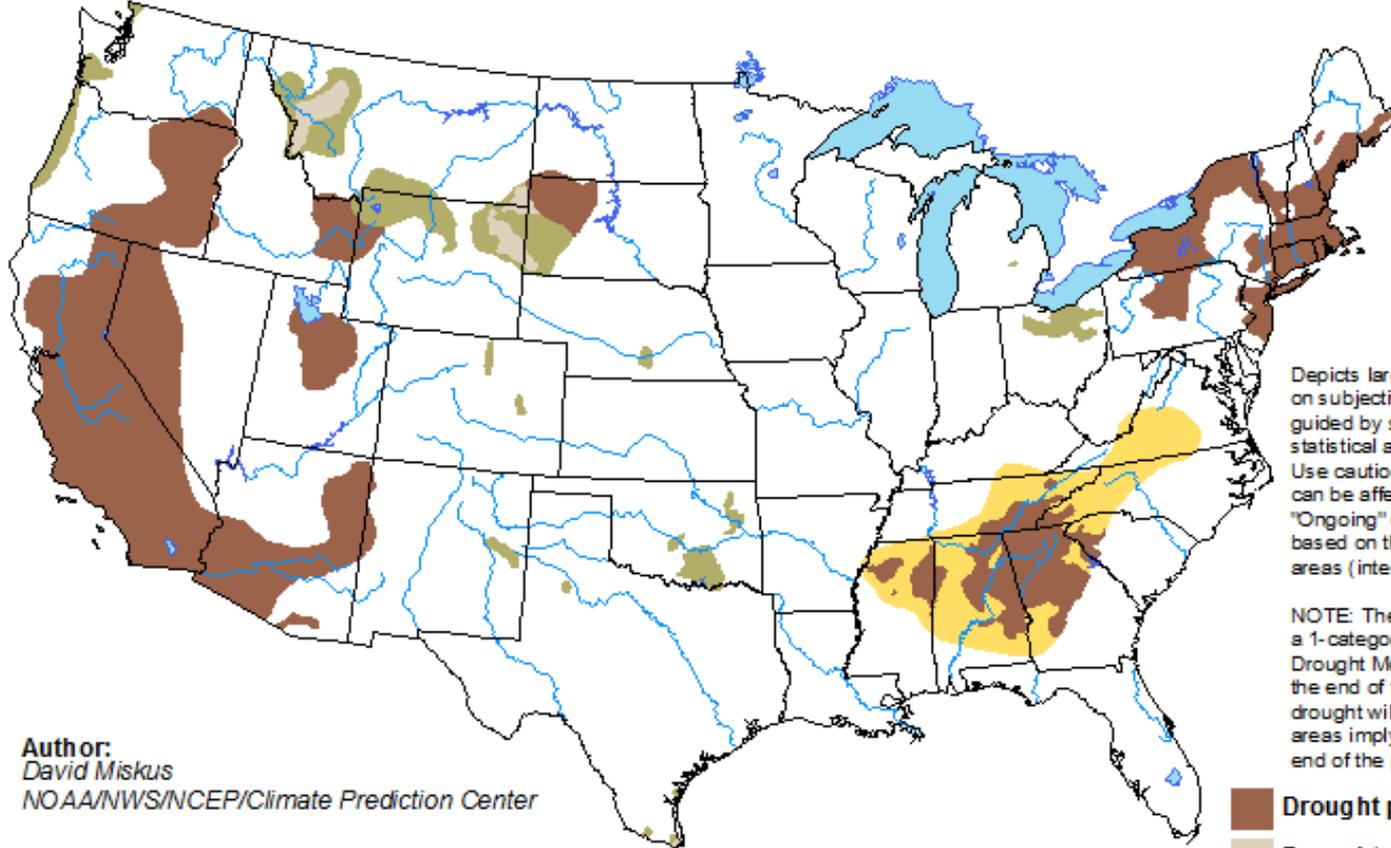
Explanation - Percentile classes						
●	●	●	●	●	●	●
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High



# U.S. Seasonal Drought Outlook valid for September 15 - December 31, 2016

## Drought Tendency During the Valid Period

Released September 15, 2016

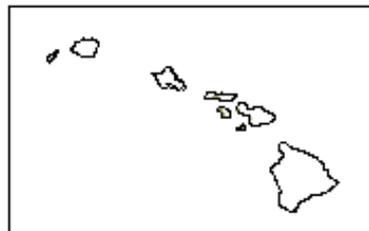
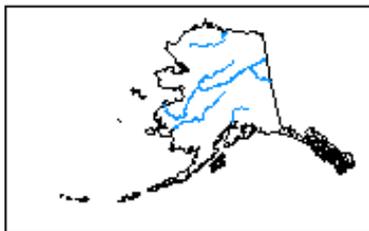


Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to 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).

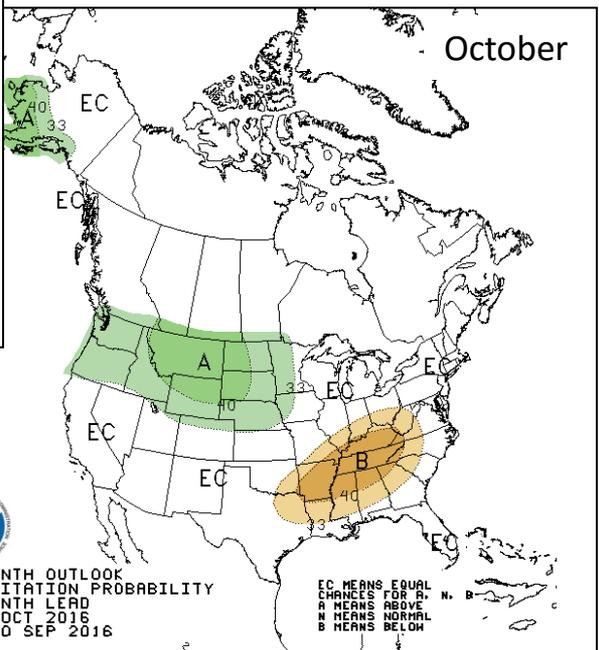
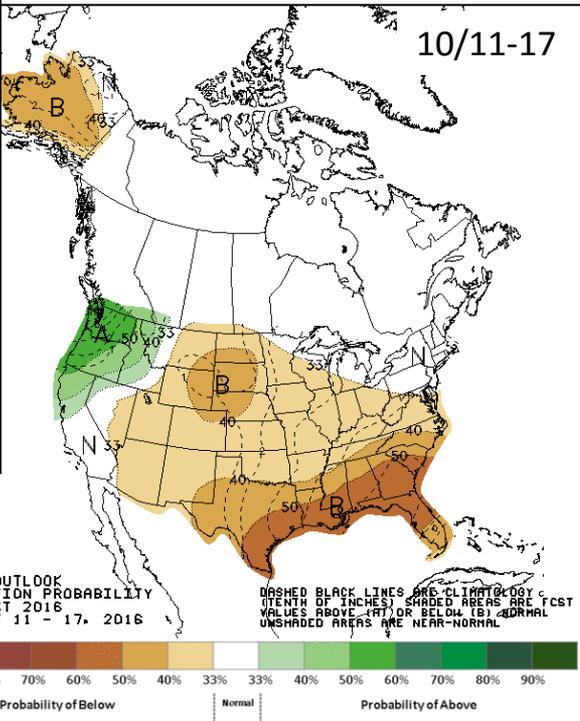
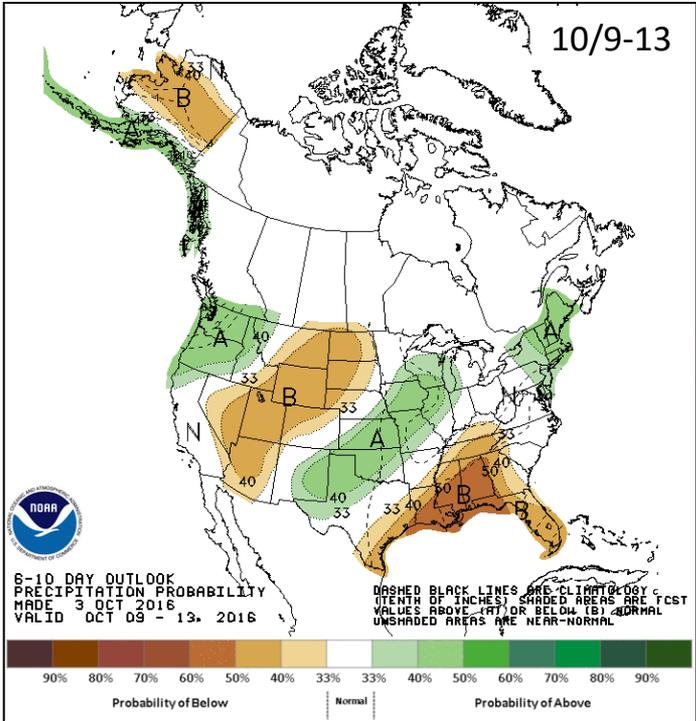
- Drought persists
- Drought remains but improves
- Drought removal likely
- Drought development likely

**Author:**  
David Miskus  
NOAA/NWS/NCEP/Climate Prediction Center

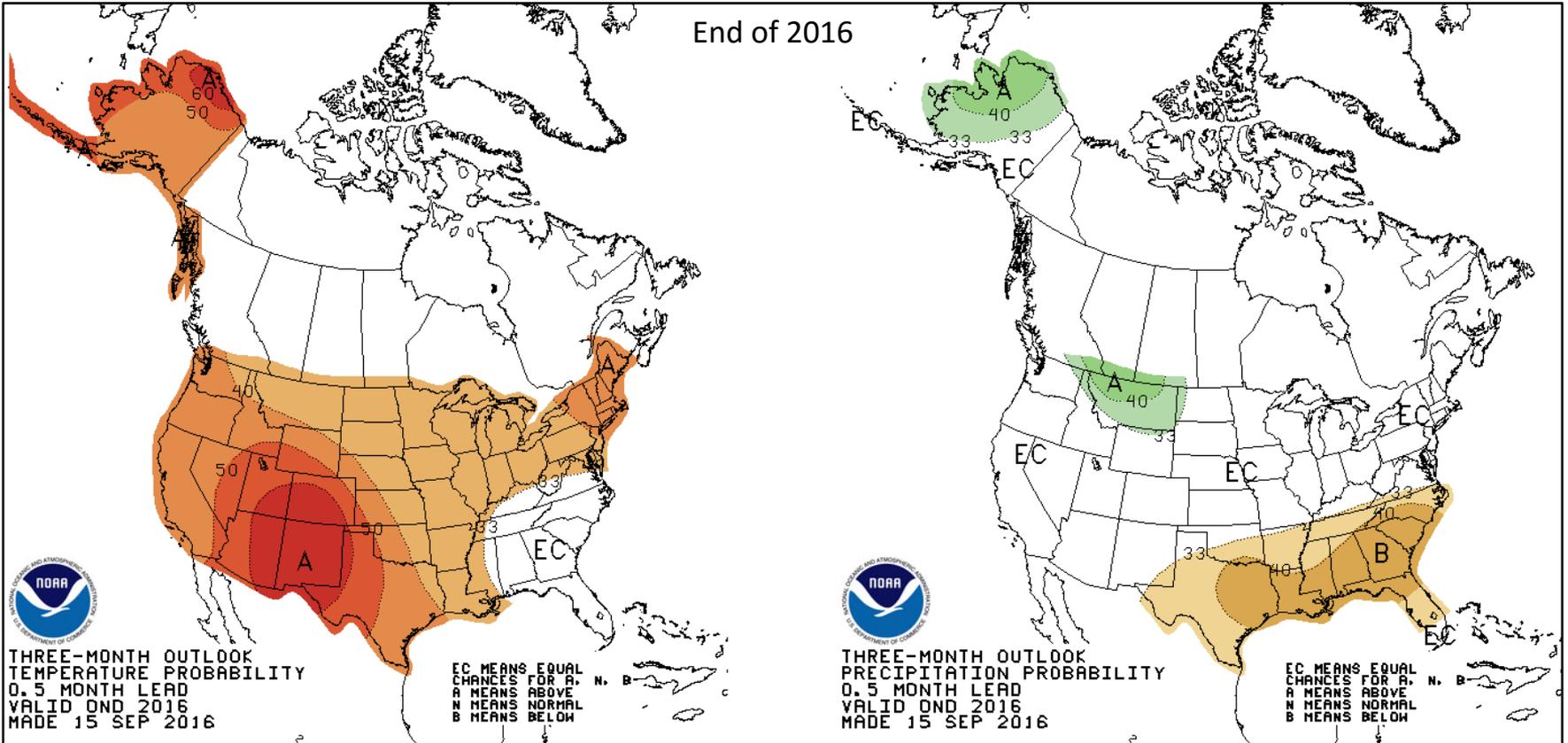


<http://go.usa.gov/3eZ73>





End of 2016



# NH Department of Agriculture, Markets & Food

Lorraine Merrill, Commissioner

271-3551

Lorraine.Merrill@agr.nh.gov

- Farmers suffering drought-related losses, dry wells, etc., should be referred to the **USDA Farm Service Agency**
- Farmers struggling with creditors or problems with USDA agencies can be referred to:

## NH Agricultural Mediation Program

Matt Strassberg

NH Agricultural Mediation Program

PO Box 2042

Concord, NH. 03302-2042

(603) 685-4780 ext 101

(800) 511-2213 (toll free)

[matts@emcenter.org](mailto:matts@emcenter.org)

[www.emcenter.org/center.org](http://www.emcenter.org/center.org)



# USDA/Farm Service Agency – County Offices

- Cheshire-Sullivan County – 11 Industrial Park Drive, Walpole 756-2970
- Coos-Carroll County – 4 Mayberry Lane, Lancaster 788-4602
- Grafton County – 19 Archertown Road, Orford 353-4650
- Merrimack-Belknap-Hillsborough, 10 Ferry St. Concord 223-6003
- Rockingham – Strafford County, 629 Calef Hwy, Epping 679-4656
- New Hampshire State FSA Office, 53 Pleasant St., Concord 224-7941



# **Strafford County Dairy Farm**



# **Strafford County Dairy Farm**





# **Historic Drought Related Inquiries/Issues**

- **Lake levels**
- **Stream flow**
- **Dam management**
- **Failing water supply wells (private & public)**
- **Public water supply shortages**
- **Restricting outdoor lawn watering**
- **Impacts on business, industry and agriculture**
- **Roadside withdrawals by tanker trucks**
- **Fire danger**

# Precipitation & Deficit

County	Precipitation (6 months)  (inches)	Deficit (6 months)  (inches)	Precipitation (1 year)  (inches)	Deficit (1 year)  (inches)	Deficit (1 year)  %
Belknap	14.96	-8.16	30.93	-14.28	32%
Carroll	17.43	-8.22	36.78	-14.00	28%
Cheshire	16.26	-7.72	31.30	-15.57	40%
Coos	20.55	-5.14	37.26	-10.08	22%
Grafton	19.71	-5.75	37.08	-10.89	23%
Hillsborough	13.72	-9.77	29.78	-17.19	37%
Merrimack	14.68	-8.88	30.80	-15.42	33%
Rockingham	12.78	-10.26	30.09	-16.48	35%
Strafford	13.02	-10.49	31.45	-15.76	38%
Sullivan	15.52	-8.11	30.23	-15.14	33%

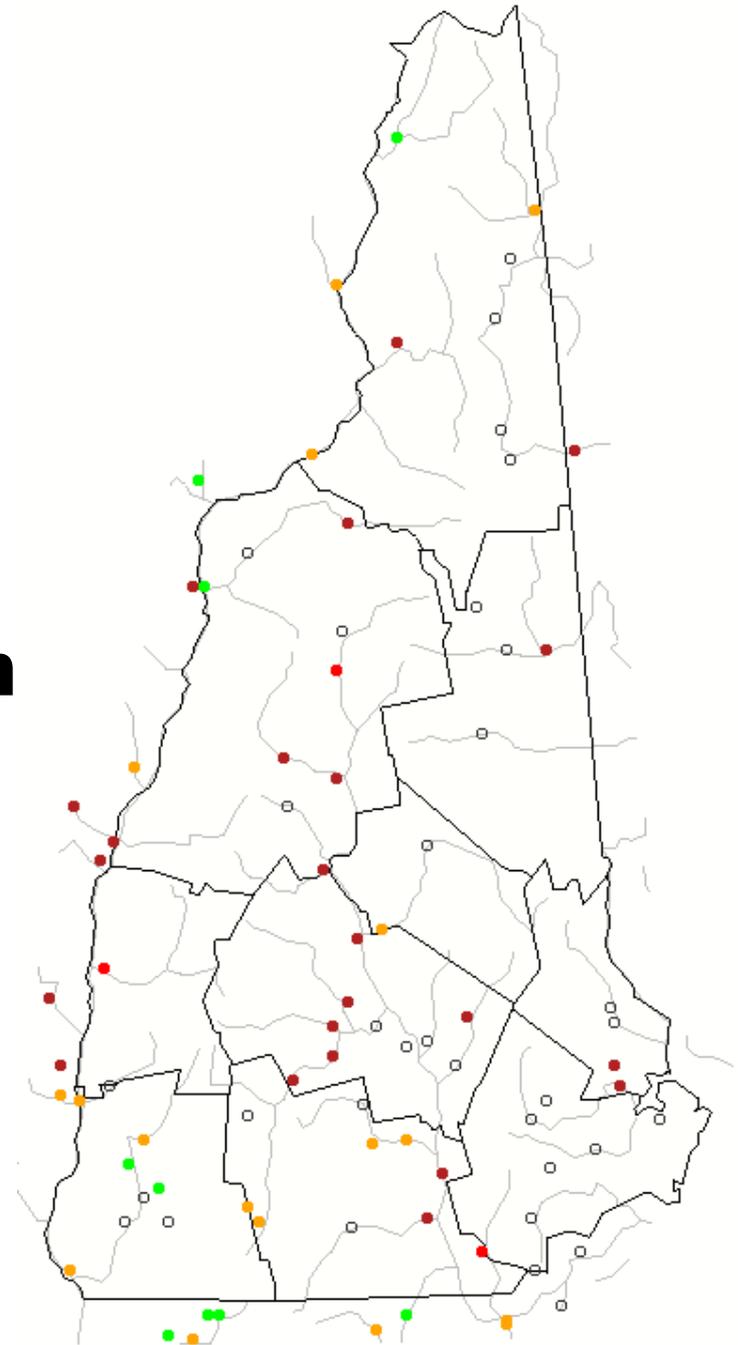
# Streamflow

## (10/3/2016)

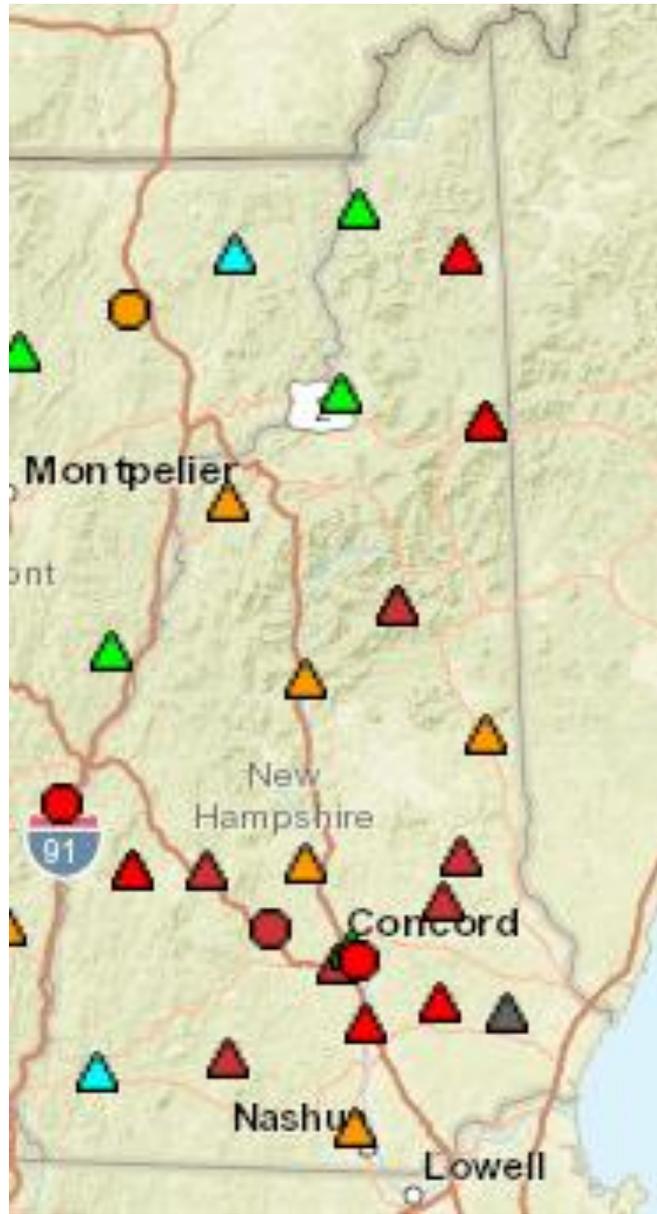
Explanation - Percentile classes

							
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		

- Exeter River and Spicket River have had "0" flow in September 2016**



# Groundwater Level Network



Explanation - Percentile classes (symbol color based on most recent measurement)								Wells	Springs	
									Real-Time	
Low	<10	10-24	25-75	76-90	>90	High	Not Ranked		Continuous	
	Much Below Normal	Below Normal	Normal	Above Normal	Much Above Normal				Periodic Measurements	



# National Drought Monitor Classification

Category	Description	Possible Impacts
D0	Abnormally Dry	<p>Going into drought:</p> <ul style="list-style-type: none"> <li>▪ short-term dryness slowing planting, growth of crops or pastures</li> </ul> <p>Coming out of drought:</p> <ul style="list-style-type: none"> <li>▪ some lingering water deficits</li> <li>▪ pastures or crops not fully recovered</li> </ul>
D1	Moderate Drought	<ul style="list-style-type: none"> <li>▪ Some damage to crops, pastures</li> <li>▪ Streams, reservoirs, or wells low, some water shortages developing or imminent</li> <li>▪ Voluntary water-use restrictions requested</li> </ul>
D2	Severe Drought	<ul style="list-style-type: none"> <li>▪ Crop or pasture losses likely</li> <li>▪ Water shortages common</li> <li>▪ Water restrictions imposed</li> </ul>
D3	Extreme Drought	<ul style="list-style-type: none"> <li>▪ Major crop/pasture losses</li> <li>▪ Widespread water shortages or restrictions</li> </ul>
D4	Exceptional Drought	<ul style="list-style-type: none"> <li>▪ Exceptional and widespread crop/pasture losses</li> <li>▪ Shortages of water in reservoirs, streams, and wells creating water emergencies</li> </ul>



**September 27, 2016**

(Released Thursday September 29, 2016)

Valid 8 a.m. EDT

# Known Water Use Restrictions and Bans

Last Update: September 29, 2016

Statistics type:

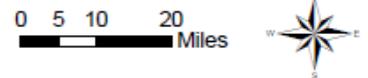
Traditional Percent Area

Export table:



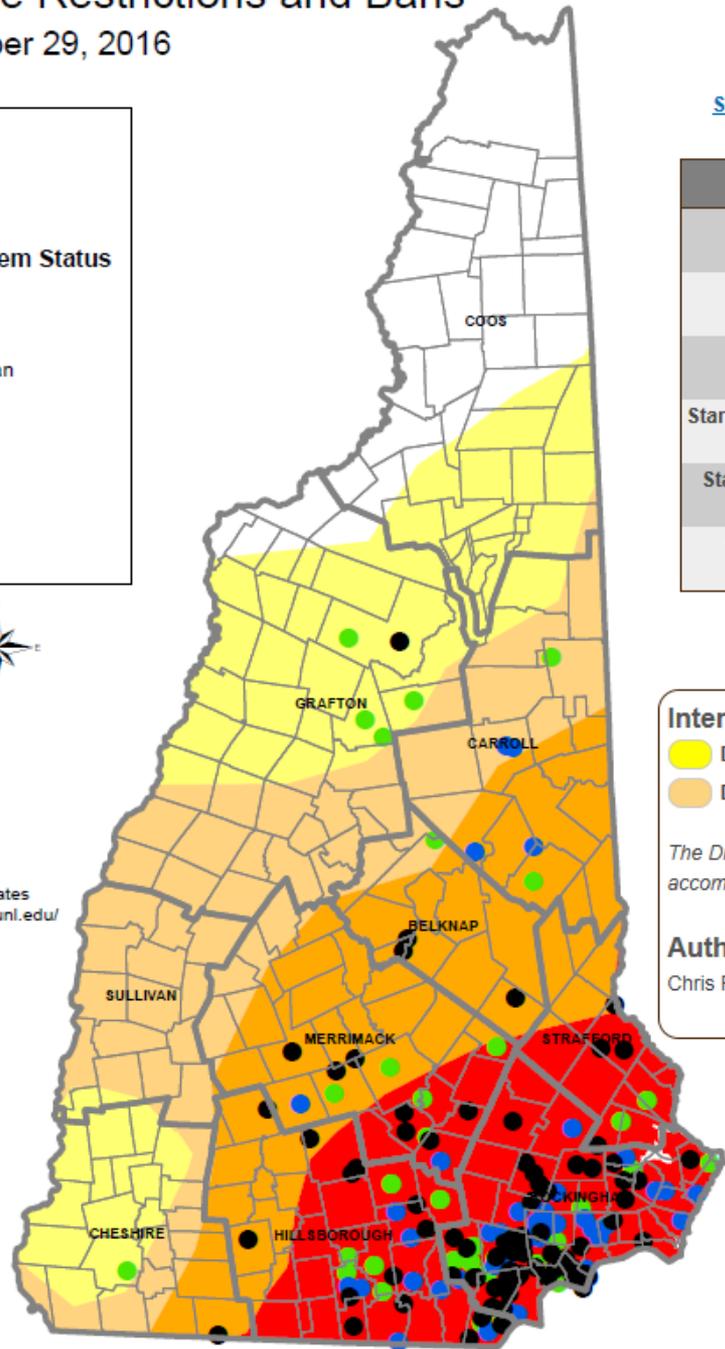
**Legend**

- County Boundary
- Town Boundary
- Municipality or Water System Status**
  - Outdoor Use Ban
  - Restriction
  - Voluntary Restriction or Ban
- Drought Condition**
  - Abnormally Dry
  - Moderate Drought
  - Severe Drought
  - Extreme Drought



Drought Conditions based on United States Drought Monitor (<http://droughtmonitor.unl.edu/Home/StateDroughtMonitor.aspx?NH>)

Disclaimer: The status of water use restrictions and bans is based on information submitted to the New Hampshire Department of Environmental Services and may not be comprehensive.



Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current <a href="#">2016-09-27</a>	15.33	84.67	62.44	40.49	19.27	0.00
Last Week <a href="#">2016-09-20</a>	23.66	76.34	52.44	29.12	19.21	0.00
3 Months Ago <a href="#">2016-06-28</a>	9.63	90.37	38.66	0.00	0.00	0.00
Start of Calendar Year <a href="#">2015-12-29</a>	50.84	49.16	14.88	0.00	0.00	0.00
Start of Water Year <a href="#">2015-09-29</a>	25.64	74.36	20.42	0.00	0.00	0.00
One Year Ago <a href="#">2015-09-29</a>	25.64	74.36	20.42	0.00	0.00	0.00

Estimated Population in Drought Areas: **1,176,114**

[View More Statistics](#)

**Intensity:**

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

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

**Author(s):**  
Chris Fenimore, NOAA/NESDIS/NCEI

# **NH Drought Management Plan**

- **Technical criteria for classifying drought updated by UNH in 2014**
- **Drought Management Plan Updated in 2015 – Stakeholder review in 2012**
- **Currently being adapted as an annex for the State’s Emergency Operation Plan**
- **Additional stakeholder comments were welcomed through August**
- **Coordinated by NHDES**
- **Administered by a Drought Management Team**
  - **30 entities**
  - **Government/Water Supply/Business/Recreation**



# **Drought Management Team**

- 1) Assembles after a sustained moderate drought is occurring**
- 2) Assesses data and recommends drought classification determination for each management area**
- 3) Recommends public messaging**
- 4) Makes recommendations to members, State agencies and Governor**
- 5) Assists in collecting data (economic and other impacts)**
- 6) Provides forum for information sharing and collaboration**



# Drought Management Team

## 2016 Drought

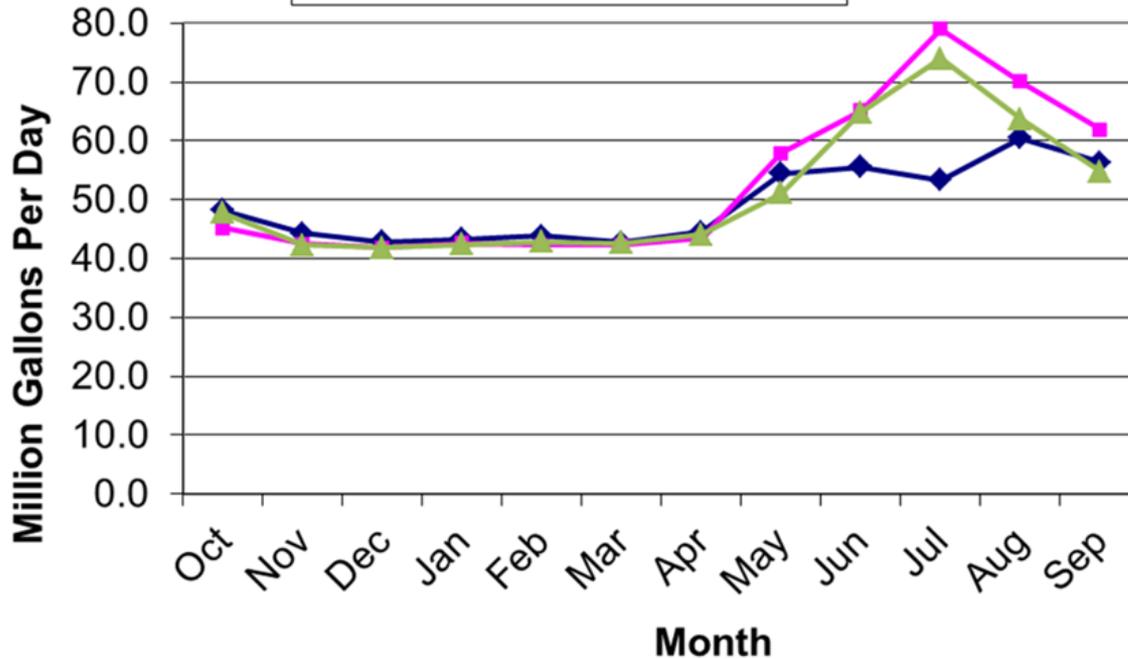
- Meetings
  - July 22
  - August 18
  - September 16
- Actions
  - Recommended public messaging
    - Financial assistance guidance documents
    - Initially encouraged conservation
    - As drought conditions persisted, strongly recommended mandatory residential lawn watering bans be enacted by municipalities
  - Guidance on impact assessment



# Groundwater Content Control

New Hampshire -  
Top Ten Public Water System's Pumpage

◆ '08-'09    ◆ '09-'10    ▲ '10-'11



Time to most effect the withdrawal from the ground is May through September

Recharge usually begins in late September/early October until the ground freezes

With continued high withdrawal and no recharge, winter well failures will increase



# Some Key Legal Mechanisms to Address Drought

- Large groundwater withdrawal permits – reduce withdrawals based on phase of drought
- Emergency authority to approve new large groundwater withdrawals
- Municipal authority to restrict or ban residential lawn watering during drought (applies to public and private residential wells)
- Authority to require dam owners to release water
- Authority to require a public water system to extend service to address a nearby emergency

Go to [www.des.nh.gov](http://www.des.nh.gov). Scroll down the “A-Z list” to Drought Management.

The screenshot shows the homepage of the New Hampshire Department of Environmental Services (DES). At the top, there is a navigation bar with the text "an official NEW HAMPSHIRE government website" and a menu with options: PUBLIC, GOVERNMENT, BUSINESS, and A to Z LIST. The "A to Z LIST" option is circled in red. Below the navigation bar is a banner with several images, including a lighthouse and a sunset. The main content area is divided into several sections:

- Left Sidebar:** A vertical menu with links: DES Home, A to Z List, About DES, Media Center, Public, Government, Business, Programs, Rules/Regulatory, and Contact Us.
- Top Navigation:** Divisions > Water Division > Programs/Bureaus/Units >
- Main Content:**
  - Drought Management Program:** A section with a photo of a dry pond and a text block stating: "Although New Hampshire is typically thought of as a water-rich state, there are times the demand for water can be difficult to meet. A combination of increased population and extended periods of low precipitation can cause reduced water supplies in the state. Drought is a normal, recurrent feature of climate. It occurs almost everywhere. [more...](#)"
  - Hot Topics:** A list of recent news items, including "NEW! Press Release: NHDES Urges Residents to Conserve Water", "NEW! Private Well Financial Assistance for Very-Low Income Households", "NEW! Weekly NH Drought Status Summary", "NEW! Water Restrictions and Bans 2016", "NEW! 2016 Drought Guidance for Municipalities and Public Water Systems", "NEW! 2016 Drought Guidance for Homeowners with Private Wells", "Drought Indicator Resources", and "Model Regulation for Restricting Lawn Irrigation".
  - Publications:** A list of publications, including "NH Drought Management Areas", "UNH Study: An Analysis of Drought Conditions in New Hampshire", and "Water Resources Primer/Floods and Droughts Chapter".
  - Rules/Regulatory:** A list of regulatory items, including "RSA 41:11-d Restricting the Watering of Lawns by Municipalities", "Env-Dw 503 Public Water System Operational Requirements (For limiting water use: See Env-Dw 503.09 and Env-Dw 503.18-503.20)", "RSA 482 Dams, Mills, and Flowage", and "Water Conservation Rules".
- Right Sidebar:**
  - Drought Program:** A list of links: Program Home, Overview, Hot Topics, Publications, Rules/Regulatory, Education/Outreach, Technical Assistance, Related Programs, Resources/Links, and Contact Us.
  - Water Division:** A list of links: Water Home, Division Overview, Programs/Bureaus/Units, Rules/Regulatory, Publications, and Contact Us.
  - The Department:** A list of links: Commissioner's Office, Air Resources Division, Waste Management Div., Water Division, and Boards and Committees.
  - DES Calendar:** A calendar grid for the month of August, with dates 1 through 31.
- Bottom Left:** A search bar with the text "search this site" and a "Go!" button.
- Bottom Center:** A URL box containing "http://des.nh.gov/index.htm".



## Current Drought Conditions

### A Situation Summary for New Hampshire

<b>Drought Conditions</b>	Check weekly during continued dry weather for Drought Status in New Hampshire <a href="#">📄</a> and Water Restrictions and Bans <a href="#">📄</a> .
<b>US Drought Monitor<sup>1</sup> Classification for New Hampshire</b>	Updated Thursdays based on data as of 7:00 AM Tuesday at <a href="#">US Drought Monitor</a>
<b>Precipitation</b>	Daily updates at <a href="#">Weather Service Precipitation Analysis Tool</a> or <a href="#">Northeast River Forecast Center</a>
<b>Stream Flow Conditions</b>	Daily updates at <a href="#">USGS WaterWatch - Streamflow conditions</a>
<b>Groundwater Levels</b>	Updated monthly at <a href="#">USGS Groundwater Watch</a>
<b>Drinking Water Supply Reservoirs</b>	Contact the Drinking Water and Groundwater Bureau at 271-0660 for information.
<b>Recreational Lake Levels</b>	Lake water levels for several water bodies in NH can be accessed at <a href="#">DES Real-Time Data &amp; Information for Watersheds in New Hampshire</a> .
<b>Fire Danger</b>	Check daily. Conditions change frequently. (updates at <a href="#">NH Division of Forest &amp; Lands</a> )

<sup>1</sup> The U.S. Drought Monitor is joint venture of the USDA; National Drought Mitigation Center; US Department of Commerce; and NOAA.

#### More information at:

[DES Drought Management Program](#)  
[DES Water Conservation Program](#)



## Media Center

**FOR IMMEDIATE RELEASE:**

**DATE: August 3, 2016**

**CONTACT: James Martin, (603) 271-3710**

### **NHDES Urges Residents to Conserve Water in Drought Areas**

Concord, NH – A combination of a below average snowpack in the spring, little precipitation to recharge the groundwater, an increase of evapotranspiration in the summer, and the inability of New Hampshire watersheds to store large volumes of water due to their geology has landed the northern half of the state in abnormally dry conditions and the southern half in severe drought. During the July 22, 2016 meeting of the New Hampshire Drought Management Team (DMT), State Climatologist, Mary Stampone, indicated that relief was not in the near future and drought conditions will likely persist into the fall. As a result of the current conditions and the long-term forecast, the New Hampshire Department of Environmental Services (NHDES) is urging New Hampshire residents to conserve water as long as drought conditions persist.

To protect water supplies, over one hundred public water systems in New Hampshire have implemented outdoor water use restrictions or bans in their service areas. If you reside in an area of severe drought, which currently includes the following counties: Belknap, Cheshire, Hillsborough, Merrimack, Rockingham, Strafford and Sullivan, and your water supplier has not issued a restriction or if you are a private homeowner on your own well, NHDES urges you to refrain from using water outdoors except for hand watering of vegetable gardens until precipitation mitigates drought conditions. For counties experiencing abnormally dry conditions, including Grafton, Carroll, and Coos counties, NHDES recommends outdoor water use be limited to watering every other day and to between the hours of 7pm and 8am. Saving water for essential uses, such as drinking, cooking and cleaning of clothes and dishes and limiting non-essential uses such as watering of lawns is the most effective way to sustain water supplies until enough rain is received to replenish water sources.



# The Exchange

## N.H. Communities Urged to Conserve Water as Drought Drags On

By THE EXCHANGE • AUG 3, 2016



ERIC NORRIS VIA FLICKR/CREATIVE CONCERNS

### GUESTS:

**Brandon Kernan**, manager of hydrology and conservation with the N.H. Department of Environmental Services.

**Mary Stampone**, state climatologist and an associate professor of geography at the University of New Hampshire.



# **Drought Emergency in New Hampshire Recommended Measures for NH Residents**

## **Reduce Water Use Immediately**

- Lawn Watering
- Sink Faucets
- Showerheads
- Clothes Washers
- Toilets

## **Private Well Owners**

- Manage Your Water Use
- Address Water Supply Problems Before Winter
- Financial Preparedness
- Well Location and Basic Information
- Be Safe



# Drought Emergency in New Hampshire

## Impact Reporting

- Drought impacts can be reported using forms on NHDES' homepage
  - Private wells
  - Businesses
  - Public water Systems
- Well drillers report deepened or replaced wells to NHDES (90 day reporting deadline)
- Water systems report water emergencies



# Drought Emergency in New Hampshire Impact Reporting



PUBLIC GOVERNMENT

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## Drought Management Program



Although New Hampshire is typically thought of as a water-rich state, there are times the demand for water can be difficult to meet. A combination of increased population and extended periods of low precipitation can cause reduced water supplies in the state. Drought is a normal, recurrent feature of climate. It occurs almost everywhere. [more ...](#)

### » Hot Topics

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- [NEW! Press Release: NHDES Is Urging the Public to Conserve and Municipalities to Implement Outdoor Lawn Watering Bans](#)
- [NEW! Press Release: Drought Management Team Drought Update](#)
- [NEW! Press Release: NHDES Urges Residents to Conserve Water](#)
- [NEW! Private Well Financial Assistance for Very-Low Income Households](#)
- [NEW! Water Restrictions and Bans 2016](#)
- [NEW! 2016 Drought Guidance for Homeowners with Private Wells](#)
- [U.S. Drought Monitor and U.S. Drought Outlook](#)
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## Drought Economic Impact Survey for Households on Private Wells

Created: September 2016

As part of the state's emergency response efforts to the drought, New Hampshire Department of Environmental Services (NHDES) is gathering information related to private well water availability and drought related economic impacts. The information requested in the below survey will assist the state in identifying the location and severity of drought impacts for assessing drought response needs.

### **Who should submit this form?**

Households on a private well experiencing problems with water supply due to the ongoing drought or households that were experiencing problems, but made repairs to mitigate water supply issues. (This does not include homes on public water systems.)

### **Why is the information needed?**

- To identify and assess drought response needs of individuals not served by public water systems.
- To identify where adverse impacts associated with drought are occurring.
- To quantify the specific economic impacts associated with drought to support potential disaster assistance requests.



## Drought Economic Impact Survey for Institutional, Commercial, Industrial, Public Water System and Agricultural Water Users

Created: Sept 2016

As part of the state's emergency response efforts to the drought, New Hampshire Department of Environmental Services (NHDES) is gathering information related to private well water availability and drought related economic impacts. The information requested in the below survey will assist the state in identifying the location and severity of drought impacts for assessing drought response needs.

### **Who should submit this form?**

Industrial, commercial, institutional and agricultural water users on private wells experiencing problems with water supply due to the ongoing drought or who were experiencing problems, but made repairs to mitigate water supply issues. (This does not include water users solely on public water systems.)

### **Why is the information needed?**

- To identify and assess drought response needs of those not served by public water systems.
- To identify where adverse impacts associated with drought are occurring.
- To quantify the specific economic impacts associated with drought to support potential disaster assistance requests.



# Private Well Impacts

- Dry well
- Intermittent water shortages
- Taste and odor
- Pump burnout



# 2016 Drought Assistance for Homeowners on Private Wells

- Answer calls from private Well owners
- Conservation tips
- Well failure symptoms
- Well improvement options
- Private Well Information
- Licensed well drillers and pump installers
- Financial Assistance – USDA loan/grant for very low income households
- Coordinate with local officials to establish emergency water sources
  - NHDES conducts testing if the source is not already a public water system
- Guidelines & prohibitions on “filling” dry wells with bulk water



# Public Water System Impacts

- Episodic water shortages associated with
  - Lawn watering
  - New leaks
- Chronic water supply concerns



# 2016 Drought Assistance for Municipalities & Public Water Systems

- Drought condition summary
- Sample Ordinances on Water use restrictions
- Strengthening relationships between municipalities and their community water systems
- Emergency bulk water supplies
- Emergency interconnections
- Emergency new source approvals
- Emergency financial assistance
  - USDA
  - State/Federal loans
  - Community Block Grant

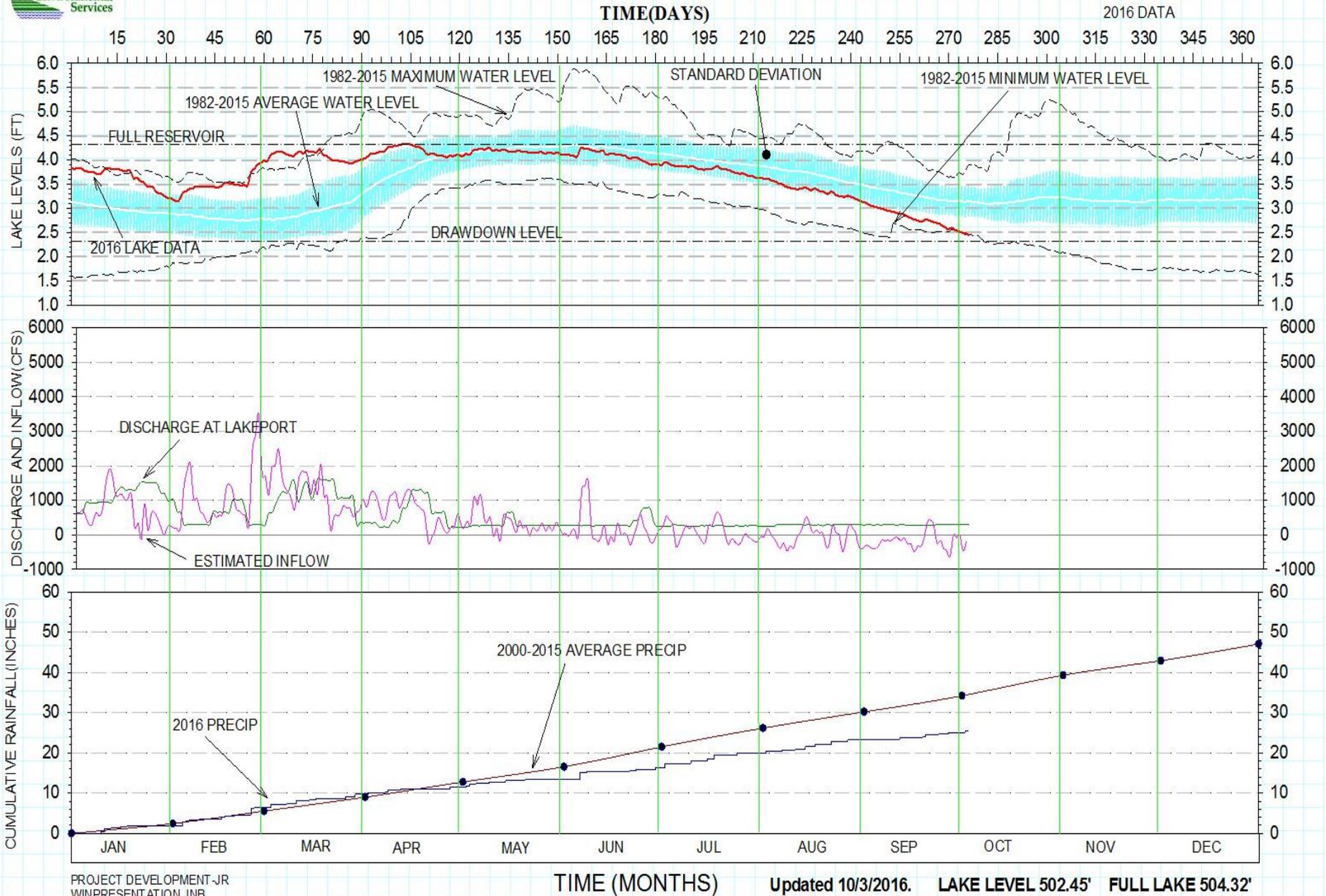


# 2016 Drought Response

- Governor's September 16<sup>th</sup> state-wide conference call with municipal officials, health officers and emergency response officials
- Continue to explore private well financial assistance options

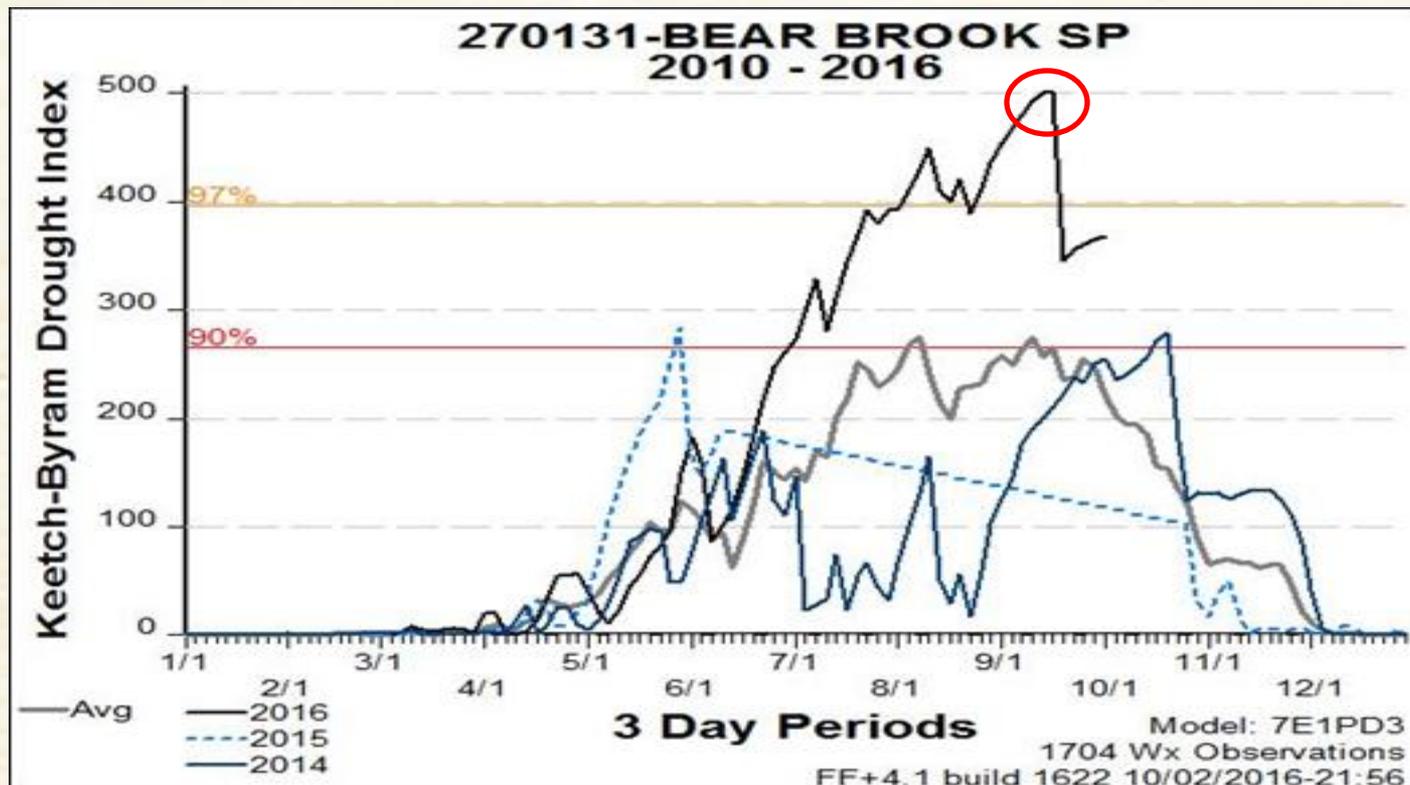


# LAKE WINNIPESAUKEE LAKE LEVEL DATA



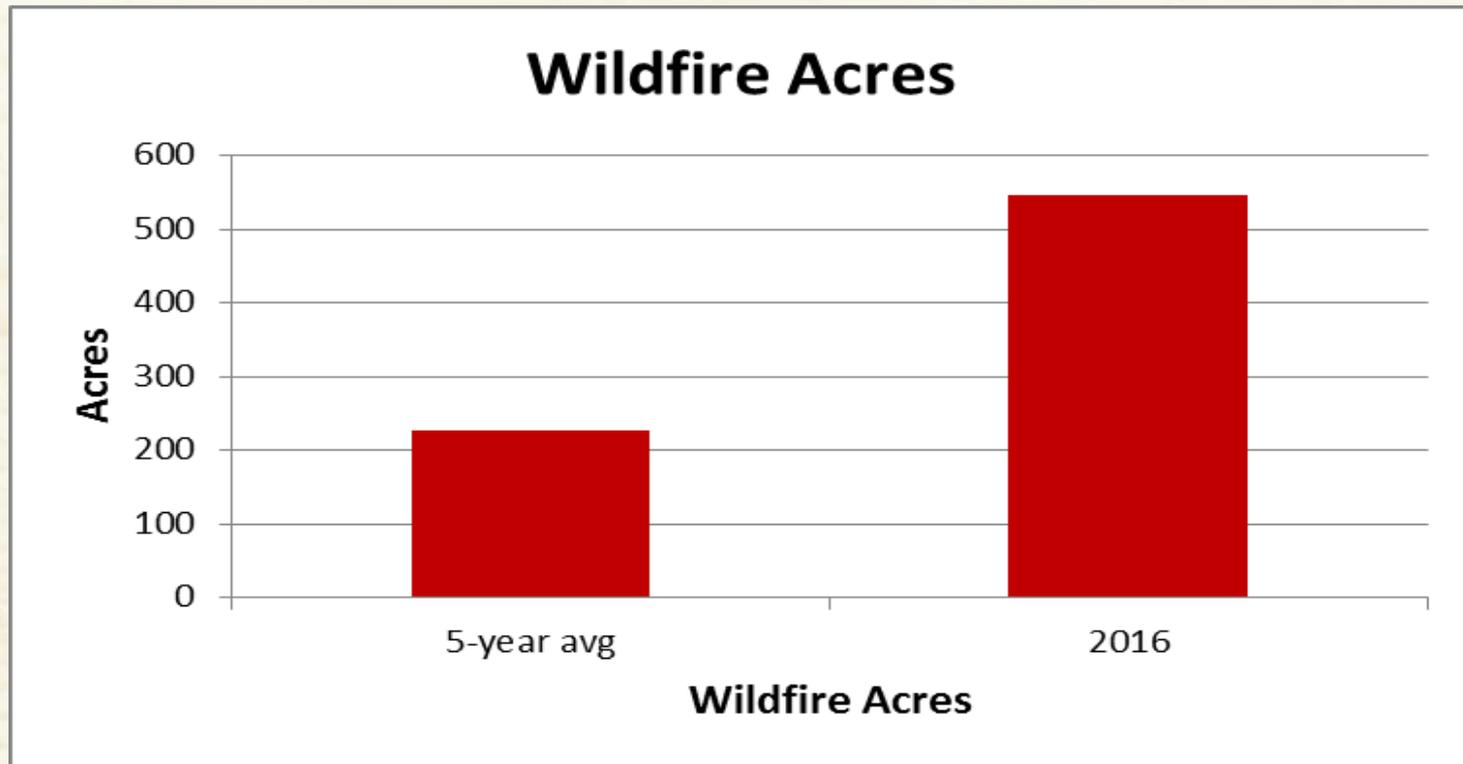


**Keetch-Byram Drought Index (KBDI)**- specific fire potential assessment, representing net effect of evapotranspiration and precipitation in producing cumulative moisture deficiency in deep duff and upper soil layers. It relates to the flammability of organic material in the ground.





**2016 Fire Season YTD: approximately 242% of average acres burned. Most fires this summer and fall have been small, but have burned deep into the ground (> 2 feet) requiring extensive labor. Also, water supplies to suppress fires are dry.**



## New Hampshire Drought Contacts

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