**State of Vermont Drought Task Force Meeting**

**August 22, 2018**

**State Emergency Operations Center**

**Waterbury, VT**

**Participants:**

* Lesley-Ann Dupigny-Giroux – Professor, State Climatologist – University of Vermont
* Rebecca Ellis – Deputy Commissioner – Department of Environmental Conservation (DEC)
* Bryan Redmond – Director – DEC - Drinking Water and Groundwater Protection Division
* Erica Bornemann - Director – Department of Public Safety (DPS) – Division of Vermont Emergency Management (VEM)
* Erin Magee – Planning Section Chief – DPS – VEM
* Lauren Oates – State Hazard Mitigation Officer – DPS – VEM
* Mariann Wolz – Emergency Management Planner – DPS – VEM
* Josh Cox – Critical Infrastructure Planner – DPS - VEM
* Marjorie Gale – State Geologist – DEC – Geology Division
* Rodney Pingree – Environmental Analyst – DEC - Drinking Water and Groundwater Protection Division
* Anne Macmillan - Vermont Agency of Agriculture, Food, & Markets (VAAFM) - Agrichemical & Plant Industry Division
* Katherine McNamara - Vermont Agency of Agriculture, Food, & Markets (VAAFM) - Agrichemical & Plant Industry Division
* Scott Waterman – Public Information Officer - VAAFM - Communications Section
* Steven Cash – Water Quality Specialist – VAAFM - Water Quality Division
* Rick Kiah – U.S. Geological Survey
* Kimberly Peck – GIS & Agricultural Program Specialist – USDA Farm Service Agency
* Britt Westergard – Senior Service Hydrologist – National Weather Service Albany
* Jessica Neiles – Meteorologist - National Weather Service Burlington

**Roles and Responsibilities**

* The Drought Task Force was established in 2002 to facilitate coordination among state government agencies and departments with a role in drought forecasting, monitoring, and response. The August 22 meeting constituted the first in 2018.
* Vermont Emergency Management (VEM) plays a facilitation and coordination role, as well as provides administrative support for the Task Force.
* Participants discussed the potential for VEM to serve as a co-chair, primarily to continue serving the multi-agency coordination and administrative functions, with the other co-chair coming from an agency or organization with more expertise on drought and drought impacts. This co-chair would be able to utilize their expertise to determine when the trigger has been reached to call a Task Force meeting or initiate action on behalf of the Task Force.
* Rebecca Ellis (DEC) and Erica Bornemann (VEM) noted a need to revise the drought incident annex within the State Emergency Management Plan (SEMP). VEM staff provided an overview of the SEMP revision process and noted the shift from SSF annexes to partner-specific annexes. The drought incident annex needs to be revised soon as a part of the overall SEMP revision.
* Rebecca Ellis (DEC) clarified that the Drought Management Team remains operational, but functions as a way of informally organizing and sharing information within the agency.

**National Weather Service Brief**

*Please see the attached powerpoint presentation for additional information.*

* In mid-June, Vermont first entered drought status. According to the latest update to the U.S. Drought Monitor (maintained by the National Drought Mitigation Center at the University of Nebraska-Lincoln) the majority of locations in Vermont are currently at drought level D0—indicating abnormally dry conditions—with some locations in the north at D1—indicating moderate drought conditions—and areas in southern Vermont moving into “none” (on a scale from none to D4). As of August 16, the U.S. Seasonal Drought Outlook, which is valid through November, noted that drought removal is likely for Vermont.
* While Vermont has received some precipitation over the past two weeks, NWS staff noted that the track of storms has been further south than normal and much of the rainfall is localized in specific areas. As a result, although precipitation has improved somewhat over the past month, rainfall levels remain below normal for much of the central and northern parts of the state. Additionally, warmer temperatures have meant that rainfall locations have received may be evaporating before entering the ground. Higher-than-average temperatures are expected to continue through November.
* While the situation is not currently dire, reduced precipitation during the summer months raises concerns regarding potential longer-term drought impacts, as July is typically the wettest month and fall and winter see a steady decline in the amount of precipitation. This means that normal rainfall during the fall and winter months will likely be insufficient to move affected areas out of drought conditions and could mean drought impacts could persist or worsen in the coming year.
* Water levels in Lake Champlain remain concerning, as they were lower than average at the beginning of 2018 and did not recover. Levels in the lake are similar to those during the 2016 drought.
* USGS staff noted that streamflow levels in some northern areas of the state are “much below normal” to “below normal”, but that areas in southern Vermont are “above normal.” Additional information on streamflow levels can be found at: <https://waterwatch.usgs.gov/?m=real&r=vt>.
* Groundwater levels at monitoring stations did not see significant declines, with the exception of the monitoring station in Hartland; however, it typically takes several months for decreases to become apparent. As a result, current groundwater levels might not be representative of the longer-term situation. Per USGS there are 13 groundwater monitoring wells in Vermont. Many stream gauges have less than 30 years of data so long term statistical data on most streams does not exist.
* NWS staff noted that drought conditions would likely only be completely alleviated by a large weather system, such as a tropical cyclone, and associated heavy rainfall or heavy snowfall this winter. No new tropical cyclones are expected in the Atlantic Ocean during the next five days.

**Agency Report Outs**

* **VEM:** 
  + Lauren Oates reported that the State Hazard Mitigation Plan is currently up on the VEM website and contains data on drought as of May 2018.
  + To date, VEM has not received any Watch Officer calls for water supply-related issues.
* **University of Vermont/State Climatologist:** 
  + Lesley-Ann Dupigny-Giroux continues to monitor drought conditions and keep appropriate federal and state agencies apprised of the situation.
* **Agency of Agriculture, Food, and Markets (VAAFM)**:
  + Steven Cash has received some reports of drought impacts on farms—primarily on feed for animals. VAAFM staff noted that the first cut of hay was approximately 50 percent lower than average and the second cut is also expected to be reduced. As a result, there may be some farms that require feed, although good production last year could help mitigate some of the need. Steven also noted some anecdotal reports of ground water issues in Addison County, but that this might not serve as an accurate representation of other areas.
  + VAAFM staff noted that farmers were also impacted by the heat this summer, noting that milk production in cows can drop quickly during periods of high temperatures.
  + VAAFM staff noted that farmers can report issues through programs like Farm First. So far, VAAFM has only received two reach outs from particular farms.
* **U.S. Department of Agriculture Farm Service Agency (FSA)**:
  + FSA has various programs to address drought, but noted that qualifying for the programs requires sustaining D2 drought conditions for eight weeks.
  + FSA staff noted a variety of economic impacts of drought conditions and higher-than-average temperatures, including loss of crops and animal feed, potentially causing the price of goods to increase.
  + FSA noted significant variation in drought impacts on farmers and ranchers throughout the state and even among counties. In northern areas, the hay first and second cuts were lower than average. In addition, pasture conditions have not fully recovered from high temperatures in July, resulting in reduced quality pasture for grazing.
  + FSA received four notices from farmers of loss for non-irrigated crops—primarily vegetables. In Chittenden County, higher-than-average temperatures resulted in rapid and over maturation of sweet corn crops.
* **Agency of Natural Resources (ANR) Department of Environmental Conservation (DEC)**:
  + To date, DEC has not received any calls from private or public systems that have run out of water due to drought conditions. However, it is difficult to determine if water systems are nearing exhaustion, as it is not a requirement to monitor water levels and individuals may not be contacting DEC regarding their water issues. DEC staff noted that they have not received any requests for permission to haul water due to water shortages—a requirement for water hauls.
  + Bryan Redmond (DEC) noted that ANR’s Drinking Water Drought Reporter (<https://anrmaps.vermont.gov/websites/droughtreporter/>) could be a tool to collect additional information on water-related impacts of drought. A link to the website could be provided on media releases to enable people to self-report drought impacts.
* **Other Issues:**
  + Participants noted a need to proactively reach out to the public on the situation, noting that messages should be provided before the situation becomes dire in order to be effective. This outreach could potentially take the form of news pitches to media sources, rather than an official government release.
  + Participants also discussed other potential economic impacts of the drought, including on tourism for fall foliage and the ski season.

**Follow Up Actions**

* Erica Bornemann (VEM) will follow up with Rebecca Ellis (DEC) and the Lesley-Ann Dupigny-Giroux (State Climatologist – UVM) on designating a co-chair for the Task Force.
* Participants agreed to invite the Department of Forests, Parks, and Recreation and Agency of Commerce & Community Development (ACCD) Department of Tourism and Marketing (VDTM) to the next Task Force meeting to discuss potential drought impacts.
* The VEM Public Information Officer will reach out to DEC and VAAFM staff on a messaging strategy for conservation.
* State partners will work on obtaining more comprehensive information on drought impacts as it relates to water supply systems and the agriculture sector for the next meeting. This could include information on yields for fruits/vegetables and what potential stressors could be going into the winter.
* VEM will follow up with the Department of Health to ensure that their information is captured and they are invited to the next meeting.
* VEM will check to see if 211 has received any drought-related calls for the next meeting.
* Frequency of Drought Task Force meetings should be monthly going forward.

***The next meeting of the Drought Task Force is tentatively scheduled for mid to late September***