

**State of Maine
Drought Task Force
Report on Current Conditions
September 26, 2001**

The Drought Task Force issued a previous report on August 27, 2001. Changes from the August 27 report are highlighted.

Overview

The Drought Task Force held a second fall meeting on September 27, 2001, and determined that despite September rainfall totals which are tracking slightly above normal, drought conditions persist across the state. The Task Force is composed of state, federal and private scientific, natural resource, water use and regulatory agencies. The purpose of its meetings is to share available information across the represented disciplines, and determine what action on the part of the member agencies is necessary or appropriate.

The following report summarizes the findings of this meeting. Throughout the report, additional sources may be cited for further information. The primary Internet “portal” to continuing information on drought conditions is the Drought Page maintained by the US Geological Survey (USGS), accessible at <http://me.water.usgs.gov>.

Additional sources of information are listed at the end of this report.

Hydrologic Conditions

Stream Flows and Storages

All flows on free-flowing streams in Maine remain at or near record lows. A new record low was set on the Saco and the Piscataquis in August, with the Little Androscoggin registering second lowest flow on record in the same month. Traditionally, low flows occur in September, but with rainfall this month, and average precipitation expected for the remainder of the fall, the stream flows for August will likely be the lowest for the year.

The recurrence interval for these stream flow readings make this a 10 to 20 year event in northern Maine, and a 20 to 30 year event in southern Maine.

Storages

Storages are low above most dams in the state, but most power producers have been able to manage power needs. However, power production has been disrupted at at least one site in northern Maine. In the Kennebec and Androscoggin basins, for example, river flows have been low all season long; Kennebec storages are 5.5% below average and Androscoggin storages 8% below average.

Ground Water

Ground water levels are generally still declining. Southern York County sites started high, with the heavy spring snowmelt, but have been steadily declining throughout the summer. One downeast site is approaching a record low, and will probably set a record low for September.

Ground water levels traditionally do not begin to recharge until late October. A significant amount of rain would be needed before the ground freezes to bring ground water levels up significantly. If

For more information on stream flows and groundwater:

<http://me.water.usgs.gov>

Climatic Conditions

A precipitation deficit of up to 20 inches over the last 13 months exists in some parts of the state. The precipitation deficit is defined as the difference between normal and actual precipitation totals.

The Palmer index, a matrix of several factors such as temperature, precipitation and soil moisture, shows severe drought in coastal and southern interior Maine, and extreme drought in northern Maine. Approximately 7.5 inches of precipitation on the coast and 9.55 inches in northern Maine would be needed in one week to bring the index up to normal.

If only normal precipitation is received for the remainder of the year, 2001 could end up in the driest 10% of years in the last century.

Background information:

<http://www.umaine.edu/mainecclimate>

http://www.ncdc.noaa.gov/ol/climate/research/prelim/US/US_prelim.html

<http://lwf.ncdc.noaa.gov/oa/climate/research/prelim/drought/spi.html>

<http://lwf.ncdc.noaa.gov/oa/climate/research/prelim/drought/palmer.html>

http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/cdus/palmer_drought/

<http://enso.unl.edu/ndmc/enigma/indices.htm#palmer>

Weather Outlook

Weather systems in the week of September 24 left over 2 inches of rain in some locations. However, much more precipitation is needed. The 6 to 10 day, 8 to 14 day and long range outlook all call for normal precipitation. With near normal precipitation through November, the deficit will not be made up and drought conditions are likely to persist. The “wild card” would be a tropical system, which cannot be predicted in long range forecasting, and could deposit large amounts of rain in a short time. The remnants of Hurricane Floyd had this effect after dry conditions in the summer of 1999.

The National Weather Service Forecast Offices in Gray and Caribou will publish a Drought Information Statement every 2 weeks as long as conditions warrant. These statements, as well as other NWS forecasts and information, may be found online at:

<http://www.nws.noaa.gov/er/gyx>

<http://www.nws.noaa.gov/er/car>

<http://www.state.me.us/mema/weather/genweath.htm>

Fire Potential

With the recent rainfall, fire danger across the state is rated as low to moderate, as of September 27. Another period of dryness could return fire danger to the high levels we saw throughout the late summer.

The Maine Department of Conservation is maintaining a “Fire Danger” web page, updated daily. The address is:

<http://www.state.me.us/doc/mfs/firedanger/fire.htm>

Agricultural Impact

The hay crop has come in at roughly two-thirds of the annual yield. Because of poor pasture conditions, many farmers are already feeding hay to livestock; ordinarily they would not be using hay for another 4 to 6 weeks. Both hay and corn crops were hit by the army worm infestation as well as the dry weather.

The potato crop is about 50% harvested. Yields are “spotty”; better in some places than others but generally depressed throughout. Overall yield could be down as much as 20%.

Apples saw a good set in the spring, but are now seeing an early drop, and some size reduction from the dryness. The recent rain, and hoped for normal precipitation through the fall, will help the trees in overwintering. Apple growers are approximately two-thirds through the Macintosh harvest, and halfway through the total harvest.

The blueberry crop will probably come in low compared to the five-year average.

The army worm infestation and subsequent hot and dry weather affected pasture land as well. Farmers are urged to fill out a “Notice of Loss” with their county Farm Service Agency. This will document the losses suffered across the state, and provide the groundwork for a possible request for federal assistance.

Water/Waste Water Impact

Five utilities across the state are reporting voluntary or mandatory water use restrictions. The public has responded well to voluntary restrictions where they have been requested.

County Emergency Management Directors report that they have not received an unusual amount of reports of private individuals with water supply problems. Anecdotal evidence suggests that demand for water well drilling has been high across the state this summer.

Natural Resources Impact

Low stream flows are having a damaging impact on Maine's endangered Atlantic salmon, reducing the quantity and quality of habitat. The Narraguagus River, for example, is in places barely passable. Some tributaries are dry, and others have dropped to isolated pools. In some areas dead fish have been observed. When fish gather in smaller pools, they are more vulnerable to predation. Since the fish rely on fall rains to produce stream flows conducive to spawning, low flows into the fall will affect the spawning rate. The full effect on the salmon population will not be known for several years.

Similar conditions will also affect species with similar habitat and fall spawning requirements such as brook trout and landlocked salmon.

With regard to food supply for wildlife, it has been noted that the berry supply appears to be reduced, but the acorn supply appears adequate.

Available Assistance

Assistance for individuals is limited. Some assistance for homeowners with water supply problems is offered through the USDA, Rural Development, Rural Housing Service. More information about this program is available by calling one of three offices in the state and asking for the Direct Single-Family Housing Program.

- Presque Isle (serves Aroostook and Washington Counties): 764-4155/4157.
- Bangor (serves Hancock, Knox, Lincoln, Penobscot, Piscataquis, Somerset and Waldo Counties): 990-3676
- Lewiston (serves Androscoggin, Cumberland, Franklin, Kennebec, Oxford, Sagadahoc, and York Counties): 753-9400

CDBG Grants may be a possibility for whole towns in need.

Farmers are urged to contact their local Farm Service Agencies to document their losses and learn of any available help.

Next Steps

- Continue to look at contingencies to assist communities with water supply problems if necessary.
- Assess the need for farm relief programs.
- Through County Emergency Management Agencies, alert communities to review their plans and consider how they can support private citizens and businesses with water supply problems.

Conclusion

The Drought Task Force, meeting on September 26, concurred that drought conditions did exist across the State of Maine, and that constant monitoring should continue in the different disciplines of member agencies. It was noted that time for recharge before the ground freezes is limited, and low ground water conditions could therefore persist into next spring.

Task Force will meet again in late fall, to review the conditions at that time.

FOR ADDITIONAL INFORMATION CONTACT:

U.S. Geological Survey
207-622-8202
National Weather Service, Gray, Maine
207-688-3216
National Weather Service, Caribou, Maine
207-496-8931
Maine Department of Conservation, Maine Geological Survey
207-287-2801
Maine Emergency Management Agency
207-626-4503
Maine Department of Agriculture
207-287-7600
Department of Conservation, Maine Forest Service
207-827-6191