State of Maine
Drought Task Force Report
December 17, 2001

This is a follow-up Drought Task Force report to that of November 14, 2001. Task Force Reports were also previously published on September 26 and August 24, 2001.

Throughout this report, references are offered for further information.

Overview:

Drought conditions have not substantially improved as the fall of 2001 has progressed. In fact, ground water, stream flow and surface water statistics as of the end of November show record and near-record lows in many instances.

Since ground water levels are unlikely to change through the winter, Maine communities and residents who are experiencing water supply problems should be prepared to see those problems continue through the winter.

Current Conditions:

Precipitation data from January through November 2001 in Maine confirms this time period as the driest January through November on record since 1895. We are on course for the calendar year to end as the driest in 107 years of record.

According to the November's Current Water Resources Conditions Report of the USGS, ground-water levels were in the below-normal range for the entire state of Maine. Eight of ten monitoring wells recorded record month-end lows for November. Five wells recorded all time lows. Nine wells showed water-level decreases during the month. Water levels in all ten wells had decreased when compared to water levels at the end of November 2000.

Stream flows are also at or near record lows for the time of year. Runoff was in the below-normal range throughout the entire state. Runoff was below normal for the sixth consecutive month and for nine of the last ten months at the Mattawamkeag River site. Runoff was below normal for the seventh consecutive month and for twelve of the last fourteen months at the Narraguagus River site. November runoff was the lowest in 53 years at the Narraguagus River site and the lowest in 82 years at the Carrabassett River site.

Stream flows are also at or near record lows for the time of year. Storages in Maine's lakes are also well below normal. The total amount of water in usable storage in the five reporting basins at the end of November was 31 percent of capacity, which is below the long-term end-of-November average of 59 percent. Power production has been curtailed at several sites.

The USGS Monthly Current Conditions Report for November is online at:
http://me.water.usgs.gov/01.nov.html

The Palmer index, a matrix of several factors such as temperature, precipitation and soil moisture, shows severe drought across the state. Between 8 and 10 inches of rain in a week would be needed in one week to bring the index up to normal. Despite the recent record warm weather, temperatures are expected to return to normal for the time of year, and the ground freeze will soon preclude the absorption of any rain.

It is difficult to project specific well status and prognosis across the state on the basis of monitoring wells alone. However, the status of these wells represents an indicator of widespread vulnerability. Ground water has continued to decline through November, a month when historically ground water levels rise. Typically ground water levels do not change markedly through the winter months.

*Background information***:**

http://www.umaine.edu/maineclimate
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 sites:

http://www.nws.noaa.gov/er/gyx
http://www.nws.noaa.gov/er/car
http://www.state.me.us/mema/weather/genweath.htm

Public Water Supplies:

There is no significant change from the last report in terms of public water systems which have requested voluntary water conservation (7) or have imposed mandatory water restrictions (2). Some water supplies have experienced some slight improvement in water levels since we are past the time of year when significant water is being used for lawn and garden and other outdoor activities.

Some of the water systems which are currently experiencing problems have historically had problems in dry periods and have not addressed these shortfalls adequately.

There is some concern that the operators of some public water supplies may not fully recognize the gravity of the current conditions. The professional organizations, and the appropriate state agencies will continue to do outreach to this group to make sure that they have the most current information.

Private Water Supplies:

Failure of private rural wells represents a greater problem for the public than possible shortages from public water supplies. Many of the involved agencies are experiencing an increase in calls

from members of the public with dry wells. No good statistics exist, however, on the true magnitude of the problem.

Well Drilling

Well drillers are universally extremely busy. The average wait time between contacting a driller and the start of the job is measured in multiple weeks.

According to a representative of the Maine Ground Water Association, which represents a majority of licensed well-drillers and pump installers in the state:

- The current backlog for drillers ranges from six to twelve weeks with the average being around ten weeks.
- Almost all drillers are currently drilling only for customers who are out of water. All other customers who want wells are being asked to wait until spring.
- The ability to drill wells in the next three months will depend to a very significant degree on the weather. Drillers are equipped to drill in very cold conditions. However, water must run through piping on the rigs in order to drill. When the wind chill drops significantly below freezing, productivity will drop dramatically and at times drilling is not possible at all. Therefore, depending upon the weather, the actual backlog has the potential to actually be somewhat shorter or potentially much longer than indicated above.
- An effort has been made to contact companies from out of state who have drilling crews that are able to come and work for Maine drillers for a period of time. However, since throughout New England, all the other drillers are also extremely busy in their own areas, this effort has been in vain. Although this situation could change, at this point it does not look like this is a likely option. If crews were able to come to Maine, licensing would likely be a complicating issue.
- Maine roads are typically posed for weight restrictions beginning in the early spring. Restrictions often exist in some areas to the end of May. This will create a problem if large backlogs of wells to be drilled still exist, since the posting of roads will curtail movement of well drilling equipment. The state will probably need to address this issue, and look into the possibility of granting exemption for well-drilling equipment.

Other Issues

Lowering of the pump within the well may provide a short-term solution in some instances. A licensed professional (well-driller or pump installer) should be contracted to do this.

General information about wells and well-drilling is available on the web site of the State Drinking Water Program. Homeowners can determine if the driller they are thinking of hiring is licensed and in good regulatory standing by contacting the Maine Well Drillers and Pump Installers Commission (207-287-5699)

Individuals should be encouraged to let their towns know if they are having water supply problems. This will lead to better information about the magnitude of the problem; in addition,

the town may be able to offer some emergency assistance.

Not Recommended

Some homeowners are resorting to having wells refilled, either through paying for a water hauler to make a delivery, or through town fire departments doing this as a service for residents. **This practice is not advisable.** Water dumped into a well will last perhaps 3 days before it completely drains away. More of the water will drain into the ground in this time frame than can usually be used by the household. In addition, contamination of water systems can result by opening the well and introducing water of outside origin. Contamination of the area surrounding the well can also result.

Sources of Assistance:

Some assistance may be available for farmers in some areas for army worms infestation and possibly drought. Farmers should check with their Farm Service Agencies for information on available programs.

The Federal Emergency Management Agency (FEMA) is unlikely to be a source of assistance. FEMA has never granted a disaster declaration for drought anywhere in the country.

USDA, Rural Development: The 504 Loans and Grants Programs are available to qualified individual homeowners. Applicants must live in an area designated as rural, must own the house and the land it is built on, and income-qualify for the assistance. Loans are 1%, and can be written for as long as a 20-year term. Grants are available to qualified applicants at least 62 years of age.

More information on this program is available from USDA, Rural Development, at:

- 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

Community Development Block Grant (CDBG), administered by the Department of Economic and Community Development (DECD) has one current program, and one program starting in the spring, that would allow towns to assist residents with water supply problems. A town, group of towns or a county must be the applicant, and then develop a program to assist low or middle-income residents with the funds. DECD advocates towns joining together to apply for grants. The following CDBG programs have been identified as possible sources of assistance:

Urgent Need Funds: A total pool of $200,000 is currently available. There is a limit of $100,00 on any single grant. Low to middle income residents are targeted. The State of Georgia is currently using this program to help drill wells for individuals.

Innovative Housing Assistance Program: Available early next year, this program can be used for a specific housing need. This requires a 20% soft match by the community(ies). There is a limit of $400,000 per single grant. Low to middle income families are targeted.

Housing Rehabilitation Grants: If a community has an active grant, it may be modified to include well drilling if certain criteria are met.

Communities are urged to determine if these programs could help them to assist their citizens.

More information is available from DECD or the jurisdiction's Regional Planning Commission.

- DECD: Mike Baran, 624-9816, mike.baran@state.me.us

General Assistance:

Individuals should check with town General Assistance (GA) Administrators to determine if their situation qualifies for assistance.

Community Support:

Some towns or utilities may be delivering water to elderly or special needs residents, making town water available to residents, making shower facilities available, etc. Towns need to be encouraged to continue to offer emergency assistance where needed.

Public Information:

More effort needs to be made to inform the public of the drought situation. Public information should include what we know, what we don't know, and stress that we will all get through this together. Several elements are critical:

- The water situation now
- The outlook for the next several months
- Importance of local conservation requests or orders
- How to assess the condition of a well
- General information about wells, and well-drilling
- Water conservation suggestions
- Drinking water safety

Possible methods of dissemination including press releases and fact sheets, press briefings, information disseminated to communities by GA coordinators, Area Agencies on Aging, Maine Municipal Association (MMA), and County EMAs.

GA has already communicated with towns about available assistance programs, and the inadvisability of refilling wells. MMA is including an article in its next newsletter about drought conditions, and potential assistance.

All agencies represented on the Task Force will continue to respond to public and media inquiries, and do outreach to their constituents.

Some specific suggested content for public information:

- Current drought conditions, including clear representation of scientific data; situation remains grave.
- The situation is not likely to improve through the winter
- If on a public water system, very important to pay attention and observe any voluntary or mandatory restrictions from the local water utility
- How to conserve water
- No-cost solutions
- Devices that can be purchased and installed
- How to make sure drinking water is safe
- Storage containers
- Purification
- Water sources
- How to assess your well's condition:
- Have you had trouble in the past?
- Are others in your area having trouble?
- Talk to the town. Are others having trouble; is there any help?
- If information about well or history of water supply is not known:
- Do not break open your well to check the level. It is difficult to assess, and can introduce contamination into the system.
- Contact the driller to check the well, or a licensed pump installer to lower the pump if that is appropriate
- General information about wells and well-drilling
- How to check if the driller or pump installer you are thinking of hiring is properly licensed.
- "We will get through this together"

Some fact sheets on water storage and conservation have been developed and FEMA and the Red Cross. These are being reviewed by Task Force members so that they can be adapted for use in Maine.

Additional informational and educational resources are available through the National Drought Mitigation Center, connect with the University of Nebraska at Lincoln, online at **http://enso.unl.edu/ndmc**.

Action Steps:

- State and Federal agencies and professional organizations will continue to offer technical assistance to communities, public water supplies and individuals, as they have done through this event.
- More public information will be developed, and various methods will be used to get the information distributed.
- Research will continue into possible sources of financial assistance.
- Organizations currently offering assistance programs will continue to assist applicants, and process applications as efficiently as possible.

- MEMA will work with DOT on the issue of road weight restrictions exemptions for well-drilling equipment.

Conclusion:

Maine enters the late fall with soberingly low ground water and stream flow levels. All agencies involved in water resources issues, as well as those who respond to community problems and human needs, will need to continue to monitor the situation closely, and work in their areas of expertise to support Maine citizens.

Information Resources:

U.S. Geological Survey
207-622-8202
http://me.water.usgs.gov
National Weather Service, Gray, Maine
207-688-3216
http://www.nws.noaa.gov/er/gyx
National Weather Service, Caribou, Maine
207-496-8931
http://www.nws.noaa.gov/er/car
Maine Department of Conservation, Maine Geological Survey
207-287-2801
Maine Emergency Management Agency
207-626-4503
http://www.state.me.us/mema
Maine Department of Human Services, State of Maine Drinking Water Program
207-287-2070
http://www.state.me.us/dhs/eng/water
Maine Department of Economic and Community Development (CDBG information)
207-624-9816