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## **Introduction and Highlights of the Past Year**

This is the fifth annual report of Maine's Water Withdrawal Reporting Program, which is found at Title 38 MRSA, §§ 470-A through 470-H. This program requires water users who withdraw quantities in excess of the thresholds contained in the statute to provide information about their annual water withdrawals from public water resources. September 30, 2007, marked the end of the fifth "water year" subject to reporting under the Water Withdrawal Reporting Program (WWRP). Reports of withdrawals made from October 1, 2006 to September 30, 2007 were to be submitted to the Department of Environmental Protection (DEP) or the Department of Agriculture, Food and Rural Resources (DAFRR) by December 1, 2007.

### **In-stream Flow and Water Level Standards**

In 2007, the Legislature conducted a major substantive rule review of the DEP's Chapter 587, *In-stream Flows and Water Levels rules*, and approved the rules with modifications. The Board of Environmental Protection gave final approval to the rules in July, and the rules were filed with the Secretary of State with an effective date of August 24, 2007. The DEP is in the process of implementing these rules. DEP staff is partnering with other agency staff as appropriate to coordinate with community public water suppliers and agricultural water users.

### **Water Resources Planning Committee**

In 2007, the Legislature also enacted Public Law 2007, chapter 399, *An Act Concerning the Sustainable Use of and Planning for Water Resources*. This legislation directed the agencies involved in water resources, under the leadership of the Maine Geological Survey, to work with stakeholders on a new Water Resources Planning Committee (WRPC) established in 5 MRSA §3331, sub-§8. The WRPC will focus research and planning efforts primarily in watersheds where the cumulative demands on water use approach a significant percentage of the supply of water. An important element of this work will be the continued compilation and analysis of water use information throughout the state.

### **Agricultural Water Management Board**

The Agricultural Water Management Board (AWMB) was in its first year and held three meetings. The AWMB held two field trips with the DAFRR and DEP staff to visit grower sites where the potential existed for low flow standards to impact agricultural irrigation programs. The AWMB was able to observe how DEP and DAFRR staff would handle the situation. In some cases it was established that no problem will exist. In one location, it is clear that the new rules will impact the farmer and he will have to find alternative sources of water in the future. The AWMB will work on a survey in 2008 to find out how many more farmers may be impacted and start the process for development of water management plans for those farmers.

The AWMB established a format and procedure for helping farmers develop water management plans as required by statute. They also are reviewing the criteria for selecting projects to participate in the water source development grant program. The AWMB has been reviewing whether or not to approach the federal government on a general permit for wetland alterations in order to minimize mitigation for small wetland impacts when developing alternative water supplies for agricultural users.

### Sustainable Agricultural Water Source Development Grant Program

The Sustainable Agricultural Water Source Development Grant Program is in its fifth year of operation. An additional \$1.5 million bond issue was approved by the voters in November 2007 and these funds will be disbursed over the next two years. The DAFRR conducted one grant solicitation in the summer to complete the use of previously approved bond funds. An additional five projects were approved, representing wild blueberry, potato and mixed-vegetable farms. Three new ponds and one new well were approved.

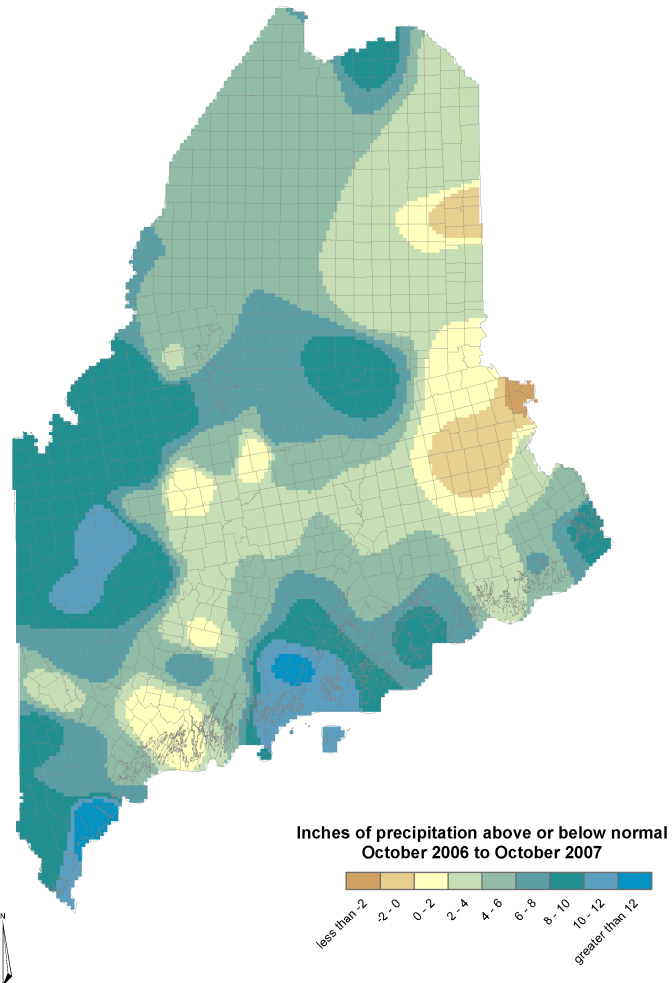
### **Water Availability Data**

#### Summary of water resources conditions for the period October 2006 to October 2007

After two *very* wet years in 2005 and 2006, rainfall returned to more normal levels over the state of Maine as a whole in 2007. There were local exceptions, however. The Patriot's Day storm delivered heavy rains to much of southern and mid-coast Maine in April 2007, while the summer months (and August and September in particular) were drier than normal.

With respect to literal drought conditions, the U.S. Drought Monitor maps (available at <http://drought.unl.edu/dm/archive.html>) showed abnormally dry conditions (the lowest level of drought) in coastal and eastern sections of the State only in the first two weeks of October 2007.

Groundwater levels and surface-water runoff reported at U.S. Geological Survey observation wells and gaging stations (<http://me.water.usgs.gov>) also reflected normal precipitation patterns. Groundwater levels and surface-water runoff only fell into the below normal range in parts of the State in the late summer months.



**Inches of precipitation above or below normal for the period October 2006 through October 2007.**  
Data from National Weather Service stations and the National Weather Service cooperative observer network

## Water Withdrawal Data

<b>Reported Water Withdrawals by Type</b>					
<b>Type of Use</b>	<b>Withdrawals Reported (millions of gallons)</b>				
	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Water Utilities	33,800	34,400	33,500	33,600	29,355
Paper Mills	70,000	66,000	63,000	57,900	64,919
Agriculture	861	719	622	514	1,691
Snow Making	590	559	606	863	537
Bottled Water	365	448	440	699	646

### Public Water Supplies

There are approximately 2,200 Public Water Systems (PWS) in Maine, and of these 400 are community public water systems with 25 or more users. Data for these systems, including location, source and population served, is maintained in a GIS database by the Department of Health & Human Services, Center for Disease Control and Prevention, Division of Environmental Health as part of their Drinking Water Program.

Production/consumption data for many of the larger water utilities comes from an existing reporting program to the Public Utilities Commission (PUC). The water utilities report to the PUC on an annual (Jan. - Dec.) basis, with data due by April of the following year. The production/ withdrawal data is broken down into monthly segments, and is also further divided by source -- either ground-water or surface water. For calendar year 2006, there were 151 water utilities and of those 87 had reported to the PUC. This is down from the 116 who had reported prior to last year's report. Of those reporting, annual production for 2006 was 29.8 billion gallons, for an average of 2.5 billion gallons per month, or 81.6 million gallons per day. There are 50 community systems that use surface water. These systems serve large population centers and therefore use the largest quantities of water. The remaining community systems, and nearly all the smaller systems, rely on groundwater for their supply.

### Bottled Water

There were 31 proposed or operational bottled water facilities in Maine in 2006. Of these, 22 actually produced bottled water during 2006. The 9 non-reporting facilities either did not sell bottled water during 2006, or were under construction. Total water use for 2006 was 646 million gallons, or an average of 54 million gallons per month. This represents an approximate 8% decrease from 2005.

### Agricultural Water Use

In 2006, Maine farmers were challenged by too much water in the early season which hampered planting, then dry conditions in late June and early July and again in late August through mid-September. Farmers in southern Aroostook county and central Maine were having trouble getting enough irrigation water to bulk up potatoes before harvest, but enjoyed great harvest weather. Blueberry crops suffered in some regions from the late August dry conditions and

blueberry irrigation in Washington County continued to be the highest user of water in the agricultural sector. Turf and cranberry farmers irrigated in the mid- summer weeks to assure that quality products had enough water. Vegetable farmers in central and southern Maine struggled to get enough water on some crops to maintain growth. Many farmers who had put in alternative water sources were glad they had done so, as water supplies in streams were minimal. The following table shows the total water use by county with a comparison to past years.

<b>Agricultural Water Use Reported (gallons)</b>					
<b>County</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Washington	581,965,980	549,439,022	558,124,014	458,421,704	1,407,695,139
Kennebec	27,760,122	105,136,500			11,165,000
York	77,547,100	48,455,600		32,356,000	557,894
Aroostook	69,615,943	8,693,100	37,542,431	10,485,516	162,346,826
Oxford	7,554,094	4,800,000	16,788,000		
Cumberland	49,486,200	2,137,200		5,602,000	
Franklin	377,730	683,760	584,410		327,700
Penobscot	23,004,000				105,921,061
Androscoggin	14,502,796		8,848,000	7,614,000	3,546,000
Lincoln	8,116,000				
Sagadahoc	462,500				360,000
Waldo	445,350				
Somerset	251,000				
Hancock	128,000				
<b>Total All Counties</b>	<b>861,216,815</b>	<b>719,345,182</b>	<b>621,886,855</b>	<b>514,479,220</b>	<b>1,691,919,620</b>

#### Commercial and Industrial Use

As noted in prior reports, many commercial and industrial facilities are exempt from the reporting requirements of the WWRP. Some are exempt because they receive their water from a public water system. Others are exempt because they are located on Maine's larger rivers, and their daily withdrawals are less than one-percent of 7Q10 (the low-flow which occurs for seven consecutive days once every ten years on average) at the point of withdrawal. This reflects the fact that availability of an abundant, dependable water supply has long been a siting criteria for some of Maine's most important industries. Other major water users, such as Maine's pulp and paper manufacturers, do not report directly to the WWRP because they report their waste water discharges to the DEP and the volume of withdrawal can be calculated from the wastewater discharge volume. Analysis of wastewater discharge volumes from ten paper mills indicates that they used approximately 65 billion gallons of water in 2005-2006. This is up from approximately 58 billion gallons in 2004-2005, which is attributed to fewer mill shut-downs during the reporting period. Most of this water is discharged back to the rivers after use and treatment.