

Water Resources Planning Committee
April 7, 2022
10:00 – 11:30 AM
Online via Microsoft Teams and in Deering Building Room 101
90 Blossom Lane, Augusta, Maine

Meeting Notes

Committee members in attendance:

David Bell, Stacie Beyer, David Braley, Susan Breau, Stephen Dickson, Mark Dubois, Don Flannery, Ryan Gordon, Dan Kusnierz, Kate Warner, Daniel Locke, Mark Margerum, Nancy McBrady, Eric Venturini

Guests in attendance:

David Kelly Clark, Tom Gordon, Darin Hammond, Ashley Hodge, Stephani Morancie, Bill Sheehan

Ryan Gordon, clerk of the Water Resources Planning Committee (WRPC), called the meeting to order at 10:05 am and provided a brief introduction and the meeting agenda.

Ryan Gordon's presentation began with a review of the WRPC mandate and organization, including an overview of Public Law 2019, Chapter 67, "An Act to Create the Water Resources Planning Committee". He summarized the goals and membership of the Committee. Ryan also mentioned that the Committee has no statutorily defined chair, but we could move to elect one if we so desired, and he can continue to serve as clerk with or without a chair.

Ryan Gordon presented brief summaries of three bills currently in the Maine Legislature:

1. LD 1569, "Resolve, Establishing the Commission To Study the Role of Water as a Resource in the State of Maine"
 - Originally an excise tax on bottled water
 - Amended last session to create a commission to study water resources and extraction taxes
 - Passed by the House, carried over by the Senate to this session
 - No other action
2. LD 1911, "An Act To Prevent the Further Contamination of the Soils and Waters of the State with So-called Forever Chemicals"
 - Carried over from last session, then amended in committee
 - Allows the DEP to require PFAS testing of wastewater discharges
 - Outlaws spreading/sale of municipal or industrial wastewater sludge

3. LD 2013, “An Act Relating to Perfluoroalkyl and Polyfluoroalkyl Substances Contamination in the State”

Establishes a \$100 million fund and advisory committee within DACF to address PFAS contamination on agricultural land:

- Health monitoring
- Transferring contaminated land
- Additional research and education
- Long-term monitoring of contaminated sites, with central data repository

Stephen Dickson, State Geologist, asked if the PFAS monitoring and data repository created by LD 2013 would be for samples besides water. Ryan believes that yes, it would include soil, crops, livestock, etc.

Ryan Gordon presented about recent work at the Maine Geological Survey (MGS) on domestic water use data and population estimates.

1. Work was funded through the USGS Water Use Data and Research (WUDR) Program. Goals were to improve the collection of public utility data from the PUC, improve estimates of population served by public water versus those who are self-supplied, and develop per-capita water use rates.
2. MGS worked with staff at the PUC to improve the annual water utility report forms, batch download filed reports, and create a new database tool to import and store data at MGS.
3. Used spatial utility service areas for 131 water utilities, asymmetric population grids, census block groups with American Community Survey (ACS) demographic and housing data, and a GIS analysis to estimate total population and weighted demographics for each utility.
4. Compared census-based population estimates to raw utility estimates, which are made by multiplying residential connections by a standard coefficient (usually 2.5). Used multiple regression analysis to determine demographic and housing factors that lead to over- or under-estimates using the standard coefficient.
5. Applied the regression analysis to estimate population-served for the remaining 240 unmapped community water systems in Maine.
6. Created a 30-meter population density grid for people for whom domestic water is self-supplied. This grid can be divided up and summed by other spatial areas such as watersheds or counties.
7. Used billing data from 13 water utilities to research seasonal use patterns and demographic and housing factors that influence seasonality and total water use. Seasonal patterns were clear, but no significant demographic correlations were found with total annual water use.

8. For the 131 mapped water districts, the mean residential water usage over three years was 49.3 gallons per person per day. Mean utility withdrawals for all purposes were 131 gallons per person per day.
9. Made total estimates by Maine county for 2017 and 2018 of the following: populations served by public water, self-supplied populations, gallons used by self-supplied households, gallons delivered through community water systems for residential use, and total withdrawals by community water systems.

Bill Sheehan asked where the report on this research can be found. Ryan promised to send a link to the publicly available technical report [it is MGS Circular 21-16, *Improvements to Domestic Water Use Data Collection Methods and Population Estimates for Maine*, available at https://digitalmaine.com/mgs_publications/616/].

After a five-minute break, Ryan Gordon presented results of the 2020 Maine Cooperative Snow Survey and existing drought conditions.

1. Snow surveys are performed monthly in January and February, and weekly starting in early March through snow melt.
2. The early March snow survey showed full snow coverage over the State, ranging from less than 1 inch of snow water equivalent (SWE) at the coast to over 9 inches in the upper Saint John River basin.
3. By the end of March, snow had melted off of the coastal half of Maine into the foothills, an earlier melt than usual, and SWE was normal over the mountains. On the other hand, SWE increased in northern Maine throughout March to over 10 inches SWE in places, and was above normal by the end of the month.
4. River ice is still intact and flood risk remains above normal in the Saint John and tributary basins (Allagash, Fish, Aroostook), but has passed for the southern-flowing rivers. Snow maps will continue to be produced for northern Maine as long as snowpack remains substantial and flood risk remains elevated.
5. The end-of-March map in 2022 was similar in many ways to 2020, when conditions later developed into a “flash drought”. This is not a prediction that we will or will not develop further drought conditions this spring or summer.
6. A map from the US Drought Monitor for March 29 shows severe long-term drought existing in the Boundary Mountains. Northwestern Maine along the Quebec border has remained in moderate to severe drought throughout last summer and all through this winter.
7. USGS Water Watch and Groundwater Watch maps show most river gages and monitoring wells in normal conditions, with a few below normal in southern, western, and northern Maine, and some above normal in eastern Maine.

Stephen Dickson asked if it is possible to subtract the SWE between two snow maps to arrive at an estimate of snow lost. Yes, since SWE is measured in inches, this is possible to multiply the difference by area to estimate melt and sublimation volumes.

Mark Margerum, Maine DEP, introduced Bill Sheehan, DEP's Northern Maine Regional Office manager, and brought up the 2020 flash drought and its impact on agriculture. Since then, the DEP has noticed increased interest in agricultural surface water withdrawals for irrigation. DEP is working to get an additional staff person for the Northern Maine Regional Office to work with requests from farmers.

Bill Sheehan described his interactions with farmers in northern Maine. They are interested and concerned about water withdrawal availability. Maine DEP has been working to apply the Chapter 587 rules ["In-stream Flows and Lake and Pond Water Levels"] to water withdrawals. The new position would be administering Chapter 587 rules and doing formal "alternative flow" plans, which allow irrigators to withdraw water during the driest parts of the season, when flows are lowest and agricultural water needs are highest. DEP is balancing environmental concerns and farming needs.

Susan Breau, Hydrogeologist at the Maine Drinking Water Program (DWP), gave several updates from the water resources team at the DWP:

- On June 21, 2021, the Governor approved LD 129, "Resolve, To Protect Consumers of Public Drinking Water by Establishing Maximum Contaminant Levels for Certain Substances and Contaminants", which requires community and non-transient water systems to test for PFAS by the end of 2022. Results are currently coming in.
- DWP is seeing many applications for solar arrays to be built in or near source water protection areas. DWP is working with consultants, water districts, and DEP on a guidance document for solar array siting in the vicinity of water supplies and protection areas.
- Cyber security is keeping water districts busy. Critical infrastructure like water and wastewater are potential targets. Homeland Security, the FBI, and MEMA are partners that help create and distribute awareness and alert information to public water systems. DWP also has a new water system asset security grant that is administered by Ashley Hodge, Source Water Protection Coordinator at DWP. Around 30 applications came in for work such as improvements to the security of operational control systems.

Nancy McBrady, Director of the Bureau of Agriculture, Food, and Rural Resources, gave several updates from her Bureau and the Department of Agriculture, Conservation, and Forestry (DACF):

- Their bureau is central to work on the ground to support farms impacted by PFAS contamination. They have been following PFAS bills closely, and are dedicated to helping farms maintain viability.
- The Agricultural Water Management Board has been meeting over the last year, and wrote a letter to the Governor asking the State to identify federal funding for improving

sound agricultural water management practices, including irrigation. The Board is also continuing work on best management practices and outreach.

- There is currently a bill working through the legislature [LD 1998, “An Act To Establish a Fund for Farmers Adversely Affected by Drought Conditions”] creating a DACF fund [“Farmers Drought Relief Grant Program”] for agricultural irrigation projects.

Tom Gordon, in the Commissioner’s Office of DACF, reported that DACF and Inland Fisheries and Wildlife will be doing a study on soil carbon incentives, with a report due to the legislature by September 1, 2022. The purpose is to develop programs and policies to incentivize and protect soil carbon storage on agricultural, forestry, and natural lands and wetlands. Soil organic matter in agricultural lands can store substantial water: 20,000-30,000 gallons of water per acre for each 1% increase in soil organic matter. This can reduce the demand for irrigation.

David Bell, Cherryfield Foods, Inc., added that 30,000 gallons is about 1 acre-inch, or approximately 1 week of crop water needs.

Stephen Dickson mentioned that MGS has a new, one-time budget line approved by the Appropriations Committee for \$40,000 in real-time monitoring equipment for some of our groundwater monitoring wells that are part of the National Groundwater Monitoring Network. Bill Sheehan asked if any monitoring wells will be in eastern Aroostook County. Ryan responded that we do have a couple wells in eastern Aroostook county that are currently only measured once or twice per year, and will be priorities for real-time monitoring.

The Committee discussed future meeting topics, with PFAS as one important ongoing topic. The next meeting will likely be in late summer or early fall.

The meeting adjourned at approximately 11:30 am.