

Water Resources Planning Committee

April 7, 2021

1:00 – 4:00 PM

Via Microsoft Teams

Meeting notes

Attending: Members - Andrew Beahm, Bruce Berger, David Braley, Susan Breau, Mark Dubois, Susan Gallo, Ryan Gordon, Bertrand Kendall, Naomi Kirk-Lawlor, Dan Locke, Mark Margerum, Bob Marvinney, Tom Gordon for Nancy McBrady, Kate Warren. Guests - Dave Bell, Stephani Morancie, Tony Jenkins, Sally Stockwell, Nickie Sekera, Mark Dindorf, Nora Schwarz, David Brooks, Thomas Neilson, Keith Taylor

1. State Geologist Robert Marvinney reviewed the protocols for the meeting, began the meeting recording, and reviewed the agenda.
2. Committee members introduced themselves.
3. Snow survey summary (Ryan Gordon, Maine Geological Survey)
 - a. Monthly surveys in January and February, weekly in March through snow melt.
 - b. March 28-31, 2021 survey shows the southern coastal areas free of snow. Inland areas have maximum of 2-3 inches water equivalent in the snow. Ice out continues to move northward with some minor ice dams and flooding. Winter snowpack is in the lowest 25th percentile statewide.
 - c. Comparison to March 29-April 1, 2020 survey. Coastal areas were free of snow. Much more water content in the snow in the northern part of the state – up to 11 inches in some areas.
 - d. Examples of some key sites – Monson traced the lowest recorded levels through February, and still in lower 10th percentile. Allagash was low through February, with slight increase in March, but now near 10th percentile.
 - e. At the end of March, the Drought Monitor showed limited areas of abnormally dry conditions, along the immediate coast in in the northwestern mountains.
 - f. Year-to-date accumulated precipitation in Portland is trending below normal, but well above the record low (1872).
 - g. During the 2016-2017 drought years, the snowpack was better than this year, but still below normal. Snow in 2020 was closer to normal at this time of year.
 - h. Snowpack is important, but it's not a predictor of drought. Early melt may contribute to drier conditions and potential for fires.
 - i. The discussion noted particularly significant wind events that facilitated soil drying. The snowpack in 2020 looked better, but conditions rapidly changed to drought. The snow survey data gets used by the River Flow Advisory Commission uses this information for flood forecasting, which includes looking at long-term forecasts, but such forecasts cannot look far ahead with much confidence. The current weather pattern is similar to the drought period last fall.

4. Stream Explorers program (Andy Beahm, Sally Stockwell, Maine Audubon).
 - a. This program was launched in 2020 to collect data on stream water quality in the Sebago Lake watershed. Surveys of macroinvertebrates are indicators of stream health. This is a citizen science project.
 - b. DEP surveys streams around the state on a 5-year rolling schedule. The results are used to determine if water quality standards are being attained.
 - c. In cooperation with DEP, Maine Audubon developed the program to train volunteers to collect macroinvertebrate information.
 - d. Used as screening-level data by DEP for indication of water quality.
 - e. Supports environmental education and builds public support of stream protection and restoration.
 - f. Partnering with DEP, Lake Environmental Association and Portland Water District. Funding from Maine Outdoor Heritage Fund and Onion Foundation.
 - g. Volunteers are trained to identify 43 taxa that are sensitive, moderately sensitive, or tolerant to poor water quality. Guides and field sheets assist taxa identification.
 - h. Volunteers record taxa in their survey streams and note relative quantities.
 - i. Training via live webinars and in-person trainings. Assembled sampling kits.
 - j. A wide range of people volunteered for this project.
 - k. QA/QC via field photographs of macroinvertebrates.
 - l. Sampling in 2020 was in the Sebago Lake watershed. Some sites sampled by volunteers and PWD using DEP protocols for comparison.
 - m. In 2020, volunteers surveyed 26 streams.
 - n. Very successful program!
 - o. Will expand the survey area in 2021, and new online data collection system.
 - p. <https://maineaudubon.org/projects/stream-explorers/>
 - q. While DEP uses rock baskets for their sampling, the approach used by Maine Audubon works well with volunteers.

5. Discussion of water-related bills in the Maine Legislature (All). The following is a partial list of water-related bills in the current legislative session.

Information on bills (text, amendments, status) can be found at:
http://legislature.maine.gov/bills/default_ps.asp?PID=1456&snum=130

 - a. [LD 64](#), RESOLUTION, Proposing an Amendment to the Constitution of Maine Regarding Environmental Rights
 - b. [LD 129](#), Resolve, To Protect Consumers of Public Drinking Water by Establishing Maximum Contaminant Levels for Certain Substances and Contaminants

- c. [LD 164](#), An Act To Establish Maximum Contaminant Levels under the State's Drinking Water Rules for Certain Perfluoroalkyl and Polyfluoroalkyl Substances (and related bills)
- d. [LD 245](#), An Act Regarding Rural Water Districts
- e. [LD 489](#), RESOLUTION, Proposing an Amendment to the Constitution of Maine To Establish a Right to a Healthy Environment
- f. [LD 757](#), An Act Concerning Large-scale Water Extraction

The following bills have not yet been assigned LD numbers and printed at the time of this meeting:

- g. An Act To Protect Drinking Water for Maine Residents, Rep. Gramlich of Old Orchard Beach
- h. An Act To Revise Maine's Environmental Laws, Rep. Gramlich of Old Orchard Beach
- i. An Act To Study the Relationship between the State and Municipalities Regarding the Waters of the State, Rep. Hepler of Woolwich
- j. An Act To Streamline Regulations Concerning Bulk Water Exports, Rep. Gramlich of Old Orchard Beach
- k. Comments by Bruce Berger regarding positions of the Maine Water Utilities Association (MWUA) on these and other bills.
 - i. MWUA has monitored most of these.
 - ii. [LD 129](#) is of concern. This sets contaminant levels for PFAS chemicals in drinking water. (Note: During the meeting, Bruce said the MWUA was opposed to this bill, but he corrected himself via email later, “We supported this bill. It is a MDWP Bill and based on science and completely doable for water utilities.”)
 - iii. [LD 164](#) – opposed because it sets the limits in statute, which can only be changed by legislative action.
 - iv. [LD 251](#), An Act Regarding Public Utility Assessments, Fees and Penalties. Addresses how PUC charges for oversight of water utilities – MWUA association is working with the PUC, the Public Advocate’s Office and sponsor on amended language that would work for water utilities.
 - v. [LD 489](#) – MWUA is concerned with wording and who will assume oversight of groundwater resources.
 - vi. [LD 757](#) – this bill comes up almost every session, and usually targets private water companies, but may impact Public Water Systems because they are also large-scale water extractors. MWUA association has concerns about property rights and that the approach may be unconstitutional in Maine.
 - vii. MWUA association has a legislative committee comprising personnel from the PWS. They meet regularly during the legislative session and review every bill. They develop testimony based on science. They fully support safe drinking water, but need to consider the unintended consequences of some of these well-intentioned bills.

- l. Susan Breau, Maine Drinking Water Program, discussed PFAS bills. LD 129, LD 164, [LD 1388](#). All are currently in committees. DWP is engaged in the discussion regarding regulatory approach to PFAS, interim PFAS standards, and the eventual adoption of MCLs.
 - i. Discussion – PFAS contamination is being discovered in more locations. Need careful consideration of standards based on science which is still changing.
 - m. Mark Dubois, Poland Spring. Watching LD 757 for its proposal to limit contracts. Also [LD 640](#) – An Act To Ban Single-serving, Disposable Plastic Water Bottles. Extraction tax is also a concern, but the bill has not yet been printed.
6. Discussion of “consumptive water use” (Bob Marvinney, Ryan Gordon, MGS).
 - a. Term is defined in rules, but the term is probably understood in different ways by different sectors.
 - b. Current definition in [Title 38, §470-A](#): “Nonconsumptive use” means any use of water that results in the water being discharged into the same water source within ¼ mile upstream or downstream from the point of withdrawal.... This also includes withdrawals from groundwater that are discharged to a subsurface system or to a hydraulically connected surface water body.
 - c. Other withdrawals that do not meet this definition are consumptive.
 - d. For a groundwater withdrawal to be nonconsumptive, the water would need to be returned to the same aquifer system.
 - e. Because of the distances between withdrawal and return points for Public Water Systems, most would be considered consumptive. This is a regulatory definition that is used to determine when water withdrawals need to be reported to the DEP.
 - f. Mark Margerum, perspective from DEP. Exemption for nonconsumptive uses was developed to address pulp and paper mills. They withdraw large volumes from a river, use it in their process, treat the water, and return to the same river. Since this language was adopted, no other entity has attempted to claim exemption under this statute. Mills withdraw large volumes from large rivers. DEP has not found this to be a problem.
 - g. Statistics on water use often lump all these uses together under the “industrial” category, regardless of whether they are consumptive or not.
 - h. Naomi Kirk-Lawlor: Do threshold amounts factor into nonconsumptive use? Nonconsumptive also means that the withdrawal amount and the return amount are not above the thresholds set in statute.
 - i. Mark said that this has not come up in any permitting at the DEP. Most permits do not include a return to the resource – most focus only on withdrawals.
 - ii. There have been discussions of withdrawals for agricultural water use and how much might be considered nonconsumptive. Some studies suggest a percentage of irrigation water that makes it back to groundwater. Some estimates suggest 10%.

- iii. Most water leaves the system through evapotranspiration or in the products.
 - iv. DEP did studies on pulp mills and found that the difference in water volumes between withdrawals and returns were on the order of a couple percent.
 - i. Dan Locke: Has reviewed Cherryfield Food withdrawals for many years. In 2020 they withdrew about 1 billion gallons of groundwater. Now with the expansion of mowing the blueberry fields rather than burning, the lichens around the base of the plants is preserved. This helps preserve moisture.
7. Overview of Agricultural Water Management Board (AWMB) by Bob Marvinney
- a. First established during the drought of the early 2000s. This led to discussions of how water could be better managed, how to assist growers with new sources.
 - b. The AWMB was reestablished this year, with membership from the agricultural community and state agency representatives.
 - c. The AWMB had an initial meeting on March 10, 2021 to establish a common knowledge of water resources and water demands, and what a build-out of irrigation might look like.
 - d. Also discussed the Chapter 587 instream flow rules.
 - e. Discussed the 2020 drought and water withdrawals that had a cumulative impact on some water sources in Aroostook County.
 - f. A member of our Committee represents the AWMB to facilitate communications.
 - g. Tom Gordon: The AWMB will elect a chair who will be the representative to this Committee. The next meeting is scheduled for April 26. Going forward, planning for drought before we experience one is key. Growers have been seeking information on potential water sources on their land. Last year was an example of how quickly water conditions can change.
8. Public Comment
- a. Dave Brooks, consulting hydrogeologist: Worked with many irrigators and snow-making during the drought of the early 2000s. Looking at subdivisions with individual wells and many local regulations do not consider consumptive use in these areas, particularly on the coast. Some communities treat residential water use as consumptive, even though the water is returned to the system in the nearby septic field.
 - i. Coastal communities, particularly those on long, narrow peninsulas have challenges with water availability. They are often rocky with little overburden which limits opportunities for water availability. It's good that communities are thinking about this, but they need a proper balance.
 - b. Dave Bell, Cherryfield Foods: Glacial outwash soils that wild blueberries grow on don't hold water well, and it's the organic matter that is important. After decades of burning, building back the organic layer is the focus to retain moisture. The agricultural

community discusses water use in terms of acre-inches. They probably use 2-3% of the rain on their land holdings.

- i. Annual rainfall in Maine is 24 trillion gallons, of which 2-5 trillion infiltrates into groundwater.
- c. Keith Taylor, consulting hydrogeologist: Are ski areas considered nonconsumptive?
 - i. Marvinney: We have not looked at the temporal aspects of water withdrawals, where the water is withdrawn but returns many months later.
 - ii. Ryan Gordon: There are many uses where we do not know the percentage of consumptive use. We may design studies to investigate this for different types of use.
 - iii. Mark Margerum: With regard to ski areas, none have applied for an exemption as a nonconsumptive use. Some ski areas are regulated by the DEP or LUPC.
 - iv. In the near term, Ryan will look at the meteorological data for 2020 and available information acreage of various crops to do an analysis of the deficit between precipitation and crop demand. This can be useful to estimate what the irrigation demand would have been if the deficit were made up by irrigation.
- d. Nickie Sekera: Is there a uniform drought index that is used in Maine, particularly for bulk water extraction and exports?
 - i. Ryan Gordon: Most regulations refer to Palmer Drought Index. It's a very quantitative index based on a water balance model for soil moisture. It's not as good at modeling hydrologic drought. From the hydrologic standpoint, the US Drought Monitor might be better. It incorporates many different effects that works well for Maine.

Meeting recording: