

Executive Summary

Through the passage of Resolve 2021, Chapter 85, the 130th Maine Legislature established the Commission To Examine the Role of Water as a Resource in the State of Maine, referred to in this report as the “commission.”¹ The resolve directed the commission to study the role of water resources in the State and the nature and extent of infrastructure involved in the use and delivery of water resources including:

- The extent of water resources available in the State;
- Legal principles regarding the ownership of water resources in the State;
- The extent to which water resources will be needed in the State and nation in the future for household, government, business, commercial and other purposes;
- The quality of available water resources and the need for measures to protect water quality;
- The extent of transportation of water within the State and exportation of water from the State;
- The sustainability of aquifers within the State;
- The nature and use of natural resource extraction taxes in other states and the advantages and disadvantages of enacted natural resource extraction taxes in the State; and
- The relationship between water resources and climate change in the State, including an analysis of what actions other states are taking on this issue.

The commission was charged with developing recommendations to ensure that there is adequate clean, safe and accessible drinking water for the State's residents and to meet the needs of commercial and business interests now and in the future; to identify the need for additional state resources to implement its recommendations; and to make a recommendation regarding the positive and negative aspects of a tax on water extraction.

The sixteen commission members appointed to examine these issues brought a broad range of experience to the table.² Over the course of five meetings, the commission solicited, received and discussed a substantial amount of information relevant to its charge as set forth in its authorizing legislation.³

Based on the information collected by the commission and following discussion and deliberation by commission members, the commission developed the following recommendations for consideration by the 131st Legislature:

¹ See Appendix A for a copy of the resolve.

² See Appendix B for a list of appointed commission members.

³ See Part III of this report for a summary of the commission process.

**** DRAFT REPORT FOR CONSIDERATION DURING 12/1/2022 STUDY MEETING ****

1. The Legislature should establish a new Commission To Study the Role of Water as a Resource in the State of Maine, with a more focused scope of study, to address the unresolved work of this commission;
2. The Legislature should amend the Water Resources Planning Committee statute in Title 5, section 6401 to:
 - A. Include among its duties: (1) identification of measures to promote public access to information about Maine’s water resources, including, but not limited to, measures to centralize within a single state agency all relevant data on water use and water resources that is currently collected by state, federal and other entities; and (2) identification of measures to enhance or supplement state monitoring and data collection regarding water use and water resources, the analysis of that data and, where necessary, funding opportunities to support those measures; and
 - B. Require annual reporting, including any proposals for necessary legislation, to the Legislature, with authority to certain legislative committees to propose legislation related to the report;
3. The Legislature should amend the Maine Agricultural Water Management Board statute in Title 7, section 352 to:
 - A. Include among its duties identification of measures to enhance drought preparedness and drought resilience by agricultural producers, including, but not limited to, improved water capture and storage measures, enhanced irrigation opportunities and identification of low-flow areas and low-flow occurrences and development of a notification system to producers located in those areas; and
 - B. Require annual reporting, including any proposals for necessary legislation, to the Legislature, with authority to certain legislative committees to propose legislation related to the report;
4. The Legislature should further study the legal status of groundwater rights and ownership in Maine, including, but not limited to, further review of the Maine Supreme Judicial Court’s 1999 opinion in *Maddocks v. Giles* and the approaches to this issue taken by other states; and
5. The Legislature should consider the enactment of measures that would require testing and reporting on the levels of perfluoroalkyl and polyfluoroalkyl substance or PFAS contaminants in water extracted and used for commercial bottling purposes.

Further information on these recommendations, including a summary of commission member votes on each recommendation, is found in Part IV of this report. Draft legislation incorporating a number of the above recommendations is found in Appendices C and D.

I. Introduction

Through the passage of Resolve 2021, Chapter 85, the 130th Maine Legislature established the Commission To Examine the Role of Water as a Resource in the State of Maine.⁴ The commission was directed to study the role of water resources in the State and the nature and extent of infrastructure involved in the use and delivery of water resources including:

- The extent of water resources available in the State;
- Legal principles regarding the ownership of water resources in the State;
- The extent to which water resources will be needed in the State and nation in the future for household, government, business, commercial and other purposes;
- The quality of available water resources and the need for measures to protect water quality;
- The extent of transportation of water within the State and exportation of water from the State;
- The sustainability of aquifers within the State;
- The nature and use of natural resource extraction taxes in other states and the advantages and disadvantages of enacted natural resource extraction taxes in the State; and
- The relationship between water resources and climate change in the State, including an analysis of what actions other states are taking on this issue.

The commission was charged with developing recommendations to ensure that there is adequate clean, safe and accessible drinking water for the State's residents and to meet the needs of commercial and business interests now and in the future; to identify the need for additional state resources to implement its recommendations; and to make a recommendation regarding the positive and negative aspects of a tax on water extraction.

The sixteen commission members appointed to examine these issues brought a broad range of experience to the table.⁵ Those members included:

- Four members appointed by the President of the Senate as follows:
 - Two members of the Senate, including a member from each of the 2 parties holding the largest number of seats in the Legislature;
 - One member of the public residing in northern Maine; and

⁴ See Appendix A for a copy of the resolve.

⁵ See Appendix B for a list of appointed commission members.

**** DRAFT REPORT FOR CONSIDERATION DURING 12/1/2022 STUDY MEETING ****

- One member representing the interests of persons who bottle or package water for commercial sale;
- Four members appointed by the Speaker of the House of Representatives as follows:
 - Two members of the House of Representatives, including a member from each of the 2 parties holding the largest number of seats in the Legislature;
 - One member of the public residing in western Maine; and
 - One member representing the interests of businesses that use water in manufacturing or the provision of items or services for sale; and
- Eight members appointed by and agreed upon by both the President of the Senate and the Speaker of the House of Representatives as follows:
 - One member representing the Office of Policy Innovation and the Future;
 - Two members who are members of federally recognized Indian nations, tribes or bands in the State;
 - One member representing the Department of Health and Human Services, Maine Center for Disease Control and Prevention, division of environmental health, drinking water program;
 - One member representing the interests of municipal water utilities;
 - One member representing the State Geologist;
 - One member representing organizations involved in protection of the environment; and
 - One member representing the Office of the Attorney General with an interest in water rights law.

Over the course of five meetings, the commission solicited, received and discussed a great deal of information relevant to its charge as set forth in its authorizing legislation.⁶ The commission received presentations at the first meeting from commission member Ryan Gordon of the Maine Geological Survey within the Department of Agriculture, Conservation and Forestry concerning water resources in Maine; from commission member Scott Boak of the Office of the Maine Attorney General who led a review of selected case law and other guidance relating to water rights, ownership and use; and from commission member William Longfellow of the Sipayik Environmental Department who provided a tribal perspective on water resources.

⁶ See Part III of this report for a summary of the commission process.

At the second meeting, the commission received presentations from Anthony Moffa, Associate Professor of Law at the University of Maine School of Law, about water rights and ownership and state approaches to regulation of natural resource extraction; from Marybeth Richardson of the Department of Environmental Protection on the department's role in the regulation of water resources; from commission member Amy Lachance of the State Drinking Water Program within the Maine Center for Disease Control and Prevention about the program's role in the regulation of water resources; from commission member Ryan Gordon of the Maine Geological Survey within the Department of Agriculture, Conservation and Forestry regarding the survey's role in the regulation of water resources and the activities of the Water Resources Planning Committee and the Maine Agricultural Water Management Board; and from Sean Birkel, the Maine State Climatologist at the University of Maine Cooperative Extension concerning climate change and water resources.

During the third meeting the commission received presentations from Tony Willardson of the Western States Water Council and Aja Croteau of the Council of State Governments, who provided an overview of state water policies, and from Jackson Brainerd and Mindy Bridges of the National Conference of State Legislatures on state approaches to natural resource extraction taxes.

As part of its work, the commission also gathered and reviewed other relevant background materials relating to water resources, including a number of prior Maine studies, summarized in more detail in Part II of this report and available for review on the commission's publicly accessible website at <https://legislature.maine.gov/role-of-water-as-a-resource-in-the-state-of-maine-background-materials>.

Drawing on the information included in these presentations and resources and following substantive discussion and deliberation by commission members, the commission proposes the following recommendations for consideration by the 131st Legislature:

1. The Legislature should establish a new Commission To Study the Role of Water as a Resource in the State of Maine, with a more focused scope of study, to address the unresolved work of this commission;
2. The Legislature should amend the Water Resources Planning Committee statute in Title 5, section 6401 to:
 - A. Include among its duties: (1) identification of measures to promote public access to information about Maine's water resources, including, but not limited to, measures to centralize within a single state agency all relevant data on water use and water resources that is currently collected by state, federal and other entities; and (2) identification of measures to enhance or supplement state monitoring and data collection regarding water use and water resources, the analysis of that data and, where necessary, funding opportunities to support those measures; and

- B. Require annual reporting, including any proposals for necessary legislation, to the Legislature, with authority to certain legislative committees to propose legislation related to the report;
3. The Legislature should amend the Maine Agricultural Water Management Board statute in Title 7, section 352 to:
 - A. Include among its duties identification of measures to enhance drought preparedness and drought resilience by agricultural producers, including, but not limited to, improved water capture and storage measures, enhanced irrigation opportunities and identification of low-flow areas and low-flow occurrences and development of a notification system to producers located in those areas; and
 - B. Require annual reporting, including any proposals for necessary legislation, to the Legislature, with authority to certain legislative committees to propose legislation related to the report;
4. The Legislature should further study the legal status of groundwater rights and ownership in Maine, including, but not limited to, further review of the Maine Supreme Judicial Court's 1999 opinion in *Maddocks v. Giles* and the approaches to this issue taken by other states; and
5. The Legislature should consider the enactment of measures that would require testing and reporting on the levels of perfluoroalkyl and polyfluoroalkyl substance or PFAS contaminants in water extracted and used for commercial bottling purposes.

Further information on these recommendations, including a summary of commission member votes on each recommendation, found in Part IV of this report. Draft legislation incorporating a number of the above recommendations are found in Appendices C and D.

II. Background⁷

As noted above, the commission was charged in its authorizing legislation with studying a number of issues associated with the role of water resources in the State and the nature and extent of infrastructure involved in the use and delivery of water resources. The commission fulfilled this duty through the collection and review of a variety of resources, including through the hosting of multiple, substantive presentations from commission members, state agencies and other experts during the course of its five meetings. The information provided in those resources and presentations serve as the basis for the background information set forth below.

⁷ The information referenced in this part is primarily derived from a number of resources and presentations provided to the commission during the course of its work. Those resources and presentations, which are available on the commission's publicly accessible website at <https://legislature.maine.gov/role-of-water-as-a-resource-in-the-state>, include, but are not limited to, "Introduction to Groundwater Resources," Ryan Gordon, Maine Geological Survey; "Oversight & Regulation of Water Resources, Maine CDC Drinking Water Program," Amy Lachance, Maine Center for Disease Control and Prevention, Drinking Water Program; "Groundwater Rights and Natural Resource Extraction," Anthony Moffa, University of Maine School of Law; "Climate Change in Maine, Precipitation Trends and Projections," Dr. Sean Birkel, University of Maine Cooperative Extension; "Regulation of Large-Scale Groundwater Extraction in Maine," Marybeth Richardson, Maine Department of Environmental Protection; and "Water Resources Programs at the Maine Geological Survey," Ryan Gordon, Maine Geological Survey.

A. Hydrogeology, Water Quantity and Water Quality

i. Hydrogeology and the extent of water resources⁸

Maine is an incredibly water-rich state, receiving on average 45 inches of precipitation per year, which is the equivalent of roughly 26 trillion gallons of water. By contrast, much of the midwestern and southwestern United States receives less than 20 inches of precipitation per year, with some areas seeing less than 10 inches annually. About 50% of Maine’s annual precipitation, or 13 trillion gallons of water, end up as runoff into streams, rivers, lakes and the ocean. 35% or 9 trillion gallons of water evaporate or transpire through vegetation. Finally, roughly 15% or 4 trillion gallons of water a year infiltrates to recharge groundwater resources. Out of those 4 trillion gallons of groundwater recharge, human use in Maine constitutes 32 billion gallons or less than 1% of that total. Private domestic wells and public water supplies consume almost 70% of those 32 billion gallons of human use. A variety of commercial, industrial and agricultural purposes, including water bottling – which uses roughly 1 billion gallons of water a year – consume the remainder of that total. It is for these reasons that Maine’s groundwater resources are broadly considered to be an abundant, renewable resource.

Groundwater in Maine is primarily held in aquifers, which are defined as subsurface materials that have enough connected pore space to transmit usable amounts of water to a well or spring. There are two primary types of aquifers in Maine –bedrock aquifers and sand and gravel aquifers. Bedrock underlies all of New England and generally contains discrete, thin fractures through which water can flow. By contrast, in a sand and gravel aquifer, water flows in the spaces between grains of gravel, sand and silt. Sand and gravel deposits constitute the best resources for high-yield wells, however, their distribution is limited in Maine.

Groundwater monitoring over time has consistently shown the levels of groundwater in Maine to be stable. Although usable groundwater resources are not evenly distributed across the State, and while localized problems have and will continue to occur especially during periods of drought, given the current human demands on the State’s groundwater resources and the robust annual recharge of those resources through precipitation, Maine is not anticipated to face water availability issues in the future in the same way many other areas in the country have and will continue to. That being said, there are a number of challenges that have and will continue to affect Maine’s water resources, including, but not limited to, the impacts of climate change and water quality issues caused by contamination.

ii. Climate change impacts⁹

As a result of climate change, Maine’s annual temperature has increased about 3 degrees Fahrenheit since 1895 and is projected to warm an additional 2 to 4 degrees by 2050 and up to 10 degrees by 2100. Annual precipitation has increased in Maine about 6 inches during that same period and is projected to increase an additional 2 to 7 inches over this century. Increased

⁸ The information referenced here is primarily derived from the presentation provided by Ryan Gordan, Maine Geological Survey on September 12, 2022, titled “Introduction to Groundwater Resources” and available at <https://legislature.maine.gov/doc/8855>.

⁹ The information referenced here is primarily derived from the presentation provided by Dr. Sean Birkel, University of Maine Cooperative Extension on October 6, 2022, titled “Climate Change in Maine, Precipitation Trends and Projections” and available at <https://legislature.maine.gov/doc/9075>.

temperatures have intensified the hydrogeologic cycle, leading to more extreme weather, heavier precipitation and enhanced evaporative losses. Maine is projected to see an increased likelihood of heat and cold waves, more intense precipitation events and a shorter snow season. Data indicates, however, that meteorological drought has not increased over the past century, although there have been a number of significant drought events in the recent past. It is unclear whether, due to climate change and other factors, drought events will become more common in the future. The observed and projected meteorological trends suggest warmer temperatures in Maine expected and more severe droughts during the drier months of the year.

iii. PFAS contamination

Although a variety of containments threaten the quality of groundwater and surface water resources in Maine, such as agricultural runoff or legacy industrial contamination, there has been recent focus in the State on the threats posed by perfluoroalkyl and polyfluoroalkyl substances or PFAS. PFAS are a group of man-made chemicals that became prevalent in a wide variety of commercial applications beginning in the 1940s, such as in various household products (e.g., furniture, carpets, cookware, clothing and food packaging), industrial processes and in fire-fighting foams. PFAS break down very slowly and are persistent. This allows for bioaccumulation in humans and animals and concentration in the environment. PFAS exposure has been tied to a number of serious health conditions and, in recent years, significant PFAS contamination has been discovered in multiple locations in Maine, including in surface water and groundwater resources. Many of these contaminated sites are at or in close proximity to locations where sludge or septage was licensed or otherwise authorized by the State to be spread or applied and many of these sites are or were in the recent past operated by agricultural producers.

Pursuant to Public Law 2021, Chapter 478¹⁰, about the Department of Environmental Protection in cooperation with the Department of Agriculture, Conservation and Forestry is in the process of identifying those sites affected by PFAS contamination. Those investigations, which are focused on and around sites on which contaminated sludge or septage was spread or applied, are due to be completed by the Department of Environmental Protection by the end of 2025. Additionally, pursuant to Resolve 2021, Chapter 82¹¹, community water systems and nontransient noncommunity water systems are required to monitor and test for PFAS in water supplies and implement treatment remedies if PFAS levels exceed a specified threshold. The Department of Health and Human Services through the Maine Center for Disease Control and Prevention's Drinking Water Program is charged with adopting maximum contaminant levels for PFAS in these systems by rule by 2024. Although the State has in the past number of years taken a number of substantial actions to address the growing threats posed by PFAS contamination, the extent of that contamination, the costs of and methods by which it can be remediated and the timeframe for that remediation remain unclear.

¹⁰ See <http://www.mainelegislature.org/legis/bills/getPDF.asp?paper=HP1189&item=5&snum=130>.

¹¹ See <http://www.mainelegislature.org/legis/bills/getPDF.asp?paper=SP0064&item=3&snum=130>.

B. Legal Principles of Water Use and Ownership¹²

Under Maine law, the legal principles applicable to the use and ownership of water resources differ depending on whether the resource in question is surface water or groundwater.

i. Use of and ownership of surface waters

The use and ownership of surface water is generally controlled by the common law doctrine of reasonable use, which requires a riparian owner – a person holding a water right – to make “reasonable use” of a surface water resource. This doctrine generally provides that a riparian owner may make use of a surface water resource on their property so long as that use does not unreasonably interfere with other riparian owners use of the resource.¹³ The Maine Supreme Judicial Court described this doctrine in its 1885 *Lockwood Co. v. Lawrence* opinion, noting that:

“Every proprietor upon a natural stream is entitled to the reasonable use and enjoyment of such stream as it flows through or along his own land, taking into consideration a like reasonable use of such stream by all other proprietors above or below him. The rights of the owners are not absolute but qualified, and each party must exercise his own reasonable use with a just regard to the like reasonable use by all others who may be affected by his acts.”¹⁴

ii. Use of and ownership groundwater

By contrast, the use and ownership of groundwater in Maine is controlled by the common law doctrine of absolute dominion. Under that doctrine, as stated by the Maine Supreme Judicial Court in its 1999 opinion in *Maddocks v. Giles*, “groundwater is the absolute property of the owner of land, just like rocks and soil that compose it.”¹⁵ In an absolute dominion jurisdiction like Maine, the right of a landowner to use the groundwater below their property is considered exclusive, meaning that a landowner is not liable for damages if their use of that groundwater affects a neighbor’s or adjacent user’s ability to access the groundwater below their property. As an absolute dominion jurisdiction, Maine falls within a minority of jurisdictions in the United States. Many states have instead adopted a reasonableness standard for groundwater use – the so-called American rule – while others apply a different approach, such the prior appropriation doctrine or the correlative rights doctrine.

The absolute dominion rule in Maine, however, has been modified over time through the enactment of a number of laws that may affect a property owner’s use of the groundwater below their land. In particular, the Legislature in 1987 established an exception to the absolute

¹² The information referenced here is derived from a number of sources including, in addition to those otherwise cited, the presentation provided by Anthony Moffa, University of Maine School of Law on October 6, 2022, titled “Groundwater Rights and Natural Resource Extraction” and available at <https://legislature.maine.gov/doc/9071> and additional documents distributed at the September 12, 2022 meeting, available at <https://legislature.maine.gov/water-as-a-resource-meeting-9122022>, and reviewed during that meeting by Scott Boak, Office of the Maine Attorney General.

¹³ See, e.g., *Lockwood Co. v. Lawrence*, 77 Me. 297 (1885). See also *Kennebunk, Kennebunkport & Wells Water Dist. v. Me. Tpk. Auth.*, 145 Me. 35 (1950).

¹⁴ *Lockwood Co. v. Lawrence*, 77 Me. 297, 316 (1885);

¹⁵ *Maddocks v. Giles*, 1999 ME 63, 728 A.2d 150, 153.

dominion rule as part of the Ground Water Protection Program by providing liability when a person withdraws groundwater in excess of the “beneficial domestic use” for a single-family home and when the withdrawal interferes with a preexisting use by a landowner or lawful occupant.¹⁶ The term “beneficial domestic use” is defined in statute to mean “any ground water used for household purposes essential to health and safety, whether provided by individual wells or through public supply systems.”¹⁷ This law accordingly does not apply to non-domestic uses and does not protect a domestic user whose withdrawal does not preexist the other groundwater use that is interfering with the domestic user’s groundwater use.

C. State Regulation of Water Resources

A variety of laws and rules in Maine regulate the extraction of groundwater and the use of water resources and protect and ensure the quality of those resources. These regulatory schemes, as they pertain to the use of groundwater resources, serve to further modify the common law absolute dominion rule, as described in the prior section.

*i. Role of the Department of Environmental Protection (DEP)*¹⁸

The DEP administers a number of statutes designed to protect and enhance the quality of Maine’s surface waters and groundwater, many of which derive from its delegation status under the federal Clean Water Act,¹⁹ including its water classification program.²⁰ In terms of the laws and regulations applicable to the quantity and extraction of groundwater resources, the DEP’s primary authority derives from the State’s site location of development or site law²¹ and Natural Resource Protection Act or NRPA.²²

The provisions of the site law generally apply to a “development of state or regional significance that that may substantially affect the environment,” which includes certain project structures that occupy a ground area in excess of 3 acres.²³ Structures that meet these criteria must obtain approval from the DEP in the form of a permit prior to development, which requires, among other factors, a DEP finding that the development will have no adverse effect on the natural environment.²⁴ In the case of such a structure designed to facilitate the withdrawal of groundwater, the DEP is required to consider the effects of the proposed withdrawal on the waters of the State, water-related natural resources and existing uses.²⁵ Pursuant to DEP rule, in assessing those effects, it may consider, among other factors, evidence regarding the impact of the withdrawal on the water table and groundwater flow patterns and may as a term or condition of approval establish requirements to ensure no unreasonable effect on groundwater quantity or require groundwater level monitoring wells.²⁶

¹⁶ See 38 MRSA §404.

¹⁷ 38 MRSA §404(1)(A).

¹⁸ The information referenced here is primarily derived from the presentation provided by Marybeth Richardson, Department of Environmental Protection on October 6, 2022, titled “Regulation of Large-Scale Groundwater Extraction in Maine” and available at <https://legislature.maine.gov/doc/9072>.

¹⁹ See 33 USC §1251 *et seq.*

²⁰ See 38 MRSA §464 *et seq.*

²¹ See 38 MRSA §481 *et seq.*

²² See 38 MRSA §480-A *et seq.*

²³ See 38 MRSA §482(2) and (6); 38 MRSA §483.

²⁴ See 38 MRSA §484.

²⁵ See 38 MRSA §484(3)(F).

²⁶ See Department of Environmental Protection Rule Chapter 375(8).

The NRPA by contrast generally regulates certain construction or development-related activities located in, on or over any “protected natural resource” or adjacent to certain other natural resource areas by requiring the issuance of a permit from the DEP.²⁷ Under the NRPA, a person also may not establish or operate a “significant groundwater well” without a DEP-issued permit.²⁸ The term “significant groundwater well” is defined to mean any well, wellfield, excavation or other structure, device or method used to obtain groundwater that is either (1) withdrawing at least 75,000 gallons during any week or at least 50,000 gallons on any day and located at a distance of 500 feet or less from certain natural resources or (2) withdrawing at least 216,000 gallons during any week or at least 144,000 gallons on any day and located at a distance of more than 500 feet from those same natural resources.²⁹ Just like the provisions of the site law applicable to groundwater extraction projects, to issue a NRPA permit for a significant groundwater well, the DEP must determine the activity will not have any undue unreasonable effect on the waters of the State, water-related natural resources or existing uses.³⁰

ii. Role of the State Drinking Water Program (DWP)³¹

Drinking water resources are primarily regulated in Maine by the State’s DWP, which is housed within the Department of Health and Human Services, Maine Center for Disease Control and Prevention. About forty percent of Maine residents obtain their drinking water from private wells, which are not regulated by the DWP although it does make certain resources available to private well users. The DWP does oversee the more than 1,800 public water systems in the State, which includes twenty-one entities that bottle water, and the DWP engages in a number of activities primarily focused on the protection and monitoring of drinking water sources and in facilitating the remediation of source contamination. DWP regulations for public water systems address groundwater quantity issues by requiring the production of sufficient water volume to maintain adequate pressure through the distribution system.

Oversight of water bottling operations is generally conducted by the Maine Department of Agriculture, Conservation and Forestry pursuant to a memorandum of understanding with the DWP. The DWP does administer Maine’s so-called bulk water transport law, which generally requires State authorization for the transportation of water for commercial purposes by conduit, tanker or container greater than 10 gallons in size.³² A water bottling operation operating pursuant to a DEP-issued NRPA or site law permit, however, is excepted from the requirements of the bulk water transport law, which also includes other enumerated exceptions.³³ For other water bottling operations not otherwise excepted from the law, the DWP may issue a bulk water transport permit upon a determination that the withdrawal will not have an undue adverse effect on the waters of the State, water-related natural resources or existing uses.³⁴ According to the

²⁷ See 38 MRSA §480-C

²⁸ See 38 MRSA §480-C(4).

²⁹ 38 MRSA §480-B(9-A).

³⁰ 38 MRSA §480-D(10).

³¹ The information referenced here is primarily derived from the presentation provided by Amy Lachance, Drinking Water Program on October 6, 2022, titled “Oversight & Regulation of Water Resources, Maine CDC Drinking Water Program” and available at <https://legislature.maine.gov/doc/9073>.

³² See 22 MRSA §2660-A.

³³ See 22 MRSA §2660-A(2).

³⁴ 22 MRSA §2660-A(3)(D).

DWP, there are at present only two such operations that have been issued a bulk water transport permit by the DWP.

iii. Role of the Department of Agriculture, Conservation and Forestry (DACF)³⁵

Many of these regulated activities described above are monitored, overseen by or include the involvement of the DACF's Maine Geological Survey (MGS). Among its other activities, the MGS also maintains a water well database,³⁶ is engaged in a long-term aquifer mapping program and maintains a network of groundwater level monitoring wells in partnership with the United States Geological Survey. As described elsewhere in this report, the DACF and MGS are also involved in the activities of the Water Resource Planning Committee and the Maine Agricultural Water Management Board.

D. Prior Water Resource Studies

Multiple entities, including the Legislature, have conducted studies of Maine's water resources over the past forty years. The commission collected and reviewed these study reports, which are available on the commission's publicly accessible website at <https://legislature.maine.gov/role-of-water-as-a-resource-in-the-state-of-maine-background-materials>. Those studies are also briefly summarized below.

i. Ground Water Protection Commission (1979-1981)

The Legislature established this commission in 1979 to review the laws dealing with groundwater.³⁷ It was specifically charged with identifying cases of groundwater contamination; reviewing the existing structure by which groundwater information is collected and analyzed; and reviewing existing federal, state and local regulations protecting groundwater. The commission's recommendations resulted in a number of enacted legislative proposals between 1981 and 1983, including amendment of the site law to prohibit siting on sand and gravel aquifers any projects with a potential to pollute the aquifer; establishment of the Maine Hazardous Waste Fund; and passage of the Underground Tanks Regulation Act. As a result of the study, the State also expanded efforts to identify groundwater sources through a sand and gravel aquifer mapping project.

ii. Groundwater Policy Committee, Land and Water Resources Council (1983-1985)

In response to concerns about threats to the State's groundwater supply, the Governor in 1983 requested the Land and Water Resources Council to review the State's protection and management of groundwater resources and to assess progress made toward implementation of the Ground Water Protection Commission's 1981 recommendations. The Governor also requested the council to produce recommendations for additional measures needed to assure continued groundwater quality and availability, to protect public health and to improve the efficiency and cost-effectiveness of the State's role in regulating groundwater. In response, the

³⁵ The information referenced here is primarily derived from the presentation provided by Ryan Gordon, Maine Geological Survey on October 6, 2022, titled "Water Resources Programs at the Maine Geological Survey" and available at <https://legislature.maine.gov/doc/9074>.

³⁶ The database is populated with information collected and provided to the Maine Geological Survey pursuant to 12 MRSA §550-B.

³⁷ See Private and Special Law 1979, Chapter 43, available at http://ldc.mainelegislature.org/Open/Laws/1979/1979_PS_c043.pdf.

council formed a Groundwater Policy Committee, which undertook an extensive review of scientific data and related policies, programs and resources of federal, state and local governments and subsequently issued a report with recommendations to the Council in 1985.

Among its recommendations, the committee proposed that the Maine Geological Survey continue its work to map the sand and gravel aquifers in the State, encouraged additional resources to assist with the project and recommended implementation of a new bedrock aquifer mapping program and measures to expand the State's capacity to monitor trends in groundwater quality and to study the effects of agricultural chemicals and practices on groundwater sources. The committee also recommended the Governor issue an executive order providing a clear, comprehensive statement of groundwater policy to direct and coordinate all State agency programs and that the council establish a standing Ground Water Committee to oversee policy implementation. Finally, the Committee recommended enactment of legislation to increase State agency funding and staff to improve groundwater programs and to conduct related research and develop policy initiatives.

iii. Ground Water Standing Committee, Land and Water Resources Council (1985-1989)

The Governor in 1985 issued an executive order³⁸ articulating the State's groundwater policy and directing the Land and Water Resources Council to establish a Standing Ground Water Committee to oversee implementation. The council in response established a Ground Water Standing Committee to ensure implementation of the State's groundwater management and protection programs; advise on groundwater protection and management policies and programs; assess priorities in the groundwater management program; and assure cost-effective allocation of State funding and staffing resources for groundwater management. The committee subsequently issued various reports and recommendations regarding groundwater resources and policy, including groundwater data management systems, a planning process for municipalities for local groundwater protection and a statewide groundwater management strategy plan.

iv. Public Utilities Commission Water Supply and Allocation Study (1987-1988)

The Governor in 1987 signed Resolve 1987, Chapter 27³⁹, which directed the Public Utilities Commission to conduct a study of water supply and allocation and report its findings and recommendations, including legislative proposals, to the Governor and Legislature. In 1988, the commission issued that study report, which proposed a structure for a statewide water management mechanism with comprehensive state regulation and input from local management units, to be overseen by a new or existing state agency and recommended that the Legislature establish a task force to review and develop the options for implementation of this proposal.

v. Maine Water Supply Study Commission (1988-1989)

The Legislature in 1988 established the Maine Water Supply Study Commission, whose duties included studying the adequacy of the water supply for both commercial and

³⁸ See Executive Order 14FY 84/85 (June 10, 1985), available at http://lldc.mainelegislature.org/Open/Exec/ExecutiveOrders/68_Brennan/1984-85/eo_1984-85no14.pdf.

³⁹ See http://lldc.mainelegislature.org/Open/Laws/1987/1987_RES_c027.pdf.

noncommercial use relative to the current and projected population; impacts on the State from the exportation of water, including relevant transport issues; the current regulation of the State's water supply relative to the future needs of its residents; and the appeals processes under the State's water transportation law. The commission issued its report in 1989, which contained recommendations to improve water management and oversight.

vi. Maine Water Resources Management Board (1989-1991)

The Legislature in 1989 established the Maine Water Resources Management Board to examine and make recommendations regarding the appropriate role of the State in managing water supplies and the institutional structures necessary for efficient and effective State regulation of those resources.⁴⁰ In 1991, the board submitted multiple reports to the Legislature containing its findings and recommendations, which largely focused on and included specific recommendations relating to the legal principles of water use rights and ownership, as well as a recommendation to create a new water resources management board with dedicated staff.

vii. Land and Water Resources Council (1994-2012)

The Land and Water Resource Council was re-established by the Legislature in 1994 to facilitate more effective interagency coordination of the State's activities regarding natural resource and land use management and to advise on the formulation of State policy on natural resources management to achieve state environmental, social and economic objectives.⁴¹ The council was comprised of representatives from multiple state agencies and required to report annually to the Governor and to the Legislature on its activities and recommendations. It was repealed in 2012 as part of the legislation that repealed the State Planning Office.⁴²

viii. Agricultural Water Management Program (1999-2003)

In response to drought impacts on wild blueberry production, the Governor in 1999 directed the Department of Agriculture to produce an action plan to ensure the availability of necessary water sources for Maine farmers. The department convened a committee, which developed a plan for increasing available water sources for agricultural use through a number of methods. In response to environmental concerns regarding the impact of certain actions proposed in the plan, two bond proposals were passed in 2001 and 2002 to make investments in new, sustainable water source developments for agricultural uses and a legislative initiative was enacted to develop low flow standards to protect wildlife habitat.

ix. Water Withdrawal Reporting Program (2002-2011)

The Legislature in 2002 established the Water Withdrawal Reporting Program, which still exists in statute.⁴³ This program requires water users, such as public water utilities, bottled water facilities and agricultural, industrial and commercial users, who withdraw quantities in

⁴⁰ See Public Law 1989, Chapter 571, available at http://lldc.mainelegislature.org/Open/Laws/1989/1989_PL_c571.pdf.

⁴¹ See Public Law 1993, Chapter 721, available at http://lldc.mainelegislature.org/Open/Laws/1993/1993_PL_c721.pdf.

⁴² See Public Law 2011, Chapter 655, available at http://lldc.mainelegislature.org/Open/Laws/2011/2011_PL_c655.pdf.

⁴³ See Public Law 2001, Chapter 619, available at http://lldc.mainelegislature.org/Open/Laws/2001/2001_PL_c619.pdf; 38 MRSA §§470-A et seq.

excess of certain specified thresholds to provide public information about their annual water withdrawals from public water resources. The Department of Environmental Protection was required to report annually to the Legislature the aggregate data on water withdrawals reported under the program until that reporting requirement was repealed in 2011.

x. Maine Agricultural Water Management Board (2005-Present)

The Legislature in 2005 established the Maine Agricultural Water Management Board⁴⁴ to work in conjunction with the Department of Environmental Protection to oversee and coordinate environmentally sound and affordable development of water sources for agricultural use; make recommendations for improvements to federal and state permitting processes for the development of farm ponds and other water sources for agricultural use; work to secure funding for the construction of environmentally sound, efficient and affordable water sources for agricultural use; use data generated by water withdrawal reports and other available information to prioritize watersheds needing alternative water sources for agricultural use and the allocation of funding; and facilitate the implementation of the sustainable agricultural water source program. The board is also required to develop a model for agricultural water use management plans and assist agricultural users in the development of water management plans. The board is comprised of State agency representatives and other representatives with backgrounds or involvement in the management or use of water resources.

xi. Groundwater Regulations Review and Recommendations, Land and Water Resources Council (2005-2007)

The Legislature in 2005 directed the Land and Water Resource Council to form a workgroup to conduct a comprehensive review of Maine's regulations governing groundwater withdrawals.⁴⁵ The workgroup was charged with identifying any changes in State law necessary to ensure a consistent, integrated and scientifically sound State policy that ensures the withdrawal of groundwater does not have an undue adverse effect on the waters of the State. The council in 2007 issued a report with recommendations to the Legislature, which included establishing an advisory Ground Water Committee within the council to review groundwater withdrawal activities, coordinate state groundwater information, direct appropriate groundwater investigations in "watersheds at risk," convene stakeholder groups as needed to address withdrawals in "watersheds at risk" in significant local aquifers, provide assistance to towns and develop and disseminate education materials regarding the regulation of groundwater resources. The council also recommended making changes to laws and regulations related to drilled well reporting, the Natural Resources Protection Act, bulk water transport, agricultural wells, public water supplies and Land Use Regulatory Commission jurisdiction over groundwater withdrawals.

⁴⁴ See Public Law 2005, Chapter 559, available at http://ldc.mainelegislature.org/Open/Laws/2005/2005_PL_c559.pdf.

⁴⁵ See Public Law 2005, Chapter 452, available at http://ldc.mainelegislature.org/Open/Laws/2005/2005_PL_c452.pdf.

xii. Water Resources Planning Committee (2007-2012, 2019-Present)

The Legislature first established the Water Resources Planning Committee in 2007,⁴⁶ as part of a package of legislative actions designed to address specific water-related issues in the State. The committee's membership included state agency groundwater professionals, water utilities, agricultural water users, the bottled water industry, other commercial water users, private well drillers and a water advocacy organization. Its primary charge was to plan for sustainable use of water resources, through the collection of data in an analysis of "watersheds at-risk"; the convening of planning groups in watersheds where additional data gathering and analysis indicate that cumulative water use approaches unsustainable conditions; and the submission to the Legislature of recommendations to address oversubscribed watersheds where the planning efforts have failed. The committee was also directed to provide guidance to municipalities and develop and disseminate educational materials on water resources and the regulatory regime and to conduct annual reviews of state policy with regard to conservation of water resources; the development of regional sources and solutions to water use issues; incentives for stewardship of water resources; and impacts of surface water quality improvements on water withdrawal opportunities.

The committee was subsequently repealed in 2012 as part of the legislation that repealed the Land and Water Resources Council but was re-established in 2019.⁴⁷ Much of the membership and charge of the current committee is similar in substance to the that of the prior committee before its 2012 repeal.

III. Commission Process

The commission held five public meetings at the Maine State House on September 12th, October 6th, October 19th, November 10th and December 1st. These meetings were conducted using a hybrid format through which commission members could choose to attend each meeting either in person at the State House or remotely using the Zoom meetings platform. Members of the public were afforded an opportunity to attend each meeting in person or to view a live video stream. Materials distributed and reviewed at these meetings as well as additional background and other study-related materials were posted online and will remain archived at the following publicly-accessible website: <https://legislature.maine.gov/role-of-water-as-a-resource-in-the-state>

A. First Meeting – September 12th, 2022⁴⁸

The commission held its first meeting on September 12th, 2022. The meeting began with introductions by commission members and opening remarks from the commission's chairs. Commission staff then provided an overview of the commission's authorizing legislation, including the commission's duties, the study process and the projected timeline for completion of the commission's work.

⁴⁶ See Public Law 2007, Chapter 399, available at http://lldc.mainelegislature.org/Open/Laws/2007/2007_PL_c399.pdf.

⁴⁷ See Public Law 2011, Chapter 655, available at http://lldc.mainelegislature.org/Open/Laws/2011/2011_PL_c655.pdf; Public Law 2019, Chapter 67, available at <http://www.mainelegislature.org/legis/bills/getPDF.asp?paper=HP0162&item=3&snum=129>.

⁴⁸ Materials distributed at the September 12th meeting as well as an archived video recording of that meeting are available at <https://legislature.maine.gov/water-as-a-resource-meeting-9122022>.

The commission next received a number of presentations on topics relevant to the duties of the commission as set forth in its authorizing legislation. First, the commission received an overview of water resources in Maine by commission member Ryan Gordon. This presentation, which provided an introductory background to the groundwater resources in the State, highlighted the water cycle, human groundwater use, distribution of water resources, effects of human activities and future challenges. The commission next heard from commission member Scott Boak, who reviewed selected case law and other guidance related to water rights ownership and use, including the Maine Supreme Judicial Court's 1999 opinion in *Maddocks v. Giles*, a number of journal articles concerning ownership along water bodies and groundwater law in Maine and a 2005 memorandum from the Office of the Maine Attorney General regarding groundwater ownership. Lastly, the commission received a presentation from commission member William Longfellow concerning tribal perspectives on water resources, which provided an overview of the water programs and initiatives implemented by the Passamaquoddy Tribe of Pleasant Point relating to water quality monitoring, drinking water sourcing and current and future water-related projects.

Throughout these presentations, commission members asked clarifying questions and the meeting closed with a discussion of the information the commission should seek to acquire for or have presented at future meetings. Some of that information identified included additional presentations from the regulating agencies that oversee water resources in Maine, information on other state approaches to groundwater rights and ownership and copies of prior Maine legislative studies relating water resources.

B. Second Meeting – October 6th, 2022⁴⁹

The second commission meeting was held on October 6th, 2022 and consisted primarily of a number of presentations covering a variety subject matters relevant to the commission's duties. The first such presentation was on Maine water rights and ownership and other state approaches by Anthony Moffa, an associate professor at the University of Maine School of Law. Professor Moffa described the legal principles underlying Maine's approach to groundwater rights and ownership and noted the variety of ways in which Maine's absolute dominion approach has been modified through the enactment of various laws and regulations. Additionally, Professor Moffa compared the approach taken in Maine to the methods implemented in other states to address rights to and ownership of water resources. Professor Moffa provided additional information on various state approaches to natural resource extraction, noting the importance to other state general funds of so-called severance taxes imposed on a variety of resources, including oil, gas, minerals and timber.

The commission next received three presentations from the primary regulatory agencies that oversee the quantity and extraction of groundwater resources in Maine. First, Marybeth Richardson of the Department of Environmental Protection described how her agency regulates and permits large-scale groundwater extraction in Maine primarily under the State's site location of development law and the Natural Resource Protection Act. Next, commission member Amy Lachance, who manages the Drinking Water Program at the Maine Center for Disease Control

⁴⁹ Materials distributed at the October 6th meeting as well as an archived video recording of that meeting are available at <https://legislature.maine.gov/water-as-a-resource-1062022-meeting>.

and Prevention, provided an overview of the mission and responsibilities of that program and described the manner in which it oversees public water systems, protects drinking water sources and regulates the extraction and transportation of groundwater. Commission member Ryan Gordon lastly described the role of the Maine Geological Survey in these regulatory processes, presenting information on his agency's water well database and online resources, aquifer mapping program, groundwater level monitoring network and role in the water use reporting program.

The commission next received another presentation from Ryan Gordon, this time about his involvement in and the scope of work of the Water Resources Planning Committee and the Maine Agricultural Water Management Board – two permanent, statutory entities charged with oversight of a variety of activities relating to water resources in the State. The last presentation of the day was from Sean Birkel, Maine State Climatologist with the University of Maine Cooperative Extension, who presented information on how climate change in Maine is and is anticipated to impact water resources, including information on temperature and precipitation trends and projections, enhanced hydrologic cycle and extreme events, the impact of a shorter snow season and the effects of droughts.

As was mentioned during the second meeting, based on a request made at the first meeting, commission staff had provided to commission members and made accessible to the public on the commission's webpage a number of previously completed Maine legislative and other study reports relating to water resources.

C. Third Meeting – October 19th, 2022⁵⁰

The third commission meeting was held on October 19th, 2022. Commission members first received a presentation from Tony Willardson of the Western States Water Council, who presented information on the approaches to groundwater extraction and water ownership taken by states in the western United States. The Commission also received a presentation from Jackson Brainerd of the National Conference of State Legislatures regarding the various state approaches to natural resource extraction taxes and fees.

Following these presentations, commission discussion turned to consideration of recommendations for potential inclusion in the final study report. Prior to the October 19th meeting, at the request of the commission chairs, members were invited to provide suggestions on such potential recommendations for discussion and, at the third meeting, those members that had done so were invited to describe the scope of those recommendations. Following the presentation of member recommendations and lengthy, deliberative discussions on those recommendations and on the commission process going forward, the commission chairs directed staff to submit to the Legislative Council a request for authorization to conduct one additional meeting beyond the four already authorized and an extension of the report submission deadline of November 2nd, 2022 to December 7th, 2022.

⁵⁰ Materials distributed at the October 19th meeting as well as an archived video recording of that meeting are available at <https://legislature.maine.gov/water-as-a-resource-101922-meeting>.

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Subsequent to the third meeting and prior to the fourth meeting, the Legislative Council considered and voted to approve that request for one additional meeting and an extension of the report submission deadline.

D. Fourth Meeting – November 10th, 2022⁵¹

The fourth commission meeting was held on November 10th, 2022. Subsequent to the third meeting and prior to the fourth meeting, commission staff, at the direction of the chairs, prepared and distributed to members a spreadsheet that included all recommendations provided by members and discussed at the third meeting as well as additional related notes and comments from staff.⁵² Additionally, members received a memorandum from the commission chairs that set forth a package of potential recommendations for consideration as the recommendations to be included in the commission’s draft report.⁵³

The fourth meeting began with commission staff providing an overview of the proposals described in the chairs’ memorandum. Members subsequently posed clarifying questions to staff and to the chairs and engaged in a robust discussion regarding the merits of each of the proposals included in the memorandum. Commission members then voted on which of those recommendations to include in the draft report, with each recommendation receiving a separate vote. As described in Part IV of this report, all of the recommendations in the memorandum received support for inclusion in the draft report from a majority of the commission members present and voting at the fourth meeting. The meeting concluded with additional commission discussion regarding the process for development and distribution of the draft report and the review of that report at the fifth and final meeting.

E. Fifth Meeting – December 1, 2022⁵⁴

The fifth and final commission meeting was held on December 1, 2022. Subsequent to the fourth meeting and prior to the fifth meeting, based on the input provided at the fourth meeting, commission staff prepared and distributed to commission members for a review a draft report for discussion at the fifth meeting.

Additional information on fifth meeting to be added later.

IV. Recommendations

Pursuant to its authorizing legislation, the legislature charged the commission with studying the role of water in Maine and required the commission to submit a report containing recommendations, including any suggested legislation, to the joint standing committee of the 131st Legislature having jurisdiction over taxation.

⁵¹ Materials distributed at the November 10th meeting as well as an archived video recording of that meeting are available at <https://legislature.maine.gov/water-as-a-resource-111022-meeting>.

⁵² See Appendix E for a copy of this spreadsheet.

⁵³ See Appendix F for a copy of this memorandum.

⁵⁴ Materials distributed at the December 1st meeting as well as an archived video recording of that meeting are available at <https://legislature.maine.gov/water-as-a-resource-1212022-meeting>.

As summarized in Part III of this report, in developing those recommendations and fulfilling its other duties set forth in its authorizing legislation, the commission held five meetings where its members engaged in robust discussions on the numerous issues related to water regulation and water resources in Maine and received numerous informational presentations from commission members, state agencies and other experts.

Ultimately, the commission voted to propose the following recommendations for consideration by the 131st Legislature. Additional recommendations suggested by individual commission members but not voted on by the full commission are included in this report as Appendix E.

A. Establishment of New Study Commission

- ***Recommendation 1:*** *the Legislature should establish a new Commission To Study the Role of Water as a Resource in the State of Maine, with a more focused scope of study, to address the unresolved work of this commission.*

As indicated by the numerous recommendations from individual commission members suggested for the third meeting but not voted on,⁵⁵ the regulation of water resources in Maine is complex and, depending on the activity, can implicate multiple regulatory schemes. The commission gathered and received a substantial amount of information relevant to its charge and engaged in lengthy and deliberative discussions on those matters over its five meetings. By the close of those meetings, however, many questions remained unresolved regarding the regulation of Maine's water resources and the potential impacts of proposed changes to existing laws or rules.

Accordingly, a majority of commission members present and voting at the fourth meeting⁵⁶ proposed that this unresolved work of the commission be taken up by a new commission during the next legislative interim through the enactment of a resolve establishing a new Commission To Study the Role of Water as a Resource in the State of Maine. At the recommendation of commission member Scott Boak, those supporting this recommendation agreed that, for the purposes of the new commission, the member representing the Office of the Attorney General would be replaced with a member with general legal expertise in water rights and water ownership.

As discussed during the fourth meeting, this new commission would have a more focused scope of study than was provided in the authorizing legislation for the current commission. That scope of study would focus on the general categories of recommendations identified by commission members⁵⁷ – oversight, data collection, data reporting; drought planning, agricultural issues; water rights and ownership; water quality/PFAS; and water extraction, contracts and permitting.

Commission members requested that staff prepare draft legislation incorporating this recommendation. That legislation is provided in Appendix C.

⁵⁵ See Appendix E.

⁵⁶ Members supporting this recommendation were Chipman, Gramlich, Wood, Boak, Jordan, Sekera and Longfellow (7). Members opposing this recommendation were Berger, Soucy and Dubois (3). Members abstaining from voting on this recommendation were Gordon and Lachance (2). Members absent for this vote were Stewart, Hanley, Hubbell and Paul (4).

⁵⁷ See Appendix E.

B. Changes to Water Resources Planning Committee

- **Recommendation 2A:** *the Legislature should amend the Water Resources Planning Committee statute in Title 5, section 6401 to include among its duties: (1) identification of measures to promote public access to information about Maine’s water resources, including, but not limited to, measures to centralize within a single state agency all relevant data on water use and water resources that is currently collected by state, federal and other entities; and (2) identification of measures to enhance or supplement state monitoring and data collection regarding water use and water resources, the analysis of that data and, where necessary, funding opportunities to support those measures.*
- **Recommendation 2B:** *the Legislature should amend the Water Resources Planning Committee Statute in Title 5, section 6401 to require annual reporting, including any proposals for necessary legislation, to the Legislature, with authority to certain legislative committees to propose legislation related to the report.*

During the second commission meeting, members learned about the activities of the Water Resources Planning Committee, a permanent entity established by law⁵⁸ in 2019. As noted during commission discussion, a similar entity existed in Maine during the early 2000s but was eliminated along with the State Planning Office in 2012. The current Water Resources Planning Committee includes members from a variety of state agencies as well as numerous public members with a wide variety of backgrounds relating to the use and conservation of water resources and is generally charged with planning for the sustainable use of water resources in Maine. It is required to meet quarterly and to annually report to the Department of Agriculture, Conservation and Forestry.

As commission members learned, many of the charges of and matters considered by this commission, as well as some of the proposals suggested by commission members, overlap with those of the Water Resources Planning Committee. There is even some membership overlap, with commission members Bruce Berger, Mark Dubois and Ryan Gordon presently serving on both this commission and on the Water Resources Planning Committee. All commission members present and voting at the fourth meeting⁵⁹ proposed to amend the authorizing statute of the Water Resources Planning Committee in two different ways.

First, members proposed to amend the charge of the Water Resources Planning Committee to include: identification of measures to promote public access to information about Maine’s water resources, including, but not limited to, measures to consolidate within a single state agency all relevant data on water use and water resources that is currently collected by state, federal and other entities; and identification of measures to enhance or supplement state monitoring and data collection regarding water use and water resources, the analysis of all such collected data and, where necessary, funding opportunities to support those measures. Given the broad membership of the Water Resources Planning Committee, commission members believe that by focusing its

⁵⁸ See 5 MRSA §6401.

⁵⁹ Members supporting this recommendation were Chipman, Gramlich, Wood, Boak, Jordan, Sekera, Longfellow, Berger, Soucy, Dubois, Gordon and Lachance (12). Members absent for this vote were Stewart, Hanley, Hubbell and Paul (4).

charge on a number of specific topics raised by multiple commission members as potential recommendations,⁶⁰ further discussion and meaningful action could be taken on these matters.

Second, members proposed to require annual reporting, including any proposals for necessary legislation, by the Water Resources Planning Committee to the Legislature, with authority to certain committees to propose legislation related to the report. As the Water Resources Planning Committee is already required to submit a report to the Department of Agriculture, Conservation and Forestry, commission members are optimistic that the transmission of an annual report to the Legislature will not be unduly burdensome. Moreover, by regularly involving the Legislature in the Water Resources Planning Committee's discussions, proposals for statutory or regulatory changes to better achieve the committee's goal of planning for the sustainable use of water resources can be considered by the Legislature directly and, where necessary, enacted in law. Members did specifically express strong support for the provision of additional State resources to the Maine Geological Survey or other state agency as necessary to effectuate these changes to the Water Resources Planning Committee.

Commission members requested that staff prepare draft legislation incorporating this recommendation. That legislation is provided in Appendix D.

C. Changes to Maine Agricultural Water Management Board

- ***Recommendation 3A:*** *the Legislature should amend the Maine Agricultural Water Management Board statute in Title 7, section 352 to include among its duties identification of measures to enhance drought preparedness and drought resilience by agricultural producers, including, but not limited to, improved water capture and storage measures, enhanced irrigation opportunities and identification of low-flow areas and low-flow occurrences and development of a notification system to producers located in those areas.*
- ***Recommendation 3B:*** *the Legislature should amend the Maine Agricultural Water Management Board statute in Title 7, section 352 to require annual reporting, including any proposals for necessary legislation, to the Legislature, with authority to certain legislative committees to propose legislation related to the report.*

During the second commission meeting, members also learned about the activities of the Maine Agricultural Water Management Board, a permanent entity established by law⁶¹ in 2006. The current Maine Agricultural Water Management Board includes members from a variety of state agencies as well as numerous public members with a wide variety of backgrounds relating to the agricultural use of water resources and is generally charged with overseeing and coordinating the environmentally sound and affordable development of water sources for agricultural use in Maine.

As commission members learned, some of the matters considered by this commission, as well as some of the proposals suggested by commission members, overlap with those considered by the

⁶⁰ See Appendix E.

⁶¹ See 7 MRSA §352.

Maine Agricultural Water Management Board. All commission members present and voting at the fourth meeting⁶² proposed to amend the authorizing statute of the Maine Agricultural Water Management Board in two different ways.

First, members proposed to amend the charge of the Maine Agricultural Water Management Board to include identification of measures to enhance drought preparedness and drought resilience by agricultural producers, including, but not limited to, improved water capture and storage measures, enhanced irrigation opportunities and identification of low-flow areas and low-flow occurrences and development of a notification system to producers located in those areas. Given the broad membership of the Maine Agricultural Water Management Board, commission members believe that by focusing its charge on a number of specific topics raised by multiple commission members as potential recommendations,⁶³ further discussion and meaningful action could be taken on these matters.

Second, members proposed to require annual reporting, including any proposals for necessary legislation, by the Maine Agricultural Water Management Board to the Legislature, with authority for certain committees to propose legislation related to the report. The Maine Agricultural Water Management Board is not currently required to prepare any regular reports but commission members are optimistic that the preparation and transmission of an annual report to the Legislature will not be unduly burdensome. Moreover, by regularly involving the Legislature in the Maine Agricultural Water Management Board's discussions, proposals for statutory or regulatory changes to better achieve the board's goal of overseeing and coordinating the environmentally sound and affordable development of water sources for agricultural use can be considered by the Legislature directly and, where necessary, enacted in law. Commission members did specifically express strong support for the provision of additional State resources to the Department of Agriculture, Conservation and Forestry or other state agency as necessary to effectuate these changes to the Maine Agricultural Water Management Board.

Commission members requested that staff prepare draft legislation incorporating this recommendation. That legislation is provided in Appendix D.

D. Further Study of Groundwater Rights and Ownership

- ***Recommendation 4:*** *the Legislature should further study the legal status of groundwater rights and ownership in Maine, including, but not limited to, further review of the Maine Supreme Judicial Court's 1999 opinion in *Maddocks v. Giles* and the approaches to this issue taken by other states.*

As noted in Part II of this report, Maine is an absolute dominion rule jurisdiction in terms of the manner in which its law regulates the use and ownership of groundwater. Enacted laws and rules have modified the nature of those common law rights but, as noted by the Maine Supreme Judicial Court in 1999 in *Maddocks v. Giles*, Maine still remains an absolute dominion rule jurisdiction. As previously described, many states take a different approach in regulating

⁶² Members supporting this recommendation were Chipman, Gramlich, Wood, Boak, Jordan, Sekera, Longfellow, Berger, Soucy, Dubois, Gordon and Lachance (12). Members absent for this vote were Stewart, Hanley, Hubbell and Paul (4).

⁶³ See Appendix E.

groundwater rights and ownership, whether through application of the prior appropriation doctrine, the correlative rights doctrine or the reasonable use or so-called American rule.

Although the commission reviewed the current status of Maine law pertaining to groundwater rights and ownership and received information regarding the approaches to that issue taken by other states, given that changing the way in which Maine regulates these matters could potentially have significant impacts on multiple industries and activities, commission members were not prepared to recommend any such changes at present. Instead, a majority of commission members present and voting at the fourth meeting⁶⁴ proposed that the Legislature further study the legal status of groundwater rights and ownership in Maine, including, but not limited to, further review of the *Maddocks v. Giles* opinion and the approaches to this issue taken by other states.

E. PFAS Testing Requirement for Commercial Water Bottling

- ***Recommendation 5:*** *the Legislature should consider the enactment of measures that would require testing and reporting on the levels of perfluoroalkyl and polyfluoroalkyl substance or PFAS contaminants in water extracted and used for commercial bottling purposes.*

The commission discussed on a number of occasions the potential threats to groundwater and surface water resources posed by contamination from perfluoroalkyl and polyfluoroalkyl substances or PFAS, which are also described in Part II of this report.

All commission members present and voting at the fourth meeting⁶⁵ proposed that the Legislature consider the enactment of measures that would require testing and reporting on the levels of PFAS contaminants in water extracted and used for commercial bottling purposes. As stated by commission member Amy Lachance of the States' Drinking Water Program, whether water used for commercial bottling purposes should be monitored and tested for PFAS contaminants similar to community water systems and nontransient, noncommunity water systems was a question that never came up during the legislative discussion of the proposal finally passed as Resolve 2021, Chapter 82.⁶⁶ Commission member Lachance further noted the United States Environmental Protection Agency is expected to introduce a draft rule in 2023 that will address PFAS contamination in a wide variety of contexts.

V. Conclusion

Commission members look forward to working with the Legislature as it considers the recommendations in this report and, where appropriate, develops legislation to implement those recommendations. Commission members would like to thank all the presenters and others who have generously offered their time, expertise and advice in helping the commission understand

⁶⁴ Members supporting this recommendation were Chipman, Gramlich, Wood, Boak, Jordan, Sekera and Longfellow (7). Members opposing this recommendation were Berger, Soucy and Dubois (3). Members abstaining from voting on this recommendation were Gordon and Lachance (2). Members absent for this vote were Stewart, Hanley, Hubbell and Paul (4).

⁶⁵ Members supporting this recommendation were Chipman, Gramlich, Wood, Boak, Jordan, Sekera, Longfellow, Berger, Soucy, Dubois, Gordon and Lachance (12). Members absent for this vote were Stewart, Hanley, Hubbell and Paul (4).

⁶⁶ See <http://www.mainelegislature.org/legis/bills/getPDF.asp?paper=SP0064&item=3&snum=130>.

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the complexities of the regulation of water resources and rights in Maine. Their knowledge and perspectives were invaluable to the commission as it endeavored to develop recommendations on these challenging, complex and critical matters. Commission members would also like to thank its staff for their time and dedication to the commission's work.

Title: *Resolve, To Further Study the Role of Water as a Resource in the State of Maine*

Sec. 1. Commission established. Resolved: That the Commission To Study the Role of Water as a Resource in the State of Maine, referred to in this resolve as "the commission," is established.

Sec. 2. Commission membership. Resolved: That, notwithstanding Joint Rule 353, the commission consists of 16 members:

1. Seven members appointed by the President of the Senate as follows:

A. Two members of the Senate, including a member from each of the 2 parties holding the largest number of seats in the Legislature;

B. One member of the public residing in northern Maine;

C. One member representing the interests of persons who bottle or package water for commercial sale;

D. One member representing the interests of municipal water utilities; and

E. Two members who are members of federally recognized Indian nations, tribes or bands in the State based on the joint recommendation of the tribal governments of the Aroostook Band of Micmacs, the Houlton Band of Maliseet Indians, the Passamaquoddy Tribe at Motahkomikuk, the Passamaquoddy Tribe at Sipayik and the Penobscot Nation. If the tribal governments do not make unanimous joint recommendations, the President of the Senate shall appoint 2 members of federally recognized Indian nations, tribes or bands in the State;

2. Six members appointed by the Speaker of the House of Representatives as follows:

A. Two members of the House of Representatives, including a member from each of the 2 parties holding the largest number of seats in the Legislature;

B. One member of the public residing in western Maine;

C. One member representing the interests of businesses that use water in manufacturing or the provision of items or services for sale;

D. One member representing organizations involved in protection of the environment; and

E. One member with general legal expertise in water rights and water ownership;

3. The State Geologist or the State Geologist's designee;

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4. The director of the Office of Policy Innovation and the Future or the director's designee; and

5. The director of the drinking water program within the Department of Health and Human Services, Maine Center for Disease Control and Prevention, division of environmental health or the director's designee.

Sec. 3. Chairs; quorum. Resolved: That the first-named Senate member is the Senate chair and the first-named House of Representatives member is the House chair of the commission. A quorum is 9 members and a quorum must be present to start a meeting but is not required to continue a meeting.

Sec. 4. Appointments; convening of commission. Resolved: That all appointments must be made no later than 30 days following the effective date of this resolve. The appointing authorities shall notify the Executive Director of the Legislative Council once all appointments have been completed. After appointment of all members, the chairs shall call and convene the first meeting of the commission. If 30 days or more after the effective date of this resolve a majority of but not all appointments have been made, the chairs may request authority and the Legislative Council may grant authority for the commission to meet and conduct its business.

Sec. 5. Duties. Resolved: That the commission shall review the report submitted to the Legislature by the Commission To Study the Role of Water as a Resource in the State of Maine pursuant to Resolves 2021, Chapter 185. The commission shall develop findings and recommendations, including any suggested legislation, to ensure that there is adequate clean, safe and accessible drinking water for the State's residents and to meet the needs of commercial and business interests now and in the future, which may include, but are not limited to, consideration of the following matters:

A. Promoting public access to information about Maine's water resources; consolidating and centralizing access to existing water use and water resource data; and enhancing or supplementing water use and water resource monitoring and data collection and the analysis of that data;

B. Enhancing drought preparedness and drought resilience by agricultural producers and others;

C. Reviewing the legal status of groundwater rights and ownership in Maine, including, but not limited to, further review of the Law Court's opinion in *Maddocks v. Giles*, 1999 ME 63, and the approaches to this issue taken by other states;

D. Protecting public and private drinking water sources from perfluoroalkyl and polyfluoroalkyl substances contamination and other contaminants; and

****DRAFT FOR CONSIDERATION DURING 12/1/2022 STUDY MEETING****

E. Identifying any changes to state laws or rules regulating the large-scale extraction of groundwater for public or private use that may be necessary to ensure adequate supply for all users.

Sec. 6. Staff assistance. Resolved: That the Legislative Council shall provide necessary staffing services to the commission, except that Legislative Council staff support is not authorized when the Legislature is in regular or special session.

Sec. 7. Report. Resolved: That, no later than December 15, 2023, the commission shall submit a report that includes its findings and recommendations, including any suggested legislation, to the joint standing committee of the Legislature having jurisdiction over taxation matters. After reviewing the report, the joint standing committee may report out legislation related to the report to the 131st Legislature in 2024.

SUMMARY

This resolve establishes the Commission To Study the Role of Water as a Resource in the State of Maine to develop findings and recommendations, including any suggested legislation, to ensure that there is adequate clean, safe and accessible drinking water for the State's residents and to meet the needs of commercial and business interests now and in the future. This study is designed to build off the work of the Commission To Study the Role of Water as a Resource in the State of Maine that was established pursuant to Resolves 2021, Chapter 185.

Title: *An Act To Enhance State Oversight of Water Use and Water Resources*

Sec. 1. 5 MRSA §6401, sub-§1, ¶B is amended to read:

B. The committee shall meet at least quarterly and ~~report annually to the Department of Agriculture, Conservation and Forestry, beginning in August 2020.~~ The committee shall plan for the sustainable use of water resources. ~~The committee shall focus on by:~~

- (1) Collecting and reviewing information regarding water withdrawal activities;
- (2) Coordinating state water resources information, developing measures to provide for the consolidation and centralization of collected state water resources information within a single state agency, ensuring public access to that information and identifying opportunities and resources to enhance or supplement the collection of state water resources information; and
- (3) Identifying watersheds at risk by refining the most recent analysis of watersheds at risk performed by the Bureau of Resource Information and Land Use Planning, Division of Geology, Natural Areas and Coastal Resources, Maine Geological Survey, including:
 - (a) Conducting appropriate water resources investigations in watersheds at risk;
 - (b) Considering projected increased water use by population, agricultural irrigation, commercial users, industrial users and other users;
 - (c) Considering seasonal use;
 - (d) Considering potential effects of climate change;
 - (e) Considering the effects of anticipated future water quality classification changes on the availability of water for withdrawal;
 - (f) In establishing priorities for further investigations, seeking input from the user community, from towns dealing with multimunicipal aquifers and from towns with significant local aquifers; and
 - (g) Developing guidelines for consistency in further investigations.

Sec. 2. 5 MRSA §6401, sub-§1, ¶E is enacted to read:

E. Beginning January 15, 2024, and annually thereafter, the committee shall submit a report to the Department of Agriculture Conservation and Forestry and to the joint standing committees of the Legislature having jurisdiction over agricultural, conservation and forestry matters; environment and natural resources matters; energy and utilities

matters; and health and human services matters. The report shall include a summary of the committee's activities during the prior calendar year and any findings and recommendations, including any suggested legislation, relating to the committee's duties under paragraphs B and C. After reviewing the report, each joint standing committee may report out legislation to implement any of the recommendations included in the report.

Sec. 3. 7 MRSA §352, sub-§2 is amended to read:

2. Duties. The board, working in conjunction with the Department of Environmental Protection, shall:

A. Oversee and coordinate the environmentally sound and affordable development of water sources for agricultural use;

B. Make recommendations for improvements to federal and state permitting processes for the development of farm ponds and other water sources for agricultural use;

C. Work to secure funding for the construction of environmentally sound, efficient and affordable water sources for agricultural use;

D. Use data generated by water withdrawal reports under Title 38, section 470-D and other available information to prioritize watersheds needing alternative water sources for agricultural use and the allocation of funding; ~~and~~

E. Facilitate the implementation of the sustainable agricultural water source program under section 353-; and

F. Develop recommendations for measures to enhance drought preparedness and drought resilience by agricultural producers, including, but not limited to, improved water capture and storage measures, enhanced irrigation opportunities and measures to better identify and notify producers of low-flow areas and low-flow occurrences.

Sec. 4. 7 MRSA §352, sub-§8 is enacted to read:

8. Report. Beginning January 15, 2024, and annually thereafter, the board shall submit a report to the joint standing committees of the Legislature having jurisdiction over agricultural, conservation and forestry matters and over environment and natural resources matters. The report shall include a summary of the board's activities during the prior calendar year and any findings and recommendations, including any suggested legislation, relating to the board's duties under subsections 2 and 3. After reviewing the report, each joint standing committee may report out legislation to implement any of the recommendations included in the report.

SUMMARY

This bill amends the duties of the Water Resources Planning Committee established under the Maine Revised Statutes, Title 5, section 6401 to include planning for the sustainable use of water resources by developing measures to provide for the consolidation and centralization of collected state water resources information within a single state agency, ensuring public access to that information and identifying opportunities and resources to enhance or supplement the collection of state water resources information. It also provides that, beginning January 15, 2024, and annually thereafter, the Water Resources Planning Committee shall submit a report to the Department of Agriculture Conservation and Forestry and to the joint standing committees of the Legislature having jurisdiction over agricultural, conservation and forestry matters; environment and natural resources matters; energy and utilities matters; and health and human services matters. The report must include a summary of the committee's activities during the prior calendar year and any findings and recommendations, including any suggested legislation, and each joint standing committee may report out legislation to implement any of the recommendations included in the report.

This bill also amends the duties of the Maine Agricultural Water Management Board established under the Maine Revised Statutes, Title 7, section 352 to include development of measures to enhance drought preparedness and drought resilience by agricultural producers. It also provides that, beginning January 15, 2024, and annually thereafter, the Maine Agricultural Water Management Board shall submit a report to the joint standing committees of the Legislature having jurisdiction over agricultural, conservation and forestry matters and over environment and natural resources matters. The report must include a summary of the board's activities during the prior calendar year and any findings and recommendations, including any suggested legislation, and each joint standing committee may report out legislation to implement any of the recommendations included in the report.