Findings and Recommendations for Streamlining Permitting New Sources of Water for Irrigation in Maine Pursuant to L.D. 1998

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MAINE DEPARTMENT OF AGRICULTURE CONSERVATION & FORESTRY

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I. Executive Summary

During the 130th Second Session, L.D. 1998, *An Act To Establish a Fund for Farmers Adversely Affected by Drought Conditions*, was heard before the Joint Standing Committee on Agriculture, Conservation and Forestry (ACF Committee) and passed into law as P.L. 2021, ch. 729 (7 M.R.S.A §220-A). The law establishes the Farmers Drought Relief Program to be located within the Department of Agriculture, Conservation and Forestry (DACF). The Program will assist Maine farmers in overcoming the adverse effects of drought conditions through a grant program to be established by DACF. Farmers may apply for a grant if they need "to establish a source for irrigation water to alleviate the risk of crop losses due to drought. The source for irrigation water must be sustainable, environmentally sound, and affordable." 7 M.R.S.A §220-A(2).

In addition, L.D. 1998 required DACF to work with the Department of Environmental Protection (DEP) and the Land Use Planning Commission (LUPC) to review the permitting process for securing permits for new sources of water for irrigation "and to develop recommendations, including suggested legislation, to streamline the permitting process." L.D. 1998 Section 2. DACF was to convey its recommendations in a report to the ACF Committee.

In order to meet the requirements set forth in L.D. 1998 Section 2, DACF:

- Reviewed with DEP and LUPC the current regulatory processes for reviewing requests for water withdrawals.
- Held two public meetings with the Agricultural Water Management Board to review the existing regulatory processes and discuss potential means for improvement.
    - One meeting consisted of a facilitated review of existing permitting materials to identify potential changes to streamline and enhance the processes.

A. Summary of Review Effort and Recommendations:

According to DEP regulations, when water levels or flows are higher than those specified by rule, irrigation water **may be withdrawn from surface water sources without approval**. This is self-implementing based on the water levels and flows, and no permit is required for this activity. However, when the water levels or flows are lower than those specified in the rule, irrigation water may only be withdrawn with site-specific written DEP approval. These types of withdrawal requests need to be done proactively, before a drought, as part of a larger planning process by an irrigator. Until very recently, DEP had never received such a request for approval. The current request is under DEP review.

With regard to agricultural ponds altering a freshwater, nontidal stream, DEP does require a general permit. DEP's review and approval process is relatively short in this instance (~30 days). However, if an agricultural pond does not have a connection with a stream, brook, river, or other protected natural resource, then a permit is not required, and the pond is not regulated by DEP.

Conversely, LUPC **requires permitting** for certain activities within its jurisdictional areas, including new water withdrawals (both groundwater and surface water). Both activities require

application filings supported by various technical information and require a filing fee that can be burdensome to the applicants.

In light of these existing processes and requirements, DACF recommends that LUPC's application forms be updated and simplified for groundwater and surface water withdrawal activities related to agricultural irrigation. It also requests LUPC assess its capacity to reduce or alter the fees for agricultural water source permitting, particularly for the construction of pipelines and irrigation ponds.

Both DEP and LUPC would benefit from additional staff capacity with specific responsibility for water-related licensing. It is recommended that an ES III be funded by the Legislature for the DEP's Northern Maine Regional Office to manage all aspects of water withdrawal. For LUPC, it is recommended that an ES II position be funded by the Legislature for LUPC's Northern Maine Regional Office to provide more technical assistance to farmers needing to complete permit applications for new water sources. In addition, DACF recommends that the Legislature fund the Farmer Drought Relief Program, which was created but not capitalized during the 131st Second Session.

II. Participants

The parties participating in this effort included:

DACF Participants –

- Bureau of Agriculture, Food and Rural Resources
    - Nancy McBrady, Director, Bureau of Agriculture, Food and Rural Resources
    - Mark Hedrich, Nutrient Management Program Manager
- Bureau of Resource Information and Land Use Planning
    - Stacie R. Beyer, Acting Executive Director, Land Use Planning Commission
    - Ryan Gordon, Maine Geological Survey
- Commissioner's Office
    - Tom Gordon, Public Service Coordinator I

DEP Participants
Brian Kavanah, Director, Bureau of Water Quality
Bill Sheehan, Director, Northern Maine Regional Office

Agricultural Water Management Board Participants
Matthew Porter
Darin Hammond (Chair)
Richard Belanger
Jake Pierson
Abby Sadauckas
David Moyse
George McLaughlin
Rebecca Long

Bill Sheehan (DEP Designee)

Members of the Public
Eric Venturini, Executive Director, Wild Blueberry Commission of Maine
Don Flannery, Executive Director, Maine Potato Board

III. Review of Drought Conditions in Maine – recent history

Maine, like most of the world, is experiencing rapidly changing climatic conditions. Maine's average annual temperature has increased approximately half a degree Fahrenheit per decade since 1960, and average annual precipitation has increased approximately 1 inch per decade over the same time period to a current average of over 46 inches per year (Fernandez and others, 2020, *Maine's Climate Future 2020 Update*, University of Maine, Orono). These trends are expected to continue. However, despite the increase in the average total, precipitation has been and will continue to be variable in both time and space. Maine occasionally experiences periods of drought, most lasting less than one year but sometimes extending over several years. Higher temperatures in the future are likely to make these short dry periods more severe, especially during the growing seasons.

Drought is generally defined as a period with lower than normal precipitation, possibly combined with high temperatures or low humidity, that causes atypical stress on hydrologic or living systems. Types of drought are defined based on the affected system and the effects experienced. Agricultural drought involves low soil moisture that can cause plant wilt, reduced crop growth and yield, tree stress or death, and an increase in fire danger. Hydrologic drought involves low flows in streams and rivers, low lake levels, and, if prolonged, low groundwater levels. Hydrologic drought can cause the loss or restriction of irrigation sources, stressed public water supplies, higher water temperatures, stranding of fish and invertebrates, reduced yield or drying of wells, and drying of springs and groundwater-dependent wetlands.

While the period from 2005 through 2011 was one of the wettest on record for the state, the years 2000-2004 and 2015-2022 saw several short-term droughts in Maine, three of which (2002, 2016, and 2020) reached "extreme" levels on the U.S. Drought Monitor severity scale for some part of our land area. "Severe" drought was experienced in 2001, 2002, 2016, 2020, 2021, and 2022 (U.S. Drought Monitor, https://droughtmonitor.unl.edu/). Figure 1 shows a recent timeline of drought conditions in Maine, and Figure 2 shows several snapshots of conditions across Maine's land area for the driest time during the four most recent severe droughts.

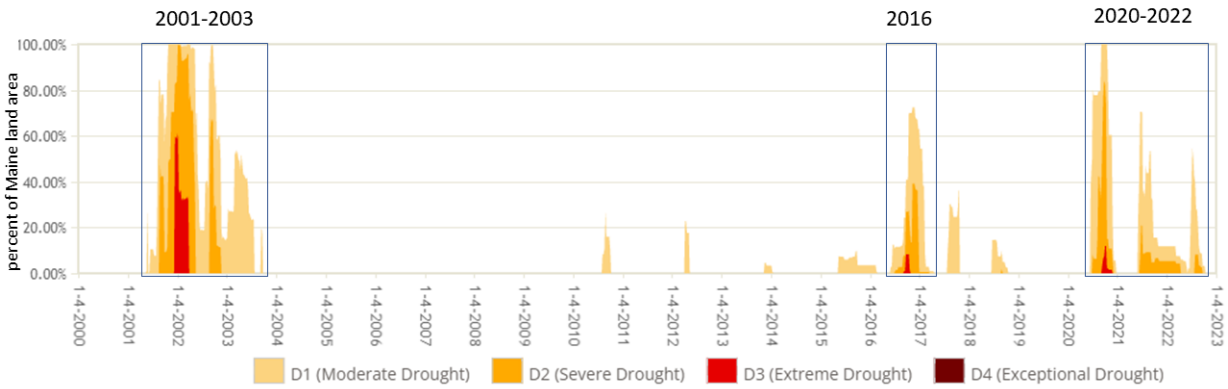

Figure 1. A time series of drought conditions for the land area of Maine, showing U.S. Drought Monitor categories D1-D4 (https://droughtmonitor.unl.edu/).

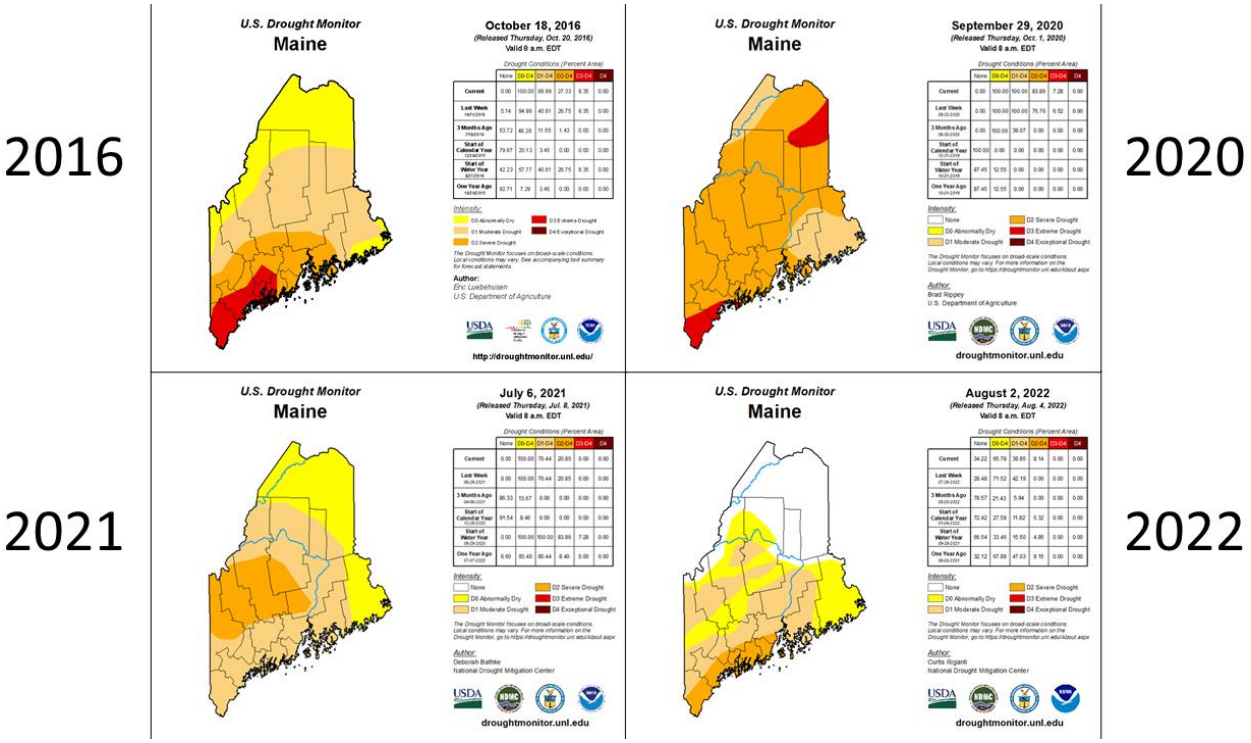

Figure 2. Maps of drought conditions during the four most recent severe droughts in Maine (https://droughtmonitor.unl.edu/).

Maine's most recent period of drought began in May 2020 with a month of unseasonably dry and warm air with no rain. The spring of 2020 was described as a "flash drought" by the U.S. Geological Survey due to the very rapid onset of dry conditions (Lombard and others, 2020, U.S. Geological Survey Open-File Report 2020-1148), which strongly affected farmers at the beginning of the planting season. The drought continued all summer, peaking in late September. Most areas saw relief in mid-October 2020, but conditions worsened again in April-June 2021. Drought again persisted through the growing season of 2021, fluctuated through the following winter, and returned again in the summer of 2022. During October of this year, substantial rains relieved dry conditions across the entire state. As of November 2022, no part of Maine was

experiencing dry conditions, according to the U.S. Drought Monitor. According to measurements by the U.S. Geological Survey, streamflow and groundwater monitoring stations throughout the state are at normal or above-normal levels with few exceptions (https://waterwatch.usgs.gov/ and https://www.usgs.gov/tools/groundwater-levels-new-england).

Because drought conditions may continue to threaten Maine's agricultural production, it is imperative that producers have the ability to successfully navigate the state's permitting requirements for water withdrawal and for the development of new, off-stream water storage structures for irrigation projects. Sustainable irrigation sourcewater development and usage that promote efficient and profitable crop growth will enhance producer resiliency. The need for timely and available water also is increasing. Farms require more water sources – ponds, wells, storage systems – and technical assistance and funding for the development of those structures, systems, and Irrigation Water Management Plans. Current funding mechanisms for these projects and for technical assistance are inadequate and provide only a small percentage of the monies required for essential irrigation needs. While this report includes recommendations for some modest adjustments to the regulatory approval process, the most significant need to increase environmentally responsible irrigation practices is increased funding and technical and regulatory assistance.[1]

IV. Existing Regulatory Structure: Overview of DEP and LUPC water withdrawal and water access regulations and permitting processes

The Department of Environmental Protection is established in law at 38 M.R.S § 341-A., and is charged to "prevent, abate and control the pollution of the air, water, and land, and preserve, improve, and prevent diminution of the natural environment of the state. The department shall protect and enhance the public's right to use and enjoy the state's natural resources and may educate the public on natural resource use, requirements, and issues."

The Maine Land Use Planning Commission is established in law at 12 M.R.S. § 683-A. It serves as the planning and zoning authority for the unorganized and deorganized areas of the state, including townships and plantations. These areas either have no local government or have chosen not to administer land use controls at the local level.

A. Summary of Department of Environmental Protection Regulations Regarding Agricultural Irrigation:

DEP implements several laws and regulations that may be applicable or of interest to certain agricultural irrigation projects. They are summarized below.

[1] A number of agricultural water development bonds were passed in Maine in the 2000's, enabling DACF to invest approximately $4.5 million in ~150 new or expanded water source construction projects, which helped to alleviate drought impacts for many farms. The cost-share program provided up to 75% of the cost of construction or up to $80,000 per project, whichever was less. It was estimated at that time that $15 million was necessary to meet demand for new water sources. Source: Maine Agricultural Water Management Board Biennial Report, 2007-2008.

i. Chapter 587 - *In-Stream Flows and Lake and Pond Water Levels*[2]

Chapter 587 (the rule) became effective August 24, 2007, and was promulgated in accordance with a statutory directive under 38 M.R.S., §470-H.[3] The rule establishes river and stream flows and lake and pond water levels to protect natural aquatic life and other designated uses in Maine's surface waters. The rule specifies the water levels and flows that must exist and be maintained for these water bodies to be used as a source of irrigation or other water withdrawal purposes. This summary focuses on irrigation issues.

The rule allowed for a period of five years for agricultural irrigation users to comply with the required water level and flow requirements. This compliance period was subsequently extended by DEP for an additional five years, expiring in 2017. The basis for this compliance period was to allow agricultural irrigation users time to establish irrigation infrastructure, such as irrigation ponds and wells, to reduce direct withdrawal from natural water bodies such as streams and rivers. However, the lack of funding mechanisms for the expansion of essential sourcewater development projects, water storage systems, and technical assistance for developing those projects, has inhibited progress.

Water may be withdrawn from surface waters for agricultural irrigation under the following conditions:

1. When water levels or flows are higher than those specified in the rule for a water body type or class, irrigation water may be withdrawn without approval. This is self-implementing based on the water levels and flows, and no permit is required. (During times of moderate to exceptional drought, water flows in streams and rivers will likely be lower than the required levels and may not be used for irrigation without site-specific DEP approval, as noted in #2 below.)

2. When the water levels or flows are lower than those specified in the rule for a water body type or class, irrigation water may only be withdrawn with site-specific written DEP approval. Site-specific approvals, which may be obtained by applying through a *Request for Alternative Water Flow,* are based on information provided by the applicant and collected by DEP. The process requires a 30-day public comment period and consultation with other natural resource agencies such as Inland Fisheries and Wildlife and Agriculture, Conservation and Forestry. To issue a site-specific approval, DEP must be able to establish site-specific water levels or flows that would enable a finding that all water quality standards will be attained. Until very recently, DEP had never received a request to establish a site-specific flow or water level. The current submittal is under review. DEP expects to receive additional requests in the future as interest in irrigation grows. Given the required review process, site-specific approvals should be requested proactively as part of a larger planning process prior to any immediate need due to

[2] https://www.maine.gov/sos/cec/rules/06/096/096c587.doc

[3] https://legislature.maine.gov/statutes/38/title38sec470-H.html

drought. (It is noted that during times of moderate to exceptional drought, water flows in many streams and rivers may not be adequate to allow for the issuance of a site-specific approval.).

There is no fee for water withdrawals under the rule. Additional information on the rule, and the application form to request a site-specific level or flow, are available on DEP's website here: https://www.maine.gov/dep/water/swup/

ii. Creation of Agricultural Irrigation Ponds

The creation of an agricultural irrigation pond is regulated by standards established in law at 38 M.R.S. § 480-Y.[4] The law stipulates that a general permit is required for the alteration of a freshwater, nontidal stream to construct an agricultural irrigation pond. If the provisions of this section are met, an individual permit is not required.

The law specifies the following eligibility requirements: the farm must have an irrigation management plan; DEP must have assessed the affected area as having no significant habitat for fish and wildlife; the pond may not be located in a wetland containing endangered or threatened plant species; a site assessment must be conducted by DEP prior to the submission of an application; and the pond may not be located in a river, stream or brook if DEP determines at the site assessment that there is a practicable alternative water supply that would be less damaging to the environment. The law also specifies application requirements and the following approval process:

> "The Department shall notify the applicant in writing within 30 days of acceptance for processing if the Department determines that the requirements of this section have not been met. This notification must specifically cite the requirements of this section that have not been met. If the Department has not notified the applicant under this section within the specified time period, a general permit is deemed to have been granted."

The current total one-time fee for the creation of an agricultural irrigation pond is $386 ($285 processing fee and $101 licensing fee). Additional information on agricultural irrigation ponds is available on DEP's website here: https://www.maine.gov/dep/land/nrpa/ip-irrig.htm

iii. Natural Resources Protection Act (NRPA)

The Natural Resources Protection Act (NRPA), established in law at 38 M.R.S. §§ 480-A – 480-JJ,[5] became effective on August 4, 1988. Permits are required for certain activities that occur in,

[4] https://legislature.maine.gov/statutes/38/title38sec480-Y.html

[5] https://legislature.maine.gov/statutes/38/title38sec480-A.html

on, or over any protected natural resource area or on land adjacent to any great pond, river, stream or brook, coastal wetland, and some freshwater wetlands. Activities that may require an NRPA permit include: dredging, bulldozing, removing or displacing soil, sand, vegetation, or other materials; draining, ditching, or dewatering; permanent structures (new, repaired, altered); and filling. Certain irrigation projects, depending on their design and implementation, may require permitting under NRPA. Additional information on NRPA is available on DEP's website here: https://www.maine.gov/dep/land/nrpa/index.html

iv. Installation of Agricultural Irrigation Wells

Installation of "significant groundwater wells" are a regulated activity under NRPA. However, wells for agricultural use or storage are specifically exempted from the definition of "significant groundwater well" and therefore are not regulated by DEP.[6]

B. Summary of Land Use Planning Commission Regulations and Processes Regarding Agricultural Irrigation:

i. Background

All the LUPC's service area, comprising approximately 10.5 million acres, has been zoned into three types of land use districts, Management, Protection, and Development. Each of those districts has multiple subdistricts. Each subdistrict identifies uses or activities that are: allowed without a permit; allowed without a permit subject to standards; allowed by permit; and allowed with a permit by special exception. The use that applies to water withdrawals is "…draining, dredging, and alteration of the water table or water level for other than mineral extraction." (Emphasis added).

Under that use listing, water withdrawals from surface or groundwater resources are allowed by permit in the General Management subdistrict, all Development subdistricts, and eight Protection subdistricts. Water withdrawals are allowed by special exception in the Aquifer Protection and Wetland Protection subdistricts. They are not allowed in Fish and Wildlife, Recreation, River Transition, and Unusual Area subdistricts.

The statutory decision-making criteria that the Commission must consider in issuing a permit are found in 12 M.R.S. § 685-B(4). For all water withdrawals, the key criterion is:

> Adequate provision has been made for fitting the proposal harmoniously into the existing natural environment in order to assure there will be no undue adverse effect on existing uses, scenic character, and natural and historic resources in the area likely to be affected by the proposal. 12 M.R.S. § 685-B(4)(C).

The Commission tracks all its permitting actions, including permit approvals, permit denials, and application withdrawals, in its Geographically Oriented Action Tracker database. Based on a

[6] 38 §480-B. Definitions

query of that database, over the past ten years, the Commission has issued ten permit decisions relating to agricultural water withdrawals. Of those ten decisions, six were amendments to previous decisions, and four were new permits. The four new permits included two surface water withdrawals, one offset pond, and one instream impoundment. The average processing time for the new surface water withdrawals was 55 days; the most recent permit was issued in 45 days.

LUPC application fees are determined in two parts – a base fee and activity-specific fees – according to the Commission's Chapter 1 rules, *Fee Schedule*. The applicable base fee for water extraction is $200,[7] and the primary applicable activity-specific fee is $200.00[8], for a total of $400. However, other activity-specific fees, including fees for disturbed areas, may apply depending on the project, which include $0.40 per square foot of disturbed area within 25 feet of a shoreline and wetland impact areas, and 1.00 per square feet for all other disturbed areas more than one acre in size.[9]

ii. Surface Water Withdrawals

In addition to the statutory decision-making criteria, the Commission has adopted rules that include standards applicable to water withdrawals. For surface water withdrawals, the key standards that are applicable are found in the Commission's rule Chapter 10, Section 10.25(P). That section of the rule requires minimizing impacts on existing uses, natural habitats, fisheries resources, water flow, and surface water quality. In reviewing potential impacts on surface water quality, the Commission uses DEP's Rule Chapter 587, *In-stream Flows and Lake and Pond Water Levels,* as a guide.

The application form most often used for surface water withdrawal proposals is the Commission's Shoreline Alteration Application form, which is an abbreviated form tailored to work in and adjacent to water bodies. In addition, the Commission requests the submission of an Irrigation Water Management Plan, including information on the acres irrigated, the amount of water needed, potential sources of water, water practices to minimize water use, and evidence that DEP's Chapter 587 requirements will be met. Except for the Irrigation Water Management Plan, all the information needed to apply for a surface water withdrawal should be readily available to the farmer. In some cases, the Irrigation Water Management Plan is prepared by an industry trade group for no cost to the farmer. Where that opportunity is not available, the Natural Resources Conservation Service (NRCS), the University of Maine Cooperative Extension, the irrigation equipment supplier, or a private engineer may be able to provide the information needed in that plan.

iii. Groundwater Withdrawals

There are two additional statutory criteria that apply to the Commission's review of a groundwater withdrawal. These include:

[7] The base fee for groundwater wells is the resource extraction fee, and the base fee for surface water withdrawals is the shoreland alteration fee, both of which are $200. 01-672 C.M.R. c.1(1.02)(B)(1).
[8] Extraction. 01-672 C.M.R. c.1(1.02)(B)(2).
[9] Disturbed area. 01-672 C.M.R. c.1(1.02)(B)(2).

- …the Commission shall consider the effects of the proposed withdrawal on waters of the State; water-related natural resources; and existing uses, including, but not limited to, public or private wells, within the anticipated zone of contribution to the withdrawal."
- "The Commission shall consider the direct effects of the withdrawal and its effects in combination with existing water withdrawals." 12 M.R.S. § 685-B(4)(C).

For groundwater withdrawals, the Commission uses its Non-residential Development Form (DP form). This form was created to cover a wide variety of non-residential development, and historically, the agency has required the entire form, plus a related supplemental form, be completed. Many of the questions were not applicable to groundwater withdrawal projects. The Commission now has a new format for the DP form, which uses a modular approach so that only applicable exhibits need to be completed. Also, the supplemental form is no longer required. With the DP form, many of the exhibits can be completed by the farmer. The most important submission requirement, however, is a geologic characterization and impact assessment, including information on the long-term safe yield of the well, zone of influence or capture, interaction with surrounding water resources, potential impacts on existing wells, base flows in streams, and wetland hydrology. The assessment can only be completed by a Maine Licensed Geologist.

iv. Application Review and Permitting

The Commission's application process is interactive and collaborative. Pre-application meetings and submission of complete application forms are critical. Once a complete application is received, Commission staff send it to an outside agency for technical review, including agencies such as the Maine Geological Survey, DEP, and Department of Inland Fisheries and Wildlife. The review is focused on the potential for an undue adverse impact on the environment. Commission staff assesses the sustainability of the resource, considering groundwater and surface water (streams and wetlands) relationships, including cumulative impacts. During the review process, staff must document the basis for the final decision. Long-term monitoring and reporting, if potential impacts are identified, may be required by permit conditions.

v. Summary

LUPC requires a permit for surface water or groundwater withdrawals. Commission staff review assessments submitted by the applicant to ensure the water source is the best alternative, there is adequate water, and there will be no undue adverse effect on surrounding resources and uses. Staff coordinates the technical review with other agencies to assure consistency and incorporates agency recommendations into its permit. In addition, the Commission coordinates with DEP's surface water rules to ensure consistency with those standards.

V. Assessment of Differences Between DEP and LUPC Regulations and Permitting Processes and Suggestions for Improvements

DEP was established to prevent, abate, and control the pollution of the air, water, and land, and preserve, improve, and prevent the diminution of the natural environment of the state. That

agency also is mandated to protect and enhance the public's right to use and enjoy the state's natural resources and educate the public on natural resource use, requirements, and issues. LUPC was established to extend principles of sound planning, zoning, and development to the unorganized and deorganized townships of the state to support and encourage Maine's natural resource-based economy and strong environmental protections. In accordance with these directives, the agencies developed rules and policies that were adopted with the intent of protecting Maine's environment and promoting the safety and well-being of the state's citizens. However, in some cases, particularly concerning permitting activities related to the development of farm irrigation and new water source systems and facilities for enhancing food production capabilities in light of changing climate patterns, there are differences in permitting methods between DEP and LUPC for these projects.

When water levels or flows are higher than those specified in the DEP rule for a water body type or class, irrigation water **may be withdrawn without approval**. This is self-implementing based on the water levels and flows, and no permit is required for this activity. Conversely, LUPC **requires permitting** for certain activities within its jurisdictional areas, including for new water withdrawals and groundwater wells, which is a process requiring the development and submission of an application and processing times that could exceed 30 days for approval by LUPC. (The processing time is correlated with how well the application is prepared and could change with an improved application format, which is recommended in this report.)

After a complete application is received, LUPC staff send it to an outside agency for technical review, which includes agencies such as the Maine Geological Survey, DEP, and Department of Inland Fisheries and Wildlife. The fee structure associated with the application submission can also be burdensome, which includes a charge based on the amount of disturbed area proposed by the project and can be more costly than DEP's fee structure for similar activities.

In addition, during moderate to exceptional drought, water flows in streams and rivers likely will be lower than the required levels and may not be used for irrigation without site-specific DEP approval. Due to no requests received until very recently, this site-specific procedure, *Request for Alternative Water Flow*, has not been utilized for approval of water withdrawal from surface water bodies. The process requires a 30-day public comment period and consultation with other natural resource agencies, such as the Department of Inland Fisheries and Wildlife and DACF. Given the required review process, site-specific approvals should be requested <u>proactively</u> as part of a larger planning process prior to any immediate need due to drought.

Based on this process of information collection and discussion with DEP, LUPC, the Agricultural Water Management Board, and members of the public, DACF has formulated the following recommendations to achieve the purposes of L.D. 1998.

- **<u>Improve Application Materials</u>**: LUPC should conduct a rigorous review of its SA and DP application forms and create a new, separate application specifically for agricultural surface and groundwater extraction to reduce the time and intensity of applying for this regulatory review.
    - LUPC staffing constraints are such that outside assistance is necessary to make this application overhaul a reality. DACF recommends that the Legislature

provide LUPC with $35,000 to hire a consultant to review and overhaul the current applications to improve water withdrawal permitting.

- **Fee Assessment**: Currently, LUPC calculates a fee based on the square footage of a project. Because irrigation pond construction can disturb a large area, the fees can be burdensome. LUPC should assess the potential for altering its permit fee calculation as it relates to agricultural irrigation projects. Upon completion of the assessment, LUPC would request legislative approval for the fee changes (major substantive).
- **Technical Assistance through New Staff (DEP and LUPC)**:
    - The Legislature should fund a full-time, permanent ES II position in LUPC's Northern Regional Office to provide more technical assistance to farmers needing to complete permit applications for new water sources. If the number of applications increase (such as in conjunction with irrigation infrastructure funding), the existing staff, already carrying a high workload burden, could not provide the necessary assistance to ensure a smooth, efficient process. Also, more pre-application assistance is needed to assist farmers with evaluating permittable options in the field, customizing application submissions to match each project, and guiding farmers to available technical resources and assistance.
    - The Legislature should fund a full-time, permanent Public Service Coordinator I position in DACF's Bureau of Agriculture, Food and Rural Resources' Division of Agricultural Resource Development. This position would be responsible for supporting the Farmer Drought Assistance Fund, assisting the Agricultural Water Management Board, and providing technical and policy expertise regarding water management and irrigation to producers and across DACF staff and programs. Given the ramifications of climate change to Maine agriculture, it is critical that DACF has the technical expertise to advise on policy and programs that meet the needs of producers as they adapt to changing climate dynamics. DACF does not currently have the professional staff available to work directly with producers regarding sustainable water resource management.
    - The Legislature should fund a full-time ES III Water Withdrawal Program Manager at DEP. There is a new and growing workload related to water withdrawal issues for agricultural irrigation due to drought and changes in agricultural practices that have significantly increased the use of irrigation. There have been many significant documented impacts to waters of the state due to these issues. This is largely, but not exclusively, in Aroostook County. Climate change is expected to exacerbate these issues. It has become apparent in the last three years that there is insufficient staffing at DEP to properly manage these requirements. A new ES III in DEP's Northern Maine Regional Office (NMRO) would manage all aspects of water withdrawal, including requests for alternative flow evaluations, education and outreach, technical assistance, compliance, and enforcement. The position would also research and help pursue federal and state grants to aid the agricultural community in drought resilience projects (some of which may also provide climate benefits consistent with the Maine Climate Action Plan's strategy of promoting natural climate solutions and increasing carbon sequestration on working lands). The position would coordinate with DACF on its new Maine Healthy Soils program. The position would also coordinate with the NMRO Manager, who is the department representative on the

Agricultural Water Management Board and Bureau of Water Quality technical staff as needed. It is expected that these job duties would be 60-80% of the position's workload.

  - Additional time would be used for industrial stormwater compliance and technical assistance inspections, and to support Non-Point Source grant projects to reduce discharges to waters of the state, with a focus on agricultural projects to minimize soil loss.

- **Fund the Farmer Drought Assistance Fund**: L.D. 1998 created the Farmers Drought Relief Grant Program to assist farmers in the state to overcome the adverse effects of drought conditions. The Fund has not been capitalized. There is extensive demand throughout the state for agricultural irrigation technical and monetary assistance. This fund, if properly capitalized, will be an important vehicle to assist agricultural producers to make sustainable, environmentally sound irrigation improvements to their farms.