

Consultation on Proposed Water Withdrawal Regulations

Commentary from the Prince Edward Island Potato Board

November 5th, 2019

Introduction

The Prince Edward Island Potato Board is the industry organization that represents more than 180 potato farmers of P.E.I. The Board and its members have been actively following the development of the new *Water Act* as well as the regulations related to the Act. It should be noted that the relatively narrow timeframe for public consultation on these regulations fell during potato harvest, limiting the opportunity for farmers and industry representatives to provide input on these regulations.

It is the stated position of the Prince Edward Island Potato Board that the current moratorium on high capacity wells for agricultural irrigation, which was initially established for one year and has been in place for 18+ years, should be lifted provided that there is no demonstrated adverse effect on water supply and the environment. The Board has advocated for additional scientific research and water use monitoring to assess current water resources and to inform future water extraction.

With this in mind, the Board is very disappointed to see that the proposed water withdrawal regulations following the introduction of the *Water Act* propose to permanently ban additional high capacity wells for agricultural irrigation. There is no data that suggests that current water use for irrigation is unsustainable; in fact, data from the Department of Environment, Water, and Climate Change indicates that current water extraction for irrigation (including both agriculture and golf courses) only represents 2% of current water usage, and that current total provincial water usage for all sectors and households only amounts to 3% of the available annual recharge. This demonstrates that on a provincial basis there is no shortage of groundwater resources. While groundwater extraction must be evaluated on a local/watershed basis, there is most definitely not the kind of groundwater shortages that have necessitated irrigation restrictions in other agricultural areas. A continuation of the moratorium on high-capacity wells for agricultural irrigation without demonstration of adverse effects on water resources would not be in keeping with the stated goals of the *Water Act*.

A matter of fairness:

At the core of this issue is the fundamental unfairness of restricting water access for agricultural irrigation. All other Island businesses and industries (such as aquaculture, golf courses, etc) have access to high capacity wells for water extraction, while farmers do not have the same access despite an absence of any data demonstrating that irrigation is having or would have a detrimental impact on groundwater. This discrimination infringes on the rights of Island farmers to access a public resource to which all other industries and persons in the province have access (with appropriate controls/monitoring to ensure sustainability of this critical resource). How can this be put into permanent regulations, especially if the rationale for agriculture's exclusion responds primarily to public opinion and emotions rather than science-based decision making?

Therefore, the Prince Edward Island Potato Board would like the proposed regulations to be amended to remove the repeated specific clauses prohibiting permits for high capacity wells for

agricultural irrigation. Permanently prohibiting permits for irrigation without scientific justification is fundamentally unfair and this discrimination would be very hard to defend if challenged. If the intent on the part of government is to temporarily extend the current moratorium on high capacity wells for irrigation while conducting research into water availability and sustainable extraction policy, the regulations should allow for permits related to this research by credible research institutions. The regulations as proposed do not even allow permits to facilitate this research.

Contextualizing the need for supplemental irrigation:

It is a fact that our climate is changing, presenting challenges for farmers with relation to water availability. Recent research from the UPEI Climate Lab anticipates the summer months of July and August to have less rainfall (albeit in larger rainfall events) with increased rainfall in the spring and fall. This presents challenges for many crops, including potatoes, that require adequate soil moisture at critical times during the growing season to provide economical yields and product quality.

Unlike many other potato growing regions in North American, Prince Edward Island farmers do not require full-season irrigation. Our natural rain-fed production system provides adequate to excessive moisture for most of the year, so supplementation via irrigation is required only in prolonged periods of dry weather. It must also be recognized that most of the water that would be used for supplemental irrigation would soak back into the soil and continue to be a resource for future use. It should also be recognized that the majority of potato acreage in Prince Edward Island is unlikely to be irrigated, even if permits were able to granted for further high capacity wells. Even if 25% of potato acreage (approximately 21,000 acres) received supplemental irrigation, the effect on total provincial water usage would be modest – still less than the amount of water used for livestock production (less than 8%).

Furthermore, many farmers in Prince Edward Island would not choose to invest in irrigation at all, as the level of capital investment may not be justified for the level of potential yield and quality improvement. Nonetheless, growers should have access to supplemental irrigation if they can justify the investment on their own farm and if anticipated water extraction is sustainable in their local watershed area. Prince Edward Island potato farmers have been investing considerably in research and on-farm production practices focused on improving soil health, reducing soil erosion, and minimizing nutrient contamination of both groundwater and surface water. The Board has been collaborating with individual farmers and multiple research partners on investigating best management practices such as use of cover crops, soil-building crops and reduced tillage practices aimed at improving soil organic matter, which helps to hold more water in soil. At the same time, the 4R nutrient stewardship initiative and other research by the industry has focused on improved use of fertilizers to reduce the risk of nutrient leaching or run-off, matching the rate of nutrient application to the needs of the crop. We are also actively seeking the development and use of potato varieties which would better withstand dry conditions and work better under our conditions. Farmers have diversified their variety usage over the years to the point that Russet Burbank now represents less than 30% of all PEI potato acres.

Research and extension efforts with producers on improving environmental sustainability have been increasing every year. At the same time, it must be recognized that improving soil organic

matter levels and decreasing nitrate levels in groundwater are long term initiatives that can not be turned around in just one or two years. Manure is one of the best ways to maintain and build organic matter, but the decline in livestock numbers in our province for the past few decades means other ways of building the soil must and are being used.

Responsible access to groundwater for agricultural irrigation is tool that should be available to growers who are actively working on improving the sustainability of their production practices; in fact, responsible use of irrigation would allow growers to make better use of nitrogen, reducing the amount of residual nitrogen at the end of the season that would be at risk of leaching. It would also provide growers with the water needed in a dry year to ensure the economic sustainability of their farm, allowing growers to invest in soil-building efforts and sustainable crop rotations that build soil resources for the future. It is difficult for farmers to invest in soil resources (which often don't have immediate payback) if they are denied access to tools which, when used sustainably (as confirmed by appropriate controls and monitoring that should apply to farmers as well as to all other users of high capacity wells), can provide more stable yields and returns.

Comments related to specific sections of the proposed regulations:

Section 2: Groundwater Exploration Permit.

- These regulations are common-sense and provide assurance that groundwater extraction is sustainable on a local level.
- Section 2 paragraph 5 should be removed, as it refers to unfair restriction of access for agricultural irrigation.

Section 5: Water Withdrawal Permit

- Section 5, paragraph 6 should be removed, as it refers to unfair restriction of access for agricultural irrigation.
- This section provides a hierarchy of water access that is common sense and supported by the Board.
- With relation to paragraph 7, it does make sense that multiple wells extracting more than 345 cubic metres per day to be treated as a high capacity well. However, it is the position of the Board that permits for these wells (often feeding a holding pond) should be grandfathered in the same way that existing high capacity wells for irrigation are grandfathered. These wells were legally drilled and put into use, often in combination with holding ponds that collect and hold rainfall and run-off for irrigation use.

Section 7: Water Withdrawal Permit

- As a means to ensuring that water extraction from high capacity wells is sustainable and within agreed upon levels based on available water resources, it may be wise to consider requiring all high capacity wells (including existing ones) to have flow meters installed to measure the amount of water that has been extracted. This would go a long way toward building a database to quantify water extraction across the province to ensure that water is being used sustainably. It would also level the playing field between wells used for supplemental irrigation for a short time in the summer months and high

capacity wells used more frequently, such as municipal wells or wells for golf courses, aquaculture, car washes, etc. Publishing water extraction rates obtained from these flow metres to ensure transparency could prove valuable.

Section 9, paragraph 4 should be removed, as it refers to unfair restriction of access for agricultural irrigation.

Closing comments:

In conclusion, the Prince Edward Island Potato Board, on behalf of the Island's potato industry, continues to advocate for fair and responsible access to groundwater for agricultural irrigation for those farmers that choose to invest in supplemental irrigation, provided that it is sustainable based on local watershed considerations. Our farmers live in the communities in which they farm and are equally committed to conservation of our groundwater resources. Farmers are open to transparent, science-based measurement of groundwater extraction and a rigorous permitting process for all high capacity well users, including farmers, that ensures that water extraction can be sustainably allowed within a specific watershed. However, if these conditions are met, it is unfair that the people who produce food in our province are the only Islanders that are automatically excluded from access to groundwater.

The Board welcomes additional opportunities for dialogue with elected officials and personnel from the Department of Environment, Water and Climate Change on these proposed regulations and other regulations that directly impact farmers. The Board fundamentally believes that public policy should be informed by science-based decision making as well as equal and fair access to public resources with environmental sustainability at the forefront. Please feel free to contact us if questions arise from anything contained in this submission.

Respectfully submitted by:

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