

Irrigation Update and Historical Backgrounder for NAPAC meeting February 22nd, 2019

- The cycle of drought like conditions in the Niagara region appears to be occurring more frequently (2001, 2007, 2012, 2016 and in 2018 to a lesser extent).
- In early July 2016 extreme dry conditions were reported to the minister of agriculture and minister of environment.
- At that time, the OMAFRA water specialist calculated that in the Niagara region alone growers were facing a water deficit of approximately 50 mm.
- When there are drought conditions, growers with irrigation (the majority of which is overhead) are in a constant cycle of trying to keep up and are putting great strain on current water infrastructure.
- Those without any irrigation capacity truck water in or simply deal with the effects of no water for their crops (reduced yields, plant stress and in some cases plant death).
- During the 2016 drought industry asked for a streamlined approval process for those requiring emergency permits to take water.
- The 2016 drought resulted in a 15% yield reduction for tender fruit crops and a 24% reduction in wine grape yields vs. 2015.

Niagara Irrigation Strategic Action Plan

- Due to the economic impact of the drought, a funding project proposal was submitted and approved in 2017 led by the Niagara Peninsula Fruit and Vegetable Growers with cash and implementation support from Ontario Tender Fruit Growers, Grape Growers of Ontario and the Niagara Region to develop a **Niagara Irrigation Strategic Action Plan**.

- The strategy was based on the following vision.

Farms in Niagara have reliable access to
irrigation water used efficiently and safely
to sustain their productivity

- To achieve this vision, the strategy recommended the following actions:
- Recruit, engage and fund an irrigation point person for the Region as a whole for a two-year trial period with specific deliverables to be accomplished
- Raise the positive profile of irrigation in the public space
 - across the government so that (i) planning decision-makers have better understanding in order to expedite approval of irrigation projects and (ii) infrastructure funding programs are accessible to support capital costs of irrigation infrastructure
 - build public support and understanding as to why irrigation is a shared public-private responsibility with the full cost burden not falling on the grower
 - coordinate actions and influence policy under the mandates of different regulatory bodies to enable irrigation access
- Work to secure public infrastructure dollars, in the context of global climate change, to:
 - Make improvements to the capacity, reliability and efficiency of the NOTL open drainage ditch system
 - Subject to a satisfactory engineering and economic feasibility study, for systems (a) to deliver irrigation water west of the canal in west St. Catharines and (b) to provide greater security for pumping water from Lake Ontario to service farms in Lincoln
 - Enable growers to access C.A.P. funding for individual irrigation projects on-farm

- The strategic action plan was presented and endorsed by the NAPAC at their January 2018 meeting.
- In February 2018 a localized Lincoln irrigation meeting was held chaired by Lincoln Mayor Sandra Easton with participation from growers and municipal representatives from Lincoln, St Catharines and NOTL.
- At that meeting a federal grant application proposal was discussed that included the following objectives;
- To move forward on recommendations from the Niagara Irrigation Strategic Action Plan and coordinate action amongst growers, ministries and municipalities to increase domestic food security, reduce energy emissions and increase water conservation by completing the following:
 1. Formation of a volunteer "Niagara Water Resource Board (NWRB) with representation from each municipality and grower association to establish a job description and specific deliverables of the irrigation ambassador and regional water security initiatives;
 2. The NWRB will design and implement an emergency response system for low water occurrences resulting in a cohesive system for the entire region;
 3. The NWRB will develop and disseminate communication materials to the public to increase awareness of the need to ensure local food sustainability and the strategies growers will use to ensure efficient use and conservation of water resources;
 4. The Irrigation Ambassador will build relationships, conduct surveys and assessments and make recommendations that will ensure the sustainability of the agricultural sector environmentally and economically.

Ambassador Deliverables:

1. Ambassador will work with growers in Zone B, the City of St Catharines and OPG to contract a feasibility assessment of conveying water from sources above the escarpment at Decew Falls to the farmland at lower elevations. The assessment will include the best way to store water centrally for distribution during high demand. The goal is to reduce energy costs and environmental emissions and minimize risk of ground water depletion by finding alternate sources to help replenish aquifers. The work will result in an organizational model for the construction and management of such a system. Grower buy in and acreage involved to be solidified.
2. Ambassador will work with NOTL Drainage System Superintendent and the NOTL irrigation committee on improving the capacity, reliability and coverage areas of the open irrigation system in Zone C.
3. Ambassador will work with growers involved in independent existing water systems in Area A (Lincoln) to determine synergies and efficiencies that could be realized with possibly one common intake, one common pumping system and the additional coverage that could be serviced.
4. Ambassador will assess and make recommendations on what tools are needed to strengthen the profile and priority given to irrigation needs in planning and legislation. Coordination of meetings and presentations with all stakeholders.
5. All stakeholders will work together to design and implement an Emergency Response Plan across the region that will ensure the protection of water sources while establishing a cohesive water rationing system with equal access to growers in the region to increase the security of agricultural production.

- A project proposal was submitted for these deliverables to the Federal EcoAction Plan program in the summer of 2018 with cash support from the Region, municipalities of Niagara on the Lake, Lincoln and St Catharines and the tender fruit and grape growers' organizations.
- Funding for the above project was not approved.
- A preproposal was sent to the Disaster Mitigation and Adaptation Fund was submitted by the Niagara on the Lake Irrigation committee in 2018 to upgrade their infrastructure but they were not asked to submit a full proposal.

Current Funding Environment

- Provincial programs for agriculture are on hold with no indication of when they will open.
- A Federal program has just recently been launched. The Canadian Agricultural Strategic Priorities Program (CASPP) which is an investment of \$50.3 million over five years.
- Funding available through this program will help facilitate the sector's ability to address emerging issues and capitalize on opportunities. **Program website - <http://www.agr.gc.ca/eng/programs-and-services/canadian-agricultural-strategic-priorities-program/?id=1549325740130>**