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June 8, 2006

Our File No.LUP.30.1.6

Re: Niagara-on-the-Lake Creeks Watershed Plan

I appreciated meeting with you and at my office on May 22 and discussing your comments and concerns. I would like to assure both of you and the agricultural community at large that the watershed plan is not intended to adversely affect the agricultural operations in the Town of Niagara-on-the-Lake.

While the Conservation Authority is concerned with the enhancement and sustainability of the watershed's natural resources, we also recognize that the remedial projects and programs must take into account the importance of agriculture to the Town and its residents and economic viability of farming operations. Our goal is to develop a plan that balances the needs of the agricultural community with those of the watershed's natural resources and sets out a multi-year implementation program that respects and achieves this balance.

The Conservation Authority is aware that some aspects of the agricultural industry in Niagara-on-the-Lake are unique to the Town and it is our intent to work with the agricultural community to establish programs that both meets the needs of the agricultural industry and supports a healthy and sustainable environment for the benefit of all. I think it important to note that stewardship programs such as improving riparian buffers are set out as programs where participation would be voluntary. With respect to the concerns about the weirs & dams that are used for irrigation on municipal drains, it is not our intent to suggest these structures would be removed. While off-line ponds would be the preferred technique, the Conservation Authority recognizes the need for irrigation and the existing infrastructure. Where a better option is available and financially feasible, the goal of the Conservation Authority would be to work with individual farmers, again on a voluntary basis, to make improvements.

I am hopeful that you and along with other members of the agricultural community will work with the Conservation Authority in completing the watershed plan and seeing it through implementation.

Sincerely



Andrew L. Burt
General Manager/Secretary-Treasurer

p.c. Mr. Kim Craitor, MPP Niagara Falls ✓
Lord Mayor Gary Burroughs

June 15, 2006

Re: NOTL Watershed Study

Comments from agricultural landowners

(42 signatures)

As landowners of most of the land that borders watercourses in NOTL, we appreciate the opportunity to be involved in the Watershed Study. However the timing of these meetings is at the worst possible time of the year for us to participate.

In reviewing the 34 management action plans we are concerned that many of the management action plans proposed are already done by other Provincial Government Ministries, the Town of NOTL, government agencies or farm organizations. We question whether other individuals responding to this questionnaire will know this.

For this Study to be successful, it is important to remember that most of the land in the Watershed is agricultural land. Many of the management action plans may require additional agricultural land being removed from agricultural production for drain reconstruction and may require further restrictions on the use of the irrigation system. We do not support these action plans.

The drainage ditches in NOTL were constructed years ago under the Drainage Act to drain farmland and the construction of each drain was preceded by an engineering report that detailed location etc. The Drainage Act provides for the maintenance of these drains in a cost effective manner.

The irrigation system in NOTL has been operating informally for many, many years and formally since 1988 under a Private Member's Bill utilizing the watercourses to carry water for irrigation purposes. The irrigation system was initiated because there was very little flow or in many cases no flow in the watercourses. We are concerned that there is no action plan to identify base flows within the watershed only plans that will restrict the use of the watercourses for irrigation purposes to provide for fish habitat.

Today the irrigation system in NOTL is managed by an Irrigation/Drainage Supervisor and has 139 growers in the system. There has been a large financial commitment from these growers to operate and expand the system. The system operates with removable dams only from May 15 to Sept 15 each year.

As landowners/taxpayers we are concerned that there has been no analysis of costs associated with each of these 34 management actions before requesting support.

In closing, the Conservation Authority publishes many good booklets on land/water management ideas. We believe these should be distributed to landowners adjacent to watercourses for voluntary commitment.

Goals

To promote the natural environments of the Niagara-on-the-Lake watershed ecosystem, within the context of a unique, fragile agricultural resource, for the benefit of humans and other terrestrial and aquatic life.

To promote environmentally sound and economically feasible water management practices that recognize the interdependencies between the watercourses and the irrigation/drainage system and to do so in co-operation with the Irrigation Committee.

This submission is our response to the Niagara-on-the-Lake Watershed Plan for Public Workshop #2, June 20, 2006.

1. If there are incentive programs through the Conservation Authority for work done adjacent to watercourses, then that information should be sent to landowners/farmers who own land adjacent to watercourses.
2. We do not feel there is a need for the cost of a program to educate residents about the Region's agriculture and its special needs, the irrigation and drainage management system, or the operation of the Virgil Reservoirs.
3. This information is provided through OMAFRA and OFA.
4. The development of guidelines is not necessary.
5. We do not feel there is a need for a one-window contact/source to answer questions about legislation.
6. We do not feel there is a need for another committee.
7. The Conservation Authority provides excellent resource material. We support material provided but not workshops to encourage/educate landowners on good stewardship of aquatic and terrestrial habitats. The material should be compiled in a very small booklet and mailed to property owners adjacent to watercourses. It is important to remember that areas of increased natural vegetation provide increased havens for wildlife, insects and pests that damage crops.
8. We believe the Conservation Authority already provides this information. It should be sent to landowners who border watercourses.
9. We believe this material is already available through the Conservation Authority and the Soil and Crops Association. Same as above for distribution.
10.
 - a) We support the upgrading of culverts in the rural area that may put restrictions on landowners' property because of their current size.

b) The Town already has a policy on fill adjacent to drains so there is no need to address this issue unless the cost can be attributed to others.

c) We do not support the need to increase the capacity of channels. We do not want to lose any more agricultural land. If the width of channels is increased there may be the need for another engineering report and we do not want to incur that cost. There could also be an adverse affect on the road allowances. If any individual landowner thinks his channel should be widened, then he/she can approach the Drainage Supervisor.

d) If the provision is only to identify areas where culverts need to be upgraded and included in the OP, we support that provision.

11/12.

The Town has approved many new developments with storm water management facilities with input from the Region and the NPCA. If there are further suggestions from the NPCA then they should be conveyed to the Town for consideration if the land is available and they are economically feasible. We are concerned that there is no cost analysis associated with this action.

13. Currently, the Town maintains a drain maintenance and management program according to the Drainage Act. Engineering reports have been done for all of the individual drains that were constructed, outlining the location of drains. Any changes would require a new engineering report. Landowners cannot support a program that requires new engineering reports and that additional cost. They cannot support more agricultural land taken out of production adjacent to drainage ditches. In most cases these areas have already had additional agricultural land removed to increase the size of the present drains.

There is no support for additional money for new drain cross-sections designs.

The Drainage Act allows for the use of rip-rapped side slopes to control erosion.

Landowners cannot support a management program that replaces weirs with off-line irrigation ponds. The base flow in most if not all the

drainage ditches and creeks is extremely low or non existent and the use of weirs has been allowed for years and is needed to contain enough water depth to provide for irrigation pumps and to fill off-line ponds.

Dams are constructed with removable wood boards. Drain maintenance is minimized between April and June. Dams are installed just before and removed at the end of the irrigation season (May 15 to Sept15).

Agricultural land parcels are smaller in NOTL than anywhere else in the Province and many farms are not large enough to be able to take land out of production for a pond or meandering drains. Dams are needed to fill existing ponds anyway. Off-line ponds are encouraged for larger farm parcels.

Drains are brushed on an average every 7 years. These drains were constructed years ago according to the Drainage Act and the Engineer Report to drain agricultural land. There is no support for redesigning these drains because of the further loss of agricultural land and the huge cost.

14.

There is no support for a review of the irrigation management system. The Town of NOTL has hired a Drainage/Irrigation Supervisor to oversee the management of the system. Water usage is being requested this year and anyone not getting a fair allocation of water is quickly accommodated.

We cannot stress enough the lack of base flow in the ditches during the summer months when irrigation is needed.

The Irrigation Committee does address any problems associated with the efficient usage of irrigation water.

15.

There has been no identification of the erosion sites so it is difficult to comment.

The Town through the Public Works Dept Drainage Supervisor manages the erosion problems according to the Drainage Act in a cost effective manner and we support that practice.

Farmers do not support any additional agricultural land for reestablishing natural channel morphology.

The Conservation Authority can provide any information to the Drainage Supervisor and a landowner who wants to avail himself/herself of this information to reconstruct the design of the channel on his/her property, including cost, can do so after consultation with the Irrigation Supervisor. The cost of a new engineer report would also be the responsibility of the property owner.

16.

Landowners who have wells are responsible for testing their own water. This is done free of charge by the Region. We do not see the need or the cost to undertake a study of the quality and quantity of well water use.

17. The MOE is responsible for permits to take water and irrigation users are required to supply the amount of their water use. We see no reason to duplicate this process.

18. It is interesting that you note the current base flows in 6 Mile and 8 Mile Creeks are currently very low. This is something we have known for years. That is the reason the irrigation system was expanded to include more water introduced into those areas.

The EA process of Walker Landfill site allows for reviews by others. We believe the opportunity to review and comment is already present and does not need to be duplicated.

If the EA for the Walker Landfill has identified potential reduction in ground water supply then there should be remediation plans to overcome this problem and these plans should be requested by the commenting or interested agencies and municipalities.

19. Same as above

20. The Virgil Reservoirs were built for flood control and irrigation. Farmers pay for some of the costs at the Reservoir. The Drainage Supervisor looks after the levels of water during the irrigation season. We do not support any other changes and we do not support the use of littoral zone aquatic plant growth because of damage to irrigation pumps.

21. We believe the decision to monitor water quality in drains and watercourses be left to the Town, in co-operation with the Irrigation Committee.

22. Farmers are good stewards of the land. Many hire a pesticide specialist to advise on timing of the use of pesticides, to reduce their usage. This includes the cost of an individual who covers each farm parcel on a weekly basis. Farmers apply nutrients and pesticides according to regulations (rates per acre) based on soil samples. There are OFA Nutrient Management Plans that already address this issue. We see no reason to duplicate this work.
23. Most farmers adjacent to drains already leave a 10 m headland for drain maintenance purposes and for turn around of equipment. There is no need for this extra work.
24. The Town of NOTL currently uses less salt on their roads than the Region does. Farmers have suffered damage to trees, vines and crops from salt spread on Regional roads. Farmers support the implementation of extending the recommendations of Niagara Regions Salt Vulnerability Study if the recommendations will reduce the amount of salt presently used on local roads.
25. We believe the decision to undertake a water and sediment quality monitoring program of Virgil Reservoirs be left to the Town, in co-operation with the Irrigation Committee.
26. Farmers already leave sufficient headland buffers adjacent to watercourses for maintenance work and for equipment movement. We see no reason to duplicate this action.
27. Water has been introduced into the watercourses for over seventeen years because the base flow is so low or non-existent. Farmers/landowners have committed substantial investments towards the expansion of this irrigation system. This year there is a requirement for farmers to submit their water usage. The Town already knows the number of users on the system because they are charged annually for capital and operational costs. There is no need for this additional review.
28. Farmers support the protection of any wetland features on public land. Without identifying locations, it is difficult to respond about private land.

29. There is already a vegetated buffer along most of Four Mile Creek in St. David's. Any restoration plan should only be undertaken after consultation and agreement with property owners.
30. The Reservoir was installed for irrigation and flood control and the irrigation system is operated from May 15 to Sept 15. Farmers do not support any changes to the operation of the Reservoir and do not support any aquatic plants that would hinder operation of irrigation pumps.
31. Most of the forested areas are on private property and are maintained at the owner's expense. According to the Regional Tree By-law farmers can only remove trees for agriculture production. To prevent complete removal of forested areas, perhaps there should be opportunities for negotiation with landowners who own these areas.
32. Farmers support the identification of opportunities to create habitat linkages along public property in the Escarpment. Linkages on private property should only be undertaken after consultation and approval of the owner because of damage to crops and property.
33. MNR and OFA currently work with landowners on this issue.
34. Reach-based concept plans should only be done if Federal and Provincial Governments share the cost of the plans and the work.

May 21, 2007

RE: WATERSHED STUDY

COMMENTS

Thank you for meeting with us today to hear our concerns about the Watershed Study.

During discussion with the Steering Committee, over a year and a half ago, it was suggested that the consultants should meet with the Irrigation Committee to understand how the system operates and how important the system is. It would have been helpful to discuss the proposed action plans and how they would affect the operation of the system. The rural landowners would also have been able to discuss the effects of the proposed action plans on their ability to farm.

At the public meeting most of those who attended were rural landowners. When the 34 action plans were submitted at the public meeting the landowners were opposed. While a few of the action plans are welcome, many of the action plans would require the removal of productive agricultural land, some would affect the ability to make a living, and some were duplications of actions already done by others and in the opinion of landowners were not required. There was also no cost associated with any of these action plans.

The landowners responded to each of the 34 proposed action plans and submitted it almost a year ago.

Prior to the meeting on May 15th, a request was made to have the screen presentation available in hard copy so one would have the ability to refer back for discussion. Unfortunately the hard copies were not available and it was extremely difficult to remember what was indicated on the screen. It was understood the meeting was held for discussion purposes and to clarify any questions raised. There was no real discussion and questions were limited. Unfortunately the consensus from the landowners after the meeting was that the Consultants did not listen to their initial response in 2006 and that the meeting was being rushed.

Irrigation Committee I have
ke the following comments.

nt agencies and other
ded.

Page 5---"to determine a program whereby the natural resources of the watershed may be conserved, restored, developed and managed" (restore means to bring back to the original) There has been no discussion on what this means and where it is to take place.

Many of these action plans will require more agricultural land and will be extremely costly. There is no cost analysis.

Page 6 states under the heading "Summary of Past Activities" that field investigations were completed. That information was requested and will be useful. Page 6 also states that the long list (34) of management options were evaluated. It would have been helpful if there had been an open and frank discussion with the consultant about these proposed actions.

Page 8 states "To protect the natural environments of the NOTL watershed ecosystem, within the context of a unique, fragile agricultural resource,---". The agricultural resource in NOTL is unique and it is important to understand that what affects the tender fruit crop in NOTL is not the same that might affect a different type of agricultural crop. i.e. Wildlife may not be the biggest predator to agricultural crops in NOTL, but birds are. Abandoned orchards or surplus and uncontrolled vegetative growth also have a costly affect on the growing of tender fruit crops. Many of the 17 action plans still call for more vegetative growth.

Page 9 states KEY ISSUES. This page does not have all the key issues identified by landowners in the NOTL Watershed. It states "Altered hydrology contributing to erosion & sedimentation of drains, watercourses-leading to unstable conditions & frequent flooding." Flooding was not identified as a key issue. Where did the frequent flooding take place? It is important to consider and mention that spring thaw, storm drains, and urban subdivisions contributes significantly to altered hydrology and this should be included in the document. The action plan calls for the removal of weirs or dams. The importance of the use of dams for the use of irrigation cannot be overlooked.

Page 11 Remove words relating to potential threat. What is meant by "Poor habitat conditions to support fish in watercourses."?

Page 12 Should include definition of Watershed Disadvantages. Most of the disadvantages directly affect the farmers.

It is my opinion further discussion with members of the Agricultural and Irrigation Committee is needed to understand the ramifications that some of the proposed action plans will have on the farming community to reach a truly cooperative plan that will be supported by all.

Chairman of the NOTL Irrigation Committee

INITIAL COMMENTS

71

June 14, 2007

NOTICE OF IMPORTANT MEETINGS FOR RURAL LANDOWNERS

As Chairmen of the Agricultural and Irrigation Committees, we would like to notify rural landowners of the most important meeting coming up about the Watershed Study. A letter notifying you about two meetings appeared in the Advance last week.

The second meeting, the Watershed Meeting, will be held on June 19 from 7:00 to 9:00 pm at the Community Center on Platoff St. in the Old Town. This meeting is to present the latest version of the proposed management actions for the watershed. If you remember, the original proposal a year ago, identified 34 management actions. The farming community responded with it's concerns about the duplication of actions done by other government agencies, the fact that some of the actions would potentially require the loss of productive agricultural land, the requirement for treed or naturally vegetated buffers adjacent to drainage ditches and the damage to crops because of it, the requirement, cost and maintenance of terraced vegetative slopes adjacent to drainage ditches for erosion control, the cost of taking more productive land to design natural channels, the potential loss of the use of dams (weirs) for irrigation purposes and the overall cost of Watershed Management Actions, which has not been identified yet.

The latest version of the Watershed Study has reduced the 34 actions to 17.

They are:

Review current incentive programs that target farmers and update to address current issues and problems

Develop brochure/educational materials on shoreline erosion, approvals, preferred stabilization techniques, protection of fish and aquatic habitats

Update Floodplain Mapping

Minimize flooding of agricultural lands by:

- a) upgrading culverts, remove weirs
- b) removing excess fill adjacent to drainage feature
- c) increase capacity of drainage feature

Implement a strategic drain maintenance and management program to reduce costs and improve stability (reduce erosion and sedimentation in drains)

Complete a review of the irrigation system to identify water use conflicts; encourage water conservation including off-line storage; identify minimum flow requirements; identify potential downstream impacts

Develop an erosion remediation plan using natural channel design for watercourses to address erosion and fish habitat impacts

2.

Implement State-of-the-Art Stormwater Management for new developments

Implement a water quality monitoring program to assess the water quality in drains and watercourses

Manage nutrient (nitrogen and phosphorus, potassium) and pesticide use to reduce potential for contamination of runoff and groundwater

Work with landowners to develop a 6m buffer zone (3m on each side) adjacent to drains.

Implement the recommendations of Niagara's Salt Vulnerability Study and extend it to cover local roads

Work with landowners to develop a 10m buffer zone (5m on each side) adjacent to watercourses

Implement a community-based fish habitat improvement plan for Virgil Reservoirs and lower 4 Mile Creek, in cooperation with the Irrigation Committee

Work with landowners to develop strategies to manage conflicts between wildlife and crops

Protect remaining wetland and forest features

Identify opportunities to create habitat linkages along the Escarpment

These 17 management actions were shown to the Ag. and Irr. Committees. Committee members still have concerns.

First it is important to realize the NPCA's intention is "to determine a program whereby the natural resources of the watershed may be conserved, restored, developed and managed."

Municipal drainage ditches have not been removed from this plan as requested previously.

Second, landowners had requested the words "and economically feasible" and "and to do so in co-operation with the Irrigation Committee" be included in the "Goals". This wording has not been included yet.

The plan recommends the installation of larger culverts which is positive. The plan recommends the removal of fill adjacent to drains which is positive. That is done now if the owner wishes to pay. The plan recommends the widening of drains to minimize flooding. Where and how?

3,

The plan still calls for an erosion remediation plan using natural channel design for watercourses and drains that could require more agricultural land.

The plan still calls for the implementation of a strategic drain maintenance program using vegetative terraces and a low flow channel with meanders.

The plan calls for a review of the Irrigation System. Why? Region (Stantec Irrigation Study) has already done some of this work. Who pays?

The Slide presentation shown to members of the Committees showed an extensive treed buffer as a good buffer, not grass.

The plan still calls for the removal of weirs/dams. The Irrigation By Law requires the removal of temporary dam boards after the season is ended.

The plan calls for the management of nutrients and pesticides. How will that be done?

The plan calls for a community based fish habitat improvement plan in co-operation with the Irrigation Committee. What time of the year will this be done and who pays?

The Watershed Plan has not yet included costs.

These are some of the ongoing concerns of committee members.

We had a very cordial meeting with Andy Burt, General Manager of the Conservation Authority. At the meeting he assured us any implementation plan would be done in co-operation with the landowner. We are enclosing a copy of his letter.

However we also believe it is important to continue to express any concerns you may have about the Watershed management action plans. The meeting will be in an Open House Format. We urge you to read the material carefully. Look at the benefits and disadvantages of individual management action plans. Ask questions for clarification and if you are concerned about any of the action plans, like the requirements for additional agricultural land for some of these management actions, or the loss of temporary dams, fill out a comment sheet and say so. If you are concerned about any of the action plans, fill out a comment sheet and say so. At the same time comment on plans that you support. This may be the last opportunity to have direct input on the Watershed Plan, so we urge you to take advantage of the opportunity.

#2

Niagara Peninsula Conservation Authority
Niagara-on-the-Lake Watershed Plan

August 22, 2007

RE Town of Niagara-on-the-Lake Irrigation Committee Response

We appreciate the opportunity to comment on the list of proposals. On June 15, 2006 comments were submitted on the 34 proposals at that time that outlined our concerns including the fact that many management actions were already done by other government bodies or private individuals. We appreciate the fact that the number has been reduced but we still have concerns about some of the action plans including the voluntary aspect of the management actions.

We understand from speaking to Andy Burt and Suzanne McInnes from the Conservation Authority that the action plans will be voluntary, not regulated. However the document from the consultant for public comment proposes Policy Considerations, Implementation Mechanisms, Unit/Initial Costs, and Funding Alternatives. Our concern is about what is chosen for implementation by the Conservation Authority.

On behalf of the landowners who irrigate we offer the following comments in response to the 24 proposed management action plans in the Watershed Study.

ACTION #8

Develop brochure/educational materials on shoreline erosion, approvals, preferred stabilization techniques, protection of fish and aquatic habitats

RESPONSE Presently erosion is controlled with the use of riprap and the Irrigation Committee supports that use. The Irrigation Committee does not support the use of vegetative side slopes using plantings if that is what is meant by "preferred stabilization techniques". The Irrigation Committee supports the use of grass adjacent to municipal drains because farmers can mow the grass and keep unwanted pests that damage crops to a minimum. Presently the NPCA publishes brochures on fish and aquatic habitat and that information should be available to all who live adjacent to a fish habitat. The cost of this should be borne by the municipality and the NPCA.

ACTION #1

Review current incentive programs that target farmers and update to address current issues and problems; provide technical advice and support

RESPONSE We support the need to better target incentive programs for all farming operations typical of our area. However the agricultural commodity groups usually identify these programs. For the purposes of the Irrigation Committee, funding for ponds, water quality testing, erosion control and dams would be most welcome but we question the need for the Conservation Authority to do a review. Reviews cost money. The Irrigation Committee does not feel it is their responsibility to fund this review.

ACTION #10

Minimize flooding of agricultural lands by identifying undersized culverts and spill zones

RESPONSE We support the development of a prioritized list of undersized culverts and we understand that has been done and submitted to the Town

ACTION #10a

Upgrading culverts, removing unnecessary weirs

RESPONSE The committee supports the inclusion of the prioritized culvert list to be included in Town and Region capital budgets. However the committee cannot stress enough the importance of the private dams on private property that hold water for irrigation use and the committee does support the simple design of a dam for irrigation purposes.

ACTION #10b

Remove excess fill adjacent to drains and watercourses

RESPONSE As stated previously the Town already has a policy on fill adjacent to drains when drains are cleaned and the drains are cleaned according to the Drainage Act. The landowner has the option of spreading the fill on his/her land or paying to truck it away if land is not available. Spill zones could be identified when drains are cleaned but the Irrigation Committee will not take the responsibility to fund the removal as the farmers are already either spreading the material on their own lands or paying to truck it away from their own property as part of drain maintenance.

ACTION #13

Implement a strategic drain maintenance and management program to reduce costs and improve stability (erosion and sedimentation of drains):

New information has proposed a \$20,000 study to be paid for by the Irrigation Committee to review the existing program of drain maintenance and identify measures to reduce frequency of maintenance (brushing, drain cleanout, linkages with irrigation network).

RESPONSE As stated by us a year ago this work is done according to the Drainage Act. Engineering reports were done on all the individual drains that outlined maintenance work. The previous Watershed Management Action Plan, a year ago, identified the need to minimize drain maintenance from April to June because of fish spawning time. We understand and support this timing but we cannot support a decrease in the frequency of

brushing the drains. The drains are not cleaned that often and the growth of weeds and bulrushes impede the movement of water through the drains, movement that is critical for irrigation (pictures enclosed). This summer is a perfect example of the problem of trying to move water through weed-choked channels during a drought. The retention of bulrushes slows the water and can also provide a breeding ground for mosquitoes. The Irrigation Committee cannot support the financing of a \$20,000 study.

ACTION #13a

Design drain morphology to be more self-sustaining

RESPONSE This management action proposes that the Irrigation Committee review the existing network of drains, weirs, tile drainage to identify measures to improve drain function to convey water and calls for the implementation of a demonstration project to design a drain typical of Type 5, 7, and 8 drain classes. Information about what that design is or at what cost has not been included so we cannot comment.

Previous information (2006) called for the use of terraces and low flow channel with grade controls or meanders to reduce gradient. The disadvantages of this proposal were that low growing vegetation required some maintenance and an increase in land requirements. The committee does not support the idea or the cost of reconstructing existing drains or losing more agricultural land but if new drains were created in the future this information would be considered.

ACTION #13b

Introduce grade controls (e.g. 6 Mile Creek) to reduce erosion risk The action proposes a \$30,000 study to be paid for by the Irrigation Committee to review measures to reduce erosion.

RESPONSE A year ago this action plan called for grade controls constructed out of natural materials to reduce gradients and increase channel roughness. For many years erosion in drains has been controlled with the use of rip rap (rock) and we support that use.

If a grade control plan for Townline municipal drain/6 mile creek needs to be implemented to slow water then it should be implemented with the use of dams with removable boards to hold water for irrigation needs. A simple dam design with removable boards needs to be done so that farmers can use that design for use elsewhere. Existing dams can be used for consideration (pictures enclosed). Further consultation needs to be done with the Irrigation Committee.

The water introduced by the irrigation committee is not the only water going through the drains and watercourses. In our opinion the extreme water that flows in the spring of the year causes extensive erosion (pictures enclosed). The Town and the NPCA should share

any study for erosion control because the Irrigation Committee may have to do an erosion study on drains they use for irrigation purposes as part of the system expansion plan.

ACTION #13c

Replace rip rapped side slopes with vegetated terraces (low growing vegetation)

RESPONSE This action calls for the Irrigation Committee to investigate alternative bank stabilization measures for drains and calls for a \$50,000 demonstration study to be funded by the Irrigation Committee, NPCA, and federal programs.

The Irrigation Committee does not support the need to replace rip rapped slopes with vegetative terraces and cannot support the cost of the study. The Committee supports the use of riprap and vegetated growth is not hampered by the use of riprap (pictures enclosed).

ACTION #13e

This action calls for the continuation of the removal of temporary dams after the irrigation system is completed (Sept 15) and the consideration of water conservation measures to manage water use and in stream storage requirements.

RESPONSE The Irrigation System by-law calls for the removal of temporary dams and will continue to do so. The Irrigation Committee advocates the construction of individual off line ponds and has had information presented at annual irrigation meetings about funding sources. The Irrigation Committee continues to look for ways to improve the irrigation system and as part of the expansion plan for the Airport, Bright and Lavigne Irrigation System a design study has been initiated that includes the construction of a holding area for the storage of surplus water and variable controls on the pump to provide the opportunity to conserve water. The Committee is also adding variable controls to an existing pump on a different system.

ACTION #13f

In areas where fish have access to drains, minimize drain maintenance activities during spring; April 1- June 30.

RESPONSE This is already done and all landowners, including members of the irrigation committee, pay the drain maintenance.

ACTION #14

Review the irrigation management system to identify any existing conflicts in water use among landowners-encourage off-line storage and other water conservation strategies; identify opportunities to maintain base flow; identify potential downstream impacts on watercourses

The action proposes that the Irrigation Committee needs to complete an audit of water withdrawals by landowners to manage its own withdrawals, current system is to respond to landowner demands for water, levy for water use needs to be based on actual withdrawals, rather than on acreage under irrigation to encourage more efficient use of water/water conservation, an assessment of watercourse erosion is needed to identify impacts of municipal drains and irrigation water on stream erosion.

RESPONSE The landowners are required to submit monthly records of water use to the Town and the cost is attributed according to acres irrigated. If a piped system were in place it would be easy to charge based on actual water use. Unfortunately the proposed cost of two different piped systems (Stantec) for NOTL is \$62,000,000 or \$65,000,000 with no guarantee of funding assistance. Completely unreasonable cost for 138 growers.

Any conflicts among landowners are usually settled by talking to each other. Complaints received by the Irrigation/Drainage Manager are dealt with by him and if an irrigation meeting is needed to deal with a serious issue, a meeting can be called almost immediately. If there is a water shortage, and it is brought to the attention of the Irrigation Committee, a rationing schedule is put in place and monitors are appointed for each drain that is rationed. Scheduling is being considered for permanent use.

Regular base flows are not always present in the municipal drains. For many drains the only water present is spring thaw water or rain water. The steady flow of water in many drains is the irrigation water introduced seasonally in the drains. During drought years it may be difficult to maintain a flow of water.

Action plan #13b proposed an erosion study with a cost of \$30,000. Action plan #14 proposes an assessment of watercourse erosion to identify impacts of municipal drains and irrigation water on stream erosion with a cost of \$50,000 to be paid by the Irrigation Committee, NPCA, Federal programs, Region Water Quality Program. There seems to be more than one opportunity for an erosion study in these action plans.

RESPONSE As stated previously, irrigation water is not introduced into every municipal drain and irrigation water is not the only water that flows through any drain. Spring thaws contribute much more water in a shorter time frame than irrigation water and do far more damage over the years. Landowners in NOTL have taken numerous pictures during this time and some are enclosed. Therefore the Province and the Town should contribute to any cost for erosion control.

ACTION #15

Develop an erosion remediation plan using natural channel design principals for lower watercourses to address erosion and aquatic habitat impacts.

RESPONSE This action plan calls for the NPCA to do a \$50,000 erosion remediation plan on 8 Mile, 6 Mile, 4 Mile and 2 Mile Creeks based on potential risk to structures and

sediment source, with the focus on the urban areas. Priorities include erosion hazards in 4 Mile Creek first, followed by sediment generating sites on all three watercourses. The cost is proposed to be paid for by the NPCA, NOTL and the landowner.

The cost of the plan is high. What and where are the erosion hazards? Have they been identified? Are they all in the urban area? Do they include the ponds used for irrigation in Virgil? What will the required work cost as a result of the plan?

According to data presented the remediation plan calls for natural channel design that could require additional land. Does the urban landowner know? Agricultural landowners have said they do not want to have more land taken out of production. Natural channel remediation also proposes natural material for bank stabilization. Presently bank stabilization is controlled with riprap.

As landowners we support the use of riprap. It has done a good job in the past. We see no reason to change that use. It is imperative to keep in mind that municipal drains are cleaned out periodically according to the Drainage Act and the Engineer's report. The sides of the banks of the drains are brushed and clogged drains are cleaned out when necessary to allow water to drain properly and those that are used for irrigation purposes are also brushed and cleaned to allow for the flow of irrigation water.

ACTION # 21

Implement a water quality monitoring program to assess instream water quality for irrigation and aquatic life, that includes a focus on nutrients, suspended sediment, chloride and less frequent monitoring of trace metals, pesticides and organic compounds. The action plan proposes funding from NPCA, Irrigation Committee and NWQP.

RESPONSE The Irrigation Committee will monitor the irrigation water at the source if funding is available. The NPCA should continue to monitor downstream.

ACTION # 22

Work with landowners to manage nutrient (nitrogen and phosphorus) and pesticide use and reduce potential for contaminated runoff (nutrients, suspended sediments, bacteria, chloride) and contaminated groundwater. Plan calls for the development of nutrient management plans with input from NPCA. The Plan proposes "all agricultural producers to complete Nutrient Management plan/Environmental Farm plan" and the implementation of a "septic system inspection program".

RESPONSE There are already nutrient management plans in place and it is on a voluntary basis. The Irrigation Committee feels that the Consultant or NPCA needs to talk to the individual who already works with the landowners to administer the program. Why is there a need for others to do this work? If the existing plan needs improvement one meeting with those who presently operate the program would suffice. This program

is voluntary and the Irrigation Committee supports a voluntary program. These action plans were supposed to be voluntary.

Many farmers use sprayers designed to reduce pesticide use. The spray is directed downwards and the spray can be directed only to one side if necessary (pictures enclosed). Funding should be made available to purchase this type of sprayer.

Septic systems are installed with the approval of the Health Unit. Periodic pumping is reported to the Health Unit. The timing of pumping depends on usage. Two people living in a home should not have to pump their system as often as a home with five or six people. These statistics should be available for review by the Health Unit and if there is no record of cleanout, a letter to homeowner should be sent and a follow up if necessary.

ACTION # 23

Work with landowners to develop a 6 m. buffer zone (3 metres on either side) adjacent to drains (manage uses/activities within the buffer); implement a demonstration project With a proposed 50 % cost share paid for by the landowners and the other 50 % share to be split between NPCA, Irrigation Committee, Federal programs and NQWP.

RESPONSE Most rural landowners have to provide a 3 metre buffer adjacent to drains to utilize their farm equipment, especially if they are spraying or harvesting because of the area needed for turning tractors and implements. The Irrigation Committee does not support the cost of a demonstration project and does not support the concept of the management by others of "the uses/activities within that buffer." Presently most rural landowners mow that area to keep weeds and other vegetation in check to prevent habitats that would harbor pests that destroy crops.

ACTION # 24

Implement the recommendations of the Region's Salt Vulnerability study and extend it to cover local roads.

RESPONSE Farmers support the implementation of the Region's Salt Vulnerability Study. Farmers have taken legal action against the Province for damage to crops and farmers in NOTL have had extensive damage (pictures enclosed) done to crops on Regional roads. The Town does a much better job than the Region in managing the salt on local roads with a small percentage of salt used, despite criticism from some taxpayers.

ACTION #26

Same response as #23

ACTION #30

Implement a community-based fish habitat improvement plan for Virgil Reservoirs and lower 4 Mile Creek in cooperation with the Irrigation Committee. The plan proposes the development of a habitat enhancement program "including improving littoral habitat in Virgil Reservoirs, incorporating habitat enhancement into erosion control works on 4 Mile Creek; developing interpretive signage, public access points for anglers."

RESPONSE There are two aspects to this plan. The first proposes littoral plantings, interpretive signage, and public access for anglers for the reservoirs. The reservoirs were built in the 60's for irrigation and flood control.

The Irrigation Committee questions the need for littoral plantings based on a site visit (pictures enclosed). The reservoirs have extensive habitat now. In certain areas riprap has been introduced for erosion control. We do not support the removal of existing riprap for additional plantings. The public uses the reservoirs now (picture enclosed). If the public is encouraged to visit the site, what happens in drought years when water is needed for irrigation and the water levels decrease? The Irrigation Committee has serious concerns about this proposal and consultation is needed with the Irrigation Committee before this plan is considered or implemented.

The second part of this plan proposes "a community based fish habitat improvement plan for the lower 4 Mile Creek" also, including a "habitat enhancement program" that includes erosion control works.

The Irrigation Committee cannot stress enough the concern over the proposals to increase vegetative habitat into our specialty crop area. This increase in habitat leads to additional pesticide sprays for crop protection at a time when the industry has made great improvements in the reduction of the use of pesticides. The landowners mow grass in buffer areas and between crop rows to prevent crop loss from unwanted pests that are harbored in vegetative growth (pictures enclosed).

ACTION # 31

Work with landowners to protect remaining forest and wetland habitats by including a municipal rebate.

RESPONSE The Irrigation Committee supports the Regional Tree By Law that allows property owners to remove woodlots if the property will be put into agricultural production. The Committee supports a Regional tax rebate to be included because that rebate would be more encouraging.

ACTION #32

Identify opportunities to create habitat linkages along the Escarpment by including a municipal tax rebate.

This plan proposes to offer a municipal tax rebate to property owners and "to identify other incentives to take land out of production" to create habitat linkages along the Escarpment.

RESPONSE The Irrigation Committee has concerns about creating habitat linkages adjacent to productive agricultural land (pictures enclosed). As stated previously creating wildlife habitats causes crop damage to specialty crops and that is what is grown in NOTL. If there is no nearby productive agricultural land then the Committee can support incentive programs but a Regional tax rebate should be included. The best approach would be to buy the land at fair market value.

ACTION #33

Work with landowners to develop strategies to manage conflicts between wildlife and crops.

RESPONSE The Irrigation Committee supports the concept of managing conflicts between wildlife and crops. One way to manage conflicts is to stop encouraging the idea of creating more habitats that attracts the wildlife (birds) that damage crops (pictures enclosed). There is no compensation for damages to crops from birds but there should be.

CONCLUSIONS

Government and society have shown a deep concern about water supply. As farmers and irrigators we know first hand the importance of a supply of water for irrigation purposes. Due to a drought in 1988 the farm community pressured the Town and Provincial Government to allow the use of municipal drains for irrigating purposes. Since that time Bill 88 has provided the ability to introduce water into municipal drains for irrigation purposes and the maintenance of the drains has been done under the Drainage Act. The water is only introduced into some branches of each municipal drain, not all. An Irrigation Committee is in place that makes decisions on the expansion of the system and only 138 landowners have paid most of the cost of the design, infrastructure, operation and maintenance of the system.

As rural landowners and irrigators we are deeply concerned about many of the action plans proposed. Most of the drainage ditches flow through our property that we maintain. A lot of agricultural land has been lost to municipal drains in the past. Some of the proposed action plans will remove more agricultural land adjacent to municipal drains and therefore remove more productive agricultural land. We cannot support the further removal of agricultural land to provide vegetative terraces etc.

Some of the action plans we see as duplication of services provided by other government agencies or private business entrepreneurs.

The Watershed Plan calls for studies for new erosion control methods, drain redesigns, grade controls, new bank stabilization methods etc. and targets the Irrigation Committee for funding for many if not most of the action plans. There are only 138 growers who irrigate and they are already paying for the majority of costs attributed to the irrigation system and any expansion proposed. It is important to remember that all rural landowners do not contribute to the Irrigation System. It is also important to remember that those who irrigate pay, not only for the capital costs but also for the operating/maintenance costs of the Town Irrigation System, but for the costs of their individual pumps, pipes and generators and tractors to run the pumps.

The Irrigation Committee does not support some of these plans and the funding costs for the reasons stated above however we do offer the following suggestions.

We believe there is a need to design a dam that can be used to hold water and control the flow of water in the drainage ditches running north and south. Board dams are allowed in the drains on a seasonal basis however it is difficult to put board dams in place and remove them without causing earth to be dislodged. A different design could have pre-fabricated cement sides with removable boards in the drainage ditch area. Dams that have been constructed in the past that work properly can be used as examples (pictures included). Consultation should take place with the Conservation Authority, the Town (Public Works), and the Irrigation Committee/landowners on the issue. Studies are not required, only designs. Costs should be kept to a minimum.

Further consideration should be given to Four Mile Creek reservoirs. The reservoirs were built for irrigation and flood control in the 1960's. Over time they have fish that have migrated to them. In years with sufficient rainfall there is not a problem maintaining water for the irrigation and fish, however, in a drought year, water supply has to be limited to protect the aquatic life. We believe that if the maintenance of aquatic life in the reservoirs is important to society then consideration should be given to deepening the ponds. The cost could be enormous. Consultation about the deepening of the reservoirs should take place with the Conservation Authority, the Town (Public Works), and the Irrigation Committee). The cost of this work should be borne by the Province.

We hope this response has provided some insight into our needs and concerns. We understand that before any plan is finalized we will be consulted in the process to develop a Watershed Plan appropriate to the needs of the farming community in a Specialty Crop Area.

The Town of Niagara-on-the-Lake Irrigation Committee