

## 2. UPPER POOLE CREEK SUBWATERSHED STUDY

### COMMITTEE RECOMMENDATION

**That Council endorse the Upper Poole Creek Subwatershed Study (April 2000) as the technical document to guide environmental planning and management decisions within the study area.**

### DOCUMENTATION

1. Planning and Development Approvals Commissioner's report dated 8 May 2000 is immediately attached.
2. Correspondence from L. McGovern, FoTenn Consultants Inc., dated 23 May 2000.
3. Faxed correspondence and attached comments from K. MacRae dated 23 May 2000 (received after Committee meeting commenced).
4. An Extract of Draft Minute, 23 May 2000, follows and includes a record of the vote.
5. *Executive Summary, Upper Poole Creek Subwatershed Study, issued previously to all members of Council and held on file with the Regional Clerk.*

Our File/N/Réf. 46-99-0092  
Your File/V/Réf.

DATE 8 May 2000

TO/DEST. Co-ordinator  
Planning and Environment Committee

FROM/EXP. Planning and Development Approvals Commissioner

SUBJECT/OBJET **UPPER POOLE CREEK SUBWATERSHED STUDY**

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### **DEPARTMENTAL RECOMMENDATION**

**That the Planning and Environment Committee recommend that Council endorse the Upper Poole Creek Subwatershed Study (April 2000) as the technical document to guide environmental planning and management decisions within the study area.**

### **BACKGROUND**

In April of 2000, Marshall Macklin Monaghan Limited completed the Upper Poole Creek Subwatershed Study on behalf of the Region of Ottawa-Carleton and the Township of Goulbourn. The purpose of the study was to develop a comprehensive understanding of the subwatershed and, based on this, prepare a plan which will allow a healthy ecology to be maintained or strengthened while accommodating planned development. The final Subwatershed Plan identifies actions that could be readily implemented, at a relatively low cost, to achieve an appropriate level of protection/remediation of the Upper Poole Creek ecosystem.

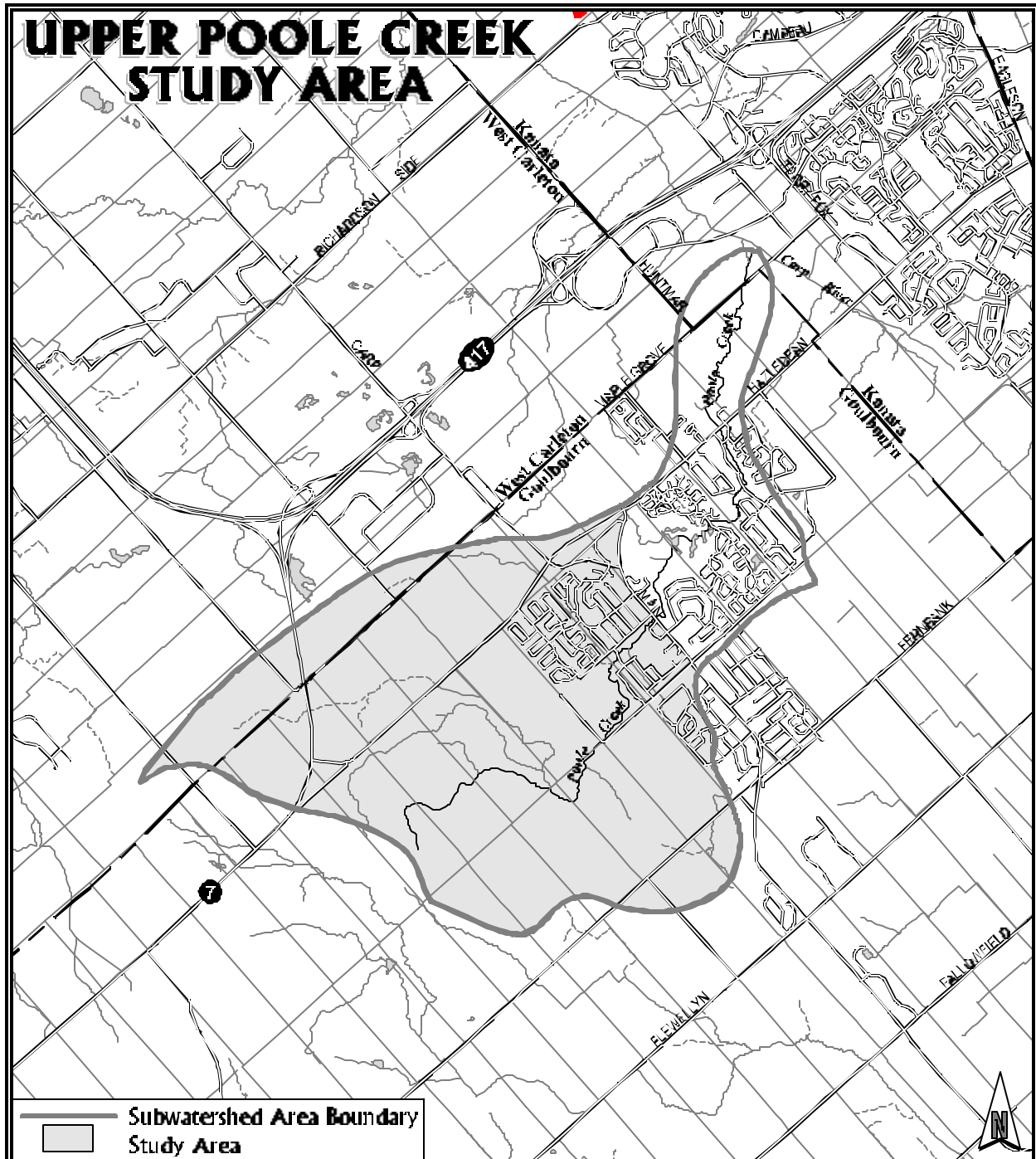
The Subwatershed Study is on file with the Corporate Resource Centre. The Executive Summary has been distributed to Council members.

### **DISCUSSION**

Poole Creek is situated primarily within the Township of Goulbourn (please refer to Figure). Its headwaters originate in a large Provincially Significant Wetland complex to the west of Stittsville and drains north-easterly through the village into the Carp River. The upper portion of Poole Creek, west of Main Street, is a cold or cool-water stream with the remainder of the watercourse considered a warm

water habitat. Because of the unique character, the Creek has become a focus and symbol for the community's concern for the environment and the existing ecology.

The subwatershed study was undertaken to protect the unique character of Poole Creek and to identify environmental constraints and opportunities associated with future development. The study area consists of the Poole Creek drainage area upstream of Main Street. This area includes the principal area designated for future development within Stittsville, the cold-cool water portion of Poole Creek, the provincially significant Upper Poole Creek Wetland to the south, and Fernbank Wetland to the west.



The study process consisted of the following main tasks:

- Background Review
- Field Work and Technical Studies
- Identification of Issues
- Formulation and Evaluation of Alternatives
- Preparation of the Subwatershed Plan and Implementation Strategy

In order to develop a comprehensive understanding of the existing environmental features and functions within the area, a thorough review of background information was conducted. This assisted in identifying information gaps and verifying the field investigation program. An interdisciplinary technical team of professionals conducted the field work which included: land use, aquatic biology, terrestrial biology, hydrogeology, water resources engineering, and stream morphology.

### ***Key Issues in the Subwatershed***

The field work and analysis resulted in the identification of the following issues or problems associated with past and current human activities. Future development could contribute to these problems unless appropriate measures are taken.

#### **1. Degraded Fish Habitat**

Past urban development has degraded the aquatic habitat of Poole Creek. The two primary constraints on the aquatic system are stream temperature and lack of baseflow.

- Stream Temperature - Based on stream temperature data, it suggests that Upper Poole Creek is a coolwater rather than a cold water habitat. Previous development has modified groundwater flow patterns which have significantly decreased cold water inputs into the creek.
- Lack of Baseflow - Baseflow measurements in Poole Creek indicate that flows are a major constraint on the stream ecosystem. Poole Creek's surface water regime is intermittent in nature. During the summer, the upper portion of the watercourse tends to dry up except after rainfall events. This limits the available cool water summer habitat. Further, the lack of flows tends to "de-couple" the upstream wetlands from the downstream watercourse, leaving two separate ecosystems.

These stressors have impacted the aquatic habitat of Upper Poole Creek to a point where the system can no longer support a self-sustaining population of trout species. However, the presence of other cold-coolwater species such as mottled sculpin were found throughout the creek. These species are less sensitive to temperature change and lower water velocities.

## **2. Condition of Terrestrial Features**

There are a number of provincially and regionally significant natural features within the study area including: the Highway 7 North Natural Area; Rothbourne Road Natural Area; and, Stittsville West Natural Area (which includes the North Goulbourn and Upper Poole Creek Provincially Significant Wetlands). Other features include the Fernbank and Stittsville Wetlands. There are few issues associated with the terrestrial resources outside the urban boundary. These areas are relatively undisturbed, however, two issues were identified: 1) Ice Damage to Vegetation; and, 2) Invasive Species.

## **3. Potential Encroachment**

No encroachment is permitted into provincially significant wetlands. Development proposals on lands adjacent to the wetland (within 120 m) must complete studies, which ensure that the function of the wetland is maintained. Future urbanization will bring development into contact with the Upper Poole Creek wetland and Fernbank wetland. There will be a need for Wetland/Environmental Impact Statements to ensure that alterations to the adjacent lands do not negatively impact the wetland function.

## **4. Public Access and Linkages**

The natural areas and associated wetlands are valuable resources to the community as well as naturalists clubs. The public identified the need to investigate opportunities to have greater access to these areas. There is presently a lack of trail systems connecting the Poole Creek corridor with the upstream terrestrial features.

## **5. Change in Wetland Status for Fernbank Wetland**

During the course of the study, the Ministry of Natural Resources reassessed the wetland status of the Upper Poole and Fernbank Wetlands which was based on the 3<sup>rd</sup> Edition of the Southern Ontario Wetland Evaluation manual. The reassessment resulted in a classification change from provincially significant to locally significant for the Fernbank Wetland. This wetland is, therefore, no longer protected under the provisions of the “Significant Wetlands South and East of the Canadian Shield” policy of the Planning Act.

### ***Goals and Objectives***

Although Poole Creek is not a sports fishery, it does represent a clean and healthy environment that is highly valued by the community. Based on consultation with the public and Steering Committee, the following goals for the subwatershed plan were established.

1. Seek to maintain a cold to coolwater aquatic habitat.
2. Seek to extend the existing pathways to make pedestrian connection between Poole Creek and the upstream provincially significant wetlands.

## *Subwatershed Management Strategy*

A number of alternatives were identified and evaluated using criteria based on the above goal statements. This resulted in a number of actions being recommended that would achieve a reasonable level of protection/remediation of the Upper Poole Creek ecosystem. These recommendations have been grouped into the following strategies: development guidelines, aquatic, terrestrial, and monitoring.

### Development Guidelines

Development guidelines were prepared to govern future development by ensuring that current constraints on the environment are not exacerbated. The guidelines included the following measures:

#### Stormwater Management

- level 1 water quality protection
- water quantity control
- temperature sensitive measures (e.g. infiltration techniques) that help to reduce thermal impacts to the creek from urban runoff
- sediment and erosion plans

#### Wetlands

- updated boundary delineation
- Wetland and Environmental Impact Statement guidelines

#### Poole Creek Corridor

- 30 metre setback from watercourse

#### Monitoring and Inspection

- construction guidelines
- stormwater management monitoring
- vegetation monitoring

### Aquatic Strategy

The aquatic strategy involves actions to strengthen and improve the aquatic habitat of Poole Creek. It supplements the development controls, which are aimed at mitigating the impacts of development. The strategy focuses on low cost actions which include:

- Buffer and Riparian Plantings
- Addition of In-stream Structures
- Remediation of Existing In-stream Structures

## Terrestrial Strategy

The terrestrial strategy involves actions to improve and enhance the existing natural areas within the subwatershed while providing for public access and education opportunities. The strategy includes actions pertaining to the following:

- Trail System and Components
- Invasive Species Program
- Wildlife Management (beavers)

## Monitoring Strategy

The purpose of the monitoring strategy is to collect information that will allow the ecological health of the Upper Poole Creek to be assessed and tracked over time. The program includes the following components:

- Indicator Species (mottled sculpin)
- Fish Community
- Benthic Community
- Water Quality and Temperature

## ***Implementation Strategy***

An implementation strategy was prepared which identifies the roles, responsibilities, and timelines associated with each of the recommended actions. The implementation of the subwatershed plan will be the joint responsibility of the regional and local municipalities, the conservation authority, the private sector, and the public. It is recognized that not all of the policy, protection, management, and restoration initiatives recommended in the plan can be achieved simultaneously.

The development guidelines will be implemented through the planning approval process and proceed in the short term. The Region's Official Plan will have to be amended as directed under policy 5.5.1.3, Policies for Significant Wetlands South and East of the Canadian Shield, which states that "... *changes in classification which result in the removal of the designation "Significant Wetlands south and east of the Canadian Shield" will require an amendment to this plan*". This process is anticipated to be initiated by staff this year.

Other recommendations will need to be examined in more detail in order to determine priorities, funding sources, and verify partnerships. The Steering Committee will continue to meet to co-ordinate implementation of the Plan and monitor progress.

## CONSULTATION

Public consultation was a major component of the study as Poole Creek is a valued resource in the community. A Steering Committee comprised of the Region, the Township of Goulbourn, the public, the development sector, the Ministry of Natural Resources and the Mississippi Valley Conservation Authority was established to help guide the development of the subwatershed plan. The Steering Committee met several times throughout the course of the study to review study findings and provide advice on study direction.

Two public open houses were held at the following key decision making points in the study: 1) Identification of Issues and Formulation of Goals & Objectives; and, 2) Evaluation of Alternatives. The general public, landowners, the development community, and the Township's Environmental Advisory Committee (GEAC) attended the meetings. The public assisted in selecting the target to maintain a cool/coldwater system. As well, they helped to elevate the attention given to the terrestrial features within the study area. The public also assisted in selecting the preferred management strategy. The public concurred with eliminating highly intrusive/manipulative measures.

On 9 May 2000, the Township of Goulbourn Council tabled the subwatershed study. Overall, Council endorses the principles and recommendations of the report. Council will formally adopt the Upper Poole Creek Subwatershed Study at their 23 May 2000 meeting after allowing for further public review.

## COMPATIBILITY WITH THE REGIONAL OFFICIAL PLAN

The Regional Official Plan, specifically section 5.4, supports and provides policy context for the preparation and implementation of watershed and subwatershed plans. This study will assist in executing several policies of the Official Plan in order to ensure sound environmental planning and management of the water and land resources within the subwatershed. Specifically, the subwatershed study provides direction and guidance in executing the following section and/or policies of the Official Plan: Section 3 - Community and Built Environment (Policies 3.2.10 and 3.2.13 in particular), Section 5 - Natural Environment (Objectives 5.1 and Policies 5.2, 5.3, 5.4, and 5.5), Section 6 - Regional Open Space and Cultural Heritage (policy 6.7), Section 10 - Environmental Services (Policy 10.3 in particular), and Section 11 - Environmental Constraints (particularly 11.2).

In addition, the plan supports and will help achieve the following goals of the Regional Official Plan:

Goal 2 - maintain the desirable characteristics and integrity of established communities in the urban and rural areas of Ottawa-Carleton.

Goal 7 - support a high quality of public open space and natural environment to bolster economic, cultural and political activities.

Goal 8 - preserve the integrity of natural systems by directing land use and development in a way that maintains ecosystem functions over time.



## FINANCIAL IMPLICATIONS

The endorsement of the subwatershed plan for Upper Poole Creek does not have any financial implications for the Region at this time. Any funding requirements associated with implementation will be brought forward for Council's consideration through the appropriate process.

*Approved by  
Nick Tunnacliffe, MCIP, RPP*

JP/sm



May 23, 2000

Councillor Gord Hunter and Members of Planning &  
Environment Committee  
Region of Ottawa-Carleton  
111 Lisgar Street  
Ottawa, Ontario  
K2P 2L7

**Re: Upper Poole Creek Subwatershed Study**

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Dear Councillors:

I write on behalf of our client, the owners of the Westwood subdivision lands in Stittsville, to express concern with one of the final recommendations in the Upper Poole Creek Subwatershed Study.

Our concern is with Section 10.4.1 of the Study which recommends a 30 metre buffer from the Fernbank Wetland. We note that Fernbank is not a Provincially Significant Wetland. It is our understanding that a 30 metre buffer is typically identified for Provincially Significant Wetlands, such as the Upper Poole Creek Wetland, whereas a lesser buffer is generally recommended for other wetlands.

It is our opinion, and that of Westwood's environmental consultant, Mr. Philip Niblett, that a better approach would be to establish the buffer for the Fernbank Wetland through an Environmental Impact Statement (EIS) which already forms part of the development process. This is a more valid approach to selecting buffers than to choose an arbitrary figure for an entire wetland complex as some sections may require more than 30 metres, while others may be adequately protected with less. We note that Westwood is currently in the process of preparing an EIS for the Fernbank Wetland as part of the next phase of its subdivision. We believe that the EIS approach can be appropriate for both Provincially Significant Wetlands and non-Provincially Significant Wetlands.

We ask that you consider an amendment to the final recommendations of the Upper Poole Creek Subwatershed Study to remove the arbitrarily set wetland buffer for the Fernbank Wetland and allow an appropriate buffer to be established through the Environmental Impact Statement.

We appreciate your consideration of this matter.

Yours sincerely,

Leeann McGovern

MURP, MCIP

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Subject : Upper Poole Creek Subwatershed Study Final Report.

Dear Committee,

I make the following comments as one of two of the public representatives on the Steering Committee for the Upper Poole Creek Subwatershed Study.

1/ Recommendation to Committee : defer endorsement until Goulbourn Township has completed it's review of the Final Report. Two weeks ago Goulbourn Council asked the study's consultants to make a number of text amendments and to add a copy of all written comments made throughout the course of the study. As such the consultants agreed to add a separate appendix containing all comments not included in the first version of the Final Report. More amendments will be considered by Goulbourn Township at it's Committee of the Whole meeting tonight. In my opinion it would therefore be inappropriate for the Region's Planning and Environment Committee to endorse the first version of the Final Report.

2/ In the "BACKGROUND" portion of the Regional staff report to you it says "The purpose of the study was to develop a comprehensive understanding of the subwatershed and, based on this, prepare a plan which will allow a healthy ecology to be maintained or strengthened while accommodating planned development." This implies that a comprehensive study was carried out for all of the subwatershed, such was not the case. If you look at Figure No. 2.1, Figure No. 4.1, Table 4.1, Table 4.2, Table 4.3, Table 4.4, Figure 4.2, Figure 4.3, Figure 5.1, Figure 5.2, Figure 5.3, Table 5.1, Figure 5.4 and most others you will see that they deal only with the portion of the creek and subwatershed from where the creek flows under Abbott Street downstream to the Lower Poole Creek portion of the Stittsville Wetlands Complex. The much larger portion of the creek and subwatershed, which are upstream of this, received little detailed study. As such I would agree that the study's consultants came to have a comprehensive understanding of the portion of the subwatershed from Abbott Street downstream to near the Lower Poole Creek Wetland ( with the exception that on Figures 4.1 and 10.1 they show the spring in the wrong location and didn't monitor water temperatures in that area ). In my opinion they don't have a comprehensive understanding of the rest of the subwatershed and to say otherwise is in my view a lie.

This contention is supported further by the Final Report itself in that on page 69 it states "*Highway 7 North Natural Area* ( found in subwatershed but not study area )" and "*Rothbourne Road Natural Area* ( found in subwatershed but not study area )". Also states "*Stittsville West Natural Area* (portion contained in study area)", which means a portion of it wasn't studied.

3/ I could add at least another full page of comments just regarding the Regional staff report, but don't have time, thanks to the very short notice given for the agenda for your meeting. So in brief : the officially accepted cold or cool-water habitat extends east of Main Street to the Lower Poole Creek Wetland. The study area was supposed to consist of the Poole Creek drainage area upstream of Main Street. The Upper Poole Creek Wetland is to the west, not the south. Fernbank Wetland is to the south, not the west. Under "Degraded Fish Habitat" it states "the system can no longer support a self-sustaining population of trout

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species." This statement is unproven in that all of the subwatershed was not studied in detail and doesn't acknowledge that there are possibilities to rehabilitate portions of the creek so that they may be able to again support a self-sustaining population of trout.

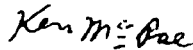
Continuing: says under "Goals and Objectives" "Poole Creek is not a sports fishery". MNR stocks it as a sports fishery and a number of people fish it as such. **I notice the glaring absence of any mention to continue stocking Brown Trout in the creek** On page 104 of the Final Report it states that one of the goals is "The subwatershed plan is to seek to maintain a cold to coolwater aquatic habitat. Continued presence of the Mottled Sculpin shall be regarded as an indicator of this goal. The Brown Trout program will be continued for its historic and symbolic value."

In regard to "Monitoring Strategy" the Region should also carry out water quantity or flow monitoring. A need as indicated in the OMYA water taking issue staff report.

Please see attachment.

There are a number of good things in the Final Report, but I don't have time now to go into them.

Sincerely,



Ken McRae

**COMMENTS REGARDING THE :  
"FINAL REPORT : UPPER POOLE CREEK SUBWATERSHED STUDY"**

**Submitted by : Ken McRae ( one of two public representatives on the Steering Committee for the study )**

**Submitted on : May 9, 2000**

1/ My general impression, from what I've had time to read, is that I'm **negatively impressed!** The amount of time between having received the Final Report ( May 5<sup>th</sup> ) and the time ( May 9<sup>th</sup> ) when Goulbourn Township Council is going to be considering accepting the Final Report is much too short. This very short time frame doesn't allow sufficient opportunity to properly review the Final Report. I suggest allowing at least two additional weeks for review and submission of comments by members of the Steering Committee, members of Council, and members of the Goulbourn Environmental Advisory Committee ( GEAC ).

The time frames available for review of information throughout the process for this study have been rushed at every step. In my December 23, 1999 comments I wrote "I was told that I would have the above said report a week before the December 14<sup>th</sup> steering committee meeting, but instead I received it on the afternoon of the 10<sup>th</sup> of December. This severely limited my time to analyse the above said report, incomplete as it was. Now another short deadline of just 8 days for written comments and public consideration of the issues involved with the Upper Poole Creek Subwatershed Study. Why the big rush? I'm getting the impression that the steering committee is just a public relations exercise."

At the last Steering Committee meeting on March 8, 2000 I asked Goulbourn Township Clerk Haller if a copy of the Draft Report could be placed in the Stittsville Library for any interested members of the public to read and allow said persons to submit any written comments they might want to within a specified time period. He indicated that the Draft Report was only for the Steering Committee and GEAC to consider.

I suggest that Goulbourn Council consider giving the general public an opportunity to review and comment upon the Final Report. Suggest that 2 or more copies of the Final Report be made available in the Stittsville Library for said purpose, and that a public notice be placed in the next available issue of each of the two local newspapers alerting the public to the fact that this is their last opportunity to comment on this study. The public notice should also indicate the deadline by which comments must be received and should point out, as indicated in the Final Report, that "Subwatershed plans are generally considered to be "master plans" and can therefore fulfil the first two phases of subsequent Class Environmental Assessments." As such the general public should be made aware of the role this study will play when the municipality and government agencies consider future development applications.

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2/ I notice that the "Appendix B Public Input" portion of the Final Report is missing a number of written comments that were submitted. GEAC's, and Jim Gillick's ( the other public representative on the Steering Committee ) comments regarding the Draft Report are missing, as are my March 22<sup>nd</sup> comments.

Given the role the Final Report may play in subsequent Class Environmental Assessments and other planning matters, all written comments, both from the public and all government agencies, that were made throughout the study process should be included in the Final Report. Note that on page 5 of the Final Report it states "The full Background Report is provided in Appendix A in order to preserve a record of the decision-making process that took place in the development of the subwatershed plan ( this may be needed in subsequent Class Environmental Assessments )." How can someone in the future fully understand the said decision-making process without all of the written comments being included in the Final Report? They should be included.

3/ There are a number of inconsistencies, other gaps in information and errors in the Final Report. A number of these are as follows:

(a) On page *i* of the Executive Summary it begins by stating "The Upper Poole Creek subwatershed is one of the few cold or cool-water streams...". "The Upper Poole Creek subwatershed" should be changed to just "Poole Creek".

(b) In the same paragraph where it states "The subwatershed also lies within an area of Stittsville...". It should read "Part of the subwatershed also lies within an area of Stittsville...".

(c) In the fourth paragraph down on page *i* it states "...Lower Poole Creek Wetland ( west of Main Street ) in Stittsville." It should read "Lower Poole Creek Wetland ( east of Main Street ) in Stittsville." This correction should also be made on page 2.

(d) In the same paragraph it states "...and the Fernbank Wetland." Should read "...and part of the Fernbank Wetland." This correction should also be made on page 2.

(e) In the next paragraph where it states "The remainder of the stream..." is incorrect. It should read "The part of the creek between the Crossing Bridge culvert outflow and almost to Abbott Street,..." This correction should also be made on page 2.

(f) For clarification purposes should add onto the end of that paragraph "The parts of the creek upstream of Abbott Street and downstream of Main Street provide year round aquatic habitat." This clarification should also be made on page 2.

(g) On page *iii*, second paragraph down, it states "...indicate that the upper portions of the Creek dry up in summer...". Its my understanding that the consultants only studied the portion of the creek from the Lower Poole Creek Wetland to Abbott Street. As such when they refer to the "upper portions of the Creek" they're referring to the portion of the creek between the Crossing Bridge culvert outflow and Abbott Street. They are not referring to any portion of the creek upstream of where the creek crosses under Abbott Street. Its important to make this clear as significant parts of the creek are upstream of the part they refer to as being "upper portions".

(h) On page *v*, in Table E-1, it indicates that "Compliance Monitoring, Inspection" is to be the responsibility of the "Proponent", developers. Isn't this comparable to asking a fox to babysit a hen house? This should be changed.

(i) Also in Table E-1, under "Monitoring Strategy" it lists the "Region" as having the responsibility of "Chemical/Temperature Monitoring". Given that the Final Report indicates in numerous places in its text the lack of flow measurement in the subwatershed I suggest that the Region should undertake such additional monitoring.

(j) On page 5, in 2.1.1 General, it states "Urban runoff from within Stittsville occurs during parts of all seasons, but is limited to a few hours after a rain event or for a few days during a melt." This exact same statement is made in the "Background Report". In my written comments regarding the "Background Report", which aren't included in the Final Report and should be, I pointed out that this statement is wrong. I wrote "Some water from people watering their lawns, washing their vehicles and hosing off their laneways makes it's way onto streets, into the storm sewers and on into the creek. This water quantity source to the creek occurs throughout the spring, summer and fall. Documented government evidence of this water quantity source is evidenced in the RMO Surface Water Quality Branch's 1998 temperature monitoring report for Poole Creek. On page 2 of said report, in the "Summary" it says "...Poole Creek, in the vicinity of Jonathan Pack, falls predominantly within the coldwater classificaion. This is primarily a result of the constant outflow of cold water from the Crossing Bridge outfall." Note that the Region's report says "constant outflow". I elaborated further with my own first hand account of seeing a sudden surge of outflow from the Church Street culvert into the creek on a sunny summer day.

Since the same error is repeated in the Final Report I can only conclude that the consultants aren't receptive to constructive criticism or were as rushed to write the Final Report as we are rushed to review and comment on it.

(k) On page 6, in 2.1.2 "Father" should be "Further".

(l) On page 6, in 2.1.5 Base Flow, it states "During the summer, the watercourse upstream of the Crossing Bridge box culvert tends to dry up except after rainfall events. This limits the available summer habitat to about 650-700 m of watercourse (Figure 2.1) between Crossing Bridge and Main Street." **Wrong!!!** In some of the last several years the part of the creek from the Crossing Bridge box culvert upstream to near Abbott Street has dried up in summer. This has perhaps been in part due to the collapsed box culvert on the Trans Canada Trail back of the auto wreckers. The rest of the creek, both upstream and downstream of that stretch have not dried up and have provided year round aquatic habitat. Figure 2.1 also shows permanent habitat extending downstream of Main Street.

(m) In the last paragraph on page 6 it states "...a detailed in-stream mapping of the creek (MNR, 1993) found only one spring." That detailed in-stream mapping was carried out by the then existing Kanata and District Fish & Game Club as a MNR Community Fisheries Improvement Project. I was a member of said club and mapped the spring location back of the Lions Medical Centre. I told the consultants of the location of this spring at least twice. In looking at Figure 4.1 of the Final Report I see that they've inaccurately mapped the spring's location as being behind the Poole Creek Manor apartment building instead. This should be corrected.

(n) On page 9, in the paragraph at the top of the page, it states "In the summer months, very low or no flow conditions have been observed in the Upper Poole Creek bed upstream of the Crossing Bridge and Jonathan Pack outfalls." Should be clarified that they're writing about only upstream to Abbott Street.

(o) On page 10, in the second paragraph, it states "From the wetland to just upstream of Jonathan Pack Street, Upper Poole Creek is an intermittent warmwater system." Should be clarified by changing to read "From the part of the wetland next to the old Argue farm lane-way to just upstream...".

(p) On page 10, under ii) Cold-Coolwater Permanent, it states "The cold-coolwater section of the creek extends from Jonathan Pack Street to downstream of Main Street." The report is inconsistent in that in several earlier text passages it suggests that the cold-coolwater habitat exists only between Main Street and the Crossing Bridge culvert outfall. In my opinion, in all such reference cases the permanent cold-coolwater habitat should be described as being from the Crossing Bridge culvert outfall to the Lower Poole Creek Wetland.

(q) On page 10, at the end of the same paragraph, it states "The Upper Poole Creek wetland does not provide a significant coldwater input to Upper Poole Creek." Did the study consultants examine all of the creek's branches from the wetland before reaching this conclusion? To my knowledge they did not. To my knowledge they only examined the creek from



Abbott Street to somewhere between Main Street and the Lower Poole Creek Wetland. The study text should therefore be amended to indicate the geographic limitations to which their statement applies.

(r) On page 13, in the fourth paragraph down, it states "Past urban development has degraded the aquatic habitat of Poole Creek. It has virtually eliminated the potential for a sustainable Brook Trout fishery." **Wrong!!!** This statement should be clarified in that geographically its meant to apply only to the part of the creek downstream of Abbott Street. There are parts of Poole Creek upstream of Abbott Street which may be able to support a sustainable Brook Trout fishery. Their potential has yet to be properly assessed.

(s) On page 13, in the last paragraph, it states "...indicate that the upper portions of the Creek dry up in summer...". This should be geographically clarified as in the aforementioned cases.

**I've run out of time to make anymore written comments, at this time.**

Extract of Draft Minute  
Planning and Environment Committee  
23 May 2000

UPPER POOLE CREEK SUBWATERSHED STUDY

- Planning and Development Approvals Commissioner's report dated 8 May 2000
- Executive Summary, Upper Poole Creek Subwatershed Study issued separately

Leanne McGovern - FoTenn Consultants appeared before the Committee on behalf of the owners of Westwood Subdivision in Stittsville. She referred to her letter, provided to members of the Committee and held on file with the Regional Clerk, which outlined her clients concerns with respect to the Fernbank Wetland. She said they were in the process of preparing an Environmental Impact Statement (EIS) as part of the submission package for draft approval of the balance of their lands and they felt it was more appropriate to continue to have the buffer determined through that process, taking into account vegetation and wildlife, rather than an arbitrary 30 metre buffer.

At Chair Hunter's request, Susan Murphy, Planner, Policy and Infrastructure Planning Division, advised the Fernbank Creek Wetland was within the Upper Poole Creek Subwatershed area. She noted one of the goals of the study was to look to future development lands within Goulbourn adjacent to Upper Poole Creek Wetland and Fernbank Wetland and provide recommendations and guidelines to assist approval agencies with future applications adjacent to these two wetlands. During the course of the study, Upper Poole Creek Wetland and Fernbank Wetland were reassessed by the Ministry of Natural Resources and through that exercise, it was determined that Fernbank Wetland was no longer deemed Provincially significant rather it was downgraded to locally significant. The consultant was trying to give guidelines in terms of if the wetland were to stay as it is was originally designated and in that case, a 30 metre buffer would be adequate to protect the wetland, in the event of development. However, as it is now being downgraded to locally significant, an EIS would be the appropriate mechanism to determine what wetland could be preserved within the development and arrive at an appropriate buffer.

Ms. Murphy went on to say, in terms of addressing the concerns expressed by Ms. McGovern in her letter, staff would recommend the letter go on file. A volume of public comments received (including Ms. McGovern's letter) will be compiled by staff and the issue of the change in designation from Provincially to locally significant and the buffer would be addressed in the upcoming Regional Official Plan Amendment (ROPA) anticipated this fall.

Ms. Murphy confirmed for Councillor Hume that the 30 meter buffer was based on Fernbank Wetlands being Provincially Significant. When the Province downgrades it to locally significant, staff would be satisfied with a development buffer based on an EIS.

Ms. McGovern confirmed this was exactly what her client wanted, however, the wording in the study does not set this out clearly. She indicated she was in agreement with staff's proposal, as long as her letter went on file and this discussion became part of the public record. Miss McGovern stated her client's concern was that they did not want to come forward with their application and find the 30 metre buffer was set. Ms. Murphy pointed out the ROPA has to precede the subdivision application and that will be another opportunity to ensure the request is dealt with properly.

Councillor Legendre stated he was upset when he saw the change in wetland status for Fernbank. Reading the relevant portion of the staff report, the Councillor stated it would appear the wetland is no longer protected. He said he thought the Region valued wetlands whether they were Provincially or locally significant. As well, he pointed out on page 21 of the staff report it states the aquatic strategy will focus on low-cost options rather than focusing on protecting environment. He expressed his disappointment with the tone of the report.

In response, Ms. Murphy noted the staff report began by identifying the five main issues, (not in any particular order of priority) and the fifth was the change in wetland status for Fernbank from Provincially to locally significant. They then addressed the management strategies and finally, the implementation strategies. She pointed out on page 22, in the Implementation Section, staff set out what they planned to do as a result of the change in designation for Fernbank. Because it has gone from Provincially to locally significant, there is a policy in the Official Plan that dictates that the designation must be removed and a ROPA must be initiated. Ms. Murphy advised staff will be coming forward with options in terms of how to address Fernbank Wetland's change in status and will likely recommend a policy that specifically requires an Environmental Impact Statement.

Councillor Legendre questioned if a wetland of local significance had any value to the Region's administration. Ms. Murphy stated the subwatershed study recognizes that Fernbank Wetland is moving from Provincial to local significance but it is saying that the properties and attributes of the wetland should be looked at and it should not lose its importance as a local attribute and amenity in the area. She said this will be the direction staff will be taking for the ROPA.

Chair Hunter noted these statements reflected policies that were currently in the Region's Official Plan. Mr. Tunnacliffe added the 1997 ROP had, for the first time, established a Schedule "K", which identified many of the features which had previously been looked upon as being of local significance.

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Addressing Councillor Legendre's comments regarding the low cost aspect of the aquatic strategy, Ms. Murphy explained much work had been done to establish existing creek conditions and what the constraints were, in terms of improving or maintaining creek habitats. She said an onerous exercise had been undertaken to look at a number of different options in terms of what could be done to maintain Poole Creek as a vital Regional watercourse. Ms. Murphy stated at the end of the exercise, measures of a more biological nature, and "common sense" solutions of trying to create shade and repairing cover along the watercourse, were recommended and endorsed. She said these and similar findings resulted in good recommendations at a relatively low cost.

Councillor Legendre explained he had thought the language of the report to be restrictive, in terms of what staff could study. Noting the report indicated the creek had already been heavily impacted, the Councillor asked if the goals of the study were to stop further impacts and to keep the creek viable, and if so, whether the present report would do this. He further pointed out that elsewhere in the report, there were references to wanting to maintain environmental aspects while allowing development. Councillor Legendre noted these goals were conflicting, opining that when they do conflict, development usually wins. He then questioned whether Committee had before it an environmental report or one that favoured development.

Ms. Murphy explained the goals of the study had been established with public input. She noted there had been a choice between trying to remediate the creek to a state it would have been in 30 years ago, which would have been expensive and unrealistic, or to try to stop the degradation, improve it, and make it something worthwhile. She confirmed that the report would do this, and was an environmental report. Councillor Legendre said he was heartened by these comments.

Councillor van den Ham noted the report recommendation asked that the Subwatershed Study be used as a technical document to *guide* environmental planning. He further noted the report stated that the development guidelines were prepared to *govern* future development. The Councillor asked staff for comment, as he felt the word *guide* was somewhat flexible, whereas *govern* was more restrictive.

Ms. Murphy explained the strategy contained a number of components: development guidelines, and aquatic, terrestrial, and monitoring strategies. In terms of the latter three, more work was needed to define what exact costs would be, who the funding partners would be, etc. She said in this regard, the study was guiding staff to work further on developing these three strategies. Ms. Murphy further noted the development guidelines were stronger and more defined. She said as there were only two subdivisions left in this area, developers would be given clear-cut

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guidelines in terms of how the Region would approve the developments. She offered in this instance, a portion of the strategy was to govern, while the majority of it was to guide.

Councillor van den Ham hoped the right word would cover the right portion. He also hoped the report contained an element of common sense to allow for flexibility, such as in terms of the request regarding a 30 metre buffer. Ms. Murphy confirmed that the development guidelines contain options to allow for such flexibility.

There being no further discussion, the Committee then considered the staff recommendation.

**That the Planning and Environment Committee recommend that Council endorse the Upper Poole Creek Subwatershed Study (April 2000) as the technical document to guide environmental planning and management decisions within the study area.**

CARRIED



Township of Goulbourn  
Region of Ottawa-Carleton

# *Upper Poole Creek Subwatershed Study*

## **Final Report**

Prepared by:  
*Marshall, Macklin, Monaghan Limited*  
in association with:  
*Water and Earth Sciences Limited*

## EXECUTIVE SUMMARY

The Upper Poole Creek subwatershed is one of the few cold or cool-water streams within the Region of Ottawa-Carleton. In addition, its headwaters originate in a large provincially significant wetland complex to the west of Stittsville. Because of its unique character, the Creek has become a focus and a symbol for the community's concern for the environment and the existing ecology. The subwatershed also lies within an area of Stittsville that has been designated for development. Urban development often places stress on the local ecosystem and its impacts must be mitigated.

The purpose of this study is therefore to develop a comprehensive understanding of the subwatershed and based on this, to prepare a plan, which will allow a healthy ecology to be maintained or strengthened while allowing development to proceed in an economically viable manner.

The project was directed by a Steering Committee composed of staff representatives from Goulbourn Township, the Region of Ottawa-Carleton, the Ministry of Natural Resources, and the Mississippi Valley Conservation Authority. Two public representatives and a representative of the land developers were added to the Steering Committee during the Background Review phase.

### ***Study Area***

The Poole Creek subwatershed is a part of the Carp River watershed. The study area for this subwatershed plan consists of only that portion of the Poole Creek subwatershed upstream of the Lower Poole Creek Wetland (west of Main Street) in Stittsville. This portion of the subwatershed includes the principal designated area for development within Stittsville, the provincially significant Upper Poole Creek Wetland and the Fernbank Wetland.

Within the urban area of Stittsville, Poole Creek is the most important part of the system. In particular, the watercourse between Main Street and Jonathan Pack Street supports cold-coolwater fish habitat. The remainder of the stream within the urban boundary provides seasonal aquatic habitat, but is limited by a lack of flow during the summer.

At the edges of the urban area and to the west of Stittsville, lies the large provincially significant wetland complex (Upper Poole Creek Wetland and North Goulbourn Wetland Complex). This is a diverse and different ecology from the downstream watercourse.

### ***Study Process***

The study involved a three-phase approach: The phases included:

- Phase 1:           Background Review
- Phase 2:           Field Work and Technical Studies

Phase 3: Alternative Evaluation and Formulation of the Subwatershed Plan

The initial phase, the background review, was completed in April 1999 and approved by the Steering Committee in May. The first phase involved:

- Review and synthesis of existing engineering and science reports pertaining to the Poole Creek subwatershed. This allowed us to formulate an understanding of the functional relationships within the subwatershed.
- Discussions with the Steering Committee and the local landowners' engineers and scientists. Anecdotal information from these sources helped in developing the understanding of the subwatershed. In some cases the information was confirmed through preliminary fieldwork (eg. preliminary flow estimates completed by MVCA).
- A preliminary assessment of the probable impacts of pending development. Possible mitigation measures associated with development were identified and discussed with the proponents by members of the Steering Committee.
- Seeking Input from the public through an advertised open house and informal public meeting. Comment sheets were distributed at the meeting. An Information Package and comment form was made available through the Township offices, for those who could not attend.

As a result of the understanding developed, the input received and the impacts anticipated, a variety of alternative measures were developed and considered, together with the criteria to be used in evaluating them. These possible measures and an assessment of the important data gaps were used to focus and refine a detailed work plan, which was undertaken in Phase 2.

Phase 2 involved studies and fieldwork that were needed to supplement the knowledge of the subwatershed gained in Phase 1. Phase 2 extended from May through to the end of October. In addition to field activities, this phase of the project involved development of other tools needed for subsequent evaluations.

The final phase extended from September 1999 to March 2000. It brought together the results of fieldwork and technical analyses, with the alternatives and evaluation criteria established in Phase 1. Specific alternatives, and where warranted, combinations of alternatives were evaluated.

***Major Issues and Subwatershed Plan Goals***

The primary issues that emerge are based on the aquatic life of Poole Creek. Terrestrial issues (wetland protection, appreciation) are equally important, but they tend to be less critical than the aquatic issues. Existing and future development pose only a localized (encroachment) threat to the terrestrial systems.



The primary issues for aquatic life are stream temperature and flow magnitude. The first is the most critical to the cold-coolwater fish habitat. Past urban development has degraded the aquatic habitat of Poole Creek. The existing aquatic ecosystem is now dependent on the existing storm sewers and the groundwater inputs that they provide. While median and average values for the current stream temperatures range from 15 to 18°C, which is within the optimal range for trout, the maximum sustained (eg. greater than 6 hours) temperatures currently exceed the lethal limits for all of the Trout species, on occasion. While trout can survive these types of temperature maximums by finding refuge areas with colder water, the stress is significant.

Low flow is the second most important issue for Upper Poole Creek. While measurements of actual low flows are limited, observations, both recently and historically, indicate that the upper portions of the Creek dry up in summer, eliminating a portion of the available aquatic habitat. In the areas where flow is continuous (eg. downstream of the Crossing Bridge storm sewer outfall) flows are sluggish, with the result that dissolved oxygen and temperature are periodically a problem. In addition, the lack of flow volume leads to shallow depths and a limitation to the habitat needed by larger species of fish. This poses a problem when using trout as an indicator species for the health of the ecosystem. Fortunately, smaller but equally sensitive species (such as the Mottled Sculpin) are resident in the Creek and provide an alternative for an indicator species.

Due to these existing conditions, the study process evaluated and confirmed the goals of the subwatershed plan, based on input received from the Steering Committee and the public. The goals of the Plan are:

- 1. The subwatershed plan is to seek to maintain a cold to coolwater aquatic habitat. Continued presence of the Mottle Sculpin shall be regarded as an indicator of this goal. The Brown Trout program will be continued for its historic and symbolic value.**
- 2. The subwatershed plan is to seek to extend the existing pathways to make a pedestrian connection between Poole Creek and the upstream provincially significant wetlands. Opportunities to produce an interpretative and educational experience should be investigated, while observing the constraints necessary to protect important habitat and significant species. Efforts to provide a year-round aquatic connection to the wetland will not be pursued unless viable coldwater sources are found in the future.**

### ***Evaluation***

Using these goals, an evaluation methodology was formulated. Thirty-four alternative actions were assessed using two sets of criteria consisting of essential (eg. the alternative contributes towards the goals) and desirable (eg. effectiveness, cost, etc.) attributes. The evaluation process led to a selection of two sets of alternatives that could be recommended for implementation. The

first set (termed the Basic Set – comprised of 15 selected alternatives) was composed of those actions that could be readily implemented at relatively low cost to achieve a reasonable level of protection/remediation of the cold-coolwater stream. This set included both physical measures and planning controls that would apply to existing and future conditions. The second set (referred to as the Enhanced Set – comprised of 2 additional alternatives) consisted of more ambitious but more costly actions (eg. stream re-construction, groundwater pumping), which could be used to achieve a more robust cold-coolwater system.

Both the Steering Committee and the Public were consulted concerning the two sets of alternatives. There was a general lack of support for the enhanced alternatives because of the major intervention and costs implied. The use of pumped groundwater was seen as non-sustainable since it required ongoing operation and maintenance and energy inputs. The basic low cost approaches were generally supported. Based upon the evaluations completed and the input received, it was concluded that a subwatershed plan embodying the alternatives associated with the “Basic Set” should be formulated.

### ***The Subwatershed Plan***

The Upper Poole Creek Subwatershed Plan consists of an overall strategy, development guidelines, strategies to improve the aquatic and terrestrial environments, and a monitoring strategy. The actions required and the implementation responsibilities for the Plan are summarized in Table E-1. The implementation responsibilities indicated are for the lead or coordinating role.

The implementation of the subwatershed plan will be the joint responsibility of the regional and local municipalities, the conservation authority, the private sector and the public. It is recommended that the Steering Committee, on behalf of their respective agencies, formally endorse the Subwatershed Plan.

Subwatershed plans are considered to be dynamic, living documents that need to be kept up to date and, in some cases, modified as conditions change or new resources become evident. The continuation of the role of the Steering Committee and the different monitoring programs form the basis for keeping the subwatershed plan current.

Table E-1 – Upper Poole Creek Subwatershed Plan

*Summary Actions*

Action	Responsibility
<b>Development Guidelines</b>	
Westridge SWM Baseflow Diversion Foundation Drains	Proponent
Westwood SWM	Proponent
Erosion and Sedimentation Plan	Proponent Township (Inspection)
Environmental Impact Statements	Proponent
Compensatory Plantings (Vegetation Loss)	Proponent
Westridge Drive Compensation	Proponent
Extend Fill Regulations	Conservation Authority
Compliance Monitoring, Inspection	Proponent
<b>Aquatic Strategy</b>	
Buffer Plantings	Township/CA
Lunkers	Township/CA
Point Bars	Township/CA
Remediation	Township/CA
<b>Terrestrial Strategy</b>	
Wetland Buffer	Proponent
Trail System	Township/CA
Invasive Species Pilot Project	Township/CA
Wildlife Control (beaver)	Township
<b>Monitoring Strategy</b>	
Fish Monitoring	Township/CA/MNR
Benthic Monitoring	Township/CA
Chemical/Temperature Monitoring	Region
<b>Administrative</b>	
Steering Committee	All
Bait Fish	MNR
Wetland Policy	MNR, MVCA (Fill Regulations)
SWM Review	Region, CA
Official Plan, Other Planning	Region, Township
Compensation Policies	Township
Subwatershed Plan Endorsement	All
EIS Review	Region, Township, CA
Road Closures	Township
Volunteer Works	Township (Liaison) CA (Technical Support)
Public Education	Township