

THE TAYLOR MASSEY PROJECT

Celebrating and Protecting Taylor Massey Creek



Reach by Reach

Regenerating Taylor Massey Creek and Completing the Taylor Massey Trail

**Recommendations to assist the Toronto and Region Conservation Authority
and the City of Toronto in regenerating the Taylor Massey Watershed**

**Draft for Public Comment
November 26, 2008 – Early 2009***

*** The comment period will close at the end public meetings on the new
Don River Watershed Plan to be conducted in early 2009 by the TRCA.**

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Introduction

The Taylor Massey Project is pleased to provide this draft vision of a regenerated Taylor Massey Creek, a key sub-watershed of the Don River, for public comment.

Reach by Reach was prepared by volunteers and is offered as a companion document to the new Don Watershed Plan, being developed by staff at the Toronto and Region Conservation Authority (TRCA) and its advisory committee, the Don Watershed Regeneration Council.

Public consultations on the new Don Plan will take place in early 2009. The current draft of the Don plan provides an inspiring, high-level vision of the watershed, urging smart growth, municipal-conservation authority cooperation, the adoption of green technologies ranging from expanded mass transit to energy-efficient buildings, and six regeneration concept sites for the Don watershed.

Reach by Reach seeks to provide additional elements to the Don Plan, focused on Taylor Massey Creek, including:

- recommendations for improved agency actions to protect water quality; and,
- details on regenerating the Taylor Massey sub-watershed to the fullest extent possible – reclaiming each degraded reach (section) of the watercourse.

The Board of the Taylor Massey Project offers this plan to share our vision, solicit comment, and to develop a shared perspective on how to best fully regenerate the Taylor Massey sub-watershed.

Invitations to discuss this vision with local organizations are welcome, and a digital version of the document is posted to our website. Please send comments or suggestions on this draft, tentatively until mid-February, 2009, to eco@theTMP.org. Please check with us at any time on the deadline.

Executive Summary

Taylor Massey Creek is the most polluted and degraded tributary of the Don River, the most polluted river in Ontario. Regardless, many of the people who live along its banks love the potential of this little creek and its accompanying ravines, forests, and meadows, and have a vision for its regeneration.

We urge local agencies with a role in watershed management to embrace our vision: protecting water quality, remediating our ravines, linking our neighbourhoods, and facilitating the transition to sustainable development through enhanced community stewardship initiatives.

In particular, we urge the City of Toronto and the Toronto & Region Conservation Authority, with support from the federal and provincial governments as required, to:

- Implement the Wet Weather Flow Master Plan in an appropriate watershed management framework that includes targets with measurable outcomes, restores the creek to natural conditions where possible, and engages the community;
- Complete the Storm Outfall Monitoring Program while transitioning it to become a comprehensive surface water quality monitoring program, with spills and aquatic test results from all levels of government posted to the internet for public access; and,
- Budget \$4,275,000.00 to implement the key regeneration priorities for Taylor Massey Creek, as detailed on pages 47-48, over the next five years.

1. Building a Regeneration Framework

Taylor Massey Creek is the most polluted and degraded tributary of the Don River, the most polluted river in Ontario. Regardless, many of the people who live along its banks love the potential of this little creek and its accompanying ravines, forests, and meadows, and have a vision for its regeneration.

This report seeks to gather community support for a shared vision that includes goals and targets for the regeneration of the creek, the completion of the Taylor Massey Trail, and the enhancement of community stewardship within the watershed.

We are able to pursue these goals because we have developed a few principles that we sought to apply to the regeneration of the creek since the Taylor Massey Project (TMP) was launched in 2003. We did not know what these principles were when we started, but they evolved into our own watershed regeneration framework thanks to the commitment of our Board and supporters as well as people of good will who work in agencies or volunteer for sister organizations.

The framework is being applied primarily toward the development of the new Don Watershed Plan, being developed by the Toronto and Region Conservation Authority (TRCA), but it also applies to initiatives in other agencies.

The framework holds the following principles:

- Watershed regeneration should be based on sets of sub-watershed current conditions reports and assembled into a vision for the health of a whole watershed;
- Watershed regeneration plans should articulate practical and measureable targets to which each sub-watershed can be restored, and that can be assessed in subsequent report cards;
- Efforts to protect both the whole Don and Taylor Massey Creek must include enhanced monitoring, more publicly-available data, and improved enforcement; and,
- Sub-watershed regeneration plans should include preliminary goals to reclaim each degraded reach, including a cost estimate and a commitment to engage the local community.

The TMP's recommendations on the first three principles are addressed in sections 2 and 3 of this report, and the fourth in sections 4 and 5.

With respect to the latter, we are pleased that, in response to a presentation by the TMP in July, 2008, the TRCA approved a motion that the Authority seek "reach-by-reach funding from senior levels of government to support watershed plan implementation."

We hope that this report will assist government agencies, local organizations, and individuals in understanding the creek, its problems, and how to restore Taylor Massey Creek to optimal conditions.

Definitions

A watershed is an area of land that drains to a common body of water, such as a river or lake.

A sub-watershed is portion of a watershed, often defined as the drainage area of a tributary to a larger watercourse. Taylor Massey Creek is a sub-watershed of the Don River.

A reach is normally a section of a watercourse between tributaries. As Taylor Massey Creek is highly developed, the TMP has defined reaches based on major roads and neighbourhoods.

2. Background, Challenges, Current Conditions, and Vision

2.1 Background

Taylor Massey Creek (TMC) flows for about 15 kilometers, from Highway 401 near Pharmacy Avenue through the western edge of Scarborough and then the heart of East York, joining the Don River near Don Mills Road and the Don Valley Parkway.

Using designations that refer to the reaches established by the Taylor Massey Project, as can be found on the drawing and are described in more detail in Section 4, the creek:

- Flows south through residential areas between the 401 and Lawrence Avenue (A10 and A9) and then through the industrial area between Lawrence and Eglinton (A8);
- Bends slightly to the east where it crosses Birchmount to wind through the three Eglinton ravines (A7) and Pine Hills Cemetery (A6);
- Turns west to tumble beside St Clair Avenue and through St Clair Ravine Park (A5);
- Turns south again through Warden Woods (A4); and,
- Turns west for the final time, flowing through the Dentonia Golf Course (A3) and the Goulding Estate (A2) before becoming center-piece of Taylor Creek Park (A1), a broad and highly-used greenspace that runs from Dawes Road to where the Creek joins the Don River.

In addition to these ten reaches, Taylor Massey Creek has several other key features:

- Two essentially natural ravines, the Ferris (B1) and Curity (C1) ravines. The Ferris Ravine and much of the eastern end of Taylor Creek Park have been designated an ESA, or Environmentally Significant Area;
- The Warden Hydro Corridor, the narrow green band running north-south and labelled WHC in the drawing above; and,
- Several lost tributaries – creeks now underground – as well as 24 abandoned landfills, all of which contribute negatively to both the quantity and quality of water in the creek.



The Taylor Massey Watershed and its Reaches
Base GIS-based imagery provided by First Base Solutions. Watershed boundary courtesy of TRCA. All customized drawings prepared by TMP Board member Rebecca Ma.

2.2 Key Challenges

Currently, Taylor Massey Creek is the most polluted and degraded tributary of the Don River, Ontario's most polluted watercourse.

This is due to a series of poor planning and permitting approaches that facilitated short-term economic advantage – for developers, homeowners, and local municipal governments - at the expense of ecological integrity.

These approaches bequeathed to Taylor Massey Creek a high percentage of impervious surface (hard surfaces that contribute to strong storm flow and therefore creek erosion), no remaining natural wetlands, no storm-water ponds, piped tributaries, sections of the creek in concrete channel, a 750m section of the main channel that has been piped, and combined sewers that contribute huge amounts of sanitary sewage to the creek.

They also resulted in whole reaches of the creek with no trail or with just informal pathways, as well as isolated sections of trail lacking a bridge, a safe street crossing, or a railway crossing to connect neighbours.

In terms of water quantity, the proliferation of impervious surfaces make the creek “flashy”, where even small rain events contribute to high storm-flow conditions which present safety issues to people and property as well as scour the bottom of the creek, erode its banks, and harm fish habitat.

In terms of water quality, the creek has four main challenges:

- 1.) Combined Sewer Overflow: Combined sewers are a low-cost engineering horror in which sanitary sewage and storm-water are sent down one pipe with a half-wall separating the two flows. Under normal conditions, the two sections of the pipe flow respectively to either a sewage treatment plant or to the creek. When it rains or when snow melts, the increased flow in the storm-water section of the pipe sloshes over the half-wall, mixes with the sanitary sewage, and transports the resulting “combined sewer overflow” to the creek. This sewage flows through the creek to the Don River and into Lake Ontario - the source of drinking water for millions of people;
- 2.) Storm Outfalls: In addition to large volumes of storm water, Taylor Massey Creek's 252 storm outfalls carry untreated storm and melt-water into the environment, picking up and transporting debris and chemicals from our streets, parking lots, lawns, and industrial and commercial areas. Storm outfalls can also contribute sanitary sewage to the creek in dry weather due to the illegal connection of toilets to the storm rather than the sanitary sewer;
- 3.) Spills: Anything accidentally spilled, purposefully dumped, or improperly stored outside washes into the creek, from industrial chemicals and automotive fluids to lawn fertilizers and car-wash detergents with surfactants that can harm aquatic life; and,
- 4.) Leachate: TMC has unknown quantities of unidentified leachate that seep into the creek from 24 old landfills.

As a result of all the above, Taylor Massey Creek was described in *Forty Steps to a New Don*, the 1994 watershed plan for the Don published by the Toronto and Region Conservation Authority

(TRCA), as the source of up to 80% of the pollutants to the Don under some flow conditions, even though Taylor Massey Creek only contributes 5% of the flow to the Don.

The impact of this pollution is significant. For example, in November, 2007, results published in the Canadian Environmental Sustainability Indicators report revealed a Water Quality Index of 34.8 for the Don River - the lowest result of any river in Ontario.

And yet, the Water Quality Index for the Don River was produced from samples taken downstream of where Taylor Massey Creek joins the Don. In other words, even though 95% of the water in the Don comes from the east and west branches, the high level of pollution in the 5% of the flow coming from Taylor Massey Creek makes the Don the most polluted river in Ontario.

What might be the impact of this polluted water in Taylor Massey Creek? Is Taylor Massey Creek the most polluted watercourse in Canada? What other key conditions have been documented in Taylor Massey Creek that might indicate a requirement to change direction?

We are unsure. In spite of the fact that *Forty Steps to a New Don* recommended a full sub-watershed study for Taylor Massey Creek, and in spite of the availability of some data on the creek as shown below, the Taylor Massey sub-watershed still lacks a proper study, and therefore lacks a watershed management framework - fifteen years after the publication of *Forty Steps*.

This absence of a sub-watershed study has taken place against a background of:

- Repeated calls from the TMP to the TRCA for the sub-watershed study;
- Repeated requests to the TRCA that Report Cards and progress reports published by them be based on sub-watersheds, as general statements about the health of the Don simply do not speak to the health of Taylor Massey Creek nor the Don's other main tributaries; and,
- The spending of millions of dollars by the City of Toronto on the Wet Weather Flow Master Plan, as well as on other efforts, without a regeneration framework with ranked priorities.

With respect to Wet Weather Flow, the TMP supports its goals and makes numerous recommendations within this document that its implementation help shift the City to a watershed management framework that includes targets with measurable outcomes, the regeneration of the creek to natural conditions, and that engages the community.

In the absence of current conditions report on the creek, we are pleased to offer our own summary of current conditions, overleaf, followed in latter sections by recommendations to regenerate the creek.

2.3 Current Conditions

<u>Source</u>	With traditional headwaters above Highway 401 diverted to the East Don, run-off from 18 hectares of the highway now runs into pipes, is augmented by local groundwater, and emerges from a concrete headwall on the east side of Pharmacy just south of the highway.
<u>Length</u>	Approximately 15 kms
<u>Discharge</u>	Joins the Don River near the Don Valley Parkway and Pottery Road. The Don flows to Lake Ontario

Historic Note: After the last ice age, TMC originally flowed into Lake Iroquois, just upstream of the parking lot in Warden Woods Park. As Lake Iroquois receded and became Lake Ontario, the creek began to flow west, below the crest of hilly deposits north of Danforth Avenue near Pharmacy and then north of O'Connor Drive, eventually meeting the Don at its current confluence near the Don Valley Parkway and Pottery Road.

Area* 2,859 Ha (hectares) – 28.59 Km²

Impervious (hard) Surfaces*

Residential	1,571 Hectares
Industrial	429
Commercial	214
Institutional	159
Highway	9
Railroad	<u>15</u>
	2,397 - 83.8%

TRCA calculation of impervious surface allowing for lawns and plantings on above lands – 43%

Open Urban Space/Vacant* 98 - 3.5%

Terrestrial Natural Heritage*

Forest	152
Meadow	80
Sessional	12
Wetlands	<u>1</u>
Total	245 - 12.7%

Additional Greenspace*

Open Water	1
Golf courses	13
Cemeteries	65
Municipal recreational	<u>40</u>
	119 hectares

Watershed Health

Environment Canada has indicated that damage to local creeks and rivers begins to occur at 10 – 15% of impervious surface and suggests that a healthy watershed should have 35% natural cover and 10% of its area in wetland.

In contrast, Taylor Massey Creek has a high percentage of impervious pavement, no natural wetlands, and no storm-water control ponds, making it a “flashy” water-course where relatively small precipitation events can cause rapid rises in water levels.

This flow represents a threat to human life, flooding, stream-bed and bank erosion, the destruction of fish habitat, and damage to built infrastructure such as bridges.

* Data for items with an asterisk taken from TRCA draft Don River current conditions reports.

Water Quantity and QualityFlow, in M³ *

Item	Don	TMC	%
Base-flow	66,000,000	3,000,000	5%
Storm-flow	124,000,000	8,600,000	7%

Area with Storm-water Controls

Virtually none, with the exception of a sediment plunge pool for headwater coming off the 401 and an experimental pond under the nearby soccer field.

Hardened Sections

Areas with hardened stream-bed include:

- 400 metres from Willowfield School to Ellesmere;
- 1,000 metres from Ellesmere to Manhattan
- 600 metres underground, from Manhattan to Lawrence;
- 300 meters from Bertrand to Ashtonbee; and,
- 100 metres in the Dentonia Golf Course.

Many other sections have gabion baskets – wire cages filled with rock – along one or both sides of the creek, with long sections in the process of failing and in need of replacement with natural stream edge.

Combined Sewer Outfalls 10 (of 33 in the whole Don watershed)

Note on Combined Sewer Outfalls: Combined sewer outfalls are described on page 6. To deal with the effluent and other issues presented by combined sewers, as well as the volume of storm water coming from the 252 storm outfalls described below, the City of Toronto has developed a 25-year, \$1B Wet Weather Flow Master Plan. The TMP supports Wet Weather Flow and makes a number of recommendations on its implementation throughout this document. Please see pages 15 and 16 for more information.

Storm-water outfalls 252 (not including pipes from abandoned landfills)

Note on Storm-water Outfalls: Driven by a report on poor water quality in dry weather by Lake Ontario Waterkeeper, expressions of concern by the TMP, and a spill in East York that resulted in significant involvement by a city Councillor, the City of Toronto is implementing a Storm Outfall Monitoring Program. The program, first launched in Taylor Massey Creek and then extended across the City, complements Wet Weather Flow by seeking to identify and remediate sources of e-coli entering the creek in dry weather conditions.

Landfills*

The Taylor Massey watershed has 24 old landfills, many along The creek between Victoria Park Road and the O'Connor bridge. In spite of obvious staining of pipes and coloured run-off in storm events, the City excluded analysis of run-off from landfills in the Storm Outfall Monitoring Program referred to above.

Spills

A promise from the local Remedial Action Plan and the TRCA to provide annual reports on spills by 2007 has not yet materialized.

Combined Impacts: Contributing only 5% of base-flow and 7% of total flow to the Don, TMC's 10 combined sewer outfalls, 252 storm outfalls, 24 abandoned landfills, and spills and run-off from corporate and private property result in the creek contributing 80% of the pollution to the Don under some flow conditions (*Forty Steps*, 1994).

Conformance to Provincial Water Quality Guidelines* (last three years)

Pollutant	% in conformance	Pollutant	% in conformance
E-coli	0	Cadmium	100
Total suspended solids	94	Chromium	83
Chloride	6	Copper	53
Total Phosphorus	17	Iron	35
Nitrates	10	Lead	94
Un-ionized Ammonia	100	Nickel	94
Aluminum	100	Zinc	72

Fisheries Management

A 2008 draft Don fisheries management plan included TMC in a Fisheries Management Zone (FMZ5) that included polluted urban creeks to the west. Minimal lobbying by the TMP resulted in the creek being designated its own fisheries management zone (FMZ6) due to its integrity as a standalone sub-watershed and the influx of cold, clean groundwater coming from the Scarborough Aquifer that offers the prospect of cold water fish that would not survive west of the creek.

Fish Species

Unavailable at time of printing. The TMP will seek a list.

Young-of-the-year Surveys*

Exceed provincial guidelines for Mercury, PCBs, and DDT.

Dams and Other Fish Barriers

There are no dams along the creek. A thorough inventory of fish barriers is being conducted by the TRCA. Barriers known to the TMP are identified in Section 4.

OtherNatural Heritage Analysis*

Of the 245 hectares of natural heritage in the TMC sub-watershed, none are ranked L1 or L2, the highest categories, 1 hectare is ranked L3, 222 are ranked L4, and 23 are ranked L5. Problems include patch size, shape, trails, illegal dumping, and in invasive species.

Encroachment and Property Standards

Most residents backing onto the creek respect its ecological integrity and public ownership. Some industrial and commercial property owners, however, have illegally extended their properties, store private goods on public land, and/or have poor outdoor management practices that send litter or pollutants into the creek or on to public property, particularly from Lawrence Avenue south to Comstock. Government agencies need to do a better job protecting public health and the environment from these activities.

Trails

The upper third of TMC has only trail segments and needs lots of infrastructure. The middle third has some trail in place but linkages and directional signage are needed. The lower third of TMC has extensive trail already in place. See page 41 for details.

Summary of Current Conditions

Taylor Massey Creek has:

- Excessively “flashy” conditions, presenting threats to stream form, infrastructure, property, and public safety. This is due to the highest percentage of impervious surface of any tributary to the Don – 43% - no historic wetlands, several kilometers of hardened channels, and only one experimental storm-water pond to buffer the volume of storm flows;
- The worst water quality of any river or creek in Ontario, with 10 combined sewer outfalls, 252 storm outfalls, and 24 abandoned landfills leaching into the creek, making it the source of 80% of the pollutants to the Don system under some flow conditions;
- The smallest percentages of both overall green-space and of forested area of any sub-watershed in the Don;
- High incidences of encroachment or poor property management from properties that abut the creek; and,
- A lack of trail infrastructure to allow neighbourhoods to connect, as well as to accommodate pedestrians and cyclists seeking to use the creek for recreational and commuting purposes.

2.4 Our Vision for a Regenerated Sub-watershed

- The City's Wet Weather Flow Master Plan will be delivered in an appropriate watershed management framework that will include targets with measurable outcomes, restores the creek to natural conditions, and engages the community. Targets will include the elimination of sanitary flow from combined sewers and reduced storm flows, as well as those below.
- Green infrastructure complements to Wet Weather Flow will result in the stabilization of eroding stream-banks, the removal of fish barriers and sections of the creek with hardened stream-bed, the replacement of gabion baskets with natural stream edge, and the planting of stream edge along the whole of the creek.
- The Storm Outfall Monitoring Program will be completed, eliminating sanitary waste flow to the creek in dry weather, and transitioned to become a comprehensive surface water quality monitoring program, with spills and aquatic test results from all levels of government posted to the internet for public access.
- **By 2015, after the completion of the Wet Weather Flow Master Plan and the Storm Outfall Monitoring Program, the creek will meet the Provincial Water Quality Objectives for e-coli 90% of the time.**
- Increased outreach to private property owners along the creek, buttressed by increased vigilance from by-law enforcement, will result in improved health for the creek and the publicly-owned lands beside it.
- Each reach will receive the analysis and resources it needs to be reclaimed, as described in the section 4 and including community involvement, resulting in a fully regenerated watercourse.
- The Taylor Massey Trail, including both pedestrian and cycling trail within the Warden Hydro Corridor, will link the whole of the watershed, with bridges as well as street and railway crossings as needed.
- Directional signage on the trail will help people get around Dentonia Golf Course and Pine Hills Cemetery when its gates are closed, as well as alert users to the circuit consisting of the Warden Hydro Corridor on the west side, the Gattineau Hydro Corridor on the south, the creek between Underwriters Road and Lawrence Avenue on the east, and Lawrence Avenue across the north.
- In addition to hosting pedestrian and cycling trail, the Warden Hydro Corridor will be heavily planted, with approximately 200,000 trees and shrubs, as described in section 5. The addition of this 20 hectares of forest and green-space will increase these categories in the Taylor Massey sub-watershed almost a full percent while buffering the local impacts of increasingly hot summers.

In short, Taylor Massey Creek will become a treasured local resource, with an abundance of plants, birds, animals, and fish, and a retreat where local residents can refresh themselves in nature.

Recommendations for improved watershed management performance from agencies to help achieve this vision are contained in section 3, while detailed regeneration actions for the creek and the trail are described in sections 4 and 5.

3. Improved Watershed Management Performance from Agencies

3.1 The Federal Government

Key Publications

IPCC Technical Paper on Climate Change and Water, Intergovernmental Panel on Climate Change: www.ipcc.ch

Please note that the IPCC study identifies fresh-water ecosystems as the most threatened on the planet.

Advice to Governments on Their Review of the Great Lakes Water Quality Agreement, International Joint Commission: www.ijc.org

A New Approach to Water Management in Canada, Pollution Probe: www.pollutionprobe.org

(Cont'd overleaf...)

The TMP supports wide-spread calls, led by the academic community and organizations such as Pollution Probe, for a new national water strategy.

The new strategy should articulate clear goals for the Great Lakes, including more funding for and more reporting and community engagement from agencies leading Remedial Action Plans (RAPs) to de-list Canadian Areas of Concern (AoCs), as identified by the International Joint Commission (IJC).

Federal action should also include refinement and expansion of the Water Quality Index, for which Environment Canada offered to produce a WQI for Taylor Massey Creek and then reneged on the offer.

Locally, Taylor Massey Creek is the most polluted tributary flowing into the Toronto AoC, and indeed into Lake Ontario.

While we applaud the City of Toronto on its 25-year, \$1B Wet Weather Flow Master Plan as a major initiative aimed at de-listing the local AoC, the Toronto RAP itself seems to have traded its early engagement of the community for a significant lack of transparency and accountability.

In fact, the Toronto RAP has not held a public meeting since April 28, 2004, has not established a target date for de-listing the AoC, and has not yet produced the annual spills inventory promised for 2007.

The TMP's goals for improved federal performance to help our watersheds in general and Taylor Massey Creek in particular include:

- A new national water strategy, including a requirement for standardized, widely-administered, and publicly accessible surface water quality reports;
- A national commitment to de-listing Great Lakes Areas of Concern, with increased funding for local Remedial Action Plans;
- Increased transparency and accountability for the Toronto RAP;
- Expansion of the monitoring and public disclosure of reporting systems such as the Water Quality Index and,
- Federal financial support for municipal infrastructure that would help the City's Wet Weather Flow Master Plan.

3.2 The Provincial Government

Key Publications (cont'd)

Great Lakes Blueprint, CELA, CIELAP, Eco-justice, Environmental Defence, Great Lakes United, Sierra Club of Canada:
www.thewaterhole.ca

The annual reports of the Environmental Commissioner of Ontario can be found at:
www.eco.on.ca

The TMP acknowledges the volume and applauds the direction of the numerous initiatives undertaken by Ontario since the Walkerton tragedy, including new planning initiatives, the Clean Water Act, the Lakes and Rivers Improvement Act, and a broad commitment to source-water protection planning.

We concur, however, with recent reports of the Environmental Commissioner of Ontario that Ontario has still not resolved the conflicting priorities of living sustainably versus business as usual, and that the budgets of the Ministry of Natural Resources and the Ministry of the Environment should be tripled.

The TMP's goals for improved provincial performance to help our watersheds in general and Taylor Massey Creek in particular include:

- Renewed regulatory and financial commitment to protecting and cleaning up the Great Lakes;
- The immediate extension of source protection planning requirements for watersheds draining into Lake Ontario;
- An adequacy assessment of current provincial water quality objectives, including the development of a set of protocols for when the objectives are exceeded;
- Increased science funding on the impacts of climate change on Ontario's wetlands, lakes, and rivers;
- Proper funding and other resources for the provincial Water Quality Monitoring Network, including publicly-accessible, up-to-date databases for water quality, water quantity, and spills-to-water reports;
- A regulatory requirement for pollution prevention planning by all industrial, commercial, and institutional facilities in Ontario; and,
- Core funding to Conservation Ontario and Ontario conservation authorities for a set of priority services that should not be tied to municipal levies.

Joint federal-provincial responsibility: Canada and Ontario irregularly sign what are supposed to be five-year agreements on the management of shared Great Lakes responsibilities, including air, water, and other issues, called the Canada-Ontario Agreement (COA). Unfortunately, COA often lapses, and can take over two years to be re-negotiated, obtain budget approvals, and get the funds flowing.

Canada and Ontario need to establish a more reliable and trust-worthy relationship to protect the Great Lakes rather than have funding unavailable for up to half of every five-year period.

3.3 The City of Toronto

Wet Weather Flow

The City of Toronto's key initiative to reduce local stream pollution is the Wet Weather Flow Master Plan (WWF), a 25-year, \$1B effort.

Goals of the Plan include:

- protecting private property from sewage floods;
- limiting erosion in local creeks by reducing the volume of storm-water entering storm sewers, and;
- eliminating sanitary sewage overflows to our creeks by re-routing effluent from combined sewers into new pipes and underground storage tunnels. After precipitation events, the water stored in the tunnels can be pumped to a sewage treatment plant for processing.

The TMP supports WWF in an appropriate watershed management framework that includes targets with measurable outcomes, restoring the creek to natural conditions where possible, and community engagement.

See the note at the bottom on page 16 for a description of natural conditions.

The City of Toronto is a national leader in many environmental initiatives, including the Better Building Partnership, the Clean Air Partnership, and the Deep Lake Water Cooling programs; by-laws on ravine and tree protection; and its commitment to parks, a revitalized waterfront, and the new Green Development Standard.

In addition, the development of the Wet Weather Flow Master Plan, recent by-laws on sewers, the use of pesticides, and requiring the disconnection of downspouts, the Storm Outfall Monitoring Program, commitments to increase the water rate to address infrastructure shortfalls demonstrate significant leadership by the City on number of issues relating to water management.

In practical terms, unfortunately, there is little evidence of cross-departmental cooperation on watershed management at the City. For example, in 2007 the City responded to a decade-old suggestion and budgeted for the creation of a wetland in the Goulding Estate. Two submissions posted to our website applauded the initiative while requesting the results of water quantity monitoring to re-assure us of the long-term viability of the wetland in a changing climate. The data was never provided.

More importantly, we flagged to the City the need to weigh the expenditure of \$300,000 against a list of other regeneration priorities for the creek.

Without a watershed study and prioritization of regeneration needs, the second submission concluded that "Toronto taxpayers can only speculate about which might have been a higher priority for the funds in the capital budget: curtailing leachate that might be polluting the Creek or a constructed wetland that might be dry in a few years. Given the pending implementation of the City's 25-year, \$1 billion Wet Weather Flow Master Plan, the need to establish Watershed Coordinators to guide the development of an ecosystem approach to watershed management is urgent."

The TMP has been calling for an ecosystem approach to watershed management at the City, in some form or another, for six years, usually suggesting that such an effort be piloted in Taylor Massey Creek due to its significant contribution of pollutants to the Don.

In 2006, we obtained support from the Don Watershed Regeneration Council, an advisory Board to the TRCA, which wrote the City's Wet Weather Flow Implementation Advisory Committee calling for Taylor Massey Creek to

The Storm Outfall Monitoring Program

As described on page 9, the City of Toronto initiated a Storm Outfall Monitoring Program in Taylor Massey Creek, and then extended it across the City.

The SOMP is designed to identify and remediate sources of e-coli entering the creek in dry weather conditions.

A 2007 report indicated that the sources of e-coli in 6 of 28 Priority Outfalls located in the creek – outfalls with high e-coli - had been identified and remediated.

An updated progress report is expected in 2009.

The TMP supports the SOMP and suggests it be completed and then transitioned to become a comprehensive surface water quality monitoring program.

become a "pilot project to demonstrate the value of an integrated, ecosystem approach to storm-water management and a comprehensive package of improvements on a sub-watershed basis".

We continue to hope that the City will shift to watershed management and that the prioritization and cost estimates provided on pages 47-48 provide a template the City can consider for future investments within the watershed. We also remain prepared to assist the City in staging a Taylor Massey Summit, involving the four Taylor Massey Councillors, agency staff, and community organizations, in order to help establish regeneration priorities and facilitate community engagement.

The TMP's goals for improved City of Toronto performance to help our watersheds in general and Taylor Massey Creek in particular include:

- **Implementing the 25-year, \$1B Wet Weather Flow Master Plan, in an appropriate watershed management framework that includes targets with measurable outcomes, restores the creek to natural conditions* where possible, and engages the community;**
- **Completing the Storm Outfall Monitoring Program and transition it to become a comprehensive surface water quality monitoring program, with spills and aquatic test results from all levels of government posted to the internet for public access.**
- Investigating the best way of shifting to a watershed management approach to facilitate internal information-sharing, decision-making, and public engagement;
- Hosting a Taylor Massey Summit as a means of obtaining feedback on preliminary recommendations on the shift to a city-wide watershed management approach;
- Increased enforcement for both encroachment and property standards for lots abutting public green-space;
- Increased funding for community involvement in natural heritage stewardship, clean-ups, and plantings; and,
- Supporting the completion of the Taylor Massey Trail.

* Restoring the creek to natural conditions: The draft version of Wet Weather Flow included commitments to remediate fish barriers, replace sections of creek-bank currently in gabion baskets with naturalized banks, and plant as much of the stream edge as possible, to a width of 10 metres on each side. These commitments were watered down in the final version and are disappearing as the environmental assessment and financial details focus on pipes and concrete storage tunnels. The TMP urges the City to dedicate a percentage of the WWF budget to restoring as much of the natural aspects of the creek as possible.

3.4 The Toronto and Region Conservation Authority

Key Facts

The TRCA's jurisdiction includes the Etobicoke, Mimico, Humber, Don, Duffins, Carruthers, Highland, and Rouge watersheds, as well as lands draining directly to Lake Ontario.

The TRCA is comprised of 28 members appointed by the municipalities in its jurisdiction.

See the TRCA website at www.trca.on.ca

The TRCA has massive responsibilities and yet generally flies below the radar screen of most of the 3.4 M people in its jurisdiction, spread across 3,467 Km² and including eight watersheds and other lands draining directly into Lake Ontario.

Uniquely positioned as a provincial-municipal partnership, the TRCA's responsibilities include:

- Flood management, including the operation of dams on area watercourses;
- Commenting on land-use plans and issuing permits regarding storm-flow reaching local waters;
- Managing open space placed in its trust, which currently consists of over 13,000 hectares; and,
- Delivering recreational, natural heritage, conservation, and outdoor educational programming.

In the forefront of defining watershed management in the 1990s, the TRCA is currently involved in local source-water protection, studies on drinking water from Lake Ontario, and serves the chair of the local Remedial Action Plan for the Toronto Area of Concern.

In addition, the TRCA has sought valiantly since about the turn of the century to expand its mandate into regional sustainability. Key efforts have included:

- Leading a regional study on ground-water;
- Developing a terrestrial natural heritage system strategy;
- Developing extensive programs in energy efficiency that have included attracting the world headquarters of the Green Building Council to Kortright and approval of a \$100 million budget for the establishment of a green building campus, also at Kortright, and;
- Participating in Partners in Project Green, an initiative to facilitate eco-industrialism and green business practices amongst the 12,500 businesses employing over 350,000 people near Pearson International Airport.

Unfortunately, some of these initiatives may be placing a strain on the ability of the TRCA to meet its traditional responsibilities for water quality and stream health within its current budget.

Priority issues for the TMP in this regard include:

- The absence of a status report on the implementation of *Forty Steps to a New Don*, as well as the dearth of the promised Taylor Massey Creek sub-watershed study;

The Don Council
and the new Don Plan

The Don Watershed Regeneration Council is a volunteer advisory committee to the TRCA, made up of both residents of the Don and staff and/or elected appointees from local municipalities

The Don Council is currently preparing a new Don Watershed Plan to update *Forty Steps to a New Don*, published in 1994. Public consultations on the Don Plan will be held in 2009.

Previous TMP submissions on the new plan can be seen under Submissions at www.TheTMP.org Look for letters dated April 17 and June 16, 2008.

The Power Point presentation to the Board of the TRCA can be found under July 25, 2008.

Two slides from the presentation can be found on page 21.

- The lack of preparation of separate current conditions reports for each of the main tributaries of the Don, including Taylor Massey Creek;
- The provision of a Don “progress report” in 2006, in place of the normal, tri-annual Report Card;
- A continued lack of focus on both leachate from landfills on TRCA property and effluent coming from snow dumps; and,
- A complete absence of public meetings and public accountability from the Toronto RAP since 2004.

In spite of these short-comings, as of November, 2008, the TRCA and its Don Watershed Regeneration Council have developed an excellent, high-level draft of a new Don Watershed Plan, which will have one regeneration concept site for each of the sub-watersheds.

For our part, the TMP firmly believes that six regeneration concept sites designed to capture the public’s imagination must be bolstered by both policy and financial commitments to regenerate each sub-watershed by reclaiming each and every degraded reach of that sub-watershed.

As a result, and as described in more detail in section 4.1, TMP made a presentation to the board of the TRCA on July 25, 2008, requesting that the Authority pursue Don watershed regeneration through the development of reach-by-reach implementation plans.

Following the presentation, the Authority passed a motion that it seek “reach-by-reach funding from senior levels of government to support watershed plan implementation.”

This report, therefore, is not an alternative to the Don Plan but an extension of it, offering four sections the Don Plan does not fully address:

- A summary of sub-watershed current conditions (section 2.2);
- A vision for a revitalized Taylor Massey Creek (section 2.3);
- Suggestions for improved agency performance (this section); and,
- Specific suggestions, in sections 4, 5, and 6, to protect water quality, regenerate the creek, and establish trail throughout the sub-watershed, supported by a draft budget to implement the top priorities.

Watershed Report Cards

Ontario's MNR's 2008 draft report on biodiversity states:

“Several of Ontario's conservation authorities have developed state of the watershed reports (also known as watershed report cards) The report cards use a standardized set of environmental indicators that measure watershed health, as well as a scoring scheme to encourage consistency. These reports provide the public with easily understood environmental information and demonstrate accountability to stakeholders.”

The TMP urges the TRCA to adopt standardized indicators for report cards on each of the watersheds in its jurisdiction.

The TMP's goals for improved TRCA performance to help our watersheds in general and Taylor Massey Creek in particular include:

- Re-balancing its efforts on regional sustainability with renewed commitment to water quality, leaking landfills on lands it owns, run-off from snow dumps, and the Remedial Action Plan;
- Establishing sets of standardized indicators, as described in the box to the left, that measure environmental health while retaining local flavour in sub-watershed report cards;
- A greater focus on sub-watershed management, including sub-watershed current conditions reports and regeneration targets that can be assessed in watershed report cards; and,
- Improved engagement of reach stewardship groups on advisory councils.

Recommended priorities for each level of government are described on page 46.

4. Reach Regeneration Plans

4.1 Introduction

In preparing the new Don Watershed Plan, the TRCA and its Don Watershed Regeneration Council have indicated that they will seek to identify one regeneration concept site for each of the Don's six sub-watersheds, including Taylor Massey Creek. In addition to continuing the process of regenerating the Don, the purpose of these concept sites is to foster greater awareness of local regeneration initiatives.

While this approach has merit, the TMP expressed its concerns, in discussion with staff and at meetings of the Don Council over the course of 2007 and 2008, that there was no report on the implementation of concept sites proposed in *Forty Steps*, and no current conditions report on Taylor Massey Creek.

In particular, we noted that *Forty Steps* had called for the development of a sub-watershed plan for the Creek, stating that "a sub-watershed plan would provide a framework for assigning priorities in improving water quality and other measures in this basin."

In place of these elements, the current draft of the new Don Plan speaks to high-level goals, including source water protection, protecting the Oak Ridges Moraine, broader municipal-provincial cooperation, green development standards, eco-industrialism, expanded rapid transit, and public education.

Each of these are admirable aspects of a new Don.

However, it has been 14 years since *Forty Steps*, and perhaps time a few more details on the ground.

This effort seeks to offer those details, suggesting a set of management priorities and implementation objectives for the regeneration of the sub-watershed, based on the following principles:

- Watershed regeneration should be based on sets of sub-watershed current conditions reports and assembled into a vision for the health of a whole watershed;
- Watershed regeneration plans should articulate practical and measureable targets to which each sub-watershed can be restored, and that can be assessed in subsequent report cards;
- The new Don Watershed Plan must include enhanced monitoring, more publicly-available data, and improved enforcement; and,
- Sub-watershed regeneration plans should include preliminary goals to reclaim any degraded reach, including a cost estimate and a commitment to engage the local community.

Status Report of a Previous Concept Site

Terraview Willowfield, the northernmost reach of TMC, was an award-winning concept site identified in *Forty Steps*.

Even though the site improves upon previous conditions, it has several deficiencies, including:

- The plunge pool designed to catch debris from the 401 has proved inadequate in size and has not been cleared out as frequently as required; and
- Phase III was not completed, leaving concrete channel in place from Willowfield School to Ellesmere.

See pages 23-24 for more details.

During discussions on the new Don Plan, the TMP acknowledged that the inclusion of six proposed regeneration concept sites would result in increased public profile on the need to regenerate the watershed, but we also expressed concerns that this approach did not extend any commitment to reclaim other severely-degraded reaches nor, more importantly, offer a longer-term commitment to fully restore the Don nor indeed any of its sub-watersheds.

As a result, we developed a belief that the best way to regenerate a watershed is to start from the ground up, seeking to:

1. Reclaim each Reach in order to ...
2. Restore each sub-watershed, resulting in
3. A Regenerated Don Watershed.

On July 25, 2008, the TMP made a power point presentation on this approach to the board of the TRCA. While the full presentation is available under Submissions on our website, two of the slides are as follows:

**The Don Council's perspective and the TMP's perspective
are not mutually exclusive.**

**However, we think the Council's top down approach
will not regenerate the Don as quickly, nor as effectively,
nor will it engage the public as much as a Ground Up,
reach-by-reach approach to regenerating the Don.**

and,

Our Request to the TRCA (is)

**That the TRCA signal to the Don Council that the Authority
will seek funding for reach-by-reach plans to regenerate the Don,
with senior government partners as needed.**

Following extensive discussion, the TRCA passed a motion that the Authority seek "reach-by-reach funding from senior levels of government to support watershed plan implementation."

**The TMP is therefore pleased to offer the following reach regeneration plans
as preliminary suggestions for the reach-by-reach regeneration of TMC.**

**We believe our suggestions point the way for the TRCA and its sister
agencies to implement the high-level goals of the new Don Plan
in a practical manner, restoring a full sub-watershed as a
meaningful milestone toward regenerating the Don.**

4.2 The Reaches of Taylor Massey Creek

The pages that follow provide descriptions of key challenges within and suggested solutions to reclaim each reach of Taylor Massey Creek. A key map to the reaches can be found below.

Reach map

Reach Name s



A10	Terraview Willowfield
A9	Manhattan
A8	Underwriters
A7	Eglinton
A6	Pine Hills
A5	St Clair
A4	Warden Woods
A3	Dentonia
A2	The Goulding Estate
A1	Taylor Creek Park
B1	The Ferris Ravine
C1	The Curity Ravine
WHC	Although not a reach, this denotes the north-south Warden Hydro Corridor and its junction with other greenspace at its southern end. The WHC is the subject of section T2.

A10 – Terraview-Willowfield

Background: Originally consisting of about 150 hectares above the 401 from which clean base-flow was diverted away from TMC, the creek's headwaters now consist of about 18 hectares, including polluted run-off from the 401 and underground springs. This flow is collected into pipes and emerges at a headwall at Terraview-Willowfield.

To deal with the poor-quality source water, *Forty Steps to a New Don*, the TRCA's previous plan for the Don watershed, identified Terraview-Willowfield as one of its initial regeneration concept sites.

Regeneration efforts incurring expenditures of \$1.5 M resulted in significant improvements, including the establishment of some storm-water controls, the removal of some concrete channels, the establishment of two ponds, and extensive plantings.

Current Conditions: Unfortunately, TW continues to have water quality problems due to poor source water run-off from the 401 and the inadequacy of the plunge pool to contain polluted sediment. A long-requested analysis of the effectiveness of the experimental storm-water treatment pond under the soccer field is now underway.

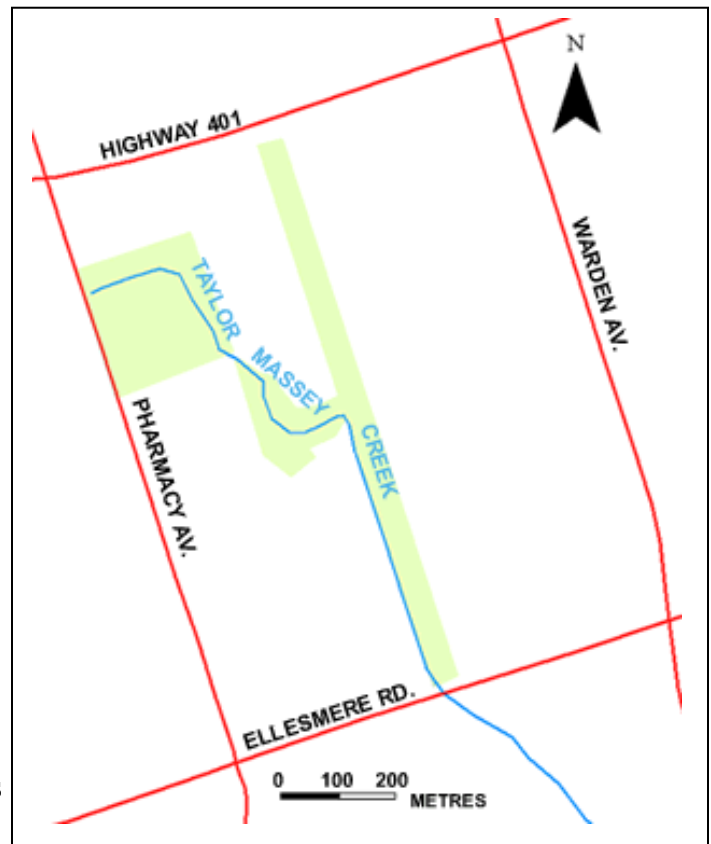
Key issues going forward are the completion of Phase III of the original regeneration plan, which would naturalize the remaining section of the Creek below Willowfield School, the acquisition of the Warden Hydro Corridor by the City or TRCA, and a safe crossing at Ellesmere associated with the construction of the Taylor Massey Trail.

Recommendations to Reclaim this Reach

- **That Terraview-Willowfield be designated a priority regeneration concept site in the new Don Watershed Plan.**

Water and Wetlands

- Investigate the opportunity to re-divert some of the base flow of the Creek from Wishing Well Park, currently allocated to the East Don, in order to improve the quality of the base flow where the creek emerges from its current source culvert;
- Investigate the opportunity to divert some of flow from the storm-water pond at the 401 and Victoria Park to Taylor Massey Creek in order to improve the quality of the base flow;
- As the current plunge-pool below the headwall is inadequate, investigate enlarging it and/or installing an oil and grit separator;



- The current study of the efficiency of the experimental storm-water treatment pond under the soccer field, including a cost-benefit analysis, should be completed and released for comment as soon as possible;
- **While all elements of the recommendations to reclaim this reach should be pursued, the key aspect that makes this reach a priority is that Phase III of the original regeneration plan be implemented, replacing the concrete channel from Willowfield School downstream to Ellesmere Avenue, with the possible addition of new storm-water ponds and wetlands within the hydro corridor.**

Terrestrial Natural Heritage

- Link Terraview-Willowfield to the inter-regional trail north of the 401;
- Areas originally designated to be planted under Phases I and II of the original regeneration plan should be planted;
- The TRCA and/or the City of Toronto acquire the ownership of or management rights to the Warden Hydro Corridor, through which the Creek flows south of Willowfield School and that sections beside the new water features listed above be densely planted;
- That the northernmost section of the Warden Hydro Corridor, against the south side of the 401, should become a large off-leash dog area, with suitable signage and fencing;
- That a section of the Warden Hydro Corridor near Willowfield School become a butterfly garden.

Trails, Signage, and Community Engagement

- That the section of the hydro corridor south of the school contain two trails, one for pedestrians and one for cyclists;
- That these trails converge at a common cross-walk or traffic light be installed at Ellesmere so that pedestrians and cyclists can safely cross Ellesmere;
- That signage be installed at the north and south ends of Terraview-Willowfield to describe trail connections north and south; and,
- That the annual Willowfield school clean-ups and plantings receive on-going support and be acknowledged on local signage.

A9 – Manhattan

Background: The TMP considers this section of the creek “The Lost Reach”, for two reasons:

- The creek has been rendered sterile. From Ellesmere to Manhattan, about a kilometer, the creek is in a narrow, steep-sided ditch with a concrete bottom. From Manhattan to Lawrence, about 750m, it is entombed in an underground pipe. These factors, combined with powerful storm flows, result in a reach where no fish, invertebrates, nor even aquatic plants live; and
- For the first kilometer downstream of Ellesmere, the creek is fenced right at the top of short, steep banks. The fence keeps the public safe from sudden and powerful storm surges. It also marks the boundary that separates public land from bank yards. As a result, no trail is possible along this reach.

To make up for the impossibility of trail in this area, the TMP has been championing the location of both pedestrian and cycling trail in the Warden Hydro Corridor. Please see the last bullet below.

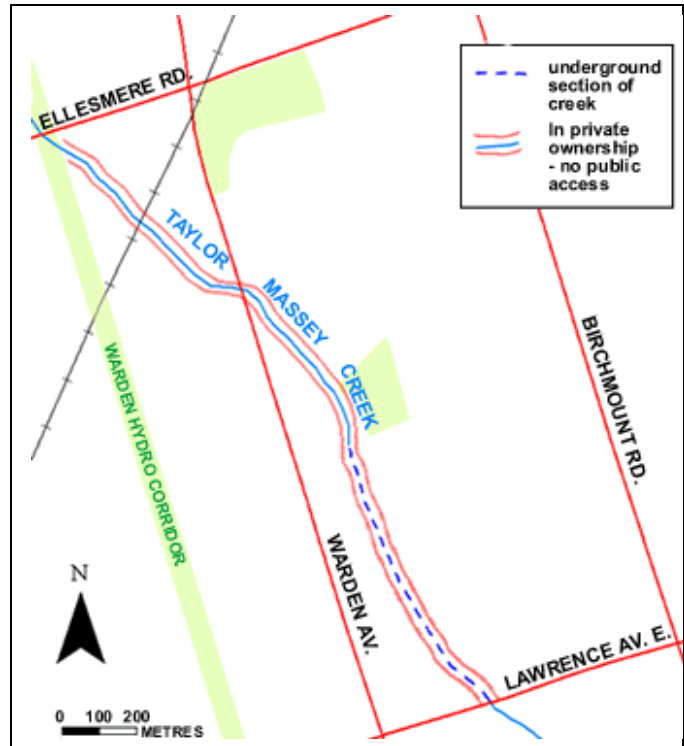
Current Conditions: In dry weather, the sterile concrete channel, located about 3m below the top of steep banks about 10 m apart, hosts a trickle of water. In wet weather, the creek can rise with dramatic speed, at times over-topping its banks. This flow also represents a threat to life, which is why this reach is heavily fenced at street crossings and at the local school. The flow comes from hard surfaces, including downspouts connected directly to the storm sewers, which empty into the creek.

Most properties abutting the creek seem to respect its remaining charms. A few have illegally raised their back yards, with fill beginning to push out the City’s fencing. Fewer still have pipes, from pools or downspouts, routing water to the creek and causing erosion.

Recommendations to Reclaim this Reach

Water and Wetlands; Terrestrial Natural Heritage; Trails, Signage, and Community Engagement

- The City and TRCA, in cooperation with the TMP and local organizations, might consider developing a Stewardship Protocol for all private properties abutting the Creek. The protocol could address fill, native species, not throwing yard waste into the creek, not draining pools to the creek and the disconnection of downspouts.
- To make up for the trail that should have connected neighbourhoods north of Ellesmere with those south of Lawrence, as well as the people living in this reach with each other, the City should aggressively pursue the creation of the Taylor Massey Trail along the Warden Hydro Corridor, as described on page 45.



A8 – Underwriters’ Road

Background: Underwriters is essentially a long and narrow reach, somewhat hemmed in by a commercial mall on the north and industry along each side. Fortunately, the former City of Scarborough acquired the lands near the creek, including an abandoned railway alignment that serves as a very popular local trail, in the 1990s. This wise purchase safeguards the prospect of continuous trail, with a few minor interruptions, all the way from Lawrence to the lower Don trail leading to Lake Ontario.

Current Conditions: The watercourse is deeply eroded, with sewage pipes on both sides, making potential regeneration difficult. Water quality appears to be very poor, due to several storm sewers that empty directly into the Reach with no treatment ponds, including a major outfall opposite the end of Underwriters Road.

Horrible waste practices from the mall along Lawrence results in excessive litter blowing into the top of the reach. Many companies on the west side north of Crockford as well as those and south of Bertrand violate property standards with impunity from the local agencies, and the reach below Bertrand is in concrete channel.

In spite of these harsh limitations, TMP plantings over the last five years with Underwriters’ Laboratories of Canada, Toronto Hydro, and Cadbury-Adams, with over 1,400 trees and shrubs from the City, have begun greening up the reach and resulted in an explosion of bird life.

Recommendations to Reclaim this Reach

- **That Underwriters be designated a priority regeneration concept site in the new Don Watershed Plan.**

Water and Wetlands

- Discussions with TRCA staff resulted in a recommendation that the City’s Wet Weather Flow Master Plan identify Underwriters as a possible location of a below-ground storage tank and artificial riffle structure north of the Gatineau hydro line. The TMP thanks TRCA staff for this suggestion and hopes it might apply to storm-flows only, leaving base flow above-ground.
- Local agencies should investigate the run-off from the culvert opposite the end of Underwriters Road and consider installing an oil and grit separator if required.
- The perched culverts south of Underwriters Road present a fish barrier and should be remediated.
- Local agencies might also consider if any off-line ponds might be created under the Gatineau hydro line.



Terrestrial Natural Heritage

- Annual clean-ups and plantings should continue until the Reach is fully planted
- The City should pursue rigorous by-law enforcement throughout this Reach.

Trails, Signage, and Community Engagement

- Public access to the trail at Lawrence would benefit from improved signage.
- Signage should also be developed to show that trail along the Underwriter's Reach can connect to the Taylor Massey Trail along the Warden Hydro Corridor via either Lawrence Avenue or the E-W trail under the Gatineau Hydro line.
- **While all elements of the recommendations to reclaim this reach should be pursued, the key aspect that makes this reach a priority is the potential creation of a local Corporate Stewardship Initiative involving the TMP and its local corporate partners.**

The basis for this initiative is that, over the last five years, these organizations have been performing annual clean-ups and tree plantings and seek to involve their corporate neighbours in further environmental endeavours.

Creating a Corporate Stewardship Initiative with the participation of other local companies and support of from efforts such as the Toronto and Region Sustainability Program* could expand outdoor natural heritage protection programs as well as embrace pollution prevention and energy efficiency.

* The Toronto and Region Sustainability Program (TRSP), delivered by the Ontario Centre for Environmental Technology Advancement (OCETA), provides funding assistance as an incentive for small and medium size companies to have a Facility Pollution Prevention Assessment conducted that addresses priority environmental issues (i.e. toxics, hazardous waste, volatile organic compound (VOC) air emissions, greenhouse gases) targeted by three levels of government. For more information on the TRSP, see <http://www.oceta.on.ca/TORSUS/index.htm>

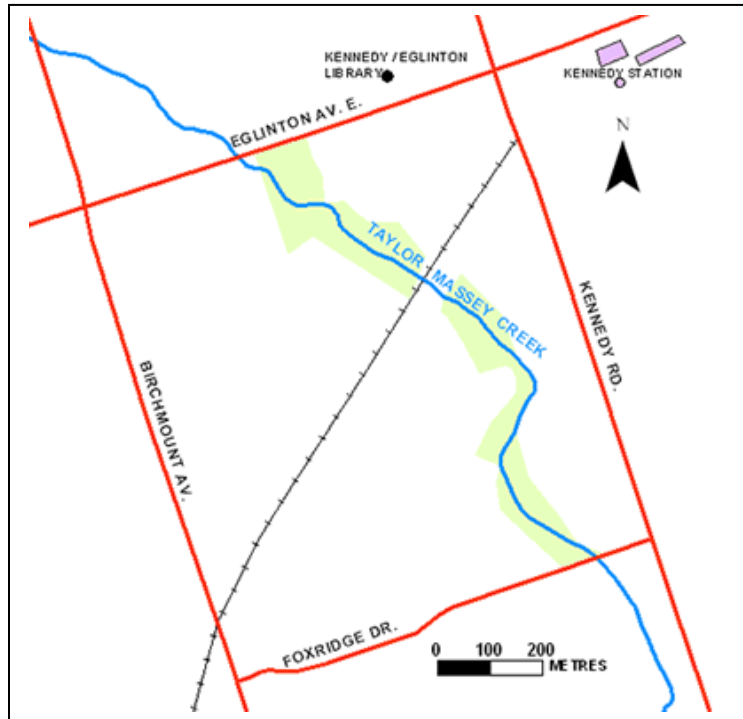
A7 – The Eglinton Reach

Background: This reach consists almost entirely of three fabulous ravines:

- the Maida Vale Ravine, from Birchmount to Eglinton;
- the Eglinton Ravine, from Eglinton to the railroad tracks; and;
- Farlinger Ravine, from the railroad tracks to Foxridge Drive.

Recommendation:

- **That the Eglinton Reach be designated a priority regeneration concept site in the new Don Watershed Plan.**

Maida Vale

Current Conditions: Lush growth almost hides the north-west end of this section, characterized by highly eroded banks. Passage along the northern bank appears problematic, due to a sign suggesting it is private property. On the southern bank, access is obtained through a gate on private property, and continues on public property along the top of a steep bank, almost to Rosemount, but getting to the street is blocked by buildings along the north side of Eglinton.

Recommendations to Reclaim this Sub-reachWater and Wetlands

- Bank erosion should be studied and remedied.
- Local agencies should investigate the claim of private property along the north bank.

Terrestrial Natural Heritage

- Holes in stream-edge plantings should be filled.

Trails, Signage, and Community Engagement

- A trail can be placed along the northern bank if the claim of private property is not valid. If the claim is valid, a trail could be placed along the southern bank until it nears Rosemount, where a bridge could take pedestrians across to the north bank and out to Rosemount.
- If trail infrastructure in the reach is too expensive or difficult, a trail could help people cross Birchmount, go through Maida Vale Park to Rosemount, then down Rosemount to Eglinton.
- Regardless of which trail alignment might be selected, a crossing at Birchmount and good signs are required to help people get from the west side of Birchmount to the south side of Eglinton.

Eglinton Ravine

Current Conditions: The stream along the parkette on the south side of Eglinton is eroded and presents a barrier to hiking south. If the creek is waded in low-flow conditions, hikers can follow a narrow path along the west bank, where monarch butterflies like to congregate in the fall. This area has significant encroachment from local properties until the pathway opens up around the emergency exit from the subway and the railroad. The other side presents more substantial challenges: several apartment buildings, with horrible waste practices, send huge amounts of litter into a fenced property below the top of bank but for which the property owner is unknown.

Recommendations to Reclaim this Sub-reachWater and Wetlands

- Bank erosion should be studied and remedied.
- Investigate flows draining into this Reach as they are dis-coloured and/or odourous.
- The ownership of the fenced property below the top of bank on the east side should be investigated. This area could be considered for an on-line pond and/or a natural heritage restoration.
- The perched culverts under the railway present a fish barrier and should be remediated.
- The safety and capacity of the two culverts under the rail line should be investigated, as one of them is shored up with heavy lumber. (Also see the last bullet below)
- Install debris cages on the culverts as needed.

Terrestrial Natural Heritage

- The City must encourage property owners on the west side to stop encroaching on public space.
- The City should pursue rigorous by-law enforcement of the apartment buildings south of Eglinton, particularly vis-a-vis outdoor waste storage.

Trails, Signage, and Community Engagement

- A pedestrian bridge is needed at the southern end of Eglinton Ravine Park.
- Install signage so that passengers using the TTC subway emergency exit north of the railway line will know where to go should they have to use the exit.
- Consider replacing and expanding the eastern culvert under the railway line for water while converting the western culvert for pedestrian use, or install a pedestrian walkway over the railway.

Farlinger Ravine

Current Conditions: Farlinger is a unique community oasis and the birthplace of the TMP, due to a fabulous reach stewardship group that has staged 14 annual spring clean-ups and 5 annual fall plantings to date. In spite of these efforts, the area continues to have highly eroded banks, mature stream-bank trees that are currently experiencing a high mortality rate, and the beginnings of an invasion by dog-strangling vine.

Recommendations to Reclaim this Sub-reach

Water and Wetlands

- TRCA staff and the City of Toronto Ravine Specialist should assess all the banks in the ravine to determine which may be in danger of further erosion due to high creek flows and can be stabilized with armour stone or river rock and/or be planted to reduce further erosion;

Terrestrial Natural Heritage

- Install a wire-mesh fence on the property line along the commercial plaza immediately east of the ravine in order to limit the excessive litter that blows into the ravine;
- The City of Toronto Ravine Specialist should continue to work with the local Reach committee to develop further ravine plantings in Farlinger, in consultation with the rest of the neighbourhood as needed, to try to replace manicured areas with as much forest cover in the ravine as possible;
- The City of Toronto Ravine Specialist should assess the state of dog-strangling vine, garlic mustard, and other invasive species, determine the threats they represent, and develop any required invasive removal programs;
- The large manicured area off the western side of the southern bridge, which is often wet and not used by the community, should be considered for other uses. If it is not possible to place a pond there, the area could be planted. If it is planted, the TMP recommends it be planted in cooperation with the Tree Advocate Program, where the TMP would plant the first 125 pieces as one of its community plantings, followed immediately by a Tree Advocate planting;

Trails, Signage, and Community Engagement

- While the TMP and the local Reach committee wish to see trail in Farlinger linked to areas upstream and downstream of the ravine, the local Reach committee has articulated a strong preference for a chip path, as such a trail would suit the scale of the ravine more than a paved path;
- The TMP, local neighbours, and the City should consider the installation of park benches in locations where they will provide good resting, viewing, and support for community activities as needed; and,
- The TMP, local neighbours, and the City should consider the installation of both directional and interpretational signage as required.

A-6 The Pine Hills Reach

Background: This reach, with much of the creek and extensive tablelands around it owned by Pine Hills Cemetery, is a delightful retreat that rivals Warden Woods as the most natural in the watercourse. Once through the gates, locked near dark, guests find both an enchanting footpath along the Creek and have access to the largest arboretum in Scarborough.

In addition to welcoming the public, Pine Hills Cemetery practices a broad spectrum of sound environmental practices and has conducted environmental walks with the TMP, local residents, and other organizations.

Current Conditions: The creek is in good shape for most of its length in Pine Hills, but could benefit with additional riparian plantings on the upstream 80%. The downstream 20% is in a ditch that runs along the edge of St Clair, is owned by the City, and as such is the recipient of general litter and run-off from the road, including and automotive fluids and road salt.



Recommendations to Reclaim this Reach

Water and Wetlands

- The City should investigate opportunities to limit pollution into the creek from St Clair Avenue.

Terrestrial Natural Heritage

- The TMP hopes to work with Pine Hills, the TRCA and the City to develop a model environmental stewardship initiative for cemeteries in Toronto.

Trails, Signage, and Community Engagement

- We need to develop signage informing pedestrians and others about how to continue along the Taylor Massey Trail when access to the path in Pine Hills is unavailable.

A5 – The St Clair Reach

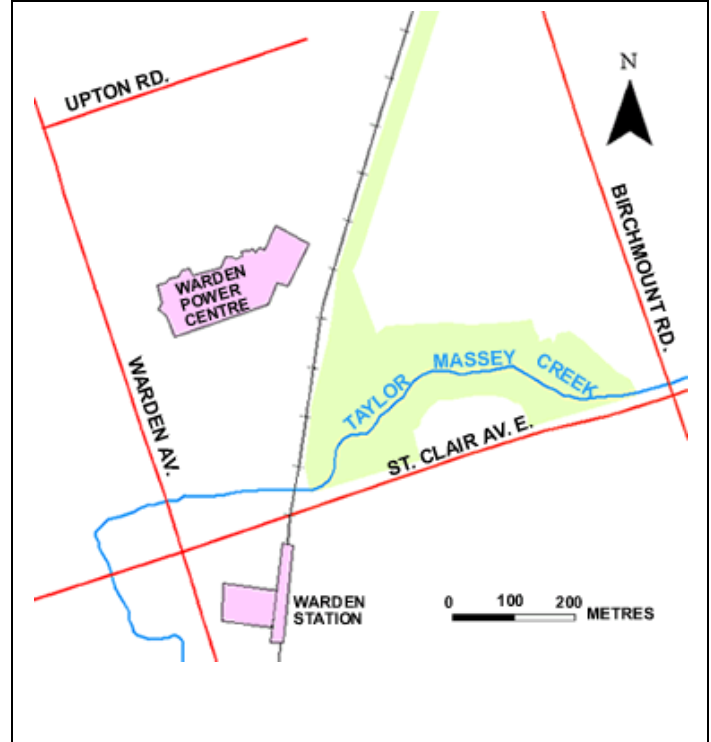
Background: This is a highly-varied Reach. The first part, from Birchmount to the rail-line, is called St Clair Ravine park, and is wellmanicured, with concrete trail and lighting,

The next section, from the rail-line to under Warden, is steeply sloped, has no trails, and is rarely used.

The last section, from Warden to St Clair, has been essentially given over to a stormwater pond, with some plantings on the higher elevations.

Current Conditions: The first section requires extensive repairs to eroding banks and could use additional naturalization, begun by the TMP with the Birchmount-Santa Monica Neighbourhood Association in 2005. The other two sections appear healthy.

The biggest issue for these three sections may be the differences in elevation at the culverts between them, which pose barriers to fish migration.



Recommendations to Reclaim this Reach

Water and Wetlands

- TRCA staff and the City of Toronto Ravine Specialist should assess all the banks in the Reach to determine which may be in danger of further erosion due to high creek flows and can be stabilized with armour stone or river rock and/or be planted to reduce further erosion.
- The City and TRCA should ascertain the possibility of expanding existing wetlands or creating new ones.
- The culverts between the sections should be assessed as possible fish barriers.

Terrestrial Natural Heritage

- The City of Toronto should continue support local ravine plantings, seeking to replace manicured areas with as much forest cover in the ravine as possible.
- The City of Toronto Ravine Specialist should assess the state of dog-strangling vine, garlic mustard, and other invasive species, determine the threats they represent, and develop any required invasive removal programs.

Trails, Signage, and Community Engagement

- St Clair Ravine Park may receive a higher profile, and more visitors, with improved signage and its inclusion in maps of the Taylor Massey Trail.

A4 – Warden Woods

Background: Warden Woods is one of the ecological jewels of Taylor Massey Creek, consisting for the most part of a well-treed flood-plain and steep valley slopes that shelter the creek as it flows from St Clair and Warden south to Pharmacy Avenue.

Following a presentation by the TMP on the need to safeguard the woods, the City commissioned an excellent report on the park called *Environmental Baseline Study of Warden Woods Park, Toronto, 2007*, referred to as the Kamstra Study.

A review of the Kamstra Study and our own field assessment resulted in a TMP report called *Protecting Warden Woods*, which suggested a number of regeneration priorities, management protocols, and community stewardship actions for the Park. *Protecting Warden Woods* is available under Publications on our website.

Most of the recommendations in *Protecting Warden Woods* have been addressed in extensive comments by staff in Parks, Forestry, and Recreation, to whom we are extremely grateful.

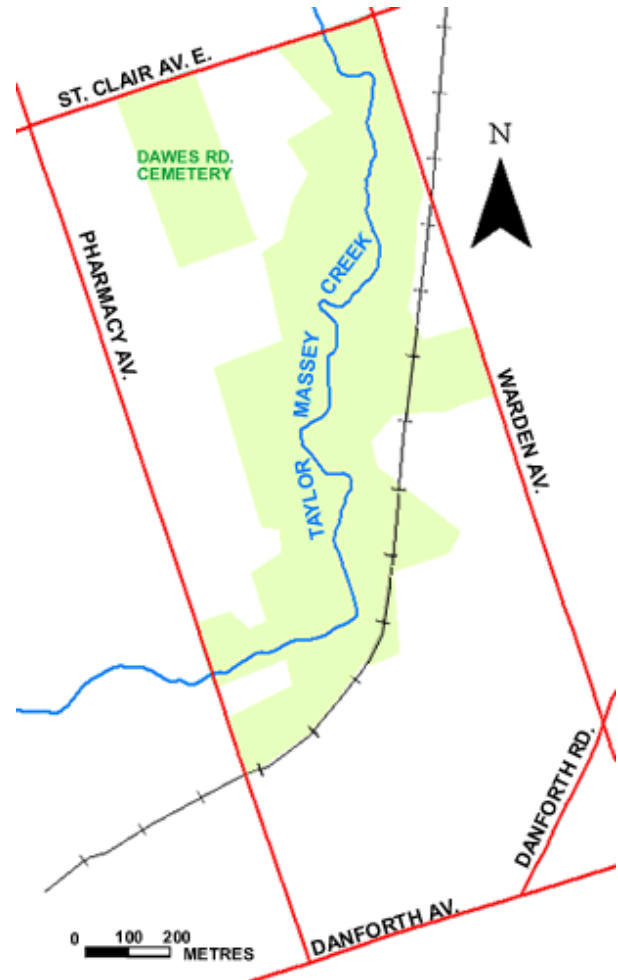
In particular, the City has indicated that Warden Woods is on a list of candidate sites for designation as an Environmentally Significant Area in the next update to the official plan. Discussion will continue on outstanding issues including lights, wetland creation, habitat improvement, signage, creating a local Friends of Warden Woods, and access, trail, and bridge maintenance.

Current Conditions: A short way in from either of its two un-inviting main entrances, and in spite of the occasional rumblings of the subway that passes through a section of the park, Warden Woods somehow becomes quiet, picturesque, and a host to dynamic diversities of both trees and birds.

This diversity is due to several strengths:

- The abundance of water in both the creek and in ground-flow across the slopes of the ravine;
- Good soils that support a relatively large forest with many areas of mature trees, intact under-story growth, and at least seven significant plant species; and,
- A highly-varied population of visiting and nesting birds, due in no small measure to the absence of lights in the park.

Unfortunately, the long-term ecological integrity of Warden Woods is threatened by several modern realities. These include extensive stream-bank erosion, invasive species, poor lot



management practices, increased regional air pollution, climate change, and local intensification that may result in both an increased demand for access to green-space as well as higher levels of local heat, noise, light, and air pollution.

Recommendations to Reclaim this Reach

- **That Warden Woods be designated a priority regeneration concept site in the new Don Watershed Plan.**

Water and Wetlands

- Agency staff should inventory eroding creek banks and failing gabion baskets and develop a creek stabilization plan. This should include increased riparian plantings for sections where existing stream-side plantings are thin.
- Agency staff should similarly develop a wetland protection and enhancement plan for pocket wetlands in Warden Woods.

Terrestrial Natural Heritage

- Warden Woods should be designated an Environmentally Significant Area and any additional trails or lights prohibited.
- The City of Toronto should develop a Management Plan for the protection and enhancement of the Park, including a long-range planting program, the immediate removal of an informal MBX stunt area, and a plan to manage and eradicate invasive non-native species.
- Warden Woods would benefit from enhanced outreach from the City on lot management practices for abutting property owners, especially concerning encroachment, waste management, and pool draining, through both increased education and increased enforcement. Please see the last bullet below.

Trails, Signage, and Community Engagement

- The TMP supports the City's plans for new signage at the park entrance.
- The TMP suggests the City also develop directional signage, to help people get around the park at night if desired, as well as interpretive signage. For the latter, we suggest a sign denoting the location where the creek originally flowed into Lake Iroquois, the antecedent of Lake Ontario, just upstream of the current parking lot near Pharmacy.
- **While all elements of the recommendations to reclaim this reach should be pursued, the key aspect that makes this reach a priority is that Warden Woods should become a model for enhanced Community Stewardship. The TMP hopes to invite the City, local community organizations, and property owners abutting the Park to create an organization tentatively called the Friends of Warden Woods, to be coordinated by the City but with a citizen-led Board.**

A3 – Dentonia

Background: This reach, owned by the City of Toronto and operated as a golf course, requires paid green-fee admission, and as such has no general pedestrian access.

While cycling detours around Dentonia can be made on streets north and south of the golf course, the most direct route on foot is via a fenced pathway that connects Pharmacy to Victoria Park Avenue. The east entrance is accessed through a path located in the midst of the apartment buildings opposite the park on Pharmacy, and the west entrance is a set of stairs leading to an elevated catwalk along the outside north wall of the Victoria Park subway station.

Current Conditions: Some sections of the creek have been hardened, much of the stream edge denuded of plants, and stream-bank erosion is well in evidence.

As with all City golf courses, pesticide use has been lowered considerably, about 70% overall, and is applied at Dentonia only under an IPM (Integrated Pest Management) code of practice.

Recommendations to Reclaim this Reach

Water and Wetlands

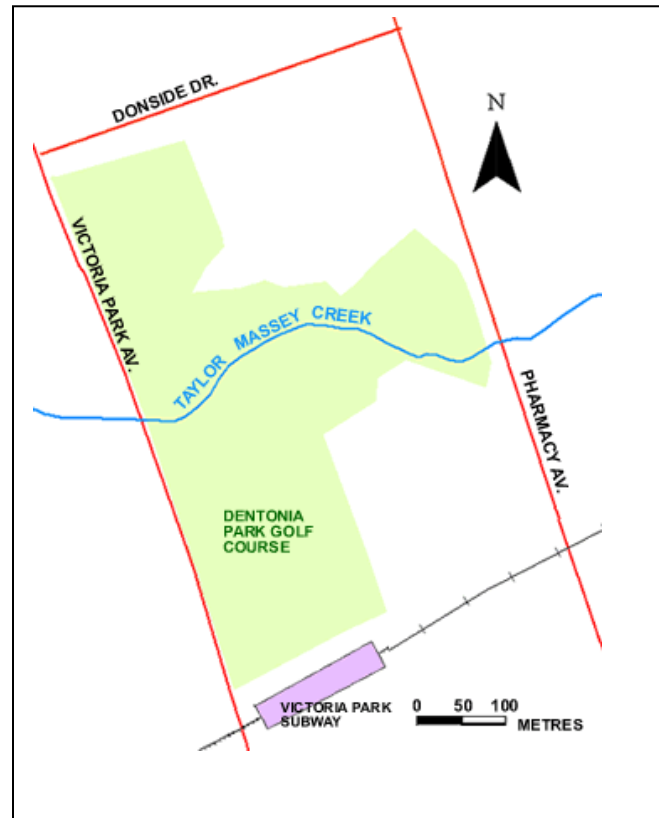
- The City should investigate where hardened bottoms can be removed, eroding banks restored, and additional stream-side plantings effected.

Terrestrial Natural Heritage

- The golf course's IPM code of practice should hopefully allow it to avoid future pesticide use.

Trails, Signage, and Community Engagement

- Signage is needed to help both pedestrians and cyclists get around Dentonia.



A2 – The Goulding Estate

Background: The smallest reach in the watershed, Goulding is nestled between the Dentonia Golf Course and Taylor Creek Park, the longest reach.

The Estate itself, the last remaining building of Dentonia Park Farms, which was once owned by the Massey family, whose name the creek partly bares, designated a heritage site in 1995.

Current Conditions: On the southern side of the reach, the slopes coming down from Crescent Town demonstrate the erosion caused when Norway Maples, a non-native species, kill competing understory growth. Further west, numerous pipes denote an extensive landfill underfoot.

The northern slopes, meanwhile, boast some of the largest oaks along the creek. The north side also now hosts a wetland, constructed in 2008, for which the TMP's technical and financial reservations are expressed on page 15.

A hundred metres west of the new wetland, a shrub planting where non-native alders were removed fronts a smaller wetland that was enhanced a few years ago.

The creek itself demonstrates excessive erosion, with huge trees hanging by a few roots and lengths of gabion baskets twisted aside or broken asunder. The culvert under Victoria Park seems to be transitioning into a natural rocky ramp, hinting that fish might make it past this barrier.

Recommendations to Reclaim this Reach

Water and Wetlands

- Local agencies should assess the culvert under Victoria Park Avenue as a possible fish barrier.
- Significant creek-bank slumping due to erosion must be addressed before more plants and indeed trail are lost.

Terrestrial Natural Heritage

- Efforts by Parks, Forestry, and Recreation to eliminate non-native species should be applauded and continued.

Trails, Signage, and Community Engagement

- Directional signage on how to get safely from the Estate to Warden Woods should be installed as soon as possible.



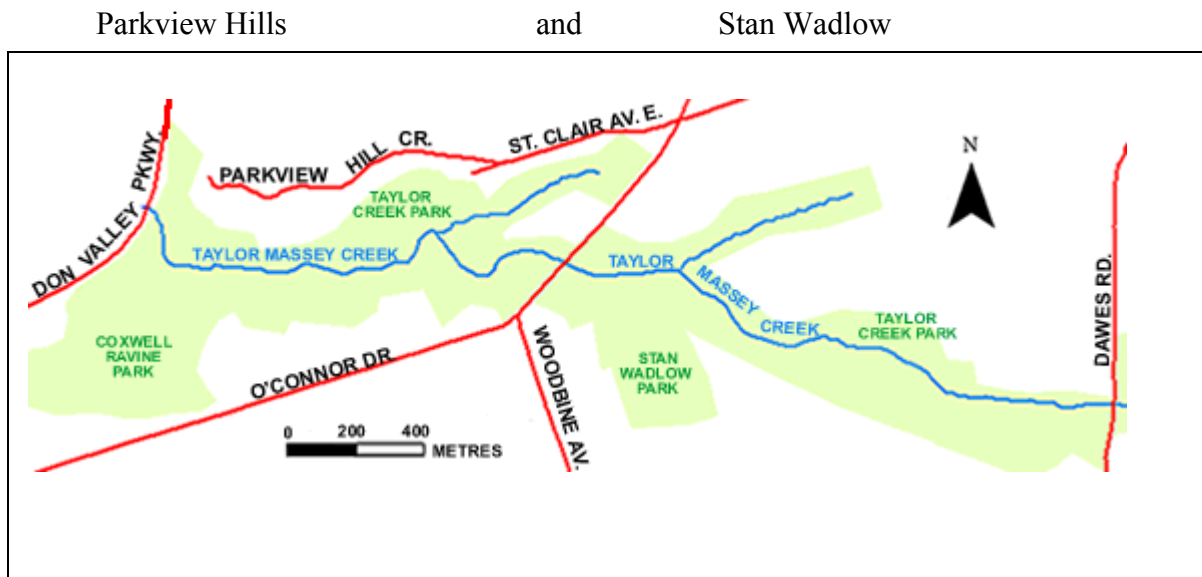
A1 – Taylor Creek Park

Background: Taylor Creek Park constitutes an unusually broad and green oasis running about 4 kilometres through the middle of East York, from Dawes Road all the way to "The Forks", the area where Taylor Massey Creek, The East Don, and The West Don all merge.

The area offers something for everyone: paved path, mown lawn, barbeque areas and picnic tables, small wetlands, well-treed slopes, areas being naturalized, and two off-shooting habitat treasures - the Ferris and Curity Ravines.

Current Conditions: This reach is severely challenged ecologically, with several combined sewer overflows, leachate trickling from old landfills sites, severe gabion basket failure, narrow riparian plantings, one major fish barrier, and non-native species establishing a foothold.

To help deal with such a long reach, the TMP has broken it into two sub-sections:



Parkview Hills runs from the bridge to the Forks. The ravine that runs northeast off this section of the creek, just west of the O'Connor Bridge, is the Curity Ravine.

Stan Wadlow runs from Dawes Road to the O'Connor bridge, situated where the red diagonal line crosses the creek. Almost all of this area, including the Ferris Ravine that runs northeast just east of the O'Connor Bridge, has been identified as an Environmentally Significant Area, or ESA.

Each of the ravines is dealt with separately beginning on page 39.

Recommendations to Reclaim Stan Wadlow

Water and Wetlands

- Wet Weather Flow and the Storm Outfall Monitoring Program must result in less human sewage entering the Creek.
- In combination with the re-routing of trail to be effected during the replacement of a watermain from Dawes Road to the second bridge west of Dawes, City staff should:
 - Assess all the banks in the Reach to determine which may be in danger of further erosion due to high creek flows and can be stabilized with armour stone or river rock and/or be planted to reduce further erosion and,
 - Identify all areas that do not have 10 m of streamside plantings and develop a plan to plant them.
- All seepage coming from old landfills needs to be tested and contained or removed if a threat to public health or the environment.
- Plans should be developed for wetlands that can be expanded or created where there are existing springs.

Terrestrial Natural Heritage

- A master plan identifying manicured areas that can be planted to forest cover should be developed.

Trails, Signage, and Community Engagement

- Directional signage should be increased and access points and stairways to local neighbourhoods should be well maintained.
- This reach has high public use. A series of interpretive signs could be developed to greatly enhance public understanding of many key natural issues.

Recommendations to Reclaim Parkview Hills

Water and Wetlands

- The City should assess all the banks in the Reach to determine which may be in danger of further erosion due to high creek flows and can be stabilized with armour stone or river rock and/or be planted to reduce further erosion.
- Plans should be developed for wetlands that can be expanded or created where there are existing springs.

Terrestrial Natural Heritage

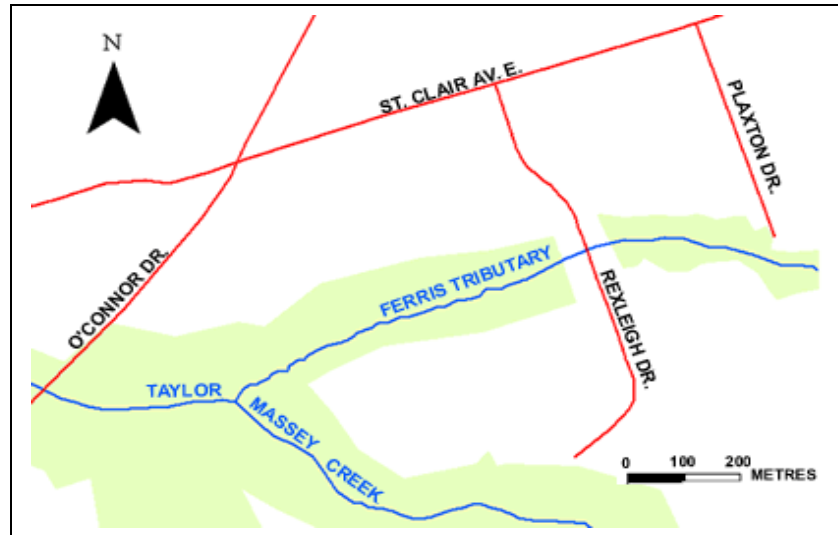
- A master plan identifying manicured areas that can be planted to forest cover should be developed.

Trails, Signage, and Community Engagement

- Directional signage should be increased, and access points and stairways to local neighbourhoods should be well maintained.

B1 – The Ferris Ravine

Background: The Ferris Ravine has a number of sections affected differently by development. West of Plaxton, the creek is underground and only evident by a dip in the ground. The loop from Plaxton west to Ferris is steep and fenced in by private property. From Ferris to Rexleigh, the ravine has trail and a semi-wild atmosphere, with mature trees and wetlands. South of Rexleigh, almost inaccessible from the east due to private property, the ravine lacks trail and is totally wild, with many pocket wetlands. This section is part of the large Taylor Creek ESA, or Environmentally Significant Area. The only way to access the ravine is from the creek. The TMP is pleased that it is exceedingly wet all year



round, and often filled with biting insects, helping to protect its isolation from too much trampling

Current Conditions:

The section of the ravine designated an ESA has at least one combined sewer in it, as well as some minor encroachment from abutting properties.

Recommendations to Reclaim this Reach

Water and Wetlands / Terrestrial Natural Heritage

- The City and TRCA should consider performing natural heritage inventories of the ravine, especially before any work to address combined sewers, priority outfalls, or other infrastructure changes, in order to provide a baseline against the intrusion of non-native species.

Trails, Signage, and Community Engagement

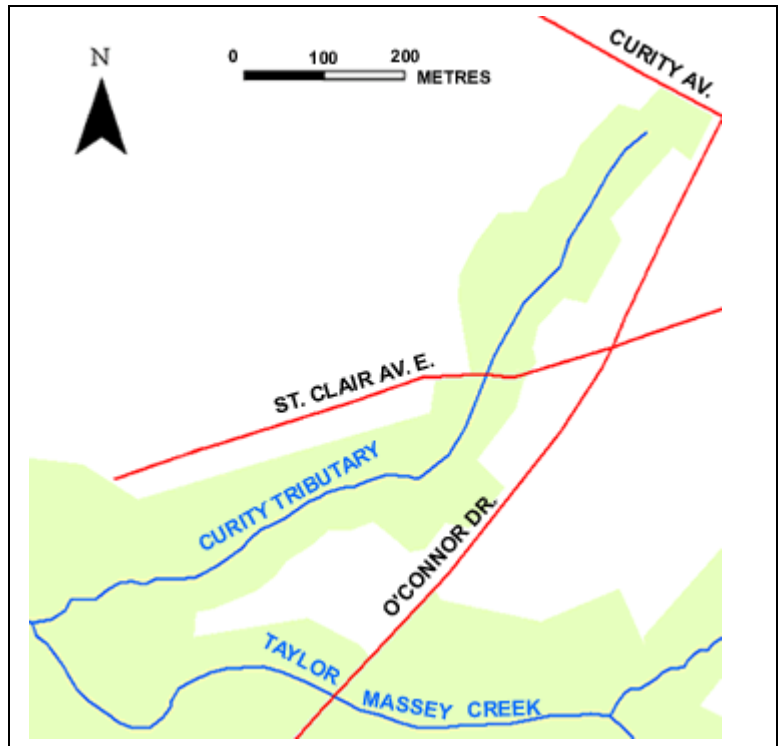
- The City and TRCA, in cooperation with the TMP and local organizations, might consider developing a Stewardship Protocol for all private properties abutting the ravine. The protocol could address fill, native species, not throwing yard waste into the ravine, not draining pools to the ravine, and the disconnection of downspouts.

C1 – The Curity Ravine

Background: Curity has three sections. Like the uppermost section of Ferris, the section east of Curity is now just a dip in the ground. The section between Curity and St Clair is gentle, well-treed, and suitable for a short hike. Mysteriously, you'll find no water flowing from the surrounding neighbourhoods through this area, as it appears to have been routed to local storm sewers. The section below St Clair will be described below.

Current Conditions: This main section of the ravine has four key features:

- Access from the south side of St Clair is steep and dangerous;
- The water that should be trickling into and through the upper section pours into it right below St Clair, scouring the creek bottom, eroding the banks downstream, and exposing sewer maintenance holes;
- Problems with sanitary sewage that must be addressed under Wet Weather Flow; and,
- Access from Taylor Massey Creek is blocked after about 300 metres by a large, sensitive wetland that should not be trampled;



Fortunately, the isolation of most of the southern section between St Clair and the wetland has caused it to become, in the words of a 2002 report to the City, "the highest quality wildlife habitat".

Recommendations to Reclaim this Reach

Water and Wetlands

- The City / TRCA should conduct natural heritage inventories of the ravine, especially before any work to address combined sewers, priority outfalls, or other infrastructure changes, in order to provide a baseline against the intrusion of non-native species;

Terrestrial Natural Heritage

- The TMP will be asking the City to consider designating the lower section an ESA.

Trails, Signage, and Community Engagement

- The City and TRCA, in cooperation with the TMP and local organizations, might consider developing a Stewardship Protocol for all private properties abutting the ravine. The protocol could address fill, native species, not throwing yard waste into the ravine, not draining pools to the ravine, and the disconnection of downspouts.

5. Completing the Taylor Massey Trail

5.1 Introduction

A regenerated Taylor Massey Creek should have three physical components:

- Water quality improvements, reduced storm-water run-off, the naturalization of hardened features, the removal of fish barriers, and the expansion and creation of wetlands;
- Improved terrestrial habitat management, including an ESA in Warden Woods and a campaign to eradicate invasive non-native species; and,
- Trail to link local neighbourhoods together, from Terraview Willowfield to the Goulding Estate, from where existing trail connects to the waterfront. Where possible, the trail should have separate paths for pedestrians and cyclists.

While most of this plan has concentrated on the first two bullets, the importance of the third cannot be underestimated.

As Taylor Massey Creek is not navigable, even by the smallest of canoes or inflatable craft, trails provide the means of communing with nature beyond the bend, aspiring to new vistas, new experiences, and even new friends.

In addition, a fully developed cycling trail - with parts along the creek, in the Warden Hydro Corridor, and along side streets - will allow for greater choices for commuters, whether headed to downtown, Lake Ontario, an area subway station, or a local shopping district.

Whether we seek regular cycle-commuting, exercise, or a leisurely pedal, hopping on a bike should be a pleasant, practical, and safe option.

Currently, the upper third of TMC has only trail segments, and needs bridges and safe street crossings, as well as an alternate to the Lost Reach, where creek-side trail is impossible from Ellesmere to Lawrence. The middle third has some trail in place but linkages and directional signage are needed. The lower third of TMC has extensive trail already in place.

The pages that follow will describe in general terms two trail alignments within the watershed. We refer to one as the Creek-side Trail and the second as the Warden Hydro Trail, each for obvious reasons. While the former can be established fairly easily by the City of Toronto through the amalgamation of isolated trail segments and the creation of linkages where needed, the Warden Hydro Trail consists of lands still in provincial ownership.

Nonetheless, not only can it fill the gap caused by the Lost Reach, it also has enough space for a pedestrian trail, a cycling trail, and approximately 200,000 trees and shrubs, which would add much-needed green-space to compensate for poor planning from previous generations.

Provincial-municipal cooperation in turning the hydro corridor into a major greenway would mitigate errors of the past, address the existing shortage of local green-space, and offer a forest to help buffer anticipated increases of temperature in the City in the near future.

- **The TMP has identified the completion of the Taylor Massey Trail, including the Warden Hydro Trail, as a regeneration priority for the watershed.**

T1 - The Creek-side Trail

The Northern Third: From the 401 to Birchmount at Ashtonbee

Terraview-Willowfield

- Some linkage or signs are needed to connect Terraview-Willowfield to the regional trail north of the 401.
- Good trail exists within the Terraview Willowfield concept site to the second bridge, but continues only as footpath to Ellesmere. Formal trails for both pedestrians and cyclists could be to be installed during construction of Phase III of the concept site.
- The northernmost part of land under the hydro line, against the 401, could become a fenced-in leash-free dog exercise area, while the area immediately north of the bridge at Willowfield school could become a butterfly garden, as proposed by the local councillor.
- A safe crossing of Ellesmere, such as a crosswalk or pedestrian-activated traffic light is required, as is directional signage informer trail users about following the hydro corridor to get to Eglinton. See the Warden Hydro Trail for more information.

Underwriters' Road

- Access to the trail from on the south side of Lawrence is currently located via a vacant lot west of the shopping plaza, but the lot may be developed. If so, signage will be needed and access secured either through the development or the plaza, or via Crockford, west of the creek, where an expensive pedestrian bridge could arch the creek.
- An excellent if informal trail on top of an abandoned rail line runs from Lawrence to Bertrand. The trail is mown by Works as part of a program to monitor potential flooding in the creek. Management of the trail should pass to Parks, Forestry, and Recreation, and a granular surface installed. The TMP opposes paved path as being inappropriate for this area and hopes that a granular surface might ensure a civil mix of pedestrians and cyclists.
- South of Bertrand, the City needs to investigate property lines and possible encroachment onto public lands. If feasible, the trail should continue along the creek to the corner of Ashtonbee and Bertrand. This alignment would require a cross-walk or pedestrian-activated light to cross at Bertrand. If this alignment in not feasible, signage would be required to direct trail users along Bertand to either cross Birchmount at the light at the corner or head south on Birchmount to the light at Ashtonbee.

The Middle Third: From Birchmount at Ashtonbee to Warden at St Clair

The Eglinton Ravines

The three Eglinton Ravines – Maida Vale, Eglinton, and Farlinger – require a lot of appropriately-scaled infrastructure to allow more people to experience their pastoral charm. This infrastructure consists of:

- The probable combination of hard trail surface along the southern bank of the creek from Birchmount to a pedestrian bridge crossing to the northern bank close to Rosemount Drive.
- A granular trail across Eglinton Flats Park.
- A pedestrian bridge over the creek at the south end of Eglinton Flats Park.
- Granular trail along the western bank of Eglinton ravine.
- A safe crossing of the railroad track. This could either be an elevated walkway or the reconstruction of the culverts under the railway, dedicating one to pedestrians and the other to the creek.
- South of the railroad, the existing footpath through Farlinger ravine should be slightly broadened but retained as a dirt or granular trail and not paved, in keeping with the local scale.
- A safe crossing of Foxridge, which separates Farlinger Ravine from Pine Hills cemetery, should be considered in the future.
- Directional signage should inform people how to get around the cemetery when the gates are closed as well as how to access the anticipated trail to run diagonally from the Warden subway station north-east to meet Birchmount near the western end of Foxridge.

Pine Hills

- Pine Hills Cemetery maintains a fantastic soft-surface trail, with much of it winding through mature trees beside the creek, and receives our deep appreciation for allowing public access of its private property. The only logistical need is for some signage at trail entrances, at Farlinger near Kennedy and at St Clair near Birchmount, informing the public about how to get around the cemetery when the gates are closed, generally from sunset to the next morning.

St Clair Ravine

- Trail users can cross at the light at Birchmount and St Clair and head directly from Pine Hills into the St Clair Ravine Park. This park has cement trail and lights, and two exits back onto St Clair, but no connection to the deep ravine west of the railway line, nor the ravine west of Warden - restrictions the TMP supports.
- Directional signage is required to inform pedestrians about following St Clair to Warden Woods Park, as well as of the proposed green-space to follow the rail corridor on its diagonal path from the Warden subway station north-east to Birchmount, near Foxridge.
- Cycling lanes along St Clair might be considered.

The Lower Third: From St Clair and Warden to the Forks of the DonWarden Woods Park

- The TMP welcomes the pending re-surfacing of the existing paved pathway, at its current width.
- Other trails in the park should be closed or maintained as soft-surface pathways.
- A few short sections of eroding, wood-beam steps on steep slopes that need to be repaired should be repaired with similar technology, rather than with cement stairways.
- The TMP hopes the existing bridge can be maintained rather than replaced. We also note that the brass plaque honouring the Thompson brothers has disappeared, and hope that it can be replaced, with more information added.

Dentonia

- Cyclists can get around the Dentonia Golf Course by going either south or north of it, but few people are aware of a pedestrian walkway around it. Directional signage would help. Emerging from the Park, cross Pharmacy at the light and head toward the apartment buildings. West of the first building, turn south and head toward the subway line. A path runs along the north side of the subway, continuing to Victoria Park Avenue via a catwalk on the outside of the subway station. If you are on a bike, there are several sets of stairs along this path and it is better to bike around.

Dentonia to the Goulding Estate

- Two sets of directional signage are needed between the Victoria Park subway station and the Goulding Estate. One set could guide walkers between the subway station and the estate, using Victoria Park Road and the lights at Crescent Town Road. Another sign is needed to guide cyclists from the Goulding Estate around Dentonia to Warden Woods.

From the Goulding Estate through Taylor Creek Park to the Forks of the Don

- No signage is needed. The City should consider, however, the need to have separate pedestrian and cycling trails, much like it has in the Humber near Bloor Street, should usage increase in the future.

T2 – The Warden Hydro Trail

Turning the Warden Hydro Corridor into the Warden Hydro Trail would create both pedestrian walkways and a major north-south cycling path, remedy the shortfall of green-space in the area, and plant a forest to help buffer anticipated increases of temperature in the future.

- **As indicated on page 41, the TMP has identified the completion of the Taylor Massey Trail, including the Warden Hydro Trail, as a regeneration priority for the watershed.**

In particular, establishing the Warden Hydro Trail would remedy the incredible error of the Lost Reach, from Ellesmere to Lawrence, restoring a sense of connectivity amongst the neighbourhoods of the watershed.

In addition, constructing the Warden Hydro Trail would also create a valuable green “loop”, consisting of the corridor south of Lawrence to the Gattineau Hydro Corridor, east across the Gattineau to the creek, north along existing trail in the Underwriters’ Reach, and then back west to the Warden Hydro Corridor across the sidewalk along Lawrence Avenue.

Efforts by the TMP to ensure the corridor is put to the best local use began in 2003, when we successfully suggested a motion passed by the Board of the TRCA that it seek to acquire the sections of the Corridor containing Taylor Massey Creek, and suggested that the City acquire the rest.

To expedite an economically reasonable transfer of the lands, we have also suggested to the Ontario Smart Growth Panel and the Province that land transfers from Ontario Realty Corporation not have to be at "full market value" where other beneficial uses are clearly possible. We hope such transfers might take place at \$2.00 each.

The Corridor itself is fairly flat in the north, but starts to have a nice roll to it south of Lawrence. The location of a meandering pedestrian path, a separate cycling path, common road crossings, some minor grading to create hillocks and wetlands, and extensive plantings can make this a valuable community resource.

Key logistical needs include:

- A traffic light or crosswalk on Ellesmere Avenue;
- A railway crossing south of Ellesmere;
- The establishment of safe crossings where the trail intersects four side streets: Dewey, Joy, Brian, and Clearfield;
- The creative use of earth taken from the construction of separate pedestrian and cycling paths to form swales and berms, both for aesthetic purposes and to create a few small wetlands;
- The planting of 200,000 trees and shrubs, over 20 years, within the corridor;
- A trailhead and washrooms near the proposed new parking lot and outdoor neighbourhood gathering place on the north side of Lawrence Avenue, with a traffic light to cross Lawrence; and,
- Directional signage at key locations showing the Warden Hydro Trail and how it connects to the Creek-side Trail.

6. Prioritization and Estimated Costs of Regenerating TMC

6.1 Institutional Leadership

- A. The **City of Toronto** should implement the 25-year, \$1B Wet Weather Flow Master Plan in an appropriate watershed management framework that includes targets with measurable outcomes, restores the creek to natural conditions where possible, and engages the community. The City should also transition the Storm Outfall Monitoring Program to become a comprehensive surface water quality monitoring program making with data from all levels of government available on the internet.

Cost: Wet Weather Flow is already budgeted. Combining existing monitoring with the continuation of the SOMP should not present increased costs above current budgets.

- B. The **TRCA** should balance its recent efforts on regional sustainability with renewed commitment to water quality, leaking landfills on lands it owns, run-off from snow dumps, and the Remedial Action Plan. It should also move from watershed management to sub-watershed management, including standardized indicators and regeneration targets that can be assessed in report cards, and a larger role for reach stewardship groups on advisory councils for each watershed or sub-watershed.

Cost: Minimal new costs for increased monitoring, but no other additional costs;

- C. The **Provincial Government** should commit to cleaning up and protecting the Great Lakes and implement an adequacy assessment of current provincial water quality objectives, including the issuance of advisories and action plans when the objectives are exceeded.

Cost: These are policy initiatives with minimal costs. Program costs to be identified but fall within currently stated provincial goals.

- D. The **Federal Government** should pursue a new national water strategy, a commitment to de-listing Great Lakes Areas of Concern, and increased transparency and accountability for the Toronto Remedial Action Plan.

Cost: These are policy initiatives with minimal costs. Program costs are committed on paper, but require a new policy agenda to be implemented.

Joint Responsibility for Water Quality

The TMP encourages better cooperation and more publicly-available reporting from all agencies involved in aquatic monitoring, including the Water Quality Index and Beneficial Use Impairments, spills and exceedances under Certificates of Approval, and monitoring for e-coli, benthic invertebrates, the health of fish populations, and leachate from abandoned landfills.

We suggest the best way forward may be to transition the resources used in the Storm Outfall Monitoring Program, as described on page 16, to create a comprehensive surface water quality monitoring program, with spills and aquatic test results from all levels of government posted to the internet for public access.

6.2 Reach by Reach Implementation

Priority	Description	Costs *
Top Priorities, as identified in sections 4 and 5, requiring capital budget expenditures		
1	<p>A: The Warden Hydro Trail: The strongest message that can be sent on managing TMC as a watershed is a commitment by the City of Toronto to acquire responsibility for the corridor and:</p> <ul style="list-style-type: none"> • Construct separate pedestrian and cycling paths, with associated berms and swales; • Install one traffic light, a bridge over the railway south of Ellesmere, and directional signage to link the Warden Hydro Trail to the Creek-side Trail and • Plant 10,000 trees and shrubs per year for 20 years. <p>See page 45.</p> <p>B. The Creek-side Trail: Costs for infrastructure for the Creek-side Trail are included in the reach budgets below.</p>	<ul style="list-style-type: none"> • \$1,500,000 • \$350,000 <p>10,000 trees/yr for 20 years - from existing budgets</p>
2	<p>Terraview-Willowfield: Implementing Phase III of the plan from 1994 while remediating the plunge pool and underground storm-water pond should be possible in short order. A leash-free dog area against the 401, a proposed butterfly garden, and dual pedestrian and cycling trails can be added, along with a safe street crossing at Ellesmere. See page 23.</p>	<ul style="list-style-type: none"> • \$750,000
3	<p>The Eglinton Reach – The Maide Vale, Eglinton, and Farlinger Ravines: The three ravines need both extensive natural regeneration and significant infrastructure, including:</p> <ul style="list-style-type: none"> • Extensive creek-bank remediation, with trail and tree plantings; • A pedestrian bridge in Maida Vale; • A pedestrian bridge in Eglinton Flats; • Regeneration of flood plain south of Eglinton; and, • A railway crossing south of Eglinton <p>See page 28.</p>	<ul style="list-style-type: none"> • \$250,000 • \$ 75,000 • \$ 50,000 • \$ 50,000 • \$250,000
4	<p>The Underwriters' Reach: Regeneration plans for this reach should be jointly developed by the TRCA and the City of Toronto's Wet Weather Flow Master Plan, including:</p> <ul style="list-style-type: none"> • The remediation of perched culverts • The installation of oil and grit separators where needed; • Formalized trail surface; and, • The possible installation of underground storm-flow storage facilities. <p>The reach should also become a model for the development of a Corporate Stewardship Initiative. See page 26.</p>	<ul style="list-style-type: none"> • \$ 50,000 • \$100,000 • \$100,000 • Included in WWF • \$50,000

Priority	Description	Costs *
5	Warden Woods: WW should be designated an Environmentally Significant Area. The development of plans to protect and regenerate the woods and the creek should be led by a Community Stewardship Initiative, tentatively called the Friends of Warden Woods, to be coordinated by the City but with a citizen-led Board including the TMP, local neighbourhood and other community organizations, and property owners abutting the park. See page 33.	<ul style="list-style-type: none"> \$50,000 / yr for 3 years to create the Friends of Warden Woods; \$50,000 to develop a regeneration plan; and \$500,000 to implement

Secondary Priorities with operating but no capital budget expenditures

6	Pine Hills: The TMP hopes to work with Pine Hills Cemetery, the TRCA and the City to develop a model environmental stewardship initiative for cemeteries in Toronto. See page 31.	<ul style="list-style-type: none"> TBD
7, 8, 9	Manhattan and the Ferris and Curity Ravines: The City and TRCA, in cooperation with the TMP, local neighbourhood associations, and other organizations working in the community, should develop a Stewardship Protocol for all private properties abutting the Creek along these reaches. The Protocol could protect against the discharge of water, litter, and the seeds from non-native species from private property into the ravine. See pages 25, 39, 40.	<ul style="list-style-type: none"> Included in outreach budget for WWF.

Longer-term priorities with costs to be determined

10 - 14	St Clair, Dentonia, the Goulding Estate, and Taylor Creek Park: Work on these reaches, which we have not costed, can proceed after the priorities above. Regeneration goals mentioned in section 4 could be included in Wet Weather Flow, a capital budget other than WWF, or incorporated into park operating budgets.	TBD
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Total Estimated Costs for the top five priorities: \$4,275,000

This investment would:

- Regenerate four reaches;
- Establish the Taylor Massey Trail; and,
- Create three community-based stewardship initiatives.

* Costs are best estimates from the TMP and need to be refined.

7. Summary and Conclusion

Early drafts of the new Don Watershed Plan offer a big-picture approach, with inspiring text.

Nonetheless, it falls short on implementation details and would not result in the full regeneration of any of the Don's three main tributaries, let alone the whole watershed.

Reach by Reach shines a light on how to implement the regeneration of a full sub-watershed, augmenting the six concept sites being proposed in the new Don Plan with a systematic plan for the regeneration of Taylor Massey Creek.

We urge local agencies with a role in watershed management to embrace our vision of a regenerated sub-watershed: protecting water quality, remediating our ravines, linking our neighbourhoods, and facilitating the transition to sustainable development through enhanced community stewardship initiatives.

In particular, we urge the City of Toronto and the Toronto & Region Conservation Authority, with support from the federal and provincial governments as required, to:

- **Implement the Wet Weather Flow Master Plan in an appropriate watershed management framework that includes targets with measurable outcomes, restores the creek to natural conditions where possible, and engages the community;**
- **Complete the Storm Outfall Monitoring Program while transitioning it to become a comprehensive surface water quality monitoring program, with spills and aquatic test results from all levels of government posted to the internet for public access; and,**
- **Budget \$4,275,000.00 to implement the key regeneration priorities for Taylor Massey Creek, as detailed on pages 47-48, over the next five years.**

About the Taylor Massey Project

Established in 2003, the Taylor Massey Project focuses on:

- Engaging local residents by coordinating local clean-ups, plantings, and educational activities;
- Articulating a watershed management approach to protecting and restoring the Creek; and,
- Connecting the communities of the Creek with new trails, bridges, and street & railway crossings.

Working with more than 20 partner organizations, the TMP has staged 66 events involving 3,425 participants who have planted 3,550 trees and shrubs and picked up more than 1,300 bags of litter over the last 6 years.

During this period, we have also made 21 submissions to local agencies.

The final version of this document will be released in 2009.