

City of Toronto  
Wet Weather Flow Management Master Plan

CONSULTATION REPORT  
Stage 2: January 2001 – March 2002  
Options, Indicators, and Evaluation Criteria

May 2002



*Jump in! Get Involved!*

This Stage 2 Consultation Report has been prepared by Lura Consulting. Lura has been retained by the City of Toronto as a neutral, third-party facilitator of the consultation process for the Wet Weather Flow Management Master Plan. If you have any questions regarding this report, please contact either:

Tracey Ehl  
City of Toronto  
Works & Emergency Services  
Public Consultation Unit  
Metro Hall, 55 John Street  
Stn. 1180, 18<sup>th</sup> Floor  
Toronto, Ontario M5V 3C6  
Phone: 416-392-2996  
Fax: 416-392-2974  
tehl@city.toronto.on.ca

David Dilks  
Lura Consulting  
107 Church Street, Suite 400  
Toronto, Ontario M5C 2G5  
Phone: 416-410-3888 ext. 2  
Fax: 416-536-3453  
ddilks@lura.ca  
www.lura.ca

# I. BUILDING THE FOUNDATION

Work continues on the City of Toronto's Wet Weather Flow Management Master Plan (WWFMMP or Master Plan). By better managing rainwater and snowmelt, the Master Plan aims to reduce or eliminate the adverse impacts of stormwater and improve the health of Toronto's watersheds. When completed in the coming months, the Master Plan will set out new stormwater management policies, practices and control measures for Toronto, and identify how these will be implemented and funded.

Between January 2001 and March 2002, the WWFMMP Steering Committee, City staff, and the project consulting team have focused their efforts on completing a number of important tasks. Much has been accomplished, building a strong foundation for the Master Plan:

- Over ninety different stormwater management options have been identified for potential use in the City.
- Indicators and targets have been developed to help measure the effectiveness of different stormwater management options and strategies.
- The potential effectiveness of different combinations of options has been estimated using innovative modeling approaches – developed specifically for the Master Plan.
- Relationships with key stakeholders have been continued through the project's consultation process, and new partnerships for the future are being explored.
- Criteria have been established for evaluating and selecting the stormwater management strategies that are best for Toronto.
- All of this information has been communicated to hundreds of individuals and groups who are interested in contributing to the WWFMMP.

Integral to each of these and many other tasks over the past fifteen months was the feedback and advice of the public – residents, key stakeholder groups, and representatives of the industrial, commercial, and institutional sectors in Toronto, as well as representatives of the neighbouring “upper watershed” municipalities. Members of the WWFMMP Steering Committee, through their participation at meetings of both the full steering committee and on various sub-committees, have also provided valuable input and direction, helping to ensure that the Master Plan benefits from contributions from a wide range of sectors and interests. In particular, the Public Consultation Sub-Committee members have continually demonstrated their dedication to guiding consultation activities to ensure meaningful results are achieved.

The purpose of this report is to highlight the results of the consultation activities undertaken during Stage 2 of the consultation process (January 2001 – March 2002), and to document the actions taken based on the input received. It is the second in a series of summary reports intended to highlight key consultation activities completed during the planning process, and to describe how the feedback and advice received from stakeholders has shaped the Master Plan. This report builds on the Stage 1 Consultation Report (August – December, 2000), published in early 2001.

Following this introduction, the report summarizes the consultation activities that took place in Stage 2 (Section II), highlights the advice received from stakeholders and resulting actions taken

(Section III), and concludes with a description of the consultation activities planned for the next stage of the process (Section IV).

Finally, it is important to note that the intent of this summary report is not to repeat detailed information available in other formats (meeting minutes, workshop reports, email correspondence, etc.). Additional detail on consultation results is available in individual meeting records and reports, available on request from Tracey Ehl at the City of Toronto – please see contact information provided on the inside cover of this report, as well as the complete list of meeting report titles and minutes in Appendix A.

## II. THE STAGE 2 CONSULTATION PROGRAM

The overall purpose of Stage 2 of the consultation program was to seek community and stakeholder input on a wide range of potential stormwater management control alternatives, focusing on people's "willingness to implement" various measures, as well as the approach for evaluating and deciding on different management strategies that will work best in Toronto.

The Stage 2 consultation program involved the following key activities:

- i. A City-wide workshop;
- ii. 12 "sectoral" focus groups:
  - Three with City of Toronto staff, including one with members of Toronto's Interdepartmental Environment (TIE) Group, and two with District Operations Managers in the Works & Emergency Services Department;
  - Four with City of Toronto residents; and
  - Five with representatives of other key "sectors" including the industrial, commercial and institutional sectors, and members of the development community.
- iii. WWFMMP Newsletter #2;
- iv. A detailed Progress Update;
- v. A workshop with "upper watershed" municipalities;
- vi. A number of meetings with community and watershed-based groups; and
- vii. E-consultation through the City's website.

**City-wide Workshop.** A total of 45 individuals attended the Stage 2 City-wide Workshop – a day-long session on Saturday, May 12, 2001 – including representatives from 12 local community groups, the WWFMMP Steering Committee, City of Toronto staff, and members of the project consulting team. The purpose of the workshop was to communicate and obtain feedback on both the long-list of stormwater control options and the proposed approach to evaluating which stormwater management strategies would work best in Toronto. Discussion at the workshop focused on: (i) participants' willingness to implement certain stormwater management options; (ii) their willingness to support the City in implementing certain options; (iii) identifying any options missing from the list; (iv) providing comments on the evaluation criteria proposed for deciding which stormwater management activities will work best in Toronto; and (v) ranking the relative importance of the proposed evaluation criteria.

**Focus Groups.** A total of twelve focus groups and "focus group"-style meetings were held with City staff, residents, and representatives of the industrial, commercial, and institutional (IC&I) sector and of the development community.

**TIE and District Operations.** Both the City's Interdepartmental Environment Group (TIE) and the District Operations Managers of the Works & Emergency Services Department participated in special meetings regarding the WWFMMP. They were asked for a departmental/staff perspective on the barriers to implementation of the WWFMMP, the opportunities to overcome those barriers, and how City staff should be engaged in the planning process and implementation of the final strategies.

**Residential.** A total of 33 members of the public (randomly recruited and paid a small stipend) participated in four residential focus groups. Participants were grouped according to the area of Toronto in which they live, with people coming from Etobicoke, Toronto/East York/York, Scarborough and North York. The purpose of these focus groups was to determine the current knowledge participants had about wet weather flow issues and to gather feedback on the acceptability of various stormwater management options which could be implemented by the residents themselves or by the City and others. Participants were also asked to identify the most and least important factors they thought the City should consider when making decisions about which of these options to implement, and to provide the City with overall advice to consider as the WWFMMP is further developed.

**IC&I and Developers.** A total of 44 representatives of Toronto’s IC&I sector and development community participated in five “focus group”-style meetings. A separate meeting was held for each of the following groups: industry (from the Highland-Rouge sub-watershed), industry (from the Emery Creek sub-watershed), commercial property owners, institutions, and developers. These meetings were designed to introduce the project and obtain perspectives and advice regarding different stormwater management options that could be implemented on industrial, commercial, and institutional properties. Discussion focused on the current knowledge participants had about wet weather flow issues and the major obstacles and opportunities that exist for the IC&I sector, development community and the City to better manage stormwater in Toronto. Participants were also asked to identify the most and least important factors in making decisions on these options.

WWFMMP Newsletter #2. Released in March 2002, the purpose of the newsletter, the second in a series of project newsletters, was to provide a general progress update regarding the project to interested stakeholders. The newsletter included information on the work completed to date in the planning process, highlighted changes that were made to the WWFMMP objectives in response to community input during Stage 1 of the consultation, reviewed the evaluation approach that will be used to decide which stormwater management strategies will work best in Toronto, and directed readers to the Progress Update (see below) if they were interested in more detailed information on progress to date. Approximately 5700 copies of the newsletter were distributed to those on project’s mailing list.

## Participant Quotes

“Government has the bright minds and the information. Just do it.”

*Residential Focus Group Participant*

“Environment is the #1 concern and you must act quickly or the City will deteriorate.”

*Residential Focus Group Participant*

“It is inappropriate to continue to treat stormwater.”

*District Ops Meeting Participant*

“This is a very important project for the City to be undertaking.”

*Developers Focus Group Participant*

Progress Update. The purpose of the Progress Update was to take a much more detailed look at the information provided in Newsletter #2. Released in February 2002, the Progress Update included information on: indicators that can measure progress toward meeting WWFMMP objectives; targets for each indicator that represent specific values the City is striving to achieve; results of computer model simulations that provide an early look at what could be achieved with different stormwater management options; insight into what these modeling results mean and how they will be used to help develop the City's WWFMMP; and evaluation criteria that will be used to determine which stormwater management approaches are best for Toronto. Approximately 400 copies were distributed and targeted specifically to the following stakeholders: Steering Committee members; upper watershed municipalities; City of Toronto staff; Toronto and Region Conservation Authority watershed groups; interested ratepayers and associations; among others. The Progress Update included a feedback form, inviting comments on the contents and results to date.

Meeting with Upper Watershed Municipalities ("Our Shared Watersheds II"). The second of three inter-municipal watershed-wide roundtables, this meeting was designed to provide participants with a comprehensive update on the WWFMMP and to highlight "best practices" from upper watershed municipalities. It also enabled a discussion on action and initiatives that could be included in the WWFMMP to assist Toronto and upper watershed municipalities to work together and address common wet weather management goals. The meeting was hosted by the City of Toronto with generous support from the Toronto and Region Conservation Authority (TRCA). It involved 35 participants, including representatives from two neighbouring regional municipalities, seven local municipalities, the WWFMMP Steering Committee, Environment Canada, the Waterfront Regeneration Trust, City of Toronto staff, and a representative from the project consulting team.

Outreach to Community and Watershed Groups. Special efforts were made to engage community and watershed groups in dialogue about the progress of the WWFMMP. The City's Project Manager Michael D'Andrea made presentations to watershed groups such as the Humber Alliance and the Don Watershed Regeneration Council and to other community groups such as the Kiwanis Club, Later Life Learners, and the Implementation, Compliance and Monitoring Committee (ICMC) of the Ashbridges Bay Treatment Plant Environmental Assessment project. In addition, the participation of watershed groups was specifically sought through liaison with the Toronto Region Conservation Authority, invitations to meetings such as the City-wide Workshop, and the mailing of the Progress Update, which contained information that the watershed groups had been anticipating.

E-Consultation. In addition to participating in the consultation activities listed above, stakeholders, including the public, had an opportunity to provide their feedback and advice over the internet by taking part in the City of Toronto's WWFMMP *Virtual Workshop* (<http://www.city.toronto.on.ca/involved/wpc/workshop.htm>). The Virtual Workshop included a survey asking visitors to share their perspectives on the same topics addressed at the City-wide workshop and focus groups (i.e. the control options and evaluation criteria). In total, 15 people took the opportunity to participate on-line.

WWFMMP Steering Committee and the Public Consultation Sub-Committee. The WWFMMP Steering Committee and its Public Consultation Sub-Committee are core contributors to the public consultation program. Working together with City staff and the project consulting team, steering committee members provide ongoing advice and insight that guides the design and delivery of the consultation program. While the feedback of steering committee members is extensively documented in its meeting records, this Stage 2 Consultation report highlights some of the key themes arising from consultation discussions – both during meetings of the Public Consultation sub-committee and the steering committee as a whole.

### III. ADVICE RECEIVED AND ACTION TAKEN

The Stage 2 consultations confirmed that one key strength of the final WWFMMP will be the many ways in which it has been shaped by the experience, expertise, and opinions of a diverse group of individuals and organizations. The engagement of stakeholders during the planning stages is also an important step towards establishing longer-term partnerships and leveraging support for implementation of the Master Plan, once completed in the coming months. Of particular note in Stage 2, the consultation process was successful in strengthening “sectoral” participation in shaping the Master Plan, with representatives from the IC&I sector and the development community adding their perspectives to the planning process.

Review of the consultation activities undertaken over the last fifteen months reveals many common themes and core messages from Master Plan stakeholders. This section highlights their advice, along with the commitments made and actions taken by the City and Steering Committee in response to that advice. Again it is important to note that the Steering Committee and Public Consultation Sub-committee were instrumental in refining and interpreting community and stakeholder advice, and in identifying opportunities to build that advice into the planning process. Along the way, they also shared their thoughts and observations on a number of the same topics as other stakeholders. Highlights of their feedback are included in this section as well.

#### Participant Quotes

“We can’t toss out a strategy just because the uninformed public don’t like it, but if everyone objects, then implementation is unlikely.”

*City-wide Workshop Participant*

“I’d have to know the costs before I can tell you if I’d do it on my property.”

*Residential Focus Group Participant*

“I would rather have 10 million dandelions than use 1 ounce of chemicals.”

*Residential Focus Group Participant*

“We should be working closely with the 905 toward a solution.”

*District Ops Meeting Participant*

“This is a problem we didn’t know we had.”

*Institutional Focus Group Participant*

“If this project saddles the commercial sector with additional costs of doing business, it will drive business out of the City.”

*Commercial Focus Group Participant*

## WILLINGNESS TO IMPLEMENT STORMWATER CONTROL OPTIONS

Advice from Residents. Willingness to implement stormwater management on residential properties varies depending on the option. There are some options (e.g. control of pesticide use, downspout disconnection, etc.) that many people had already implemented or would be more likely to implement. Others are less popular (e.g. soakaway pits, foundation drains). Typical concerns about implementation included cost, lack of space, closeness of neighbouring houses, stagnant water, mosquitoes, and safety issues.

→ Action. The WWFMMP Steering Committee created a Working Group to estimate the percentage of residents that would likely implement different stormwater management options. Sources of information included the May 12<sup>th</sup> (2001) WWFMMP City-wide Workshop, the residential focus groups, as well as data collected through previous polls and projects. The result was agreement on participation estimates (referred to as “Percent Uptake”) that were used in computer models (and will continue to be used) to estimate the effectiveness of different combinations of stormwater management options if implemented in Toronto. Two estimates were created: one that assumed actions would be voluntary, and another where actions would be encouraged and/or supported by the City in some way. The estimates of percent uptake and rationale for each source control option, developed based on public input, are included in Appendix B.

Advice from Residents. The likelihood that residents will implement stormwater management on their properties would increase if the City provided information, technical assistance, and subsidies or financial incentives to support their efforts.

→ Action. The City and Steering Committee are committed to creating a WWFMMP with a strong public education and outreach component that will provide residents with the type of information they are calling for. Opportunities for technical and financial support will be explored in the next steps of the planning process when reviewing the types of supports required to make different residential stormwater management strategies successful.

### Related thoughts from the Steering Committee and the Public Consultation Sub-Committee

*Participants at the City-wide Workshop are best viewed as members of a growing constituency of people concerned and knowledgeable about wet weather flow issues, rather than as a representative cross-section of the City’s population. The results from this workshop are best viewed as qualitative and should be interpreted with caution given the number of participants and the nature of the information being communicated.*

*Age is a key factor for uptake – younger people have less time, while older retired people have more.*

## WILLINGNESS TO IMPLEMENT STORMWATER CONTROL OPTIONS

Advice from the industrial, commercial, institutional, and development sectors. The message from these sectors is that many are willing to consider improving stormwater management on their properties as long as the actions do not increase total costs, involve a lot of red tape, or increase liability. Specific advice to the City regarding how to increase willingness of IC&I stakeholders to manage their stormwater included:

- Create an incentive for action in this sector (e.g. modified development charges, providing credits to businesses that are proactive, etc.).
- Remove barriers to action (e.g. streamline the stormwater-related site plan approvals process, make it more flexible, and harmonize City of Toronto actions with other related municipal, provincial and federal legislation).
- Consider making any stormwater management program positive and voluntary.
- If legislative changes are being considered, make sure design standards are performance-based to allow developers and property-owners flexibility in deciding how to best meet stormwater management needs on their sites.
- Work with these sectors to identify pilot projects and showcase innovative stormwater management activities and to identify space for communal stormwater management facilities.

→ Action. Drawing on this feedback, City staff and the consulting team estimated the percentage of businesses in the IC&I sector that would likely implement stormwater management on their properties (i.e. the “Percent Uptake”). Two estimates were created: one where actions would be voluntary, and another where actions would be encouraged and/or supported by the City in some way. These estimates were used in computer models (and will continue to be used) to estimate how effective different combinations of stormwater management options would be if implemented in Toronto. The estimates of percent uptake and rationale for each source control option are included in Appendix B.



Action. The City and Steering Committee know that the effectiveness of the WWFMMP depends on the involvement of the IC&I and development sectors. Opportunities to increase the participation of these sectors will be included in the alternative stormwater management strategies currently being developed. Additional details will be considered and discussed when key supporting mechanisms for the WWFMMP are developed, including a new stormwater policy for Toronto, and implementation and financing plans.

Staff have contacted those who identified stormwater management opportunities on their sites to offer information and support.

→ Action. City staff are tracking these opportunities and taking action to ensure relationships with potential partners and pilot project hosts are maintained.


## WILLINGNESS TO IMPLEMENT STORMWATER CONTROL OPTIONS

Advice from the industrial, commercial, institutional, and development sectors, continued...


- Continue to consult and provide information to the IC&I and development sectors through the consultation  Action. All participants in the IC&I and development sector focus groups have been added to the WWFMMP project database and are receiving all project-related material being distributed to stakeholders. Additional public consultation activities are planned for the coming months and IC&I stakeholders will be invited.
- Work with these sectors and approach the federal and provincial governments for funding  Action. The City's project team is dedicated to exploring funding opportunities with other levels of government. Ways to work with the IC&I and development sectors in this effort are being reviewed.

## WILLINGNESS TO SUPPORT CITY IMPLEMENTATION OF THE OPTIONS

Advice. Stakeholders at the City-wide Workshop and at the residential focus groups provided comments on options the City or others could implement, expressing varying levels of support for stormwater management options at all three levels of the stormwater management hierarchy (source control, conveyance, and end-of-pipe options). More commonly supported options included control of road de-icers and sewer separation, while examples of options prompting concerns included enclosed beach areas and extended outfalls. Representatives of the IC&I and development sectors did not comment substantively on these options, noting that as long as their properties are not adversely impacted— then the City's stormwater management efforts are not a priority interest for them.

 Action. Stakeholder input on options the City or others could implement will be taken into account in developing alternative strategies during the next phase of the planning process. This advice will also inform the City's decisions regarding which stormwater management activities the City will take responsibility for implementing.

Advice. The City should use its policies and practices to set a good example for stormwater management.

 Action. This is the City's intention. A sub-committee of the Steering Committee has been created to work on ensuring that the recommendations in the WWFMMP are reflected in the City's new stormwater policy, and the City

is actively pursuing and supporting various possible pilot projects with potential partners from the IC&I and development sectors.

## WORKING WITH OTHER WATERSHED MUNICIPALITIES

Advice. Continue to work together with the 905 municipalities in Toronto's upper watersheds.



Action. A second workshop was held with 905 municipalities to continue the dialogue concerning wet weather flow management at the watershed scale. A comprehensive update on the WWFMMP planning process was provided and "best practices" from 905 municipalities were highlighted. Discussion focused on actions and initiatives that could be included in the WWFMMP to assist Toronto and upper watershed municipalities work together to address common wet weather management goals. The key result was agreement to create an Inter-regional Working Group of stormwater management practitioners to promote and ensure collaboration and cooperation between the City of Toronto and the upper watershed municipalities to improve water quality.

## EVALUATION CRITERIA

Advice. A number of suggestions were made regarding how to develop, strengthen, and weight the criteria that will be used to decide which stormwater management activities are best for Toronto. Randomly identified homeowners participating in the focus groups identified "health & safety of the community and the environment" as the most important decision-making factor. In the City-wide stakeholder workshop, participants put the highest priority on activities that are "effective," "match the stormwater management hierarchy," and "meet the WWFMMP Objectives." Cost was of lower importance to both these groups, however representatives of the IC&I and development sectors thought differently. They clearly indicated that cost was the most important factor influencing their participation, noting that costs must be borne by residents,



Action. The Evaluation Sub-Committee of the WWFMMP Steering Committee worked to develop and refine the evaluation criteria and approach based on feedback received. In terms of content, a major change made was the addition of a criterion under the "Economic" heading – adding "Who Pays" (the City or the Property Owner) as a consideration when evaluating which stormwater management strategies should be included in the WWFMMP. The 14 criteria include: (1) effectiveness, (2) degree to which the stormwater management hierarchy is achieved (i.e. at source, in conveyance, and end-of-pipe options), (3) degree to which WWFMMP objectives are met, (4) timing to implement, (5) degree of control, (6) ease of monitoring, (7) community health & safety, (8) public acceptance, (9) open space areas/parks, (10) air emissions, (11) terrestrial systems, (12) aquatic systems, (13) total annual (lifecycle) costs, and (14) who pays. Given the diverse opinion regarding priorities, it was decided that all of the criteria are relevant and equally important. Please see Appendix C for the complete evaluation criteria, as

businesses, and the City in a manner that is fair and mindful of the realities of living and doing business in Toronto.

revised based on public input.

Measures have also been developed for assessing the performance of different stormwater management strategies against these criteria.

## FEEDBACK ON PROGRESS UPDATE

Advice. Five sets of written feedback were returned to the City from Pollution Probe, the Don Watershed Regeneration Council, the Toronto Automobile Dealers' Association, and individual residents. These comments focused on everything from suggested wording changes to support for specific options in specific locations and ways to pay for and implement the Master Plan.



Action. All the comments that were received were forwarded to the study area consultant teams, for consideration in Stage 3, when specific strategies will be developed and selected.

## PARTICIPATION IN THE PROCESS

Advice. Residents and the IC&I sector want to be continue to be involved in the consultation process and have a say in any final decision that may affect them. Many suggestions were also offered to broaden participation to include those individuals and organizations that would play a key role in implementation. The greater the variety of options for participation, the easier it will be for individuals and organizations to participate in the way they are most comfortable or that best meets their needs.



Action. These opportunities have been, and will continue to be, created throughout the WWFMMP planning process. Information updates are distributed to all project stakeholders regularly, with new stakeholders added to the database each time a suggestion is made. Work is currently underway to develop alternative stormwater management strategies for each of the City's five study areas. When these are complete, five public workshops will be held to ensure that key stakeholders and the public have the opportunity to review the options, and that the City has the opportunity to benefit from the insights and perspectives of all stakeholders. Ongoing opportunities for feedback exist through the project website, and direct contact with City staff.

Advice. When asking stakeholders for feedback on the WWFMMP development process, it would be helpful to have more information on the anticipated impacts, cost, and cost-effectiveness of alternative strategies, implementation schedules, and experiences elsewhere to ensure



Action. This advice will be integrated into the design of subsequent consultation opportunities.

meaningful feedback can be provided.

Advice. There are many partnership and pilot project opportunities that exist with the IC&I sector, community groups, and neighbouring municipalities. The City, the IC&I sector and members of the public should work together on local stormwater management issues.

→ Action. These opportunities are being identified and tracked, and will represent an important component of the final WWFMMP.

### Related thoughts from the Steering Committee and the Public Consultation Sub-Committee

*The effectiveness and environmental benefits, along with total cost, of all options are essential for evaluating the measures and building strategies.*

*Descriptions of options should be worded in neutral and consistent language in order to avoid creating a bias amongst stakeholders.*

*Public participation will be more useful and meaningful if information is presented in manageable amounts, rather than trying to get agreement and acceptance on the entire body of information at the strategy formulation stage.*

## PUBLIC EDUCATION AND OUTREACH

Advice. Communicating the additional beneficial aspects of some stormwater control options, such as increased vegetation that reduces climate change and energy use, will increase the public desirability of those options. The City must strive to achieve the appropriate balance between asking the public what is acceptable and building acceptance for what is needed.

→ Action. The City is working to achieve this balance. Two strategies for building acceptance for the WWFMMP will be important: the development of a public education and outreach strategy, and working with City Councillors in support of their potential role as advocates of the WWFMMP with their constituencies. In addition, the Steering Committee is chaired by Councillor Irene Jones, the City's first Water Advocate.

### Related thoughts from the Steering Committee and the Public Consultation Sub-Committee

*Although public acceptance of the options is an important part of the solution, it should not limit the development of other solutions for addressing stormwater management in the City.*

*It will be important to use traditional methods for building public support as well as more proactive and assertive initiatives for activating the constituency. An important component of any Public Education and Outreach campaign should be to create a positive message, such as reminding people that every individual can make a difference, that Toronto can have healthy fish and clean swimming areas again, and by communicating the spin-off benefits that arise from some of the options.*

*Public consultation activities should evolve gradually into social marketing approaches as implementation approaches.*

*Building public and political support for the plan is critical to its success.*

*The finite capacity of the City's sewage treatment plants is a hook that can be used to build support for City-implemented source and conveyance controls.*

*It would be useful to develop a presentation that can be delivered at meetings of business associations, ratepayer's groups, watershed groups etc., and then actively solicit opportunities to do so.*

## ADVICE REGARDING THE WWFMMP AS A WHOLE

Advice. The Master Plan should be sensitive to the features and characteristics of different areas of the City. Stormwater management options should be evaluated on a site-specific basis, with consideration for local conditions.



Action. This is the approach that is being taken in the development of stormwater management strategies.

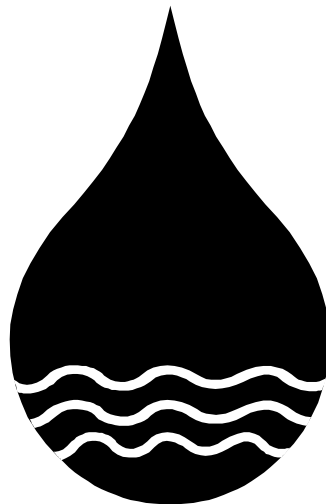
### Related thoughts from the Steering Committee and the Public Consultation Sub-Committee

*Dry weather flows are a significant problem and must be addressed by the WWFMMP.*

*Mandatory compliance measures will help the WWFMMP be accepted by the public.*

*The City should place a moratorium on the sale of surplus lands until it can be determined whether those lands could be used to benefit stormwater management in Toronto.*

*Cooperation from the “upper watershed” municipalities will be critical for success.*



## IV. LOOKING FORWARD TO STAGE 3

Building on the results of Stage 2, the next stage will focus on the development and evaluation of alternative stormwater management strategies for each watershed and sub-watershed in Toronto. As in Stage 2, communications and consultation activities will be critical components of Stage 3 work. Additional information about Stage 3 consultation activities will be available shortly, and will be distributed directly to all those that have been involved in the process at any time up to this point. Participation opportunities will also be publicized broadly to the community at large.

### Participant Quotes

“If the government is really serious, make this mandatory.”

*Residential Focus Group Participant*

“If the water is not polluted, what’s the problem with sending it to the sewers? Why would I keep it in a barrel on my property?”

*Residential Focus Group Participant*

“We should be looking at what we can do as a corporation/property owner, as well as what we can impose on others.”

*TIE Meeting Participant*

“We could be powerful partners when the City goes to the province looking for funding for this project.”

*Commercial Focus Group Participant*

“If we are ever going to have the chance to make a difference, then we must start to think outside of the usual solutions.”

*Online Virtual Workshop Participant*

# APPENDIX A

## Stage 2 Reports and Minutes

### City-wide Workshop

- Workshop Report On Options and Decision Factors, May 12, 2001

### Focus Groups

- Toronto Interdepartmental Environment (TIE) Group: Discussion Summary, June 14, 2001
- Briefing Sessions with Works & Emergency Services (WES) Department District Operations Managers, June 2001
- Residential Focus Groups: Summary Report, July 2001
- Industrial Meeting (Highland/Rouge) Key Messages, July 2001
- Industrial Meeting (Emery Creek) Key Messages, July 2001
- Commercial Meeting Key Messages, June 2001
- Institutional Meeting Key Messages, June 2001
- Developers Meeting Key Messages, June 2001

### WWFMMP Newsletter #2

- Toronto's Rainwater Plan, Volume 2 Issue 1 October 2001

### Progress Update

- Progress Update: For Discussion, February 2002

### Meeting with Upper Watershed Municipalities ("Our Shared Watersheds II")

- *Our Shared Watersheds II: Continuing the Dialogue on Wet Weather Flow*, Meeting Summary, February 2002

### WWFMMP Steering Committee and the Public Consultation Sub-Committee

Meetings for both the Steering Committee and Public Consultation Sub-Committee were held approximately monthly throughout Stage 2. Copies of minutes from each of these meetings are available upon request.

# APPENDIX B

## Source Control Options % Uptake (Existing Condition) – Rationale and Assumptions

Source Control Option	Uptake Rate		Rationale/Source		
	Voluntary	Enhanced	N. Bloor West Village (150 residents)	Storm Pollution Poll (1,000 residents)	WWFMMP Focus Groups (33 residents)
<b>Residential (low/medium/high density )</b>					
Roof Disconnection <sup>1</sup>	6 - 50 % (40%)	40 - 80 % (75%)	Voluntary 43% Enhanced 63%	Voluntary 6% Enhanced 37%	Voluntary 30% Enhanced 78%
Rain Barrel (1/house) <sup>1</sup>	10 - 20 % (15%)	30 - 80 % (55%)	Voluntary 10% Enhanced 57%	Voluntary 0% Enhanced 33%	(grouped with roof dis-connection)
Storm Garden • Stormwater <sup>2</sup> • aesthetic <sup>3</sup>	< 1 - 2 % (1%) 1-10% (5%)	1- 9% (5%) 5-15% (10 %)			Voluntary 0% Enhanced 33% (part aesthetic?)
Soak-away/ infiltration <sup>1</sup>	1 - 10 % (5%)	10 - 30 % (15%)	Voluntary 3% Enhanced 25%		Voluntary 12% Enhanced 42%
Foundation Drain Disconnect - current owner <sup>3</sup>	1 - 5% (3%)	5 -15% (10%)			Voluntary 3% Enhanced 6%
Lot Regrading <sup>2</sup> (number of lots that would apply)	1 - 8% (5%)	10 - 20% (15%)		Voluntary 0% Enhanced 34%	
More Trees <sup>3</sup>	(5%)	(10%)			
Pervious Driveway <sup>1</sup> (number of lots that would apply)	10 - 15% (15%)	30 - 40% (35%)	Voluntary 12% Enhanced 35%	Voluntary 0% Enhanced 36%	Voluntary 9% Enhanced 36%
<b>Residential (High Rise)</b>					
Parking Lot to Grass <sup>3</sup> (% of parking area)	20 - 30% (25%)	40 - 60 (45%)			
More Trees <sup>2</sup>	30 - 70% (60%)	40 - 80% (75%)	Voluntary 33% Enhanced 42%		
Regrade Parking Lot to Grass (including biofilter) <sup>3</sup> (number of parking lots that would apply)	1 - 10% (5%)	15 - 25% (15%)			

Source Control Option	Uptake Rate		Rationale/Source		
	Voluntary	Enhanced	N. Bloor West Village (150 residents)	Storm Pollution Poll (1,000 residents)	WWFMMP Focus Groups (33 residents)
Roof Drainage to Wetland <sup>3</sup> (% of the roofs that pass screen criteria)	1 - 10% (5%)	5 - 15% (10%)			
Pervious Pavement <sup>3</sup> (% of walkways area)	1 - 10% (5%)	10 - 20 (15%)			
<b>Commercial/Institutional</b>					
Roof Top Restrictors <sup>3</sup> (% of roofs that would apply)	20 - 30% (25%)	40 - 60% (50%)			Cost is important for infrastructure, land, operation, budget etc. Rely on architect/engineer for cost effectiveness. Cost savings alternatives preferred
Roof Garden <sup>3</sup>	(5%)	(10%)			
Parking lot CB Restrictors <sup>3</sup> (% of parking area that would apply)	5 - 15% (10%)	20 - 30% (25%)			
Parking Lot to Grass <sup>3</sup>	(20%)	(40%)			
Pervious pavement <sup>3</sup>	(5%)	(10%)			
Regrade Parking Lot to Underground Storage, biofilter <sup>3</sup>	1 - 10% (5%)	5 - 15% (10%)			
Oil/grit separators <sup>3</sup> (% of parking that would apply. % is high due to gas stations paved areas of which 90% have oil/grit separators. Effectiveness due to maintenance is questioned). Should this number be reduced to reflect maintenance practice?	30%	40%	Toronto experience: installed at 80 - 90% gas stations, in general not maintained; large food stores (Loblaws, etc) at loading/ unloading area, garbage storage to intercept spills; installed at large park lots (Yorkdale) but not at general public lots. Uptake with sewer use by-law enforcement 60-70% with incentives 70-80%. Incentives will expedite implementation period. (estimate of contributing area Voluntary 30%; Enhanced 40%)		

Source Control Option	Uptake Rate		Rationale/Source		
	Voluntary	Enhanced	N. Bloor West Village (150 residents)	Storm Pollution Poll (1,000 residents)	WWFMMP Focus Groups (33 residents)
<b>Industrial</b>					
Roof Top Restrictors <sup>3</sup>	20 - 30% (25%)	40 - 60% (50%)			Considerations for alt having cost effectiveness, no cost increase. Lack of space for implementation. Incentives from City desirable. Share City facilities.
Roof Garden <sup>3</sup>	(5%)	(10%)			
Parking lot CB Restrictors <sup>3</sup>	5 - 15% (10%)	20 - 30% (25%)			
Route Parking Lot to Grass, including biofilter <sup>3</sup>	5 - 15% (10%)	20 - 30% (25%)			
Pervious pavement <sup>3</sup>	(5%)	(10%)			
More Trees <sup>3</sup>	20 - 50% (40%)	50 - 80% (70%)			
Oil/Grit Separators <sup>3</sup>	10%	15%	Toronto experience: Installed at sites based on process/product manufactured, normally at loading/unloading areas to intercept spills. Uptake with sewer use by-law enforcement 60-70% with incentives 70-80%. Incentives will expedite implementation period. (estimate of contributing area Voluntary 10%; Enhanced 15%)		
Underground Storage <sup>3</sup>	0% (0%)	1 - 10% (5%)			
<b>Open Space - Urban Park (uptake as % of area)</b>					
Route Parking Lot to Grass <sup>3</sup>	(25%)	(50%)			
More Trees <sup>3</sup>	1 - 10% (5%)	1 - 15% (8%)			
Ditch/swale drainage with restrictors <sup>3</sup>	60 - 80% (70%)	60 - 90% (80%)			
<b>Open Space - Valley land (uptake as % of area)</b>					
More Trees/bushes <sup>3</sup>	10 - 40% (25%)	10 - 40% (30%)			
Ditch/swale drainage <sup>3</sup>	90 - 100% (95%)	90 - 100% (95%)			
<b>Open Space - Utility Corridors (uptake as % of area)</b>					
More Trees/bushes <sup>3</sup>	10 - 30% (15%)	10 - 30% (20%)			

**NOTE:** Data feed back from public input for % uptake can be categorized into the following 3 groups:

<sup>1</sup>Reasonably justifiable %

<sup>2</sup>Minimal data, some guidance, and

<sup>3</sup>No data, professional estimate

# APPENDIX C

## Evaluation Criteria

Drawing on the results of the computer models that were run during Stage 2, as well as a number of other sources, the next step in the WWFMMP development process involves coming up with different stormwater management strategies for each subwatershed in each study area. The evaluation of the different potential strategies is an integral part of the planning process. The table below lists the criteria that were developed based on Steering Committee and public input and that will be used in this evaluation process.

Criterion	Description
<b>MUST-HAVE CRITERION</b>	
1. Effectiveness	<ul style="list-style-type: none"> <li>Strategies should be as effective as possible based on factors such as rate of uptake (i.e. number of people willing to implement the options), opportunities available (e.g. feasibility, such as soil conditions necessary for infiltration to occur during conveyance, and availability of land) and regulations regarding levels of control.</li> </ul>
<b>COMPARATIVE CRITERIA</b>	
Overall Study Principle	
2. Degree to which hierarchy is achieved (i.e. deals with stormwater where it falls)	<ul style="list-style-type: none"> <li>Rainwater is to be treated as a resource to be utilized to enhance and nourish the City's environment.</li> <li>As a priority, rainwater (including snowmelt) should be managed where it falls on the lots and streets of our City, particularly before it enters a sewer.</li> <li>Wet weather flow quantity and quality issues are to be managed on a watershed basis to enhance and preserve ecosystem health through a hierarchy of source, conveyance, and end-of-pipe control and/or treatment measures.</li> <li>Source controls will be considered first in this hierarchy, in a manner that is balanced with the other two measures in terms of environmental, social, and economic impacts.</li> </ul>
Specific Objectives	
3. Degree to which a strategy meets the 13 approved objectives, reflecting water quality, water quantity, natural	<ul style="list-style-type: none"> <li>Targets for objectives currently being established. Performance of strategies against objectives will be measured through modelling techniques, and qualitative evaluations.</li> <li>Performance score for objectives will be carried forward as part of the evaluation of strategies.</li> </ul>

areas and wildlife,  
and sewer system  
improvements  
(each of the 13  
objectives will be  
considered  
separately)

#### Implementation and Operation

4. Timing to implement
  - Length of time it will take until strategy is implemented and operational includes the following:
    - Degree to which new legislation/by-laws are required to implement strategy; and
    - Time for approvals.
5. Degree of control
  - Degree that strategy can be controlled to continually be effective, includes the following: Public compliance; How does land ownership transfer affect strategy; and Technical/scientific uncertainty (prediction error, reliance on measures that are unproven).
6. Ease of monitoring
  - Degree to which the strategy allows for future monitoring of effectiveness

#### Social/Cultural

7. Community Health and Safety
  - Potential risk/liability or benefit to community health and safety.
  - Potential risk/liability or benefit to user (e.g. homeowners, park users, industrial and commercial establishments) health and safety to operate or manage.
8. Public Acceptance
  - Public/user acceptability of overall strategy includes acceptance relating to: Short-term construction impacts; Possible property value impacts (including residential, commercial, institutional, industrial, park/recreational impacts); Possible lifestyle changes; Possible noise/odour from control technologies; Possible opportunities for educational value, job creation; and Inconvenience.
9. Open Space Areas/Parks
  - Potential to impact open space areas (includes undeveloped areas, such as vacant lots, hydro-corridors, road right-of-ways), and park lands (e.g. municipal and provincial parks, conservation lands, shoreline parks/beaches).

#### Natural Environment

10. Air Emissions
  - Potential to produce air emissions

- 11. Terrestrial Systems
  - Potential to impact terrestrial habitats or systems, including possible impacts on wildlife and terrestrial features/functions (including but not limited to designated features such as ANSIs, and ESAs).
- 12. Aquatic systems
  - Potential to impact aquatic habitats or systems, including possible impacts on aquatic life, features, and functions.

Economic

- 13. Total Annual (Lifecycle) Costs
  - Total annual capital and operating/maintenance costs amortized over 20 to 40 years, includes: Estimated costs for capital works (including up-front capital investments); and Estimated costs for staff resources, energy needs and ongoing routine operation and maintenance activities.
  - This criteria inherently considers factors such as land requirements, ease of maintenance, compatibility with existing system, mitigation and restoration requirements.
  - Risk/liability can also be handled under this criterion (e.g. as an insurance premium).
- 14. Who Pays
  - City or Property Owner.