



*Transportation and Works Department
Water and Wastewater Branch*

August 25, 2005

Barbara Konyi
Manager - Planning Systems
Prov. Planning & Environmental Services Branch
Ministry of Municipal Affairs and Housing
777 Bay Street, 14th Floor
Toronto, ON M5G 2E5

Dear Ms Konyi:

**Re: York Region Staff Comments on EBR Registry No. PF05E0001
Oak Ridges Moraine Technical Papers Series – Part 2 –
Ministry of the Environment
Our File P12 WR047**

The Province of Ontario posted the second series of Oak Ridges Moraine Technical Papers that relate to the Ministry of the Environment portions of the Oak Ridges Moraine Conservation Plan on the Environmental Bill of Rights (EBR) Registry on June 29, 2005. A 60 day period was allowed for interested parties to submit comments to the Province by August 28, 2005.

Staff of The Regional Municipality of York (York Region) have prepared the following comments to be considered by the Ministry of the Environment (MOE) in response to this EBR posting. Given the timing constraints of this EBR posting, these comments have not yet been endorsed by Regional Council, however a report summarizing the issues and containing this letter will be forwarded to Planning and Economic Development Committee and Regional Council at its next available meeting.

The nine documents covered in this review/response include:

- Technical Paper # 9 – Watershed Plans (June 2005 Draft)
- Technical Paper # 10 – Water Budgets (June 2005 Draft)
- Technical Paper # 11 – Water Conservation Plans (June 2005 Draft)
- Technical Paper # 12 – Hydrological Evaluations for Hydrologically Sensitive Features (June 2005 Draft)
- Technical Paper # 13 – Subwatersheds (Impervious Surfaces) (June 2005 Draft)

- Technical Paper # 14 – Wellhead Protection – Site Management and Contingency Plans (June 2005 Draft)
- Technical Paper # 15 – Recreation Plans and Vegetation Management Plans (June 2005 Draft)
- Technical Paper # 16 – Sewage and Water System Plans (June 2005 Draft)
- Technical Paper # 17 – Stormwater Management Plans (June 2005 Draft)

York Region staff provided technical comments on earlier drafts of these nine Technical Papers. Although many of the issues raised by York Region have been addressed, a few key points have yet to be incorporated. Where relevant, these issues have been raised again below.

For reference purposes, each of these documents will be referred to as TP#XX in the remainder of this document.

1. GENERAL COMMENTS

The series of “technical papers” is intended to assist all stakeholders in understanding and reaching the goals of the ORMCP. Review of these papers by York Region staff generated comments in the following categories:

- a) Clarity of Audience Needs & Expectations
- b) Clarity of Roles and Responsibilities
- c) Clarity of Objectives
- d) Clarity of Deliverables
- e) Consistency
- f) Background Information Requirements
- g) Application to ORM Area
- h) Hierarchy of Monitoring
- i) Reference to Municipalities
- j) Timing Considerations

a) Clarity of Audience Needs & Expectations

While each of the Technical Papers identifies the intended audience in the introduction, the papers are not clearly organized to address the needs and expectations of each portion of the audience. These definitions and explanations must also include references to the specific pieces of legislation that support the roles and responsibilities.

In our view, there are three basic audiences that will benefit from this series of papers:

- i) agencies (and public stakeholders) involved in conducting the baseline analyses, setting targets/goals and developing the watershed plans and component plans (including province, conservation authorities and municipalities);
- ii) proponents and their representatives (including municipalities at times) who are proposing activities that are governed by the ORMCP, and
- iii) agencies involved in implementing and enforcing the resultant watershed plans and component plans (including approval of applications, etc.).

Each of these “audiences” have slightly different needs from the “technical papers”:

- **Audience i)** need to know the intended “technical” objectives of the ORMCP and how to set appropriate targets. It is acceptable that the technical targets are identified through local studies, but there must be consistency to ensure that the overall objective of protection of the integrity of the Moraine is met.
- **Audience ii)** need to know what specifically is expected of them when they wish to undertake an application that would be considered under the ORMCP.
- **Audience iii)** need to know how to assess submissions from Audience ii) and make decisions as to whether the applications both meet the targets and address the objectives of the ORMCP or of the component plans required by the ORMCP.

The following matrix illustrates how the Technical Papers addresses the audiences when described in this way.

Audience	Technical Paper #								
	9	10	11	12	13	14	15	16	17
Audience i) Plan Development & Target Setting	x	x	x						
Audience ii) Proponents/ Affected Parties				x	x	x	x	x	x
Audience iii): Reviewers & Decision Makers									

While all of the Technical Papers have some relevance to each of these types of audience, TP#9, TP#10, and TP#11 are clearly intended more for Audience i) as they relate to development of these “Plans” on a watershed scale. TP#12 through 17 are more directed to proponents working on a local scale. All of the Technical Papers fail to adequately address the needs of reviewers and decision makers. Part of this is related to the fact that many of the objectives for review/assessment will be established in the Watershed Plans or Water Budgets or Conservation Plans.

A possible solution would be to update each document to include a short section to direct each of these audiences with respect to how they are expected to apply the information in the Technical Paper.

b) Clarity of Roles and Responsibilities

While the technical documents address many of the issues of interest to each of the audiences (see comment a)), the documents do not present a clear definition of the expected roles and responsibilities of each “audience”.

The series of Technical Papers would be much more useful if they were to contain at least a subsection to indicate how each of the identified audiences were expected to work with this material.

For example, perhaps the most important aspect of the roles and responsibilities lies with identifying the approval authority and the process through which they will be expected to act on individual plans. Given the wide geographical area, it will be essential to establish a clear minimum standard and “approval mandate” that can be applied consistently through the entire ORM area. If the roles and responsibilities could be dealt with more specifically then the “approval” functions could be articulated

c) Clarity of Objectives

While each of the Technical Papers provide an overview of the issues and constraints associated with each topic, they tend to fall short of providing clear guidance on how to set clear objectives, undertake an appropriate level of work, or dictate how to manage and resolve situations that may arise. This results in many cases to having a variety of options available to either the “target-setter” or to the “proponents” that will ultimately rely on the interpretation of the “reviewer” to make ultimate decisions. Greater quality and consistency of the end product would be obtained if each Technical Paper:

- established a preferred methodology/approach;
- established a minimum acceptable level of effort;
- established a minimum acceptable outcome;
- clarified how and when to incorporate local scale studies in a watershed or subwatershed context; and
- provided an approval and dispute resolution approach for each topic.

The absence of this clear direction will result in many issues resorting to a costly and time consuming arbitration process for resolution rather than being readily approved.

d) Clarity of Deliverables

Given that the products of these studies will be documents that will need to be reviewed, assessed, and approved, it would be a great benefit if the Technical Papers outlined some minimum expected requirements for the deliverables and provided checklists for use by review agencies to confirm that the requirements of the ORMCP are met.

e) Consistency

Several of the documents contain good ideas that would work well if carried consistently through the series. Examples of these are clear step-wise processes with flow-charts. Another is the outline Table of Comments in TP#11 is extremely useful and should be included in each of the guidance documents. More use of tables to communicate acceptable standards for individual parameters/issues would likely be highly effective.

Where possible, a minimum standard should be proposed for use across the entire ORM area. This is particularly important for the characterization and target setting studies that would be maintained by either the municipality or the CA.

f) Background Information Requirements

Section 4.2 of Technical Paper 15 outlines a requirement for compiling and reviewing other studies prepared under the watershed plan. It seems to be appropriate that this step should be included in each of the Technical Papers. Also, studies such as the Water Budget and Watershed Plan should be specifically reviewed and referenced.

g) Application of ORM Area

The Technical Papers clearly provide direction to municipalities and CAs with respect to direction in establishing watershed plans and water budgets on a watershed or subwatershed basis. Unfortunately, in many instances, the area in which the ORMCP provides jurisdiction to enforce these protective measures is only a portion, and often a small portion of the entire watershed. Additional direction is needed to clarify expectations in translating watershed-based characterizations into local policy. Alternatively, the same expectations for watershed planning will need to be carried through into the Province's Drinking Water Source Protection Planning exercise and any technical papers that result in that process.

h) Hierarchy of Monitoring

Table 5 of TP#9 shows the Hierarchy types of monitoring. This table is very good and illustrates clearly the expected responsibilities for various aspects of the monitoring program. In the later documents, the monitoring sections only include a simple statement such as "The monitoring to be carried out regarding stormwater management plans is at the compliance monitoring level" (TP#17). These later documents are missing the linkage to Table 5 in TP#9. At the least, there should be a verbal direction to cross-reference this connection. It may be more useful to provide an adapted version of the monitoring section from TP#9 either directly in the report or as an Appendix.

i) References to Municipalities

Some of the Technical Papers contain references to local municipalities. This should be reviewed to clarify whether it is intended to include "regional municipalities" or to distinguish responsibilities of lower tier municipalities.

j) **Timing Considerations**

One key objective of the ORMCP and the Technical Papers is to ensure that an appropriate minimum level of effort is taken with respect to all future developments and approvals. Since the development industry relies on economic opportunities, time typically becomes a very important factor to the owner/developer. In many cases, site-specific proposals will require on-site investigations and monitoring to support the applications. Minimum timeframes and monitoring frequencies should be specified by the Province to ensure that the proponents understand the time constraints and build these into their investigation and assessment programs.

General and specific comments relating to each Technical Paper are provided in the following sections.

2. TECHNICAL PAPER # 9 – WATERSHED PLANS

General Comments

York Region and our CA partners are strongly committed to the intent and objectives of the ORMCP. This Technical Paper provides valued direction above that already provided in the ORMCP, but still falls short in setting clear objectives, goals, and acceptable approaches so that the resultant watershed plans will meet the objectives envisioned by the Province when the ORMCP was developed.

TP#9 does not establish minimum Provincially acceptable management targets or provide an acceptable or standard approach to establishing consistent minimum management targets in the Watershed plans.

Specific Comments

- S.4 - Only 2 of these bullets refer to the other technical papers. What targets are the municipalities (and their CA partners) supposed to use to develop reachable targets from the direction of the ORMCP.
- P. 12 – The previous draft had reference to targets that provide: specific and measurable end results. This concept of performance measurement must be retained in the target/goal setting (these could perhaps be incorporated into the Monitoring section).
- P. 16 – Why would the preferred management alternative only have to demonstrate that the requirements of Section 24 of the ORMCP be met? If it is to be based on all of the other items listed above (this paragraph), then it would be appropriate to say that all requirements of the ORMCP be met.
- P. 17 - Is the “Environmental Monitoring Plan” intended to be a component of the “Watershed Plan” or is it a stand-alone entity. If it is stand-alone is direction required with respect to the extent/content.
- P. 19 – Is there a definition to describe what is meant by “Adaptive Management”.

- P. 21 – The first three sentences are contradictory. Suggestion: “The watershed plan should be viewed as a living document that will evolve on an on-going basis in response to the measures implemented and as science evolves and stakeholder priorities change within the watershed. Watershed plans should therefore be updated in time for changes to be incorporated into Official Plans on a five-year basis, or at a very minimum in time for the ten year provincial review of the ORCMP.”

3. TECHNICAL PAPER # 10 – WATER BUDGETS

General Comments

TP#10 provides an excellent description of what a water budget is and provides the basics necessary to understand how to develop and apply water budgets to meet the requirements of the ORMCP on a “watershed” or “Subwatershed scale”.

One shortcoming of the Technical Paper is in describing the expected content of the deliverable described in the ORMCP as a “Water Budget”. Option 1 would be to simply provide the results of scenario modelling using the tools developed following the direction of TP#10. Option 2, would be to provide some form of resultant targets/policy that considers other information than the technical water budget alone.

The issue here is that Option 2 is essentially the objective of the Watershed Plan. All of the other constraints to be addressed in the Watershed Plan should be considered when setting the minimum targets for protection. This will ensure that the protective measures address the greatest threats to the entire system and not those that may be considered to only affect the water budget.

As part of our ongoing work to develop the Water Budget for the “area serviced by the Yonge Street Aquifer”, we have developed the flow chart shown on Figures 1 and 2. Figure 1 illustrates the steps that LSRCA and York Region have followed to date in preparing a water budget as per the steps outlined in TP#10. Figure 2 provides an expanded process relating to Step 5A (Target Setting). This process has been organized more consistently with the expected format of conducting water budget assessments as part of a Source Protection Plan. Steps 5A-1 & 5A-2 deal with identifying whether or not there is a threat that needs to be acted on. Step 5A-3 shows the development of targets (including inputs from other components of the watershed plan). Step 5A-4 involves reverse application of the modelling tools to inform policy decisions based on the developed and approved targets.

Having the target-setting within the scope of the Watershed Plan is important as the issues that relate solely to “water budget” targets may not ultimately be the most sensitive and be the highest priority to address.

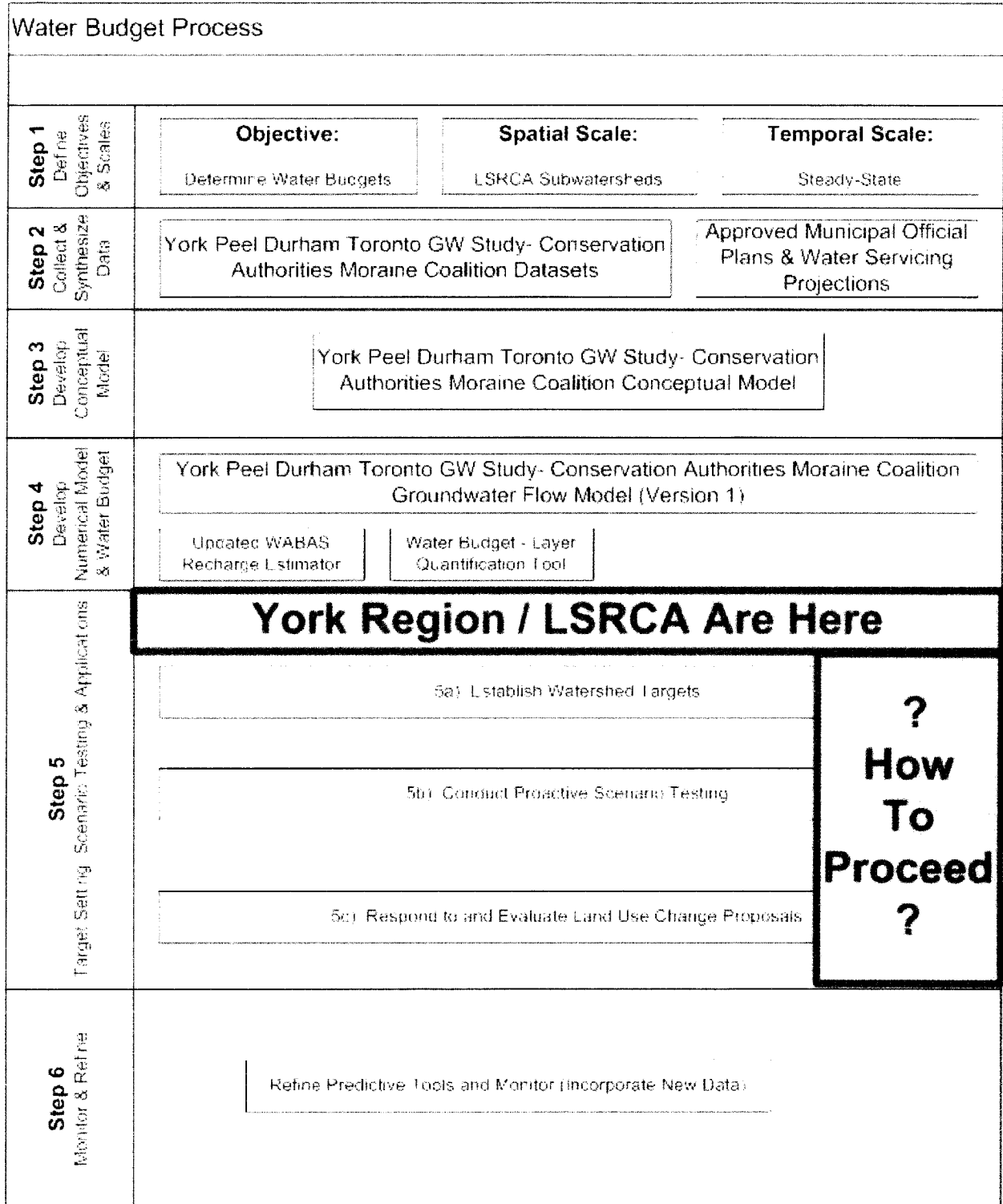


Figure 1 LSRCA & York Region Water Budget Development Flowchart

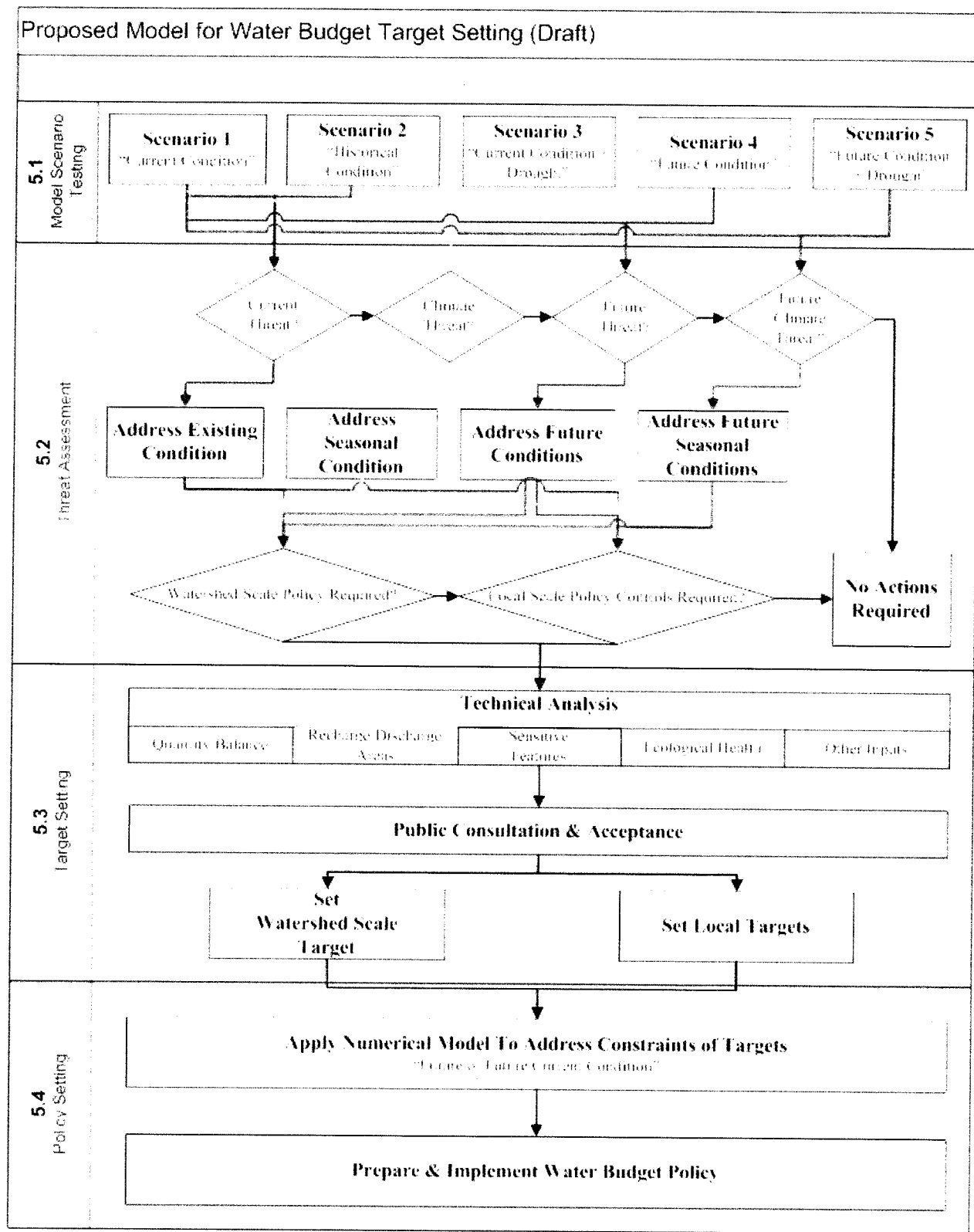


Figure 2 Process for Target Setting and Policy Development from Water Budget Inputs

TP#10 focuses on the tools to develop a water budget for a watershed or subwatershed. TP#10 does not provide any direction with respect to how to adapt these estimations to address the situation where only a portion of these watersheds or subwatersheds are within the jurisdiction of the ORMCP. This is a significant issue as the area of the ORM typically only comprises the headwaters of much larger watershed areas. York Region has the additional case to deal with in working with restrictions in the Area served by the Yonge Street Aquifer where all of the wells and the majority of the watershed are downgradient (downstream) of the Oak Ridges Moraine Area.

TP#10 does not provide any level of direction to owners/operators who would be required to prepare a water budget on a site or local scale and have it interpreted in the context of the watershed water budget. The other guidance documents do not outline appropriate methods for estimation of water budgets on a site scale. Should there be an additional section to this document, or another document that provides direction on the minimum requirements for establishing a water budget on a site scale and provides clear guidance to reviewers with respect to how to determine whether this is appropriate? It is not reasonable that water budget studies for small developments would be expected to be carried out using a calibrated 3-D model and it would be a substantial burden to municipalities and CAs if they were required to provide this service for each application.

Our efforts, with our CA partners, to follow this process to first estimate water budgets and then set appropriate targets for possible policy are ongoing and continue to reveal new challenges. We are hoping to continue dialog with the Provincial staff to address these challenges. Where possible, it would be great if the final release of the Technical Papers were to provide assistance in meeting these challenges. Some examples of these challenges to date include:

- How do we make effective planning decisions on a site-specific basis from a watershed-scale assessment?
- How can we distinguish the needs of applications involving changing on-site recharge from applications involving a water taking?
- How do we determine whether steady-state water budget estimates from the 3-dimensional numerical modelling do not substantially overestimate the time required for the groundwater system to respond to normal variations in precipitation and water use?
- How can we tell whether or where the system is currently under stress?
- How can we tell where and if development could proceed?
- How do we take into account the inherent (3-dimensional) variability in local water budget over the entire watershed area?
- How do we determine how a development in the Oak Ridges Moraine Area would affect the health of the system downstream and, vice versa, how do we determine how a development downstream would affect the system in the Oak Ridges Moraine Area?
- How do we set a target for conservation planning from this information?

- How would we know when to absolutely say no to future development or to perhaps consider a development were additional work has been performed to an acceptable standard?
- How do we identify a “trigger point” at which we would expect an onset of an undesirable condition?
- What types of maps could be generated to help with decision-making?
- How do we deal with managing the potential cumulative effects of smaller developments? Or, how much total development can we allow (and where)?
- What will a proponent need to do to gain approval after a watershed scale “budget” has been established? And by extension – what will the approving agencies need to see or know?
- What type of assessment process would need to be established to enable approvals to be granted efficiently?

Specific Comments:

Pg. 5 Reference to the CAMC/YPDT ORM web site should be directed to the “future public site” (and not the site under development). The reference should indicate that this site is under construction and is expected to be available in late 2005 or early 2006.

S. 4. At this time, the tools developed by the YPDT/CAMC study have now been applied to complete a water budget study for the Holland River, Black, and Maskinonge Watersheds (two of which have headwaters in the Oak Ridges Moraine). We consider that this study demonstrates a good example of applying the technical principles outlined in the Technical Paper; however, we recognize that substantial challenges remain in determining how this information can be best used for development of planning policy and decision making. York Region will be arranging further meetings with MAH and MOE to discuss these issues and obtain guidance on how to proceed.

Step 5 is described as establish watershed targets. While the complexities associated with this are discussed in the text, it is shown very simply in the flow chart. As discussed above, York Region and our CA partners have developed an expanded flow chart to address some of the steps that we believe are necessary to achieve the goals of Step 5.

S. 6.1.4 As long as all of the prescribed components are accounted for, can the water budget not be done on any scale? The issue is that on different scales some of the components can be estimated more accurately (for example, no lateral inputs in shallow systems at a watershed scale.)

P.22 S6.4 – P1 – Is it important to distinguish that the CAMC/YPDT study has two model products on different scales? The “Regional Model” can be used to estimate conditions for the entire Oak Ridges Moraine Area, but may not be sufficiently accurate for application in

local watersheds. The COR model is obviously more robust and useful in the central portion of the Oak Ridges Moraine Area.

Step 6 – The monitoring requirements are described to meet several needs. This Technical Paper does not describe who is responsible for the monitoring nor who would be responsible for auditing and enforcement. This is covered to some extent in TP#9, but there is no reference from Step 6 to TP#9.

TECHNICAL PAPER # 11 – WATER CONSERVATION PLANS

General Comments

The “Water Budget” and other inputs (future servicing plans) will play a key role in establishing the targets for Conservation Plans (in fact for determining if conservation is required). Given this strong linkage there should be more reference to the Water Budget Technical Paper (This is provided in S. 4.2). It might make more sense that the Water Conservation Plan is a specific output that is developed based on all considerations within the Watershed Plan.

The introduction should clarify whether this Technical Paper is intended to apply to the municipalities/CAs in creating conservation plan on a watershed or subwatershed scale, or if it is intended to provide guidance to proponents (possibly including municipalities) who are developing individual applications or proposals.

TP#11 does not address the need to establish water conservation targets for situations where the municipal water supply systems involve multiple wells and service linkage over large areas (that may be outside of the Oak Ridges Moraine Area). Management and balancing of extraction from individual wells will be the primary method for meeting local ecosystem based targets. While the option to reduce municipal water taking is feasible, its application must be balanced against the need to continue to service the community and the feasibility (technical and cost) of other water supply alternatives. In many cases, the negative effects of the alternatives may be more significant than environmental consequence of the current situation. It is therefore likely that decisions will need to be made regarding when and how to reach management targets and clear guidance will help greatly in directing this process.

Municipalities and CAs have limited abilities to implementing conservation programs in meet targets in areas serviced by municipal water and have minimal tools or powers to work with private users (commercial (such as golf courses, water bottling companies, sod farms and agricultural operations) and multiple domestic wells in a local area) to promote overall conservation. These types of tools may be needed to ensure that watershed targets can be met.

Many of the methods outlined in TP#11 will provide a good step forward in maximizing conservation based goals. One issue that should be addressed is the opportunity for the Province, or perhaps the Conservation Authorities Moraine Coalition, to take a lead role in ensuring that consistent messages and materials are used throughout the ORM area. York Region could provide technical assistance based on our Water for Tomorrow experience to help the province co-ordinate an Oak Ridges Moraine strategy for water conservation if this would ultimately reduce our required effort in preparing Conservation Plans for individual watersheds.

TP#11 does not provide detail regarding the expected scope, frequency, and objectives of monitoring initiatives. A baseline acceptable level should be defined to ensure that this minimum requirement is met consistently across the ORM. TP#11 does not describe who is responsible for the monitoring nor who would be responsible for auditing and enforcement. This is covered to some extent in TP#9, but there is no reference from TP#11 to TP#9.

4. TECHNICAL PAPER # 12 – HYDROLOGICAL EVALUATIONS FOR HYDROLOGICALLY SENSITIVE FEATURES

General Comments

This Technical Paper appears to be more directed towards the developers and their technical staff who would be conducting site-specific assessments and evaluations in support of proposed developments. The evaluations

One key element of these types of studies is the length of time taken to complete the study, especially in terms of reviewing site-specific monitoring data. It would be beneficial to establish a minimum time period for monitoring and minimum conditions for monitoring frequency (i.e. Seasonal monitoring).

Specific Comments

Step 2 – Are these truly background studies? They appear to include a significant component of the assessment (especially the last main bullet). Would it be more appropriate to refer to Step 2 Desktop Study components, Step 3 as Field Study components, and Step 4 as Evaluation or Assessment Methods?

Step 6 – This section does not provide the Approval Authority with sufficient guidance with respect to what to look for and how to assess that the study is acceptable. This is needed to ensure that consistency is promoted amongst the approval authorities.

Step 7 – Monitoring here is to confirm effectiveness. It is also presumably to make changes to the plan in order to meet goals. This Technical Paper does not describe who is responsible for the monitoring nor who would be responsible for auditing and enforcement. This is covered to some extent in TP#9, but there is no reference from Step 7 to TP#9.

Table 1 provides a good example of setting out what the goals of the evaluations are so that the proponents will have the ability to tailor their studies to meet these goals. It would be useful to have this prepared as a “submission or reviewer’s checklist”.

5. TECHNICAL PAPER # 13 – SUBWATERSHEDS (IMPERVIOUS SURFACES)

General Comments

In Section 2 (Restatement of Clause 27 of the ORMCP) – there is a need to clarify as to whether the impervious surface restrictions apply to the entire subwatershed or only to the portion of the watershed in the ORM area? Does the legislation provide the authority for application of these principles to include the former? Is the expectation that where the lower reaches of the subwatershed have impervious surfaces greater than 10% (of the total subwatershed), then there would be no more impervious surfaces allowed in the moraine area? This issue needs to be clarified to assist CAs and municipalities in setting targets and policies.

Are roofs/patios/driveways considered impervious if the runoff is redirected in a manner that infiltrates away from its original contact point? Even though many roads will have some drainage collection, there will likely still be a net increase in recharge (relative to original) relative to these features. How is this considered in the guidance?

Section 4.1 presents a list of options on how imperviousness “could” be calculated for a subwatershed. Clarification is required as to whether the watershed and subwatershed calculations are expected to be performed and maintained by the CA or Municipality or whether an individual developer would be required to perform their own estimates for the watershed. While respecting that each of these methods has a value and that there is a value in having flexibility, should there not be a minimum standard proposed for consistency across the ORM area. Other, potentially more accurate, methods could then be applied on a site-by site basis for verification or to address disputes. With the current accuracy of our digital ortho-images, some of the issues around digitizing can probably be minimized

One management option that is not described is to establish the current amount of impervious surface and then to estimate the amount of pervious service that could still be permitted. The tools to tackle this type of approach would probably make the responsibility of all involved in developing and reviewing future applications much easier. For example, developers might be able to enquire how much pervious surface remains available (including under review) before they start any of their studies. This would save all involved a lot of time and effort if there were no opportunities still available.

6. TECHNICAL PAPER # 14 – WELLHEAD PROTECTION – SITE MANAGEMENT AND CONTINGENCY PLANS

General Comments

Is there really a value to the “risk assessment” component as outlined in Section 4.3? The wellhead protection area delineation already outlined that this area is at a certain degree of risk. Is the intent to imply that an activity could be permitted if the risk assessment shows that it would not be a problem? If this is the case, someone must be responsible to help make that

decision (preferably the municipality who operates the water supply). Can this be done under current legislative regimes?

Specific Comments

- S. 4 This is the first explicit description of the expected role of the municipalities in being responsible for “ensuring appropriate property use” within wellhead protection areas. The ORMCP only describes responsibilities for establishing wellhead protection areas. The wording provided suggests that the municipality is also to be responsible for any administrative requirements relating to the Site Management and Contingency Plans (The ORMCP only states that owners are responsible to prepare them). Additional clarification is required as to the expected roles of the municipalities (or others) in the development, approval and enforcement of these Site Management and Contingency Plans. Similarly, if this is the intent, the tools necessary for municipalities to take on these responsibilities – such as powers of entry and enforcement powers - must be available. Municipalities will also need to be prepared to deal with staff resources and financial implications of these types of responsibilities and will be looking for compensation from the Province. Another issue that follows on would be what would be done or who pays in the event that an owner/operator failed to comply?
- S.4 – The second paragraph should be reworded to emphasize that the owner/operator is required to prepare the site management and contingency plan within wellhead protection areas. The next issue that follows is who is responsible for ensuring that this is happening and that it is enforced?
- S. 4.7, 1st para – it is unlikely that any measures incorporated into a site management and contingency plan will “prevent” the accidental release of substances. Suggest to replace “prevent the” with “minimize the potential for”.
- S. 4.9 Monitoring is proposed at the “Compliance Level” . This Technical Paper does not describe who is responsible for the monitoring nor who would be responsible for auditing and enforcement. This is covered to some extent in TP#9, but there is no reference this document to TP#9.

7. TECHNICAL PAPER # 15 – RECREATION PLANS AND VEGETATION MANAGEMENT PLANS

General Comments

The Technical Paper does not clearly indicate to whom “recreational plans” and vegetative Management Plans are to be submitted nor, who has authority to approve, how they are to be judged as acceptable, etc.

Specific Comments

- S.4.2. – This section on Background information is quite good and appropriate for proponents developing these types of plans. Why would this type of review of other ORM-regulated

features not be specified in the requirements of the other Technical Papers? Also, why would there not be a requirement to include the Water Budget or Conservation Plan, or even the Watershed Plan, in this review.

- S. 4.4 Should there not be a requirement for providing a “baseline water balance” in this list? (This is addressed, somewhat, in S. 5 but that applies more to what the planned activity is). This is an example of where there would be a requirement to prepare and present a local water budget and show that there is no substantial change between pre-and post-development conditions.
- S. 4.5.1 & 2 – Does this not support the need to fit into the Water Budget and Conservation Plans being proposed for the Watershed? These should be included in the list in S. 4.2.
- S. 4.7 – The guidance document does not provide sufficient direction to review/approval agencies to ensure that Recreation Plans and Vegetative Management Plans can be reviewed and assessed consistently and in an unbiased manner. Clearer guidance is required to help reviewers determine what meets the goals of the ORMCP and what does not.
- S. 6 Monitoring is proposed at the “Compliance Level”. This Technical Paper does not describe who is responsible for the monitoring nor who would be responsible for auditing and enforcement. This is covered to some extent in TP#9, but there is no reference this document to TP#9.

8. TECHNICAL PAPER # 16 – SEWAGE AND WATER SYSTEM PLANS

General Comments

The audience for this Technical Paper should include consultants.

TP#16 does not specify who is responsible for receiving, reviewing or approving Sewage and Water System Plans. In addition, TP#16 does not contain sufficient information to allow unbiased review and approval of the Sewage and Water System Plans.

Is there any consideration here for the issue where the municipalities are most likely to be the principal group requiring these types of plans to deliver their infrastructure and therefore may not be the appropriate approval authority?

Specific Comments

- S.1 The sentence in the first paragraph that reads “In addition, groundwater and surface water quality and quantity, and baseflows, are to be obtained and natural groundwater flows are not to be disrupted during construction” should be reviewed to ensure that it sends the correct message. Firstly, the statement with respect to groundwater is very strong and should reflect an ability to construct features provided appropriate mitigation is available. Secondly, the statement does not clearly indicate an intent that the final installed services would not alter groundwater flow patterns (after construction).

- S. 4 – Should mention that municipal requirements will likely be addressed by either a Class EA or an Individual EA that will address the ORMCP and other issues. Currently this is addressed through a general statement that municipalities may have requirements in addition to those offered in this technical paper.
- S. 4.1 – Much of the information required for Permit To Take Water approvals are also required within Environmental Assessments. In most cases, the Environmental Assessment will address the requirements of the Permit To Take Water.
- S.4.3 Do we need a clear definition of “sustainability”? How does the MOE propose to deal with the issues of scale and sustainability (for example, on a watershed scale, a water taking may not have an influence, but it may have an influence on a specific feature (well or segment of stream). It isn’t clear how these types of issues could be resolved. Proponents, municipalities and conservation authorities (as well as provincial review staff) will need clear guidance on how to confirm that a proposal is “sustainable”.
- S. 4.4.1 & 4.5.1 – There is no specific mention that the municipalities (Regional or Local) will be required to follow these same steps.
- S. 4.5.2 is nice in theory, but there is no discussion of whose responsibility it is to provide a uniform dataset that proponents can refer to in compiling these applications. It is not reasonable that each proponent will need to obtain their own data for each application. We expect that our ongoing partnerships with conservation authorities and the MOE will help to ensure that this data can be available for all of York Region (and possibly within much of the Oak Ridges Moraine Area). Most other jurisdictions are not likely to be able to provide the same level of service.
- S. 4.5.3 – While there is merit in performing these types of predictive analyses using “steady-state” models, the models alone should not be used to judge the suitability of a proposal. Decision making should consider sound technical work, supported where possible by appropriate input from predictive modelling tools. In many cases the steady-state models are constructed to be overly conservative and there should be opportunities to interpret the steady-state model results using professional input on temporal effects or data from actual testing. Also, when applying steady-state models, the water taking assigned in the model should be appropriate for the steady-state condition (i.e. In the case of a municipal well it would be appropriate to use the planned long-term average rate and not the expected “peak daily rate”). The advantage of good models is that they can investigate many scenarios and allow qualified professionals to incorporate these views in their opinions and designs.
- P. 9 - The definition for “Sustainable aquifer yield” is good, but perhaps overly conservative for water takings other than municipal takings. Many specific projects (for example a temporary dewatering, or a specific commercial venture) may have a specific time frame associated with their development. In these cases, there should be an opportunity to indicate that the proposed project is sustainable for the proposed life of the project (but not for the more universal definition as provided in the paper).
- P.9. - Regional municipalities and conservation authorities, and other private agencies (consultants) can be valid sources of precipitation (and other climate) data.

- S.4.6 Is this section foreseen to provide any restrictions on projects that would involve extending major water and sewer infrastructure across (or through) the moraine along existing transportation corridors (subject to typical EA process)?
- S. 4.7 In addition to some of the provisions outlined for water and sewer trenches, another bullet should be added to ensure that proposed alignments do not puncture any fine-grained soil units that confine underlying aquifers. The potential for utility trenches to breach confining layers (aquitards) is very high, particularly along the S. flank of the moraine.
- S4.6 It might also be useful to provide some guidance/statements relative to local aquifer depressurization that may be required during construction to put utilities in (related to comment above).
- S. 4.9 Monitoring is proposed at the “Compliance Level”. This Technical Paper does not describe who is responsible for the monitoring nor who would be responsible for auditing and enforcement. This is covered to some extent in TP#9, but there is no reference this document to TP#9.

9. TECHNICAL PAPER # 17 – STORMWATER MANAGEMENT PLANS

General Comments

TP#17 does not include a statement regarding the intended audience of the document as in the other papers in the series.

The guidance document does not provide clear direction to review/approval agencies on how to evaluate stormwater management plans; audit the progress of monitoring, or to enforce changes to the plans. A clearer link of responsibility to the watershed planning process is required and if and where municipalities and CAs should be provided an avenue to enforce revision of stormwater plans to ensure that they meet the established targets.

Specific Comments

- S.4.3.3.1 in dealing with Rapid Infiltration Basins, mentions that “Other infiltration techniques can be used to achieve water balance objectives, and are encouraged.” This “principle” should be emphasized more clearly in the general direction of the document and not only in this specific spot. Stormwater management provides one of the best opportunities to “off-set” any effects that water taking in the watershed may have on total stream flows. Consideration should be also given to providing incentives for stormwater management designs that assist in balancing the effects of water taking or reduced infiltration. Measures to ensure that water quality impairment would be minimized would be expected.
- S. 4.3.3.1 – There may be some challenges in identifying the difference between an infiltration basin (or other infiltration technique as described above) and a rapid infiltration basin or column. Clearer definitions would be helpful. The important point here is to limit the net rate at which recharge can be infiltrated to a specific aquifer. Although the intent of the current definition is to eliminate direct recharge into lower, perhaps more sensitive aquifer layers, it may not achieve the quality control objectives in the long term if water is infiltrated into an upper aquifer and naturally allowed to travel to the lower aquifer. A

possible option is to introduce a definition that specifies a minimum flux (mm/m^2) through the basin. Most rapid schemes would be designed to deliver water at a high flux rate, while natural basins will have a lower flux rate (on a per m^2 basis). It is very important to maintain this opportunity to infiltrate and maintain water balance.

S. 4.4 Monitoring is proposed at the “Compliance Level”. This Technical Paper does not describe who is responsible for the monitoring nor who would be responsible for auditing and enforcement. This is covered to some extent in TP#9, but there is no reference this document to TP#9.

We trust that these comments will be incorporated with others to develop a cohesive set of clear guidance documents.

Sincerely,



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LAL/sp

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