



**GUIDE**

**FOR APPLYING FOR**

**DWWP Amendments  
Licence Amendments  
Licence Renewals  
&  
New System Applications**

**Municipal Residential  
Drinking Water Systems**

**SAFE DRINKING WATER BRANCH**

**November 2010**

**PIBS 7014e01**

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# PART I GENERAL INFORMATION AND INSTRUCTIONS FOR APPLICATIONS/SUBMISSIONS

## 1.0 Acronyms and Terms

Acronyms and Terms	
C of A	Certificate of Approval or “Approval” under the SDWA
Director	A Director appointed for purposes of specified sections of the SDWA
EA	Environmental Assessment
ESR	Environmental Study Report
DWWP	Drinking Water Works Permit
GUDI	Groundwater Under the Direct Influence of Surface Water
Licence	Municipal Drinking Water Licence
Ministry	Ministry of the Environment
MOH	Medical Officer of Health
OWRA	Ontario Water Resources Act
PTTW	Permit to Take Water
SDWA	Safe Drinking Water Act, 2002, c.32
SDWB	Safe Drinking Water Branch

## 2.0 The Licensing Program

### 2.1 The Municipal Drinking Water Licensing Program

With the issuance of Drinking Water Works Permits and Municipal Drinking Water Licences, the Ministry of the Environment is transitioning from an approvals program referred to as the Certificate of Approval (C of A) Program for municipal residential drinking water systems to the new Municipal Drinking Water Licensing Program (licensing program).

### 2.2 Authorities to Establish, Alter, Use or Operate

Under the C of A Program, an approval (C of A) is required prior to the establishment or alteration of a municipal residential drinking water system. The C of A also serves as the legal authority to use or operate the system. Conditions placed on the C of A may relate to either the physical works or the operation of the system.

Through the implementation of the Licensing Program, the authority to establish or alter a system will be provided through a drinking water works permit (DWWP) and the authority to use or operate will be provided through a municipal drinking water licence (licence). The DWWP will also provide a description of the drinking water system.

Both of these instruments will contain Terms and Conditions similar to those in Cs of A. Conditions which may be placed on the DWWP will generally relate to the physical works, while conditions on the licence will generally be related to operational matters.

The licence to operate the system will have an expiry date which will be no later than the fifth anniversary of the day of issue of the first licence or the licence renewal date and will also contain a date which is the deadline for an application for renewal of the licence. The application date will not be less than 90 days before the expiry of the licence. The DWWP will generally not have an expiry date unless such a requirement is considered appropriate by the Director.

### 2.3 One Licence and One DWWP for Each System

A drinking water system is made up of all connected water works under common ownership. Under the licensing program, a single DWWP and a single licence will be issued for the entire drinking water system.

The DWWP will provide a description of the overall system, including treatment, storage, pumping and distribution and will include, when applied for, an authority to alter the system in a specified way, much in the same way that a C of A currently approves alterations. Once the first DWWP has been issued for the system, further alterations to the system will need to be authorized through specific amendments to the DWWP.

Municipal Residential Drinking Water Systems	Current Process	Licensing Program	
	Certificate of Approval (C of A)	Municipal Drinking Water Licence	Drinking Water Works Permit (DWWP)
Authority to establish or alter	[		[
Authority to use or operate	[	[	
Expiry Date	Generally No	Yes (Within 5 years)	Generally No
Number of Legal Instruments per System	Multiple	One	One

### 2.4 DWWP Structure

The DWWP consists of the following:

#### a) Front Page

### **DWWP Number**

A DWWP number will be assigned to the first DWWP for the drinking water system and will remain unchanged over time for that system.

### **DWWP Issue Number**

As the DWWP is amended with changes to the contents of Schedule A or Schedule B the issue number will be incremented to reflect these alterations.

### **Owner Name & Address**

This will identify the owner of the drinking water system along with an address. In most cases this will be the name of a municipal owner of the system.

### **Director Signature and Date**

This is the signature of the Director authorized to issue or amend the DWWP. The date on the front page established the validity date of the DWWP.

### **b) Schedule A - Drinking Water System Description**

Schedule A provides a tabular description of critical components of the drinking water system currently in service. As the Director is notified of additional components of the system coming into service, further to conditions of the DWWP, Schedule A will be updated and re-issued to reflect these changes.

Watermains within the system are identified through reference to a document or electronic file representing a graphic depiction of the distribution system submitted in support of an application for the first DWWP or a licence renewal, and the description has been written in such a manner as to also include all watermains which will be added to the system further to authorizations provided by the Director in the DWWP or issued at a future date. This part of Schedule A describing watermains will not be continuously updated or amended as watermains are added, modified, replaced or extended, but will be amended on a cycle consistent with licence renewal at which time an updated graphical depiction of the distribution system will be required to be submitted.

### **c) Schedule B – General**

Schedule B sets out conditions of the DWWP. These conditions will generally relate to the addition, modification, replacement or extension of the physical works and include such matters as; the disinfection of works before being placed into service, notification of the Director when specified components of the system are placed into service and authorization for specified future alterations.

### **Specified Future Alterations**

The Director may have provided conditions within Schedule B of the DWWP which authorize specified future alterations to the system.

Compliance with the conditions would enable the owner to proceed with the specified alterations, which may include additions, modifications, replacements and extensions to the drinking water system without obtaining any further authorizations or approvals under the SDWA. These conditions may relate to such works as watermains, minor modifications and equipment with emissions to the air.

The conditions may include limitations on the nature and extent of the alterations, and establish other requirements which must be met before proceeding such as meeting specified design or performance

standards. The owner of the system may also be required to prepare and retain records of the alterations and verification of conformity with the conditions. The forms required for verification will be available from the ministry.

Specified alterations not meeting the conditions may be permitted but would require an application and further amendment to the DWWP (through a Schedule C document) issued by the Director prior to proceeding.

#### **d) Schedule C – Authorization to Alter the Drinking Water System**

Upon the successful review of an application for an amendment to a DWWP to permit an alteration to the drinking water system the Director will authorize the alteration by the issuance of a DWWP Schedule C document. The Schedule C document will describe the alteration to the system being authorized, be signed by the Director and contain an issue number and date. Multiple Schedule C documents may be issued in respect of the system over time as further alterations to the system are authorized.

The conditions of the DWWP and the licence will apply, as applicable, to the additions, modifications, replacements or extensions of the drinking water system authorized by the issuance of a Schedule C document. Other Schedules of the DWWP and licence will not necessarily be amended and re-issued with each Schedule C document unless the alterations being authorized by a Schedule C document require associated amendments to conditions of the DWWP or licence. In such cases the Director will initiate the required amendments and re-issue the amended instruments.

### **2.5 Licence Structure**

The DWWP will consist of the following elements:

#### **a) Front Page**

##### **Licence Number**

A licence number will be assigned to the first DWWP for the drinking water system and will remain unchanged over time for that system.

##### **Licence Issue Number**

As the licence is amended with changes to the contents of Schedule A, B, C or D the issue number will be incremented to reflect these alterations.

##### **Owner Name & Address**

This will identify the owner of the drinking water system along with an address. In most cases this will be the name of a municipal owner of the system.

##### **Director Signature and Date**

This is the signature of the Director authorized to issue or amend the licence. The date on the front page established the validity date of the licence.

#### **b) Schedule A – Drinking Water System Information**

Schedule A identifies information in respect of the drinking water system including the DWWP number, any permits to take water associated with the system, financial plan numbers, and a listing of all accredited operating authorities for the system.



Schedule A also sets out an expiry date for the licence and a date on or before which an application for the renewal of the licence must be submitted.

### c) Schedule B – General Conditions

Schedule B sets out general conditions of the licence primarily relating to the operation and performance requirements of the drinking water system. The general conditions of the licence also set out several terms and conditions that apply to both the licence and the DWWP, including definitions and a requirement that the drinking water system must be established, altered and operated in accordance with the conditions of the DWWP and the licence.

### d) Schedule C – System-Specific Conditions

Schedule C of the licence contains system-specific conditions primarily related to performance requirements of the drinking water system. These will include such things as rated capacities of any treatment subsystems, any maximum flow rates restrictions through any unit processes, residue management discharge criteria, ultra-violet equipment performance, flow measurement and recording requirements, any additional sampling, testing and monitoring requirements beyond regulatory requirements.

### e) Schedule D – Regulatory Relief

Schedule D of the licence sets out conditions provided for any relief from regulatory requirements that has been authorized by the Director.

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The Ministry has produced a document entitled '**Overview Guide – Municipal Licensing Program** (PIBS 2601e) which is available on the Ministry's Drinking Water Ontario portal ([www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater)) and should be referenced for additional information on the Licensing Program.

## 3.0 Purpose and Applicability of this Guide

This Guide is intended to provide guidance to owners of municipal residential drinking water systems in respect of:

1. Amendments to an existing DWWP to enable an alteration (including an extension) to an existing system
2. Amendments to an existing licence
3. Renewal of an existing licence
4. Revocation of a DWWP or licence
5. The first DWWP and licence for a new<sup>1</sup> drinking water system

This guide does not address matters respecting:

- Applications for fragmentation or regulatory relief for municipal or non-municipal systems.

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<sup>1</sup> A new drinking water system is one for which no components of a system previously existed and does not include any new works, regardless of size or complexity, being added to an existing system. A fully functional non-municipal drinking water system, the ownership of which is being transferred to a municipality, should be regarded as a 'new' system for purposes of applying for a first DWWP and Licence. This latter scenario does not refer to the transfer of portions of a drinking water system being transferred to municipal ownership through a development agreement as these are municipal drinking water systems at the time of initial construction.

Further information on these matters can be obtained from:

**Guide for Applying for Fragmentation and Relief from a Regulatory Requirement - Municipal Drinking Water Systems and Non-Municipal Drinking Water Systems – March 2009.**

- Applications for a Certificate of Approval respecting existing drinking water systems for which a DWWP/licence have not yet been issued

Further information on these matters can be obtained from:

**Guide for Applying for Approvals related to Municipal and Non-Municipal Drinking Water Systems – Revised November 2003.**

- Applications for the issuance of, or an amendment to a Permit to Take Water.

Further information on these matters can be obtained from:

**Permit to Take Water Manual – April 2005, and the;  
Guide to Permit to Take Water Application Form – February 2006 (PIBS 5046e).**

- Applications for approvals in respect of non-municipal or non-residential drinking water systems.

See **Appendix C** of this document for further information respecting potential approvals requirements for these systems

### **Non-Municipal & Municipal Non-Residential Drinking Water Systems Possible Other Approvals Requirements**

Pursuant to the provisions of the SDWA and O. Reg. 170/03, an approval, DWWP and a licence is not required for the establishment, replacement or alteration of a non-municipal drinking water system or a municipal non-residential drinking water system.

Under the *Safe Drinking Water Act* (SDWA) the definition of drinking water system includes “*any thing related to the management of residue from the treatment process or the management of the discharge of a substance into the natural environment from the treatment system*”. Components of the drinking water system undertaking these functions may also be considered sewage works under the *Ontario Water Resources Act* (OWRA) or fall under the purview of the *Environmental Protection Act* (EPA) for discharging a contaminant into the natural environment other than water.

While an approval, drinking water works permit or municipal drinking water licence is not currently required under the SDWA for works or components from categories of drinking water systems which are not large or small municipal residential drinking water systems, it is possible that components from these categories of drinking water systems which manage residue from the treatment process or discharges a substance into the natural environment may require an approval under the OWRA or the EPA.

Approvals under the OWRA or the EPA are administered by the Environmental Assessment and Approvals Branch of the Ministry of the Environment and further contact should be made with this branch if there is any question with respect to approvals requirements under these acts for drinking water systems which are neither large nor small municipal residential drinking water systems.

**While every effort has been made to ensure the accuracy of the information contained in this guide, it should not be construed as legal advice.** If proponents/users of this guide have any doubts or questions regarding legal aspects of the document, they should consult their legal counsel.

## **4.0 When Applications are Needed**

### **4.1 DWWP Amendments**

Once a DWWP/licence has been issued for a drinking water system, any further alterations to the system (including additions, modifications, replacements and extensions) would be authorized through an amendment to the DWWP.

#### **4.1.1 Exceptions**

The following, however, represent exceptions to the above requirement:

1. O. Reg. 170/03 exempts the following from the requirement to obtain a DWWP amendment before proceeding with the undertaking:
  - a) the establishment or alteration of or a change to a service pipe;
  - b) the establishment or alteration of or a change in an appurtenance of a watermain, if the appurtenance does not disrupt the operation of the drinking water system that the watermain is part of;
  - c) the relining of a watermain, if the new lining does not disrupt the operation of the drinking water system that the watermain is part of; and
  - d) the replacement of an existing watermain with a new watermain that has similar dimensions and performance criteria and that is in the same or approximately the same location, if the existing watermain was established or altered in accordance with an approval granted by a Director.
2. The DWWP may contain an authorization for future specified alterations to the drinking water system subject to conditions imposed within the permit in which case the an application for the specified alterations would not be required before proceeding with the undertaking.
3. Maintenance or repair of the drinking water system.

The owner may also apply for an amendment to the DWWP, or the conditions associated the DWWP, at any time for their own purposes.

### **4.2 Licence Amendments**

In most cases the owner of the system would apply for a DWWP amendment only to authorize an alteration to the physical system. If the permit amendment would require a related amendment to the licence, respecting the operation of the altered system, the Director, at his or her initiative, will make the necessary amendments to the licence and its conditions.

The owner may, however, have reasons to request specific amendments to the licence as part of seeking the authority to alter the system through the DWWP. In such cases, the application for amendment to the licence should be submitted at the same time as the application for the DWWP amendment.

The owner may also apply for an amendment to the licence, or the conditions associated with the licence, at any time for their own purposes.

### **4.3 Licence Renewals**

The SDWA requires that every licence be renewed within a five year period. The licence will identify its expiry date and a deadline for the submission of applications for renewal of the licence. The expiry date for a licence issued or renewed will be no later than the fifth anniversary of the day of issue or previous renewal of the licence.

The deadline for application for a renewal of the licence will not be less than 90 days before the date of expiry of the licence and will also be identified on the licence. The licence must be renewed to authorize the continued operation of the drinking water system beyond the expiry date set out in the licence.

### **4.4 DWWP and Licence Revocations**

The owner of the system may apply for a revocation of a DWWP and/or licence for their own purposes. This revocation would apply to the DWWP and/or licence for the entire drinking water system.

If a component of an existing system, even a major component, were to be decommissioned and taken out of service such an alteration to the system this undertaking would be addressed through amendments to the existing DWWP and licence and not a complete revocation if other parts of the system remain in service.

### **4.5 New System Applications**

The SDWA states that no person shall establish a new municipal drinking water system except under the authority of and in accordance with an approval (C of A) or a DWWP.

A new drinking water system would be a system for which no components of the system previously existed. Major treatment works additions or expansions, or watermains servicing a new subdivision would not represent a new system if they were to connect to any part of an existing system.

A non-municipal drinking water system, the ownership of which is being transferred to a municipality, should be regarded as a 'new' system for purposes of applying for a first DWWP and Licence.

The combined provisions of the SDWA and O. Reg. 170/03 require that a person who proposes to establish a new municipal residential drinking water system must apply for:

- an approval (Certificate of Approval) for the system if the application is made before the date prescribed in O. Reg. 188/07 for the owner of the proposed system, or
- a DWWP and a licence for the system if the application is made on or after the date prescribed in O. Reg. 188/07 for the owner of the proposed system.

## **5.0 Who Must Apply**

### **5.1 Existing Drinking Water System**

The responsibility for obtaining a DWWP amendment to authorize an alteration (including an extension) of a drinking water system and to ensure a licence is in place for the operation of the altered system lies with the drinking water system owner as identified on the current DWWP and licence.

#### **5.1.1 Owner Definition**

The SDWA defines ‘owner’ to include every person who is the ‘legal’ owner or the ‘beneficial’ owner of all or part of the drinking water system.

The legal owner is the entity who holds legal title to the physical works which make up all or part of the system. For most or all of any system this would generally be the municipal owner of a municipal drinking water system identified in the DWWP and licence.

The legal owner of a part of the system, however, could also be the owner of parts of the system designated as a municipal drinking water system through the provisions of O. Reg. 172/03. O. Reg. 172/03 prescribes parts of drinking water systems that serve major residential developments and are to be transferred at some future date from a developer to a municipal entity pursuant to a subdivision agreement to be municipal drinking water systems. Typically these would be watermains within a new subdivision, the ownership of which have not as yet been transferred to the municipality. These watermains will form part of the drinking water system.

The beneficial owner of all or part of a drinking water system is the entity who ultimately enjoys some of the benefits of ownership of the drinking water system, but does not hold legal title to it. In the above scenario of watermains, the municipal owner is a beneficial owner since it will ultimately be transferred legal title to the watermains through the subdivision agreement.

Authorizations to proceed with the addition of subdivision watermains will be issued to the owner of the parent<sup>2</sup> drinking water system, in most cases a municipality, who will be have either the legal or beneficial ownership of all parts of the system. In this context, the Ministry is also requiring that any applications for DWWP or licence amendments come from the legal owner of the parent system as set out in the DWWP and licence.

The provisions of the DWWP and licence, including their conditions, will apply to both the legal owner and the beneficial owner of parts of the drinking water system as applicable. For example, watermains for servicing a subdivision may be added, replaced, modified or extended by a legal owner (not necessarily the municipal owner of the system such as a developer) if the relevant conditions of the DWWP have been met. These conditions include, in part, that consent has been given by the beneficial owner of the drinking water system as identified in the DWWP and licence.

Enforcement of non compliance with any conditions of the DWWP or licence will be undertaken in respect of the appropriate party having committed the offence. One of the conditions of the DWWP will be that the owner of the system (as identified in the DWWP and licence) shall notify the legal owner of any part of the drinking water system that is prescribed as a municipal drinking water system by section 2. of O. Reg. 172/03 of the requirements of the DWWP and the licence as applicable to the prescribed system.

### **5.1.2 Licence Renewal**

The owner of the drinking water system, and holder of the current licence, will be required to apply for a licence renewal.

## **5.2 New Drinking Water System**

The proponent of the new municipal residential system should be applying for the DWWP and licence. In most cases this will be the future municipal owner of the system that is the beneficial owner of the system, as described above.

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<sup>2</sup> In this context ‘parent’ drinking water system means the system, identified in the DWWP/licence, onto which the developer’s watermains will be connected.

This scenario does not refer to the transfer of portions of a drinking water system being transferred to municipal ownership through a development agreement as these are municipal drinking water systems at the time of initial construction

## 6.0 When to Apply

### 6.1 System Alterations and New Systems

In order to reduce the risk of unforeseen delays associated with obtaining the required DWWP amendment, when contemplating an undertaking, the proponents should familiarize themselves with the specifics of the DWWP/licence process and the requirements related to the supporting information and documentation for various types of proposals outlined in this Guide. Also, at that time, the proponents should contact the Ministry to determine the current application average turn-around time and schedule their projects accordingly.

The application average turn-around time will vary depending on the type of application, complexity of the project, and the number of other applications received by the Ministry in the preceding period. Proponents must also be aware that the application average turn-around time that would be provided by the Ministry on request would be based on the assumption that the application is complete. If, during the review of the application it is determined that additional information or documentation is necessary for proper assessment of the proposal, the review may have to be suspended and delay the issuance of the DWWP/licence amendment. If the required additional information is not readily available from the proponent, the application may be returned to the proponent as incomplete, and the proponent would have to re-submit the application when all required information is available.

### 6.2 Licence Renewal

As noted above, the expiry date for a licence issued or renewed will be identified in the licence will be no later than the fifth anniversary of the day of issue or previous renewal of the licence.

The deadline for application for a renewal of the licence will not be less than 90 days before the date of expiry of the licence and will also be identified on the licence.

## 7.0 Where to Apply and What to Include

Applications for DWWPs, DWWP amendments, licences, licence amendments, licence renewals, DWWP or licence revocations related to municipal drinking water systems should be made to:

Director, Part V, SDWA  
Safe Drinking Water Branch  
Ministry of the Environment  
2 St. Clair Avenue West, 19<sup>th</sup> Floor  
Toronto, Ontario  
M4V 1L5

A completed application form, together with the required supporting information and documentation, and the correct application fee (if applicable) must be submitted to the Safe Drinking Water Branch.

- X one (1) copy of the completed application form, including the supplementary forms referred to in the application form and provided in the application package (see Part II of this Guide for explanations),
- X all applicable supporting technical information and documentation outlined in Part III of this Guide,

- X the correct application fee (where applicable), and
- X a covering letter addressed to the **Director, Part V, SDWA**, at Safe Drinking Water Branch, stating the purpose of the application and indicating that a copy of the complete submission has been sent to the appropriate local District Office of the Ministry.

A copy of the application must be submitted to the Ministry's District Office serving the area in which the system is or is to be located [see **Appendix A - Regional, District and Area Offices of the Ministry** for locations and addresses of the Ministry's District Offices] as follows:

- X one (1) copy of the completed application form and all supporting information and documentation, and a copy of the covering letter.

#### **A Note about the 'Transfer of Review Program'**

The Transfer of Review Program is a program currently associated with the issuance of Certificates of Approval respecting sewage works and drinking water systems. The types of drinking water works covered by the program depend on individual agreements between the Ministry and the designated municipal authority, and they usually include watermains and water booster pumping stations. Under this program designated municipal authorities conduct a review of the application for approval on behalf of the Ministry of the Environment. The municipal authority then submits the application to the Ministry together with their recommendations for approval, or comments explaining why an application is not recommended for approval. Any fees associated with the review are collected and retained by the reviewing municipality. A further explanation of the program including a list of participating municipal authorities is contained within the Ministry's **Guide on Applying for Approvals related to Municipal and Non-Municipal Drinking Water Systems – Revised November 2003**.

Until such time that a DWWP and licence has been issued for the system, applications for Certificates of Approval may continue to be submitted to the municipal authority participating in the program, however, once a DWWP and licence has been issued for a drinking water system the Transfer of Review Program will no longer apply to applications respecting the drinking water system.

The Transfer of Review Program will continue to exist for sewage works and will not be affected by the issuance of a DWWP or licence for the drinking water system.

The Ministry is intending to include an authorization for future specified alterations to the drinking water system in the DWWP subject to conditions imposed within the permit in which case the an application for the specified alterations would not be required before proceeding with the undertaking. It is anticipated that a significant portion of alterations including additions, modifications, replacements, and extensions of drinking water system components currently reviewed under the Transfer of Review Program, including watermains, will be pre-authorized through the DWWP.

Additions, modifications, replacements, and extensions of drinking water system not identified as being pre-authorized through the DWWP or additions, modifications, replacements, and extensions of drinking water system not meeting the conditions of the pre-authorization will require than an application be submitted and authorized through a DWWP amendment before proceeding with the undertaking. All applications respecting alterations to drinking water systems should be submitted the Director, Part V, SDWA at the Safe Drinking Water Branch for review and approval.

## 8.0 The Review and Approval<sup>3</sup> Process

The approval process generally consists of pre-application consultation, review of application, and issuance of approval. These steps are outlined below to give proponents an understanding of the process requirements and enable them to account for those requirements in scheduling their projects in order to avoid unforeseen delays.

### 8.1 Pre-Application Consultation

Pre-application consultation is a dialogue between the proponent, the Ministry, and possibly the public, prior to the submission of an applications for a new system or a significant DWWP amendment (although may be useful in the case of an application for a licence amendment or renewal).

In the case of a DWWP amendment, pre-application consultation is meant to assist proponents in defining the objectives, including environmental objectives, for the project in the case of a DWWP amendment. This may include determining the requirements regarding characterization of the source of raw water, any water treatment process waste stream effluent requirements, establishing general acceptability of the proposed technology, identifying any application type specific special information requirements (e.g., information in support of an application for relief from a specific regulatory requirement), and determining the need for public consultation/notification.

Pre-application consultation should be undertaken for all projects involving construction of new water 'greenfield' treatment facilities, expansion or re-rating of existing water treatment facilities, and major modifications/upgrades to existing water treatment facilities, and introduction of an innovative technology. Also, depending on their scope, it is recommended for less complex projects.

Where pre-application consultation is required or desired, it must be initiated by contacting the local District Office of the Ministry. The District Office may call upon or direct the proponent to other offices, branches or sections of the Ministry which may have a role in the approval process.

When approaching the Ministry, the proponent should be prepared to discuss the nature of the proposal and identify in general the proposed source of water supply, water treatment process, and any water treatment process residue management system and its expected effluent quality and environmental impact at the proposed discharge location. The Ministry will assist the proponent in identifying all provincial environmental legislation, policies, objectives and guidelines applicable to the project, including details of applicable public consultation and notification requirements under the *Environmental Assessment Act (EAA)*.

The Ministry will also determine if there is a need for an assessment of the environmental impact of effluent from any water treatment process residue management system and outline the required scope of such an assessment, determine if a Permit to Take Water is required for the proposed system, advise on the required characterisation of the water source, and discuss with the proponent any special concerns that must be addressed in the application for approval.

Where the proposed system involves discharge of effluent from a process residue management system directly to the environment (i.e., other than into a sanitary sewer), it is recommended that the proponent completes the required environmental impact assessment and obtains a written concurrence with the assessment and proposed effluent criteria from the Technical Support Section of the respective Regional Office of the Ministry before the formal application for approval of the system is submitted to the Safe Drinking Water Branch.

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<sup>3</sup> In the meaning of the *Safe Drinking Water Act*, the term "approval" relates to the process associated with a Certificate of Approval. The use of the term here in the context of DWWPs and licences has a broader general meaning of a review and approval process.



If the required environmental impact assessment is only submitted to Safe Drinking Water Branch along with the application for approval of the drinking water system (without a confirmation of the concurrence with the assessment by the Regional Office of the Ministry), the Safe Drinking Water Branch will have to request the Regional Office to review the submitted assessment before commencing the review of the application for approval. However, if it is at that time determined that no pre-application consultation for the project took place, and the Region=s Technical Support staff advises the Safe Drinking Water Branch that they are not able to assess the submitted impact assessment without further data or other information not readily available from the proponent, the application may be closed as incomplete, and the proponent would have to re-apply after completing a proper environmental impact assessment.

Also in pre-application consultation, the proponent may discuss with the Ministry the need for and the details of any study to determine if the source of the proposed ground water supply should be considered a ground water under the direct influence of surface water (GUDI), and what level of water treatment may be required.

Note: For the purposes of the treatment and monitoring requirements of the Drinking Water Systems Regulation made under the SDWA, a drinking water system that obtains water from a raw water supply that is ground water under the direct influence of surface water (GUDI) is deemed to be a drinking water system that obtains water from a raw water supply that is surface water. The regulation identifies specific situations where a source of water supply is deemed to be a ground water under the direct influence of surface water (GUDI), and the source must be considered as such unless there is a report by a professional engineer or a professional hydrogeologist that concludes that the source is not a GUDI. In case of drinking water systems subject to the DWWP and licence requirements (municipal residential systems) of the SDWA, the source can only be considered a non-GUDI source if the Director agrees with the conclusions of the report by a professional engineer or a professional hydrogeologist.

For the purposes of an application for DWWP for a new system or proceed with alterations of a drinking water system, the report concluding that a source is not a GUDI (or a GUDI with adequate in-situ filtration) must be prepared in accordance with the Ministry document entitled **“Terms of Reference for Hydrogeological Study to Examine Ground Water Sources Potentially Under Direct Influence of Surface Water@.**

Based on such pre-application consultation, the proponent would be better prepared to develop environmental objectives for the project with a clear understanding of the Ministry's requirements, complete any required public consultation process (especially any process required under the *Environmental Assessment Act*), design the system such that the Ministry=s requirements and public concerns are adequately addressed, and obtain any prerequisite permits.

Where applicable, the processes that must be completed, and permits that must be obtained before an application for approval of the drinking water systems is submitted to the Safe Drinking Water Branch, may include, for example, completion of the environmental assessment process under the EAA (normally Class EA processes), a Development Permit under section 24(1) of the *Niagara Escarpment Planning and Development Act*, and a Permit to Take Water under Section 34 of the OWRA.

## **8.2 Screening of Applications**

Upon the receipt by the Safe Drinking Water Branch of the Ministry, applications are pre-screened for completeness of their application forms and presence of the applicable application fees.

If an application does not include the application fee (if applicable) or if the application form is incomplete (see Part II of this Guide for detailed instructions for the completion of the form), the application cannot be properly recorded in the Ministry=s electronic application processing and information management system. In such a situation, the application processor will attempt to contact the applicant by phone in order to obtain this critical information. However, if the application processor is unable to obtain this

information from the applicant within three business days of the receipt of the application, the application is returned to the applicant, and would have to be re-submitted.

Each application which includes at least the administrative processing portion of the application fee (if applicable) and whose application form is complete undergoes detailed examination of the entire submission for adequacy of the submitted fee and presence of the required supporting information and documentation (see Part III of this Guide for information on the supporting information and documentation requirements).

Based on the results of the examination of the submission, a letter of acknowledgement will be sent to the applicant.

In the letter of acknowledgement, the application processor advises the applicant of any missing supporting information and documentation, details of any fee inadequacy, and the date by which the applicant must respond to the request for additional fee and/or information (usually two weeks from the date of the letter).

**Note:** If the applicant fails to submit the outstanding fee or address the request for additional information or documentation identified in the letter of acknowledgement within the time allowed, the Review Engineer (the application will have already been assigned to the Review Engineer) will initiate the process of cancelling the application and refunding the submitted application fee in the amount reduced by any applicable non-refundable portion of the fee as may be stipulated in the Minister=s Order for Drinking Water Works Permit Fees.

### 8.3 Technical Review of Applications

Detailed technical review of applications for new system or DWWP amendments assigned to a particular Review Engineer is conducted chronologically in order of their receipt by the Review Engineer and therefore, the technical review of a particular application will not normally commence immediately. However, in order to expedite the process, immediately after receiving the application, the Review Engineer will determine if the application requires any supplementary review (e.g., comments on the submitted environmental impact analysis from the Technical Support Section of the appropriate Regional Office of this Ministry, or comments of the local Drinking Water Inspector and if required, will request such a review without delay.

In the detailed technical review, the Review Engineer assesses the completeness and adequacy of the submitted detailed design documentation and other supporting information, the compliance of the proposal with the Ministry acts, regulations, policies, objectives, and environmental guidelines, the conformance of the engineering design to the principles of sound engineering, and the adequacy of controls and contingencies provided to facilitate the proper operation of the system.

In the process of this detailed review, the Review Engineer may determine that additional information, beyond that requested (if any) in the letter of acknowledgement, is necessary for proper assessment of the application, or that the application involves aspect which require submission of an additional fee. A request for such information/additional fee is usually made in form of a letter or e-mail from Review Engineer to the applicant, and includes a deadline for response. This deadline may vary depending on the nature of the requested information but typically the proponent is given two weeks to respond.

**Note:** If the applicant is unable to submit the requested information within the given time but wishes to keep the application active, by the same deadline, the applicant must request an extension of the deadline and provide an adequate justification. If the applicant fails to respond to the request within the given time, or if the requested deadline extension is unjustified or unreasonably long, the Review will initiate the process of cancelling the application and refunding the submitted application fee in the amount reduced by any applicable non-refundable portion of the fee as stipulated in the fees regulations and any additional amount determined based on the Ministry=s effort expended to date in

the review of the application. The applicant would have the right to appeal such a refusal to the Environmental Review Tribunal.

Upon completion of the detailed technical review, when all outstanding issues have been addressed, the Review Engineer provides his/her recommendations on the application to the approving Director.

#### **8.4 Issuance of a DWWP or Licence - Including Amendments**

Upon considering recommendations of the Review Engineer, the approving Director shall, as he or she considers necessary for purposes of the SDWA:

- a) Issue the DWWP, DWWP amendment, licence, licence amendment or licence renewal, or
- b) Refuse to issue or amend the instruments, or
- c) Issue the instruments including such terms and conditions as he/she deems necessary.

Conditions imposed on the DWWP will typically relate to the physical works. They may also deal with such issues as time-limited authority, timing for upgrades to the system or a requirement to obtain some other approvals before proceeding with the undertaking. An example of the latter would be a DWWP, or DWWP amendment authorizing an undertaking to proceed, subject to the submission and acceptance of final plans and specifications for works.

Conditions imposed on a licence will typically relate to requirements respecting the performance, operation and maintenance of the system as well as monitoring and recording of specific indicators of water quality and environmental impact, and provision of contingencies to prevent and deal with accidental spills or upsets.

#### **8.5 DWWP Subject to Final Plans and Specifications**

When requested, in some special circumstances, the Director may grant a DWWP or DWWP amendment in principle for works whose detailed engineering design has not been finalized, provided that the design has advanced to the stage where all significant technical decisions having a potential to affect performance and/or environmental impact of the works have been already made.

The issuance of such an instrument would include a special condition prohibiting construction of any part of so approved works until the Director has received and approved in writing detailed engineering design drawings, specifications, and a final engineering design report containing detailed design calculations for that part of the works.

A request for such an approval will be considered if the entity financing or approving the financing of the project (e.g., the Ontario Municipal Board) requires the applicant to provide a proof of the Ministry's acceptance of the proposal prior to their release or approval to release funds for the undertaking of the detailed engineering design.

Such an approval in principle, subject to a separate approval of final engineering design for the proposed system, or its part, may also be granted for a large project with agreed upon phased implementation of its various components, or a design-build project, i.e., a project intended to be implemented through a single contract between the proponent and a contractor who would both design and construct the works.

Requests for such staged approvals will only be considered where the proponent has included with the application for a DWWP or DWWP amendment an adequate written justification for the proposed course of action. It is highly recommended that, where the proponent intends to take this route, the issue be discussed in the pre-submission consultation.

The technical information and documentation required to be submitted in support of applications for various types of drinking water systems for such an instrument in principle is outlined in Part III of this Guide.

## **8.6 Appeal Provisions**

Where the Director decides to impose any terms or conditions on a DWWP or licence, alter any terms or conditions of an existing DWWP or licence, refuse to issue a DWWP, licence or a DWWP amendment or licence amendment, or revoke a DWWP, revoke or suspend a licence, in accordance with the requirements of section 128 of the SDWA he/she will serve the owner of the drinking water system with a written notice of this imposition, alteration, refusal, suspension or revocation, including details of the owners right to appeal the decision to the Environmental Review Tribunal.

Under section 129 of the SDWA, within 15 days after being served with such a notice of a reviewable decision, the person notified may require a hearing by the Tribunal by a written notice served on the Director and the Tribunal.

The conditions imposed on a DWWP will typically relate to the physical works. They may also deal with such issues as time limited approval, timing for upgrades to the system or a requirement to obtain some other approvals before commencement of the construction of the conditionally approved system or its part. An example of the latter would be an approval subject to obtaining approval of the final plans and specifications for the conditionally approved work.

## **9.0 Public Access to Application Information**

The release of information contained in application forms and documentation submitted in support of applications for approval is subject to the provisions of the *Freedom of Information and Protection of Privacy Act*. This Act defines what may, and what may not, be disclosed to the public, and is used to assess all requests for information contained in the documents on file with applications for approval.

The applicant should therefore identify all documents which are to be considered confidential and must provide detailed evidence in support of this claim. The applicant should refer to the exemptions from disclosure set out in sections 12 to 23 of FIPPA, and in particular, section 17, third-party information. This evidence will be one of the factors the Ministry would consider when making a decision regarding disclosure of specific documents on file.

## **10.0 False Information**

Through a reference to section 138, it is an offence under section 140 of the SDWA to knowingly give false information to the Ministry in respect to matters under the Act or regulations.

Under sections 141 and 142, the penalties for this violation could result in fines of up to \$50,000 for the first conviction and fines up to \$100,000 and/or imprisonment up to one year for each subsequent conviction where the offence is committed by an individual, and \$250,000 and \$500,000 respectively where the offence is committed by a corporation.

## **11.0 Questions Regarding Filing Applications**

For any assistance or advice regarding the filing of applications for approval related to municipal drinking water systems the Safe Drinking Water Branch of the Ministry may be contacted at the following address and telephone numbers:

Safe Drinking Water Branch  
Ministry of the Environment  
2 St. Clair Avenue West, 19<sup>th</sup> Floor  
Toronto, Ontario  
M4V 1L5

Tel. (416) 314-1651 or (Toll Free) 1-877-955-5455  
Fax. (416) 314-324-1037  
e-mail: [mdwl@ontario.ca](mailto:mdwl@ontario.ca)

Further information may also be obtained through the Municipal Drinking Water Licensing Program webpage on the Drinking Water Ontario portal at [www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater)

# Part II

## Instructions for Completing Forms

### 1. Owner of the Drinking Water System

#### A. Owner Name

This is the name of the owner of the drinking water system as it would appear on legal documents associated with the owner. This should be the same name as that appearing on the current licence and DWWP.

### 2. Owner Mailing Address

#### A. B. C. D. E. F. G. Address Information

These entries make up the address that the owner of the system wishes to use for the purpose of receiving correspondence associated with the applications. The address will need to include the street number, unit identifier, municipality, province and postal code as applicable. If the formal mailing address includes a post office box, rural route or general delivery it should be identified accordingly.

#### H. Attention, I. Position/Title, J. E-mail address, K. Telephone

Enter information into boxes H. and I. to identify a specific person, along with their position or title, within the owner's organization that will receive the amended DWWP/licence. In the case of a municipal corporation, this should be the mayor, warden, reeve, clerk or deputy clerk.

The e-mail address and telephone number is also being requested to facilitate communications and the forwarding of the DWWP/licence or amendments.

### 3. Drinking Water System

#### A. Drinking Water System Identifier Name

In cases of a DWWP/licence amendment, licence renewal or DWWP/licence revocation for an existing system this would be the drinking water system name that current appears on the existing DWWP and licence.

In the case of a new drinking water system, the system name entered here should be a name that identifies the municipal residential drinking water system as a whole. This name will be used to identify the system on the DWWP and the licence. In most cases this may be a simple and logical descriptor such as the 'Broken Antler Treatment and Distribution System'. This name will be included in the DWWP and licence to identify the drinking water system.

#### B. DWWP Number, C. Licence Number

The applicant is required to enter the drinking water works permit number and the municipal drinking water licence number in the case of an existing drinking water system.

If the application is for a new drinking water system these boxes should be left blank.

## 4. Type of Application

### A. Identify the type of application being made

The applicant should check the box, or boxes, which identify the type of application being made.

This section of the application form also provides instructions respecting which sections of the application form need to be completed depending on the type of the application.

A DWWP amendment would be relevant for any application to authorize an alteration (including an addition, modification, replacement or extension) to a drinking water system. Such an amendment could also refer to a request to amend any condition of the DWWP.

A request for a licence amendment would not normally be required when requesting a DWWP amendment to permit an alteration to a system. If a licence amendment would be required in support of a DWWP amendment, the Director would normally undertake this at his or her initiative. The owner may, however, request an amendment to any condition in the current licence for the owners own purposes, in which case this box should be checked.

A new drinking water system would be a system for which no components of the system previously existed. Major treatment works additions or expansions, or watermains servicing a new subdivision would not represent a new system if they were to connect to any part of an existing system.

Note:

This application form does not provide a check box for an application for relief from regulatory requirements or for fragmentation of the drinking water system. For such applications, reference should be made to the **Guide for Applying for Fragmentation and Relief from a Regulatory Requirement - Municipal Drinking Water Systems and Non-Municipal Drinking Water Systems – March 2009**.

This application form does not provide a check box for an application for the first DWWP or licence for an existing drinking water system. For such applications, reference should be made to the **Guide for Applying for the First Drinking Water Works Permit and Municipal Drinking Water Licence and Submission of Operational Plans – October 2008**.

## 5. Proponent Information Contact

### A. B. Identify the Proponent

The beneficial owner (in most cases the municipal owner of the parent drinking water system) is required to identify the proponent of the system. The proponent may be a person that is both the beneficial and legal owner of the drinking water system or a person other than the beneficial owner (e.g. legal owner only) of the undertaking and the appropriate box should be checked.

The latter scenario would apply, for example, when a developer is proposing to construct and initially own watermains within a subdivision. In such cases the person (including a corporation) who will initially construct and be the legal owner of the works should be identified as the proponent of the alteration of the system.

### C. Name of Proponent

This entry should be the name of the proponent if it is different than the owner of the parent drinking water system. The proponent may be a corporation or a person. The name should be the full legal name (corporate name or a person) of the proponent as it would appear on legal documents.

#### **D. Proponent Contact, E. Position/Title**

This would be the person Ministry staff would contact in the event further dialogue was required on information submitted with the proponent of the undertaking. If the proponent is a corporation, the position or title of the person should also be identified.

#### **F. Employer/Company**

If the proponent contact is engaged by an employer/company other than the proponent identified in C., the employer/company should be identified here.

#### **G. H. I. J. K. L. M. N. O. Proponent Contact Information**

These entries provide further contact information including e-mail address and telephone number.

## **6. Technical Information Contact**

#### **A. Name B. Position/Title, C. Employer/Company**

This would be the person Ministry staff would contact in the event further dialogue was required on information submitted in support of the applications, particularly information of a detailed technical or design nature. This may be the owner of the system, staff within the municipal organization or a consulting engineer working on behalf of the owner or proponent. The position/title of the person as well as the employer/company should be identified.

#### **D. E. F. G. H. I. J. K. L. Technical Contact Address, E-mail and Telephone Number**

These entries provide further contact information including e-mail address and telephone number.

## **7. Description of Undertaking**

#### **A. Brief Description of the Undertaking/Project Name**

The applicant should provide a brief summary description of the undertaking (e.g. "Duplication of filter train at the Broken Antler Treatment Plant" or "Elevated storage tank on Elm Street" or "John Street Trunk Watermain").

If the project has a formal name it should also be entered here for reference purposes.

#### **B. Project Start Date, C. Start of Operations**

The anticipated project start date and date of commencement of operation should be identified.

## **8. Undertaking Location Information**

#### **A. Location Description**

The applicant needs to identify which of three location categories are relevant to the application.



Box 1. The first box would be checked if there is not an identifiable location associated with the application, such an amendment to a condition of the DWWP or licence. In this case no further boxes need be completed in this section of the application.

Box 2. The second box would be checked if the undertaking were to be located over such a large spatial area that an identified location could not be readily described, such as 5 km of trunk watermain. In this case, the location identifiers need not be completed (boxes B. through O.) but the remaining boxes (boxes P. through S.) should be completed as applicable.

Box 3. The third box would be checked if the undertaking were to be located at a discrete location which could be identified. In this case all of the remaining (boxes B. through S.) should be completed as applicable.

#### **B. C. D. E. F. G. H. I. J. K. L. M. N. O.**

§ **Site Name** – If a site name exists it should be entered here. (E.g. Broken Antler Treatment Plant). If a site name is not applicable, leave this entry blank.

§ **Site Address (Street Information)** - the type of address used in urbanized areas, consisting of Street Number, Name, Type and Direction, and Unit Identifier, e.g., 437 Park Drive West, Unit 7, **or**

§ **Survey Address (Lot/Concession)** - the type of address used in rural and suburban areas of subdivided municipalities, consisting of Lot and Concession Number, e.g., Lot 22, Concession VII, **or**

§ **Survey Address (Lot/Plan)** - the type of addresses used in unsubdivided townships and unsurveyed territories, consisting of Lot Number, and Reference Plan Name and/or Number, e.g., Lots 4, 5 & 6, Plan 4.

§ **Non-Address Information** - this is any additional information which may clarify location of the site, it may include the community name, location in relation to roads and intersections, etc.

§ **Site Geo-Reference** - this is the geographic location of the site identified as coordinates (UTM Easting and Northing) of the site's main point of reference (e.g., the approximate centre of the treatment plant) in the Universal Transverse Mercator (UTM) grid adopted for this purpose by the Ministry.

The geo-reference information required to be provided is as follows:

§ **Map Datum** -this is the UTM datum of the map or GPS (Global Positioning System) used to specify position of the point of reference; currently, there are two map datums in use in North America, namely, the North American Datum 1927 (NAD27) and NAD83. The NAD83 is preferred as the current Ontario Base Maps are constructed using this datum, however NAD27 is acceptable.

§ **Zone** - this is the UTM Zone within which the site is located; there are four UTM Zones within Ontario, namely 15, 16, 17 and 18.

§ **Accuracy Estimate** - this is the accuracy (+/- metres) of the provided UTM Northing and Easting coordinates for the point of reference; the accuracy of the data depends on the method the data is generated, e.g., the accuracy of direct geodetic survey may be less than 1 metre, a GPS (depending on its quality) may guarantee accuracy from 1-10 metres to more than 10-30 metres, and a topographic map a 10-100 metre accuracy.

§ **Georeferencing Method** - this is the method used to generate the data for the provided UTM Northing and Easting coordinates for the point(s) of reference; it could be a determination by geodetic survey, or estimation from a map, a GPS or the Gazetteer (<http://geonames.nrcan.gc.ca/cgndb/english/cgndb.html>) or any other specified method.

§ **UTM Easting** - this is the distance in metres east from the western delimiter of the UTM Zone to the point of reference.

§ **UTM Northing** - this is the distance in metres from the equator to the point of reference.

§ **Municipality/Unorganized Township** - this is the name of the lower tier municipality or unorganized (geographic) township (not the name of the community/settlement), and it must include the type of municipality (i.e., City, Town, Village, Township, or geographic township), e.g., Barrie City, Cardinal Village, Rideau Township, Canis Bay geographic township.

§ **County/District** - this is the name of the upper tier municipality (Regional Municipality, County or District Municipality), or geographic District or territory within which the Municipality/Unorganized Township is located.

Note: Provide the name only (without the type of the upper tier municipality/geographic district), e.g., Halton (for R.M. of Halton), Simcoe (for County of Simcoe), or Algoma (for District of Algoma).

**Postal Code** - this is the postal code of the area where the site is located (not necessarily the same as the postal code for the site=s mailing address).

#### **P. Location controlled by the Niagara Escarpment Planning and Development Act**

The applicant must indicate whether location of the undertaking will be within the area defined by the *Niagara Escarpment Planning and Development Act* (NEPDA), and is subject to the NEPDA.

If the proposal is subject to the NEPDA, a copy of the NEPDA development permit must be submitted with the application. For further information on this issue the owner should contact the Niagara Escarpment Commission.

#### **Q. Location within the Oak Ridges Moraine Conservation Area**

The applicant must indicate whether location of the undertaking will be within the Oak Ridges Moraine Conservation Area defined by the Oak Ridges Moraine Conservation Plan (ORMCP), which is a regulation under the Oak Ridges Moraine Conservation Act (ORMCA), and is therefore subject to the requirements of the ORMCA and the ORMCP.

If the proposal is subject to the ORMCA and the ORMCP, the owner must attach a proof of the municipal planning approval (e.g. letter from a municipality within whose jurisdiction the undertaking is or is to be located confirming land use compliance with the ORMCA, and municipal planning approval.

#### **R. Location within the Greenbelt Planning Area**

The applicant must indicate whether the location of the undertaking will be within land to which a Greenbelt Plan made under the Greenbelt Planning Act 2005 applies.

If yes, the applicant will also need to confirm that the proposed undertaking is consistent with the Greenbelt Plan by checking the box accordingly.

#### **S. Owner of the Site**

The applicant needs to identify if the proponent of the undertaking is the owner of the site of the undertaking. The proponent would be the person or entity identified in section 5 of the application form.

## 9. Environmental Impact Information

### A. Discharge of Residue to Surface Water

The owner should identify whether any components of the proposal will result in a discharge of residue from the treatment process directly into surface water. Typically this would be effluent resulting from the discharge of filter backwash water, but may include any other type of discharge to surface water. This is not applicable to discharges to a sanitary sewer.

### B. Summary Description of Component Discharging to Surface Water

A brief description of the component discharging to surface water, including discharge via a storm sewer, should be provided. (e.g.: discharge of effluent from a filter backwash treatment facility at the 'X' water treatment plant).

Reference should be made to section 1.1.4 of 'Part III – Supporting Information' of this guide respecting information to be submitted in support of such a proposal.

### C. Effluent Receiver

The name of the effluent receiving water body should be provided (e.g. Lake Erie).

### D. Discharge to the Air

The owner should identify whether any components of the proposal will result in a discharge of a contaminant into the air.

### E. Nature of Discharge to Air

A brief description of the component discharging a contaminant into the air should be provided. This would include, for example, emergency power equipment not meeting conditions of the DWWP pre-authorizing.

### F. Attach Supporting Information

The application should include all information that would be required for an application for a Certificate of Approval (Air) in accordance with the Ministry's **Guide for Applying for Approval (Air), Section 9, EPA.**

Note: The owner and/or proponent should review the conditions of the current DWWP for the drinking water system to determine if the proposed equipment with an emission to air is pre-authorized through conditions of the permit. If the proposed equipment were to meet the requirements of these conditions, an application for a DWWP amendment would not be required prior to the addition or modifications to such equipment. The proponent would, however, be required to comply with the conditions of the preauthorization.

### G. H. I. J. Environmental Assessment Requirements

The owner will need indicate how applicable requirements of the *Environmental Assessment Act* (EAA) have been fulfilled.

In most cases, undertakings in respect of a municipal residential drinking water system will have met these requirements through compliance with the requirements of the Municipal Class Environmental Assessment prepared and amended from time to time by the Municipal Engineers Association and approved by the Minister of the Environment. In these cases, the owner should identify the relevant

Schedule (Schedule A, Schedule A+, Schedule B or Schedule C) for the undertaking confirming that the applicable procedures have been met.

The application form also provides for possibilities that the undertaking is either exempt from the requirements of the EAA, is proceeding under an Environmental Assessment Approval Notice, or is not subject to the requirements of the EAA. In these cases the relevant information requested in the forms should be provided.

Note: Under the EAA, it is prohibited<sup>4</sup> to grant an approval under any Ontario statute for an undertaking subject to the EAA unless all applicable requirements of the EAA have first been satisfied. Applications for a DWWP amendment subject to EAA requirements will be closed (cancelled) if it is determined that the applicable EAA process has not been completed.

## 10. Public Consultation

A. In this section of the application form the owner is to identify all public consultation and notification related to the proposal, such as public hearings, notification to First Nations, notices in newspapers, etc, that has been completed or is in the process of being completed.

## 11. Supporting Information Checklist

The Supporting Information Checklist includes all major types of information which may be required in support of an application for a DWWP amendment.

The Checklist must be completed as follows:

- § For all its items of the Checklist (i.e., all listed types of supporting information), the applicant must indicate in the "**Attached**" column whether or not the particular type of information is enclosed with the application. This ensures that, where a particular type of information is not submitted with the application, it is not by omission but because the applicant has determined that the type of information is not relevant to the proposal.
- § For all submitted (attached) supporting information, the applicant must identify in the "**Reference**" column the attachment which contains the information (e.g., report name and chapter/page number, or drawing title, number, revision number and date), and indicate in the "**Can be disclosed**" column whether or not the applicant considers the submitted information confidential. [Note: For clarification on the issue of confidentiality and release of information, please refer to Public Access to Application Information in Part I of this Guide]
- § For any submitted supporting information which does not fall within the definition of any of the specific items of the Checklist, the applicant should identify it in the "Other Attached Information" item, and complete the item as above.

Where the applicant wishes the Ministry to consider as supporting information for the application any information submitted previously (e.g., with another application), the "Attached" column of the item should be checked as No, and the "Reference" column must identify the Certificate of Approval, DWWP or licence number and the associated document which contains the information.

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<sup>4</sup> This prohibition does not apply to specified future alterations which may be authorized through conditions in the DWWP; however, all other requirements of the EAA continue to apply to the specified future alterations.

## 12. Accredited Operating Authority(ies) & Operational Plan(s)

In the case of a drinking water system alteration, a new drinking water system, or a licence renewal, the owner must identify all operating authorities operating the drinking water system or operational subsystem as applicable and confirm their accreditation status.

### A. Treatment System or Operational Subsystem; B. Operating Authority Name

In the case of an application respecting an alteration (including an addition, modification, replacement or alteration) of an existing system, the applicant need only identify the name of the drinking water system or operational subsystem that is being altered and the associated operating authority.

If the application relates to the drinking water system as a whole (e.g. amendment of a condition in the DWWP or licence), all operational subsystems<sup>5</sup> (if applicable) should be identified with their associated operating authorities. If there is more than one operating authority for the system, the name of the operational subsystem associated with each operating authority should be entered into column A with the relevant operating authority identified in column B.

### C. Confirm Accreditation Status

The applicant will need to confirm the accreditation status of each operating authority identified in column B.

### D. Operational Plan

If the application is in respect of a licence renewal or a new drinking water system the owner will need to attach a copy of the Operational Plan for the drinking water system.

In these cases, the owner must confirm the attachment of the current Operational Plan for each of the operational subsystems or the drinking water system identified in Column A.

The Operational Plan must be prepared in accordance with the Ministry's **Director's Direction – Minimum Requirements for Operational Plans - July 2007** as amended from time to time. This document can be obtained through the Municipal Drinking Water Licensing Program webpage on the Drinking Water Ontario portal at [www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater)

Note: An Operational Plan should only be attached when the application relates to a licence renewal or a new drinking water system. In cases of an alteration to an existing drinking water system, do not attach a copy of the Operational Plan. In the event information respecting the Operational Plan is required by the Ministry reviewer, it will be requested during the course of the review.

## 13. Financial Plan – Licence Renewal

This section will need to be completed as part of an application for a licence renewal.

### A. Resolution Approving Financial Plan

The owner will be required to confirm that the financial plan has been approved by attaching a copy of the resolution of council or governing body providing the approval in accordance with subsection 3.(1) 1. of

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<sup>5</sup> An operational subsystem is the part of the drinking water system that is operated by an operating authority if there is more than one operating authority for the entire drinking water system. Any existing operational subsystems will be identified in Schedule A of the licence.

O. Reg. 453/07. A copy of the financial plan itself is not required to be submitted to the Ministry at the time of the application, but it may be requested in the course of review.

### **B. First Year Financial Plan Applies**

The owner will also need to confirm the first year to which the financial plan applies. The period of time that the financial plan needs to apply is set out in subsection 3. (1) 3. of O. Reg. 453/07 in respect of licence renewals.

### **C. Financial Plan Number**

The financial plan number must also be inserted. The financial plan number can be obtained from Schedule A of the current licence.

## **14. Financial Plan – New Drinking Water System**

This section will need to be completed as part of an application for a DWWP and a licence for a new drinking water system. A new drinking water system is one for which no components of a system previously existed and does not include any new works, regardless of size or complexity, being added to an existing system.

### **A. Resolution Approving Financial Plan**

The owner will be required to confirm that the financial plan has been approved by attaching a copy of the resolution of council or governing body providing the approval in accordance with subsection 2.1 of O. Reg. 453/07. A copy of the financial plan itself is not required to be submitted to the Ministry at the time of the application, but it may be requested in the course of review.

### **B. First Year Financial Plan Applies**

The owner will also need to confirm the first year to which the financial plan applies. These requirements are set out in subsection 2.3. of O. Reg. 453/07 in respect of licence renewals.

### **C. Confirm Financial Plan Scope:**

The owner will need to confirm by checking both check boxes that the financial plans: (a) Include a statement that the financial impacts of the drinking water system have been considered, and; (b) apply for a period of at least six years

## **15. Permit(s) to Take Water – Licence Renewal**

The information being provided will assist the review engineer, and in turn the Director, in establishing that all necessary Permits to Take Water are in place for the drinking water system prior to issuance of a licence renewal. The information being provided will be cross referenced with information available from the Ministry's regional offices.

This information is not required in the case of an application respecting a stand-alone distribution-only drinking water system.

## **16. Permit(s) to Take Water – DWWP/Licence Amendment**

The owner will need to identify whether a PTTW will be required to be issued or amended to permit the operation of the proposed works. If a PTTW currently exists in respect of the proposed undertaking and does not need to be amended to enable the works to operate, the applicant should indicate 'No' in the applicable box.

If the answer is 'yes', the owner needs to identify the status of any application for issuance or amendment of the PTTW.

This information is not required in the case of an application respecting a stand-alone distribution-only drinking water system.

**Note:** Permits to Take Water are processed under the provisions of the *Ontario Water Resources Act* and applications respecting a PTTW should be made to the Ministry's Environmental Assessment and Approvals Branch. Reference should be made to the Ministry's **Permit to Take Water Manual – April 2005** and the **Guide to Permit to Take Water Application Form – February 2006 (PIBS 5046e)** for further information.

## 17. Raw Water Assessment – Licence Renewal

Raw water information is required in accordance with Appendix C of this document entitled: **Raw Water Assessment for the Renewal of the Municipal Drinking Water Licence**.

In the case of multiple source water supplies, information will be required for each source. In the case of a 'distribution-only' system which receives all of its treated water from another system, do not submit raw water information.

This information will be used to determine whether there has been a significant change in raw water quality since the issuance of the licence or the last licence renewal.

## 18. Raw Water Characterization – New Treatment System or Treatment System Alteration

This information will be required in the case of a new treatment systems or an alteration to a treatment system where raw water characteristics are relevant to the design of the treatment works. If raw water characteristics are not relevant to the application, check the 'No' box in the form.

Raw water information provided, when required, will assist the Review Engineer in their assessment of the proposal. The information should be in accordance with [Section 1.2](#) of Part III of this Guide.

## 19. Distribution System Information – Licence Renewal

The applicant will need to attach a file or files which describe the current distribution system. This information will be an electronic file document using the portable document format (".pdf") containing a graphical depiction of the water distribution system (e.g. a street map with watermains located and identified). These may be multiple files providing that all files, when combined, contain the entire watermain distribution system.

The document file(s) should have an associated unique file name and a date. This description should include watermains that have been constructed and placed into operation as of the date stated but would not include watermains which have been approved but not constructed and placed into operation.

The document should identify streets and critical information including, as a minimum; a linear representation of the watermain showing its approximate location within the street, pipe diameter, street name, valving and hydrant locations.

In the case of small systems, this may consist of an electronic scan of a paper document, providing the result is a '.pdf'. file document that contains the information required.

## 20. DWWP/Licence Revocation

### A. Instrument Requested to be Revoked

The owner should check one or both of the boxes, as applicable, establishing which instrument is being requested to be revoked

### B. Reason for Revocation

The owner should provide a brief explanation of the reason for the requested revocation

## 21. Application Fee

Application Fee is the processing fee required in order to recover cost incurred by the Ministry in processing the application for approval. The fee applicable to a particular application is established in accordance with the **Minister=s Order for Drinking Water Works Permit Fees** issued under section 157 of the SDWA. The Minister=s Order sets out in detail the fee components applicable to various types of applications respecting DWWP amendments under Part V of the SDWA.

### **Supplement to Application - Form A: Costs For Part V SDWA Applications – Drinking Water Works Permits**

Before completing the Application Fee table of the application form, the applicant must complete (and also submit with the completed application), the supplementary form titled **Supplement to Application - Form A: Costs for Part V SDWA Applications – Drinking Water Works Permits** included in the application package. This supplementary form is also included in **Appendix B** to this Guide. The Application Fee table of the application form is to be completed on the basis of the completed supplementary form.

**Category Code** and **Category Description** - these are identifiers of an individual aspect of a particular type of application for a DWWP or DWWP amendment (cost category) to which a separate fee applies, as shown in the **Supplement to Application for Approval - Form A**. All cost categories applicable to the particular application for approval must be listed in the Application Fee table, including the categories which indicate no fee (i.e., \$0).

**Amount** - this is the individual fee amount applicable to the individual cost category, as shown in the Summary of Cost sheet.

**Quantity** - this is the number indicating how many individual facilities under a particular cost category are the subject of the application for approval (e.g., if the application involves two pumping stations at two separate locations, the category applicable to a pumping station applies two times, i.e., the quantity is 2).

**SubTotal** - this is the total amount of fee under a particular cost category applicable to the application for approval.



**Total Fee** - this is the total fee amount for the application for approval, i.e., the Application Fee.

**Payment Information** - this information must include identification of the Method of Payment and the Amount Enclosed, and where the payment is made by a credit card, it must also include the credit card number and expiry date, and the credit card holder's name and signature.

**Method of Payment** - the payment of the application fee may be made by one of the following methods:

- \$ a certified cheque,
- \$ a money order,
- \$ a VISA charge (up to the amount of \$10,000 only), or
- \$ a MasterCard charge (up to the amount of \$10,000 only).

**Payable to:** Minister of Finance

## 22. Statement of System Owner

Statement of Owner is the owner's affirmation that to the best of his/her knowledge the information provided in the application form (including the supplementary forms) and the submitted supporting documentation is accurate and complete, and that the person identified in the application as the Technical Information Contact is authorized to act on the Owner's behalf for the purpose of the submitted application. The owner is the owner whose name would appear on any existing Drinking Water Works Permit or Municipal Drinking Water Licence or the beneficial owner of any new system.

This section must be completed as follows:

**Name, and Title** - these are the name and title of the owner (if the owner is an individual or a sole proprietor), or an individual authorized to sign documents on behalf of the Owner. For the Name, provide the surname first followed by the given name and initials.

**Signature, and Date** - the application must be signed and dated by the person identified above.

**Note:** It is an offence under Section 140 of the *Safe Drinking Water Act* to knowingly give false information to the Ministry with respect to matters under the SDWA and the regulations.

# Part III

## Supporting Information Requirements

This Part identifies the information and documentation that may need to be prepared and submitted to the Ministry in support of applications for a DWWP, a licence, amendments to those instruments and a licence renewal for a municipal residential drinking water system.

### 1.0 DWWP Amendments

#### 1.1 The Rationale – Public Health and Environmental Impact

The supporting information requirements for applications related to drinking water systems are based on the various aspects of public health and environmental impact that must be considered in relation to drinking water systems. These aspects include the public health issues related to the quality and quantity of the drinking water being supplied, the impact on the source of water related to the quantity of water taken, the impact on the receiver of waste water generated in the process of water treatment, and the environmental impact associated with any discharges to the air from the equipment associated with the drinking water system (e.g., diesel generators, air stripping of methane).

##### 1.1.1 Quality and Quantity of Supplied Water

With respect to the quality and quantity of the drinking water being (or proposed to be) supplied, there is a need for an assessment of the microbial safety and chemical quality of the source of raw water and the capability of the drinking water systems to adequately treat sufficient quantity of raw water and supply the treated water to the consumer in accordance with:

- the requirements of the **Ontario Drinking Water Quality Standards Regulation** (O.Reg. 169/03 under the SDWA);
- the **Drinking Water Systems Regulation** (O.Reg. 170/03 under the SDWA), as well as
- the **Procedure for Disinfection of Drinking Water in Ontario** adopted by O.Reg. 170/03 through reference.
- Also, in this assessment, consideration should be given to the objectives and guidelines included in the Ministry document **Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines**, and the design guidelines contained in the reference documents listed below.

With respect to water sources which are deemed under O.Reg. 170/03 to be groundwater under direct influence of surface water (GUDI), the Ministry requires that where a hydrogeological assessment is undertaken for the purpose of proving that a source is not a GUDI source or that a GUDI source has adequate in-situ filtration and may not need chemically assisted filtration, the assessment is required to be prepared in accordance with the document:

- **Terms of Reference: Hydrogeological Study to Examine Groundwater Sources Potentially under Direct Influence of Surface Water - October 2001.**

##### 1.1.2 Design Guidelines

The following publications are recommended to be consulted in the design of drinking water systems:

- Design Guidelines for Drinking Water Systems - 2008

- Recommended Standards for Water Works (GLUMRB, 2007)<sup>6</sup>

The above publications are only guidelines, not regulated standards which would have to be adhered to in order to obtain a new or amended DWWP. It is not the intention of the Ministry to stifle innovation, and if the design engineer can demonstrate that all public health and environmental protection requirements can be satisfied on a consistent basis by the proposed works, such a proposal will be considered for approval.

The DWWP may contain conditions which authorize specified additions, modifications, replacements or extensions of the drinking water system including watermains. Such conditions may make reference to a compliance with a design 'standard' as a requirement of the authorizations. This is not to say that watermains not complying with the design standard would not be approved if an application were to be submitted, however, watermains which meet the requirements of the design standard, as well as the other conditions of the DWWP, would be authorized to proceed without any further approvals from the Ministry.

### 1.1.3 Quantity of Water Taken From the Source

Another aspect of the health/environmental impact analysis of a drinking water system is the analysis of the effect of the withdrawal of water from the water source at the proposed quantities and flow rates on the availability of water to existing users of the water source and the maintenance of the necessary base flow.

The acceptability of the proposed rate and quantity of water withdrawal from the proposed source of water supply is established by the Ministry separately from the drinking water systems approval process through the Permit to Take Water (PTTW) program administered by the Regional Offices of the Ministry.

This acceptability of the proposed rate and quantity of water withdrawal (i.e., the availability of the required amount of raw water), must be established before the drinking water system can be properly designed. For this reason, applications for approval related to drinking water systems involving a new water intake/well or an existing intake/well with a change in quantity or rate of source water should include a copy of an appropriate valid PTTW under Section 34 of the *Ontario Water Resources Act* (OWRA) or, at least, a proof that an application for such a PTTW has been submitted to the appropriate Regional Director of the Ministry.

Note: Normally, a DWWP and licence (or amendments) will not be issued for a new/expanded system until valid PTTW(s) is/are in place. In exceptional situations, a DWWP amendment for the system may be issued subject to a prohibition to commence construction of the system until the required PTTW is obtained.

### 1.1.4 Disposal of Effluent

The disposal of any wastewater generated in the process of the operation of a water treatment plant (e.g., filter backwash water or other process residue) is an aspect of the environmental impact of a drinking water system, and must be addressed in all proposals for the establishment, alteration or expansion of a drinking water system. An analysis of this aspect of environmental impact would involve establishment of

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<sup>6</sup> The Ministry is a member of the Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers (GLUMRB), and participates in the development of and subscribes to the Board=s recommendations for water works standards known as the "Ten State Standards". This document is specifically identified in the Ministry=s **Procedure for Disinfection of Drinking Water in Ontario** as a design guideline for drinking water systems in Ontario.

effluent criteria acceptable to the appropriate Regional Office of the Ministry, and an assessment of the capability of the proposed residue management system to operate within the criteria.

Any effluent discharged into surface water or into or onto the ground is considered a sewage discharge. Under the SDWA, facilities related to the management of water treatment process residue and the discharge of the facility's effluent to the environment are part of the drinking water system. For this reason, where the drinking water system is subject to the DWWP/Licensing requirements of the SDWA, such facilities are assessed and approved together with the drinking water system, and do not need to obtain a separate approval under section 53 of the OWRA as sewage works.

Where the proposed system involves discharge of effluent from a process residue management system directly to the environment (i.e., other than into a sanitary sewer), it is recommended that the proponent complete the required environmental impact assessment and obtain a written concurrence with the assessment and proposed effluent criteria from the Technical Support Section of the appropriate Regional Office of the Ministry before the formal application for a DWWP or amendment. Before undertaking any such assessment, the proponent should contact the local District Office (pre-application consultation) to establish the required scope and depth of such a study which may vary considerably depending on the intended receiver of the effluent.

**Note:** If the required environmental impact assessment is only submitted to Safe Drinking Water Branch along with the application for DWWP amendment for the drinking water system (without a confirmation of the concurrence with the assessment by the Regional Office of the Ministry), the Safe Drinking Water Branch will have to request the Regional Office to review the submitted assessment before commencing the review of the application for approval. However, if it is at that time determined that no pre-application consultation for the project took place, and the Region=s Technical Support staff advises EAAB that they are not able to assess the submitted impact assessment without further data or other information not readily available from the proponent, the application may be closed as incomplete, and the proponent would have to re-apply for approval after completing a proper environmental impact assessment.

### 1.1.5 Other Discharges to the Environment

Under the SDWA, facilities related to the water treatment process that may discharge contaminants to the environment (including air emissions and noise) are part of the drinking water system. For this reason, where the drinking water system is subject to the approval requirements of the SDWA, such facilities are assessed and approved together with the drinking water system, and do not need to obtain a separate approval under the *Environmental Protection Act* provided that the application for approval under the SDWA includes all information that would be required for an application for a Certificate of Approval (Air) in accordance with the Ministry=s **Guide for Applying for Approval (Air), Section 9, EPA**.

## 1.2 Applications for DWWP Amendments for Drinking Water Systems

It is recognized that the process of planning and engineering design of drinking water systems varies with the size and complexity of the undertaking, and not all items of documentation listed in the Supporting Information Checklist section of the application form may be required for a particular undertaking.

The multi-stage process of planning and design of a new large and complex municipal drinking water system will involve preparation of a number of separate documents including an Environmental Study Report (ESR - a requirement of the Class EA process under the *Environmental Assessment Act*), a Preliminary Engineering Report (which may be part of the ESR), a Design Brief (basis of detailed engineered design), Final Plans (engineering drawings), and Specifications (construction process, materials and equipment).

On the other hand, the design of a minor modification may only require preparation of a single engineering drawing with the basis of design and specifications included on the drawing itself.

The information required to be submitted in support of applications for a DWWP amendment to authorize an alteration to a drinking water system is outlined below in the form of individual documents normally prepared in the process of planning and design of complex drinking water systems. However, it is not necessary to submit such separate documents provided all pertinent information is included in the submission.

Note: When requesting an approval in principle for a drinking water system or drinking water system component whose detailed engineering design has not been finalized, i.e., approval subject to approval of final plans and specifications (see Part I of this Guide for information as to when such an approval may be issued), the application should contain, as a minimum, the information outlined below under the heading Preliminary Engineering Report

### 1.2.1 Preliminary Design Report

If a Preliminary Design Report is being prepared for the proposed works, it should present the following information, where applicable:

- Description of the proposed works, and where applicable, a description of the associated existing drinking water system which is intended to be part of the new/expanded system.
- Extent, nature and anticipated population of the area to be serviced, facilities proposed to serve the area (including identification of the sources of water supply), and provisions for future expansion of the system to include additional service areas and/or population growth.
- Itemization and discussion of present and future domestic water consumption figures, commercial and industrial usages, and fire flows used in sizing various components of the drinking water system.
- Discussion of raw water quantity requirements and its availability from the proposed source of supply based on a source study. The extent of a study to determine availability of water will depend on the type and size of the water source, and should be completed in association with the application for a Permit to Take Water (PTTW) issued by the appropriate Director appointed under Section 34 of the *Ontario Water Resources Act* (OWRA). For all groundwater wells, the source study should be a hydrogeologist's report establishing the wells' perennial yields, maximum short-term yields (i.e., 1 day, 7 days, 90 days) and recommended pump sizing based on a hydrogeologist's rating of the long term yields of the wells. The hydrogeologist's report should also deal with possible interference with other existing wells in the area and other natural environmental issues/impacts.
- For systems using or intending to use groundwater wells as a source of raw water, an assessment of the source with respect to it being deemed a groundwater under direct influence of surface water (GUDI) in accordance with the criteria set out in O. Reg. 170/03 should be undertaken and, if required, a report prepared under the Ministry document **Terms of Reference for Hydrogeological Study to Examine Groundwater Sources Potentially Under Direct Influence of Surface Water**. The designer should refer to O. Reg. 170/03 under which some groundwater supplies are deemed to be GUDI, unless a report prepared by a professional hydrogeologist or professional engineer concludes otherwise; and
- Discussion of raw water quality with respect to treatment requirements to meet the **Ontario Drinking Water Quality Standards Regulation (O. Reg. 169/03)** under the *Safe Drinking Water Act, 2002* and the Ministry document **Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines** (Technical Support Document), supported by a raw water characterization of parameters listed in the Technical Support Document on a number of raw water samples appropriate for the type of source.

In case of a groundwater source, it is usually sufficient to base the study on several samples obtained during the well pumping tests conducted to establish the yield of the well(s). In order to establish a

reliable database for a surface water source, it is generally necessary to undertake a water sampling and analysis survey extending over a sufficiently long period of time to account for seasonal variations in the water quality.

- Normally, the source water analyses should include, at a minimum, all physical, chemical and bacteriological parameters identified in Tables 1, 2 and 4 of the Technical Support Document, and the gross alpha and gross beta screening procedure to determine if it is necessary to undertake further analyses to identify individual radionuclides responsible for the detected radiation (Table 3 of the Technical Support Document). Where general knowledge and/or historical data indicate that particular substances are consistently absent or below the level of concern, these substances/parameters need not be included in the raw water characterization, provided that the designer documents evidence in support of such exclusion.
- The raw water evaluation may also need to include parameters such as conductivity, water stability index, which are not listed in the Technical Support Document, but may be essential in establishing the raw water treatability or other special treatment needs.
- Discussion of the proposed water treatment facilities for the treatment of the raw water in terms of the minimum treatment requirements of **Drinking Water Systems Regulation (O. Reg. 170/03)** under the *Safe Drinking Water Act, 2002* and the **Procedure for Disinfection of Drinking Water in Ontario** (Disinfection Procedure) adopted by O. Reg. 170/03 through reference, and the treated water quality standards and objectives of O. Reg. 169/03 and the Technical Support Document, and a description of treatability work completed. This discussion should include a summary of basic process design parameters of all major components of the treatment facilities, including those such as chemical addition, equipment capacities, retention times, surface settling rates, filtration rates, filter-to-waste capability, and backwash rates as well as the operational reliability of key process units, unit redundancy and back up reliability.
- Evaluation of treated water characteristics and their potential for accelerated corrosion of pipes and appurtenances in the existing or proposed distribution system and plumbing. (Refer to **Design Guidelines for Drinking Water Systems 2008** - Section 5.1.1 – Blending of Dissimilar Waters/ Treatment Changes) if more than one water source is being considered.
- Discussion of all residuals streams generated in the water treatment process, including their volumes, composition, proposed treatment and points of discharge, in terms of effluent criteria established by the proponent in concurrence with the appropriate Regional Office of the Ministry.
- Discussion of the proposed instrumentation and control strategy and level of automation.
- Discussion of the proposed flow metering, sampling and monitoring program, including monitoring of any waste streams.
- Description of the proposed pumping facilities (well pumps, and low lift, high lift and booster pumping stations), including the number and capacities of duty and standby pumps, and discussion of the ability of the system to supply water during power failure events through either standby power facilities and/or elevated storage facilities.
- Discussion of the system storage requirements, including disinfection capabilities and chlorine contact concentration/time (CT) requirements, if applicable, and the ability of the proposed facilities to satisfy these requirements.
- Brief discussion of the locations of all significant water works structures with respect to proximity to sources of potential water supply contamination (e.g., sewage treatment plant discharges, sewer overflows, septic systems, impact of major storm events, tributary run-off impacts, runoff from agricultural/livestock rearing areas) and susceptibility to flooding.

- Discussion of the design criteria used for proposed watermains including design flows, minimum and maximum distribution pressures, minimum depth of cover, and minimum separation distance from sewers and other utilities.
- Discussion of the planning for any future extensions and/or improvements to the water supply and distribution system.
- Preliminary design plan(s), all bearing the project title, name of the municipality/owner, name of the development or facility with which the project is associated, name of the design engineer and preparation date, and where applicable, the plan scale, north point, land surveying datum, and any municipal boundaries within the area shown, and providing the following information (where pertinent).
  - General layout and sizes of existing and proposed watermains, and location of major components of other existing and proposed water works and sources of water supply, and points of potential source or system contamination (e.g., sewage treatment plant discharges, sewer overflows, septic systems, runoff from agricultural/livestock rearing areas).
  - General layout (line diagram) of the works (except for watermains).
  - Process flow diagrams for the water treatment processes, showing all process components, the direction of flow of all raw and treated water, recycle and waste streams, the location of all chemical addition points, and the maximum flow of all streams entering and leaving each component of the process and a mass balance for all parameters around each process component; and
  - A drawing showing the hydraulic profile through the entire facility including each treatment process.

If these issues were addressed in the ESR, reference should be made to that document

## **1.2.2 Design Brief/Basis of Design**

A design brief, summarizing the design criteria and presenting the design calculations used in sizing individual components of the system, should be prepared along with final plans and specifications. Where a preliminary report was not prepared or where some part of the information in the preliminary report is no longer valid or applicable, the design brief should include the applicable information outlined in as well as the applicable information outlined below.

### **1.2.2.1 Design Brief – Watermains**

In many cases, the establishment and alteration (including additions, modifications, replacements or extensions) of watermains will have been pre-authorized through the provisions of the DWWP. However, in cases where the pre-authorization conditions have not been met or are one of the excluded categories of watermains, an application for an amendment to the DWWP will be required.

In such cases, the design brief should include:

- Nature and population of the area served (current and design);
- Maximum water demand, including fire flows;
- Hydraulic grade line profile;
- Design data and calculations for individual watermains, including the required capacity; and
- Capacity of the existing (or proposed) drinking water system to meet the additional water demand without compromising the system minimum pressure requirements. In cases of

minor watermain extensions, where the minimum sizing requirement dictates the use of 150 mm (6 in) diameter pipes, such calculations are generally not required. However, the information is essential where:

- (a) the designer proposes the use of pipe diameter smaller than 150 mm (6 in) for watermains not required to carry fire flow;
- (b) the uncommitted water supply capability of the existing system is marginal; or
- (c) the proposed water main extension is extensive.

### 1.2.2.2 Design Brief – Major Facilities

Major facilities would include, but not be limited to, water intakes and low lift pumping stations, groundwater wells, water treatment plants, high lift pumping stations and water storage facilities. Basic data should be provided on the estimated water demand from the population and area to be served, including:

- Design period;
- Design service population and area (hectares), and population density;
- Design per capita water consumption, and industrial and commercial water demand;
- Fire flow requirements; and
- Total design water demand (minimum hour, average day, maximum day and peak hour).
- Design flows used in sizing of individual components of the drinking water system (water intakes, pumps, treatment process units, storage, and distribution facilities);
- Summary of the raw water quality information and the treatment requirements;
- Description (types, number and sizes) of all proposed facilities, process units and equipment, including waste stream treatment and disposal facilities, and identification of their process design parameters (e.g., intake velocity in the intake, mixing energy in rapid mix and flocculation tanks, surface settling rates and retention times in settling tanks, filtration and backwash rates in filters, and chemical feed rates);
- Disinfection concentration and contact time information, as well as expected flow characteristics related to CT assessments (T10) where applicable;
- Detailed process and hydraulic design (or sizing) calculations, including surge analysis (where required) for all facilities, treatment units and equipment;
- Hydraulic profiles through facilities such as water intake, treatment plants, and pumping stations, prepared for minimum and maximum flow conditions to a vertical scale adequate to clearly show the elevations of tank tops, channel and trough inverts, weirs and other features directly affecting the hydraulic gradient (for water intake facilities, normal, maximum and minimum water levels of the water source and their effects on low-lift pumping station should be shown);
- Process flow diagrams (PFD) showing all process components (including type, size, pertinent features, and rate capacity of process units and major equipment, e.g., tanks, reactors, pumps, and chemical feeders), direction of flow of all process, recycle, backwash and waste streams, and the location of all points of chemical



addition and treated water and waste stream effluent sampling and monitoring; and indicating the minimum and maximum flow rates of all streams entering and leaving each process component as well as a mass balance for all parameters around each process component;

- Proposed flow metering system, including raw water supply, backwash water flows, individual unit filtration rates, treated water production quantity;
- Proposed chemical flow metering systems, where applicable;
- Proposed treated water and waste stream effluent quality monitoring program, including provision of continuous automatic water quality analyzers, identification of sampling points, frequency of sampling and calibration procedures;
- Proposed system automation and back up procedures (Refer to the Ministry's **Design Guidelines for Drinking Water Systems 2008** - [Section 9.6 – Automated/Unattended Operation](#)); and
- Proposed rated capacity of the new or expanded water treatment plant (Refer to the Ministry's **Design Guidelines for Drinking Water Systems 2008** - [Section 3.6 – Plant Capacity Rating](#)).

### **1.3 Final Plans and Support Documents**

All final plans should bear the project title, name of the municipality/owner, name of the development or facility with which the project is associated, and name of the design engineer, including a signed and dated imprint of his/her Professional Engineer seal, and where applicable, also the plan scale, north point, land surveying datum, and any municipal boundaries within the area shown.

Detailed engineering plans should include plan views, elevations, sections and supplementary views which, together with the specifications and general layout plans, would provide the working information for finalizing the construction contract for the works. These drawings should show dimensions and relative elevations of structures, ground elevations, the location and outline of equipment, location and size of piping, liquid/water levels, 1:100 year flood line, where applicable, and groundwater levels.

#### **1.3.1 Plans of Watermains**

##### **1.3.1.1 General Plan**

A comprehensive plan of the existing and proposed components of the drinking water system should be prepared for projects involving new water distribution systems or substantial additions to existing systems. This plan should show:

- All major topographic features including existing and proposed streets, contour lines at suitable intervals, drainage areas, watercourses, municipal boundaries, and land surveying datum used (or assumed bench mark);
- Location and size of existing and proposed watermains;
- Location and nature of all existing and proposed components of the drinking water system associated with the proposed watermains; and
- Location of any existing sewer overflows.

##### **1.3.1.2 Detailed Engineering Drawings**

Detailed plan and profile drawings should be provided for the proposed and adjacent existing watermains. The profiles should have a horizontal scale of not more than 1:1000 and a vertical scale of not more than 1:100. The plan view should be drawn to a corresponding horizontal scale. Detailed engineering drawings should show:

- Location of streets and watermains;
- Existing and proposed ground surface;
- Size, material and class of pipe, location of hydrants, valves, blow-offs, meter chambers and other appurtenances;
- Location of all known existing structures which might interfere with or affect the proposed watermains, especially any sewers and other sewage works;
- Details of elements such as watermain bedding and anchoring, hydrant connections, service connections, bridge crossings, stream crossings, support structures for existing structures in the path of construction, trench bracing, thrust blocks, air release valve and blow-off valve installations, and corrosion control measures; and
- Any additional descriptive specifications and information not included in a separate specifications document, but required to inform the contractor of all project requirements regarding the type and quality of construction materials and prefabricated components, quality of workmanship, testing of structures and materials to meet design standards, and acceptance testing for the completed works and component units (e.g., disinfection and pressure testing of watermains).

### **1.3.2 Plans of Major Facilities**

Major facilities would include, but not be limited to, water intake and low lift pumping stations, groundwater wells, water treatment plants, high lift pumping stations, re-chlorination facilities and water storage facilities.

#### **1.3.2.1 General Plan**

A comprehensive general plan of the existing and proposed water works should be prepared for all projects involving new major water works. This plan should show:

- Location of the proposed system and the area to be serviced by the system, if applicable;
- All major topographic features including drainage areas, existing and proposed streets, watercourses, contour lines at suitable intervals, municipal boundaries, and land surveying datum used (or assumed bench mark); and
- Location and nature of all existing and proposed major components of the drinking water system associated with the proposed facilities, including wells, intakes, treatment plant, reservoirs and pumping stations, together with their individual geo-reference coordinates (UTM Easting and Northing).

#### **1.3.2.2 Site Plans**

Individual site plans should be provided for all proposed major facilities of the drinking water system and modifications/upgrades of such facilities. Each site plan should show:

- The entire property where the facility is to be or is located, including the property lines, and identification of the nature of the adjoining lands;
- Topographic features of the property and adjoining lands, including existing and proposed streets, contour lines at suitable intervals, drainage areas, watercourses, the elevation of the highest known flood level, where applicable, municipal boundaries, and the land surveying datum (or assumed bench mark) used;
- Layout, size and nature of the existing, proposed and future structures on the property showing distances from property lines, and location of residences and other structures on adjoining properties; and
- The location of wells, test borings and groundwater elevations within site limits may be shown on the site plan, depending on the consulting engineer. The geotechnical report is usually a separate document and a reference should be provided.

### **1.3.2.3 General Layout and Detailed Engineering Drawings**

The following general layout and detailed engineering drawings should be provided for all new major facilities of the drinking water system and modifications/upgrades of existing major facilities:

- For each groundwater well, a schematic diagram showing details of well construction including proposed pump installation level, and well screen data including well screen entrance velocities;
- General layout plans for all major facilities of the works (e.g., layout of all filters together) including all associated process flow channels and piping (show direction of flow), process and ancillary equipment, air and chemical feed lines, points of chemical addition, and filter-to-waste;
- Construction scale plan and profile drawings (with dimensions and elevations) of all facilities proposed to be constructed or modified, including any additional descriptive specifications and information not included in a separate specifications document; and
- Process and instrumentation diagrams (P&ID) showing the inter-connection and operational control arrangements for all process and ancillary equipment and appurtenances.

## **1.4 Specifications**

Detailed technical specifications should be provided for all water works projects. In the case of minor works such as minor watermain extensions, these specifications can generally be noted on the final plans. For more extensive works, separate specification documents should be prepared.

The specifications should include all construction and installation information not shown on the drawings and required to inform the contractor of all project requirements regarding:

- Type and quality of construction materials and prefabricated components;
- Quality of workmanship and audit procedures/methodology;
- Type, size, rating, operating characteristics, and quality of mechanical and electrical equipment and installations (e.g., process and ancillary equipment and appurtenances, valves, piping and pipe joints; electrical apparatus, wiring, and metering and monitoring equipment, laboratory fixtures and equipment, and special tools);

- Type and quality of process materials (e.g., filter media) and chemicals, as well as applicable American National Standards Institute (ANSI), American Water Works Association (AWWA), NSF International (NSF) and Canadian Standards Association (CSA) requirements;
- Testing of structures, materials and equipment necessary to meet design standards;
- Instrument accuracy and calibration frequency necessary to meet the performance criteria of residual analyzers required by O. Reg. 170/03);
- Acceptance testing for the completed works and component units (e.g., pressure testing of watermains and other piping);
- A program for keeping existing water works facilities in operation during construction of additional facilities so as to minimize interruption of service;
- Laboratory facilities and equipment;
- The number and design of chemical feeding equipment (Refer to the Ministry's **Design Guidelines for Drinking Water Systems 2008- [Section 6.2.6 – Chemical Feed Equipment and Control](#)**);
- Procedures for flushing, disinfection and testing, as needed, prior to placing the project in service; and
- Materials or proprietary equipment for sanitary or other facilities including any necessary backflow or backsiphonage protection.

### 1.5 Detailed Description of Proposed Drinking Water System

The Ministry will be authorizing alterations to the drinking water system through the issuance of a schedule to the DWWP. That schedule will adopt a tabular format consistent with the system description schedule of the DWWP. It is intended to be a concise description of the authorized alterations containing the critical elements of the proposal.

In addition to the project description summary required to be provided in the application form, the proponent should attach a detailed technical description of the proposal clearly identifying all components of the system.

With the exception of watermains, such a detailed description would specify the locations, names, types, number, sizes and capacities of all vital structures and pieces of equipment in the proposed works, and identify the role of the individual components in the treatment process. The individual components of the system should be described in separate paragraphs in order of their sequence in the process flow.

Watermains should be described in a tabular form indicating the street on which the watermains are to be located and their location on that street with respect to the nearest intersecting streets.

The following are some examples of description of various types of drinking water system components.

#### **Watermains**

Street	From	To
Elm Crescent	Maple Blvd	Oak Avenue
Pine Street	Cedar Crescent	Spruce lane

**Example:**

**Groundwater supply system**

- a 324 mm diameter 61.26 m deep drilled groundwater well (Well 1-93), located in Lot 28, Concession 1, approximately 40 m west of Highway 10 and 75 m north of the Credit River crossing (NAD 83: UTM Zone 17: 498402.m E.,4835573 mN), equipped with a submersible deep well pump, rated at 1022.0 L/min at a TDH of 104.0 m, with a 150 mm diameter discharge line connected to the well pump header in the pumphouse described below, including a vented watertight galvanized steel enclosure over the wellhead;
- a well pumphouse, located approximately 30 m north of well 1-93, housing treatment and control facilities, including:
  - 150 mm diameter well 1-93 pump header and appurtenances, connected to the feeder watermain described below, including a magnetic flow meter with a by-pass,
  - chlorination system utilizing sodium hypochlorite, consisting of a 200 litre capacity sodium hypochlorite solution storage tank and two (2) chemical metering pumps (one duty, one stand-by) with a feed line discharging into the well pump header at the exit from the pumphouse,
  - iron and manganese sequestering system utilizing a phosphate based sequestering agent, consisting of a 200 litre capacity sequestering agent solution storage tank and one (1) chemical metering pump with a feed line system discharging into the well pump header at the exit from the pumphouse and into the well itself at the well pump suction (feed line to the well installed inside a 100 mm diameter PVC pipe laid underground along with a similar PVC pipe containing electrical service connection for the well pump),
  - a stand-by well-casing air displacement system utilizing carbon dioxide, consisting of two (2) (one duty, one stand-by) 34 kg carbon dioxide cylinders with gauges and solenoid valves located in the pumphouse, a 10 mm diameter carbon dioxide line from the CO<sub>2</sub> cylinders to the inside of the well casing (installed inside the above-described 100 mm diameter PVC carrying the sequestering agent feed line from the pumphouse to the well), and two (2) vents on the well casing opening inside the enclosure over the well, one equipped with a well-casing pressure relief valve opening when the pressure inside the casing is greater than 14 kPa (2 psi) above the atmospheric pressure, and the other equipped with a well-casing vacuum relief/air inlet valve opening when the pressure inside the casing is lower than 2 kPa (3 psi) below the atmospheric pressure, and
  - a 350 kW Diesel engine stand-by power generator set located in a separate room of the pumphouse; and
- a 300 mm diameter feeder watermain with fire hydrants and appurtenances and with no service connections on its entire length of approximately 915 m dedicated to provide chlorine contact time before the first consumer, as follows:

Street	From	To
Pumphouse Site	approx. 40 m west of Highway 10	Highway 10 (Pumphouse)
Highway 10	Approx 115 m North of McCannall Avenue	Credit River Crossing

### Elevated water storage tank

- an elevated water storage tank to be constructed at the northwest corner of the intersection of Herman Street and Woodlands Crescent, having an operating capacity of 4500 m<sup>3</sup>; between the minimum and maximum operating water elevations of 177.31 m and 189.50 m, designed for the peak hour water demand equalization, and fire and emergency storage.

## 2.0 Licence Renewal

The SDWA requires that the licence must be renewed within a five year period. An application for renewal will need to be submitted and the Director will issue a licence renewal if the Director is satisfied that:

1. the system will continue to be operated by an accredited operating authority or operating authorities;

The application for licence renewal will request confirmation from the owner of the operating authority or operating authorities for the system and the ministry will confirm with the accreditation body that accreditation is still in place for authorities identified.

2. the Drinking Water Works Permit remains in force;

This information will be available to the Director through the Ministry's own records.

3. operational plans for the system satisfy the requirements of the **Director's Directions for Operational Plans**;

The application for renewal will be required the submission of the Operational Plan(s) for the system which will be reviewed by Ministry staff to determine whether they continue to meet the requirements of the Director's Direction.

4. financial plans have been prepared and approved;

The application for licence renewal will request confirmation from the owner that the financial plans which have been prepared and approved by the owner as required under O. Reg. 453/07.

5. the system has been and will continue to be operated in accordance with the requirements under the SDWA and the licence;

This will be a judgement call on the part of the Director after considering all information available respecting the drinking water system. This will include any input from ministry's inspection staff, performance of the system and the assessment of information provided in support of the application for renewal, including an assessment of raw water as a source water supply. Conditions on the DWWP or licence may be added or modified as part of this assessment.

The raw water assessment will need to be undertaken as set out in accordance with Appendix C of this document entitled: **Raw Water Assessment for the Renewal of the Municipal Drinking Water Licence**.

6. any required permits to take water remain in force (if required).

The application for licence renewal will request confirmation from the owner of the status of any permits to take water for the system and MOE will share this information with MOE regional staff. This requirement would not be relevant for a stand-alone distribution system receiving all of its water from another drinking water system.

## Part IV

# Statutory Framework

### ***The Safe Drinking Water Act, 2002, c.32***

There are different requirements set out in the *Safe Drinking Water Act* for municipal and non-municipal drinking water systems. The requirements are set separately in Part V (Municipal Drinking Water Systems) and Part VI (Regulated Non-Municipal Drinking Water Systems) of the SDWA.

These two parts of the SDWA set out general requirements and prohibitions regarding the establishment, replacement, operation, alteration and fragmentation of drinking water systems, including the Directors power to grant relief from regulatory requirements regarding water treatment, sampling, testing, monitoring of the systems and the reporting of results.

For the purposes of the SDWA and the regulations, the SDWA defines a *municipal drinking water system* as a system that is owned by a municipality or a municipal service board or a corporation established under the *Municipal Act* by a municipality or a group of municipalities, or from which a municipality obtains or will obtain water under a contract, or which is defined as a municipal drinking water system by a regulation. [Note: A drinking water system owned by a Local Services Board in an unorganized territory and serving a community located within an unorganized territory is not a municipal system.]

The ***Ontario Drinking Water Quality Standards Regulation (O. Reg. 169/03)***, made under the SDWA, sets the minimum drinking water quality requirements applicable to all water that is required to be *potable* under any Ontario act, regulation, municipal by-law, or an order or other document issued under the authority of an Ontario act.

The ***Drinking Water Systems Regulation (O. Reg. 170/03)***, made under the SDWA, categorizes drinking water systems and sets category-specific requirements related to the provision and operation of treatment equipment, conducting operational checks, sampling and testing, reporting adverse test results and other problems, taking corrective action, preparation of Annual Reports, and where applicable, preparation of Engineers= Reports, Engineering Evaluation Reports and Summary Reports for Municipalities.

The ***Definitions of Words and Expressions Used in the Act Regulation (O. Reg. 171/03)***, made under the SDWA, among others, defines the term *private residence*. This definition is crucial in determining whether a drinking water serves a *major residential development* which makes the system subject to the requirements applicable to residential drinking water systems (e.g., approval requirements).

This definition provides that a *private residence* is a dwelling place occupied for an extended period of time by the same persons, if,

- s the residents have a reasonable expectation of privacy;
- s food preparation, personal hygiene, and sleeping accommodations are not communal in nature; and
- s any use of the dwelling place by a resident for a home occupation, trade, business, profession or craft is secondary to the use of the dwelling place as a residence and does not use more than 25 per cent of the indoor floor area.

Another provision of O. Reg. 171/03 relevant to the approvals program prescribes a non-municipal year-round residential system and a non-municipal seasonal residential system that serve a designated facility as a “regulated non-municipal system” for the purpose of subsection 52(2) of the SDWA (prohibition, fragmentation of regulated non-municipal systems). As a result, a Director=s consent is not required for fragmentation of a non-municipal non-residential drinking water system.

The ***Definitions of aDeficiency@ and aMunicipal Drinking Water System@ Regulation (O. Reg. 172/03)***, made under the SDWA, defines the two terms noted in its name. The latter is especially



significant from the point of view of the approval requirements. Through this regulation, the SDWA=s definition of a Δmunicipal drinking water system@ includes, a residential drinking water system being established by a non-municipal owner under a Part VI *Planning Act* agreement with a municipality if the agreement provides that the ownership of the system may be transferred to the municipality.

The **Licensing of Municipal Drinking Water Systems Regulation (O. Reg. 188/07)** made under the SDWA provides schedules of dates on or before which the owner of a municipal residential drinking water system must apply for a drinking water works permit and a municipal drinking water licence; and must submit operational plans for the system to the Director. The regulation also established that the day a municipal drinking water licence is first issued to the owner of a municipal drinking water system is specified as the day on and after which the owner shall ensure that an accredited operating authority is in charge of the system.

The **Financial Plans Regulation (O. Reg. 453/07)** made under the SDWA sets out requirements for the preparation and content of financial plans for new and existing municipal drinking water systems.

# Appendices

# APPENDIX A

## REGIONAL, DISTRICT AND AREA OFFICES Safe Drinking Water Branch

<b>SOUTHWESTERN REGION (1)</b>	<b>WEST-CENTRAL REGION (2)</b>	<b>CENTRAL REGION (3)</b>	<b>EASTERN REGION (4)</b>	<b>NORTHERN REGION (5)</b>
<b>London</b>	<b>Guelph</b>	<b>Halton Peel</b>	<b>Belleville</b>	<b>Kenora</b>
3232 White Oak Rd 3rd Flr London ON N6E1L8 Phone (519) 873-5094 Fax: 519-873-5096	1 Stone Rd. W., 4th Fl., Guelph, ON N1G 4Y2 Phone 519-826-4255 Fax: 519-826-4286 Toll Free: 800-265-8658	4145 North Service Rd., Ste. 300, Burlington, ON L7L 6A3 Phone: 905-319-3847 Fax: 905-3199-9902	345 College St. . Belleville, ON K8N 5S7 Phone 613-962-9208 Fax: 613-962-6809 Toll Free: 800-860-2763 (Within Area Code 613)	808 Robertson St. 2 <sup>nd</sup> Fl., Kenora, ON P9N 3X9 Phone 807-468-2718 Fax: 807-468-2735
<b>Owen Sound</b>	<b>Hamilton</b>	<b>York Durham</b>	<b>Cornwall</b>	<b>North Bay</b>
101 17 <sup>th</sup> Street East 3 <sup>rd</sup> Floor Owen Sound, ON N4K 0A5 Phone: 519-371-2901 Fax: 519-371-7829 Toll Free: 800-265-3783	119 King St. W., 12 <sup>th</sup> Fl., Hamilton, ON L8P 4Y7 Phone 905-521-7650 Fax: 905-521-7806 Toll Free: 800-668-4557	230 Westney Rd S., 5 <sup>th</sup> Fl., Ajax, ON L1S 7J5 Phone 905-427-5600 Fax: 905-427-5602	113 Amelia St, 1 <sup>st</sup> Fl., Cornwall, ON K6H 3P1 Phone 613-933-7402 Fax: 613-933-6402	191 Booth Rd, Unit 16 & 17, North Bay, ON P1A 4K3 Phone: 705-497-6865 Fax: 705-497-6866
<b>Sarnia</b>	<b>St. Catharines</b>	<b>Barrie</b>	<b>Kingston</b>	<b>Sault Ste. Marie</b>
1094 London Rd Sarnia ON N7S 1P1 Phone 519-336-4030 Fax: 519-336-4280	301 St. Paul Street, 9 <sup>th</sup> Floor, Suite 15, St. Catharines, ON L2R 3M8 Phone 905-704-3900 Fax: 905-704-4015 Toll Free: 800-263-1035	54 Cedar Pointe Dr., Unit 1201, Barrie, ON L4N 5R7 Phone 705-739-6441 Fax: 705-739-6350 Toll Free: 800-890-8511	1259 Gardiners Rd, Unit 3, P.O. Box 22032, Kingston, ON K7M 8S5 Phone 613-549-4000 Fax: 613-540-6876	289 Bay Street, 3 <sup>rd</sup> Fl., Sault Ste. Marie, ON P6A 1W7 Phone: 705-942-6354 Fax: 705-942-6327
<b>Windsor</b>			<b>Ottawa</b>	<b>Sudbury</b>
4510 Rhodes Dr Unit 620, Windsor ON N8W5K5 Phone 519-948-1464 Fax: 519-948-2396			2430 Don Reid Drive, Ottawa, ON K1H 1E1 Phone: 613-521-3450 Fax: 613-521-5437	199 Larch St., Ste. 1201, Sudbury, ON P3E 5P9 Phone: 705-564-3237 Fax: 705-564-4180
			<b>Peterborough</b>	<b>Thunder Bay</b>
			300 Water Street, 2 <sup>nd</sup> Fl., Peterborough, ON K9J 8M5 Phone 705-755-4300 Fax: 705-755-4343	435 James Street South, 3 <sup>rd</sup> Floor, Suite 331, Thunder Bay, ON P7E 6S7 Phone 807-475-1205 Fax: 807-475-1161
				<b>Timmins</b>
				Hwy 101 E., Box 3080, South Porcupine, ON P0N 1H0 Phone: 705-235-1500 Fax: 705-235-1520

# APPENDIX B

## Supplement to Application - Form A

### COST FOR PART V SDWA APPLICATIONS

### DRINKING WATER WORKS PERMITS

This form is to be completed for all applications under Part V of the **Safe Drinking Water Act** (SDWA) for drinking water works permits (DWWPs) or amendments. This form reflects the cost for applications for approval under the SDWA, as per the **Minister=s Order for Drinking Water Works Permit Fees**.

Please refer to the tables in the attached **Summary of Drinking Water Works Permit Costs** when completing this form. These tables summarize the applicable costs and categories. The Summary of Drinking Water Works Permit Costs should be retained for future use and the completed form should be attached to the application for a DWWP or amendment. At the present time fees are not required to be paid in respect of a municipal drinking water licence.

<b>Drinking Water System Owner's Name:</b>	<b>DWWP No.</b>
<p>Application Cost: Indicate the type of application and complete the corresponding <b>Section 1, 2, 3, or 4</b>.</p> <p><input type="checkbox"/> <b>Section 1: DWWP for a New Drinking Water System (Table 1)</b></p> <p><input type="checkbox"/> <b>Section 2: Amendment to existing DWWP:</b>    <input type="checkbox"/> <b>Administrative amendments (Table 2(a))</b>  <input type="checkbox"/> <b>Amendments requiring a technical review (Table 2(b))</b></p> <p><input type="checkbox"/> <b>Section 3: DWWP Revocations (Table 3)</b></p> <p><input type="checkbox"/> <b>Section 4: Amendments or revocation necessary as a result of action that the applicant has been required to take by the Director pursuant to a condition contained in a drinking water works permit or a licence – No Fee</b></p>	

## SECTION 1: DWWP for a New Drinking Water System

Table 1: DWWP for a New Drinking Water System

	Fee Categories	Cost
	<b>Fee Category 1 - Administrative processing (applies to all)</b>	<b>\$ 200</b>
	<p>From the attached summary table, under the section entitled <b>Table 1 – DWWP for a New Drinking Water System</b>, indicate the appropriate fee categories <b>applicable to the application</b> and the corresponding costs (Categories 2 to 7).</p> <p>Applicable Fee Category _____ Cost \$ _____</p> <p>_____ Cost \$ _____</p> <p>_____ Cost \$ _____</p> <p><i>(Indicate all applicable categories and the corresponding cost.)</i></p> <p><b>Total Cost:</b> _____</p>	\$
<b>TOTAL COST</b>		<b>\$</b>

## SECTION 2: AMENDMENT TO EXISTING DWWP

**Table 2(a): DWWP Administrative Amendments**

	Fee Category	Cost
	<b>Fee Category 8</b> - If the amendment is considered as administrative (no technical review is required), the total cost of the application is \$100.	<b>\$ 100</b>
<b>TOTAL COST</b>		<b>\$ 100</b>

**Table 2(b): Amendments Requiring a Technical Review**

	Fee Categories	Cost
	<b>Fee Category 1</b> - Administrative processing ( <b>applies to all</b> )	<b>\$ 200</b>
	<p>From the attached summary table, under the section entitled "DWWO Amendments (Technical)", indicate the appropriate fee categories <b>applicable to the application</b> and the corresponding costs (relevant Categories of 2, 3, 9, 10, 11, 7).</p> <p>Applicable Fee Category _____ Cost \$ _____</p> <p>_____ Cost \$ _____</p> <p>_____ Cost \$ _____</p> <p><i>(Indicate all applicable categories and the corresponding cost.)</i></p> <p><b>Total Cost:</b> _____</p>	<b>\$</b>
<b>TOTAL COST</b>		<b>\$</b>

### SECTION 3: REVOCATION OF EXISTING DWWP

**Table 3: Revocation of an Existing DWWP – Total Category 500 Fee**

(For a revocation not required as a result of action that the applicant has been required to take by the Director pursuant to a condition contained in a drinking water works permit or a licence. For these types of applications see Section 4, Table 4)

	Fee Categories	Cost
	<b>Fee Category 1 - Administrative processing (applies to all)</b>	<b>\$ 200</b>
	<p>From the attached summary table, under the section entitled <b>Table 1 – DWWP for a New Drinking Water System</b>, indicate the appropriate fee categories <b>applicable to the application</b> and the corresponding costs (Categories 2 to 7).</p> <p>Applicable Fee Category _____ Cost \$ _____</p> <p>_____ Cost \$ _____</p> <p>_____ Cost \$ _____</p> <p><i>(Indicate all applicable categories and the corresponding cost.)</i></p> <p style="text-align: right;"><b>Total Cost:</b> _____</p>	\$
<b>TOTAL COST (Category 500 Fee):</b>		<b>\$</b>

### SECTION 4: AMENDMENTS/REVOCATION PURSUANT TO CONDITIONS

**Table 4: Amendments/Revocation Pursuant to Conditions**

	Category	Cost
	<b>Fee Category 100 - Amendments or revocation necessary as a result of action that the applicant has been required to take by the Director pursuant to a condition contained in a drinking water works permit or a licence.</b>	<b>\$ 0</b>
<b>TOTAL COST</b>		<b>\$ 0</b>

## SUMMARY OF DRINKING WATER WORKS PERMIT COSTS

**Table 1: DWWP for NEW Drinking Water Systems**

*TOTAL COST = 1 (always) + ( Total of one or any combination of 2 ,3, 4, 5, 6) + 7 (if applicable)*

FEE CATEGORY	SUBJECT MATTER	COST (\$)
1	Administrative processing (applies to all applications for new system)	\$200
2	The new intake or extraction of surface or ground water, together with treatment other than disinfection, or the expansion of the capacity of an existing intake or extraction of surface or ground water, together with treatment other than disinfection.	\$5,000, if the maximum design capacity is not more than 4,550 cubic metres per day
3	The new intake or extraction of surface or ground water, together with treatment other than disinfection, or the expansion of the capacity of an existing intake or extraction of surface or ground water, together with treatment other than disinfection	\$10,000, if the maximum design capacity is more than 4,550 cubic metres per day
4	A facility for the extraction and supply of ground water with no treatment other than disinfection.	\$2000
5	Watermains and appurtenances, including hydrants.	\$1000
6	Highlift and booster pumping stations, reservoirs or elevated tanks.	\$2000
7	Review of Hydrogeological Assessment	\$3000

**Table 2(a): DWWP AMENDMENTS (ADMINISTRATIVE)**

FEE CATEGORY	SUBJECT MATTER	COST (\$)
8	Administrative amendments (no technical review involved)	\$100

**Table 2(b): DWWP AMENDMENTS (TECHNICAL)**

*TOTAL COST = 1(always) +(Total of one or any combination of categories 2, 3, 9, 10, 11) +7 (if applicable)*

FEE CATEGORY	SUBJECT MATTER	COST (\$)
1	Administrative processing (applies to all amendment, except administrative amendments)	\$200
2	The new intake or extraction of surface or ground water, together with treatment other than disinfection, or the expansion of the capacity of an existing intake or extraction of surface or ground water, together with treatment other than disinfection.	\$5,000, if the maximum design capacity is not more than 4,550 cubic metres per day
3	The new intake or extraction of surface or ground water, together with treatment other than disinfection, or the expansion of the capacity of an existing intake or extraction of surface or ground water, together with treatment other than disinfection	\$10,000, if the maximum design capacity is more than 4,550 cubic metres per day
9	A. A treatment plant upgrade, including new treatment (such as chemical coagulation and flocculation, settling, granular media filtration, membrane filtration, or contaminant absorption or disinfection) at existing water supply plants, new plant process waste stream treatment and disposal facilities, additional or replacement treatment modules, and the establishment, alteration, expansion or replacement of an intake facility, or  B. A process modification, including the alteration, extension or replacement of an existing pumping system or chemical storage or application system (such as a change of chemical filter media or a standby power supply system) and the provision of additional points of process chemical application.	\$3000
10	The alteration, extension or replacement of an existing well, including provision of an additional well to serve as a standby and the provision of disinfection and disinfection control facilities	\$1200



## SUMMARY OF DRINKING WATER WORKS PERMIT COSTS

11	In any other case	\$600
7	Review of Hydrogeological Assessment	\$3000

**Table 3: REVOCATIONS**

FEE CATEGORY	SUBJECT MATTER	COST (\$)
12	Administrative revocations (no technical review involved)	\$0
500	If a technical review is involved in reviewing the application for the revocation, the applicable costs are outlined under APPROVALS (for new works or equipment), above, where TOTAL COST = 1 (always) + (Total of one or any combination of 2, 3,4, 5 ,6 ) + 7 (if applicable)	as calculated

# APPENDIX C

## Raw Water Assessment

for the

## Renewal

of the

## Municipal Drinking Water Licence

### 1.0 Preamble

In a multiple barrier system for providing safe drinking water, the selection and protection of a reliable, high quality drinking water source is the first barrier.

The purpose of providing information respecting raw water in support of an application a Licence renewal, is for the owner to demonstrate to the Director that:

- the source water has not substantively deteriorated or varied since the issuance of the issuance or renewal of the Licence, and
- the existing unit processes of the treatment system continue to be appropriate and effective for the treatment of the source water.

### 2.0 Raw Water Categories

The concerns respecting the ongoing suitability of raw water sources and the current treatment being provided may be further summarized by source water category as follows:

#### 2.1 Surface Water

A good groundwater supply should have no evidence of contamination by surface water<sup>7</sup>. The minimum treatment requirement for such supplies consists of disinfection only. The concern is that the system might have become, or might be trending towards, a **G**roundwater **U**nder the **D**irect **I**nfluence of surface water (GUDI) designation.

#### 2.2 Groundwater

Surface water supplies are presumed to contain some contaminants or be at a high risk of contamination and the applicable minimum treatment requirements consisting of chemically assisted filtration and disinfection have been established accordingly. The concern is that contamination upstream or in the vicinity of the intake might have increased or varied with time such that it could not be effectively removed or treated with the existing treatment processes. It is necessary to confirm that the current pathogen log removal or inactivation capabilities of the treatment processes continue to be adequate, which, in turn, will be based on confirming that the raw water supply has not significantly changed in its characteristics.

#### 2.3 Groundwater Under the Direct Influence of Surface Water (GUDI)

A well water supply is a GUDI supply where there is:

- a) Physical evidence of surface water contamination (e.g. insect parts, high turbidity), or
- b) Evidence of surface water microorganisms (e.g. campylobacter, aerobic spores, cryptosporidium, giardia)

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<sup>7</sup> *Procedure for Disinfection of Drinking Water in Ontario – June 4, 2006* – section 2.2

Also, subsection 2(2) of O. Reg. 170/03 specifies conditions under which well water is deemed to be groundwater under the influence of surface water unless a current report by a professional engineer or professional hydrogeologist states that the well is not a GUDI well and a MOE Director agrees with this conclusion.

A well water supply will normally be flagged as a potential GUDI system, and the undertaking of a study by a professional engineer or professional hydrogeologist may be necessary, if:

- a) The well water regularly contains Total Coliforms and/or periodically contains E.coli; or
- b) The well is located within approximately 50 days horizontal saturated travel time from surface water or are within 100m (overburden wells) or 500m (bedrock wells) of surface water (whichever is greater) and meet one of the following criteria:
  - a. The well may be drawing water from an unconfined aquifer;
  - b. The well may be drawing water from formations within approximately 15m of surface;
  - c. The well is part of an enhanced recharge/infiltration project;
  - d. When the well is pumped, water levels in the adjacent surface water body rapidly change or hydraulic gradients in the ground beside the surface water body significantly change downward in the direction of the well;
  - e. Physical and chemical water quality parameters (e.g., temperature, conductivity, turbidity, total dissolved solids, pH, colour, oxygen) in the well water are more consistent with the adjacent surface water body than the local groundwater and/or they fluctuate significantly and rapidly in response to climatological or surface water conditions.

A well water supply determined to be a GUDI supply is considered to have essentially the same risks as a surface water supply and, as such, the minimum treatment for GUDI supplies consists of chemically assisted filtration and disinfection. The concerns for this type of source water are the same as those outlined above for a surface water source.

## 2.4 GUDI with Effective Insitu Filtration

A water supply identified as a potential GUDI supply through the ministry review of the Engineer's Report (submitted further to the requirements of O. Reg. 459/00) would have been determined by the Director to have effective in-situ filtration when all of the following conditions were met:

- a. particle count data had shown that water consistently contained significantly less than 100 particles per ml in the size range of 10 microns and greater in size;
- b. a hydrogeologist's report had confirmed that the particle count is not likely to change during storm, seasonal or other regular environmental changes; and
- c. the raw water was characterized by good microbiological quality.

For GUDI sources determined to have effective in-situ filtration, the minimum treatment requirements imposed through conditions of the C of A would consist of enhanced disinfection alone and the system owner would also be required to take measures to protect the well from contamination and prevent deterioration of the integrity of the overburden in the vicinity of the well.

The concerns to be addressed during Licence issuance or renewal are whether the in-situ filtration provided by the overburden might no longer be effective or that any protective or preventive measures imposed by the C of A might not have been implemented.

## 3.0 Raw Water Characterization – General

In the case of a new drinking water system raw water characterization would normally require results of source water analyses that include all physical chemical and bacteriological parameters identified in Tables 1, 2 and 4 of the **Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines – Revised June 2006** (ODWSOG), or as further revised from time to time, which is published in support of the **Ontario Drinking Water Quality Standards Regulation (O. Reg. 169/03)** document. This characterization would also include the gross alpha and beta screening analyses to determine if it is necessary to undertake further analyses to identify the individual radionuclides

responsible for the detected radiation and determine their individual radiation intensities<sup>8</sup> (Table 3 of the ODWSOG document).

The number of samples and the period of sampling frequency would be dependent on the type of source. A new secure groundwater source may only require samples taken during well pumping tests, while a new surface water supply may require sampling over a period of time sufficient to account for seasonal variations in the water quality.

The raw water characterization may also need to include such parameters as conductivity, water stability index, etc., which are not listed in the ODWSOG document, but may be essential in establishing the raw water treatability or other special treatment needs.

#### **4.0 Raw Water Assessment – Licence Renewal**

For purposes of determining that the raw water has not changed significantly enough to warrant additional treatment, the information required to be submitted may be met, in whole or in part, through historical data or knowledge.

The information submitted should include, as a minimum, a summary<sup>9</sup> of the following information compiled since the issuance of the first licence or the last renewal of the Licence (as applicable):

- Monitoring results of raw water taken in accordance with regulatory requirements, or Conditions imposed on a C of A.
- Monitoring results of raw water taken for purposes of operational control.
- Results of any raw water assessment which may have occurred within the interim period.
- In the case of a GUDI well supply which has been determined to have effective in-situ filtration (but without chemically assisted filtration as part of the treatment system), an outline of any measures implemented to protect the well from contamination and prevent deterioration of the integrity of the overburden in the vicinity of the well.

In addition, the submission may also include summary information or historical data including, but not necessarily restricted to:

- Monitoring results of treated water where the parameters in question would not be significantly removed or altered by the treatment processes of the system,
- Assessments or studies undertaken of the source water catchment area,
- Knowledge of land use activities (e.g. no agricultural activity or pesticides application within the aquifer catchment area of a well supply).

The information submitted needs to demonstrate to the ministry reviewer, and in turn the Director that the treatment being provided (or proposed in the case of a new system) continues to be appropriate for the current source water conditions.

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<sup>8</sup> When such screening is undertaken and the results are confirmed to be above a set value, the individual alpha and/or beta emitting radionuclides responsible for the radiation detected through the screening analyses must be identified and their individual radiation intensities determined. The identification of individual alpha emitters is required if the repeat gross alpha analysis result exceeds 4.0 Bq/L (repeat analysis required if the first analysis result exceeds 0.1 Bq/L). The identification of individual beta emitters is required if the repeat gross beta analysis result exceeds 0.5 Bq/L (repeat analysis required if the first analysis result exceeds 0.5 Bq/L).

<sup>9</sup> The extent and content of the summary will vary from system to system and depend on the nature and availability of the information. While the individual analysis results need not be submitted, the summary should be supported by context information (e.g.: parameter, number of samples, frequency/period of sampling, ranges, averages, etc.) as available.

Where there have been some evidence or analysis results since the issuance of the first licence or the last renewal of the Licence (as applicable) that the raw water may have changed or would indicate evidence of a GUDI or potential GUDI source in a well supply previously identified as a good groundwater source, further discussion on the evidence or analyses results is required. In this case, the supporting information provided must include a discussion of relevant incidents or historical occurrences and measures taken to respond to or address the occurrences and/or results of any subsequent monitoring.

The ministry's review staff may request further information to support the assessment of the raw water source.

If the applicant should have any questions respecting the sufficiency of the information being provided he/she should contact the Safe Drinking Water Branch for further pre-submission consultation.