

APPLICATION FORM AND GUIDE FOR A NEW MUNICIPAL WATERWORKS SYSTEM

INTRODUCTION

The attached form and guidelines outline the information required in an application for a waterworks system regulated under the Environmental Protection and Enhancement Act (EPEA). The application has been prepared in accordance with the Approval Procedure Regulation 113/93 and requirements specific to applications for waterworks systems. Please ensure that each section of the application is completed in a concise and clear manner.

Waterworks system includes water well or surface water intake, water supply line, water treatment plant, storage, pumping and distribution systems. Waterworks systems are regulated by two methods in Alberta:

- Systems that must treat the source water for health-related parameters must obtain an Approval and operate in accordance with the terms and conditions of that Approval,
- Systems that do not require health-related treatment must obtain a Registration and operate in accordance with a Code of Practice.

For your information, the general steps and procedures that are followed when reviewing and issuing an Approval or Registration for municipal waterworks system is illustrated by the attached flow chart (Figure 1).

Depending on the activity for which you are applying for, an application may be required to be advertised and the applicant, upon request, must provide copies of the application to the public. It is therefore important that the application must contain all the information required and be formatted to facilitate public review. Systems that require an Approval are also subject to appeal.

This application must be completed and forwarded to the Regulatory Approvals Centre at the address below. The Regulatory Approvals Centre will forward the application to the appropriate Regional Director for review. The Approval or Registration Holder must receive the required Approval or Registration prior to the construction and operation of the waterworks system.

**Regulatory Approvals Centre
Main Floor, Oxbridge Place
9820 - 106 Street
EDMONTON, Alberta
T5K 2J6**

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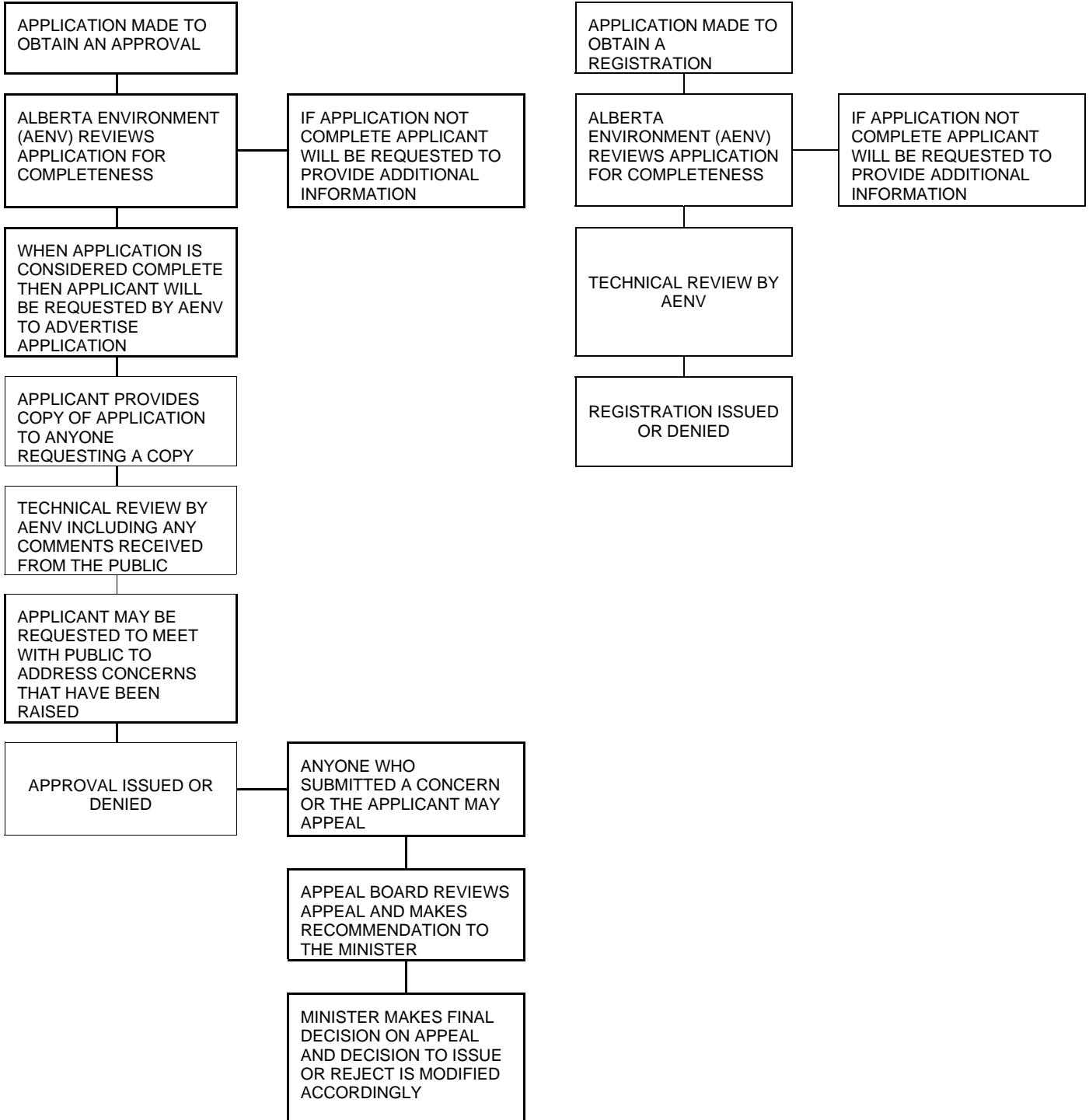
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FIGURE 1 - THE APPROVAL AND REGISTRATION PROCEDURES FOR MUNICIPAL WATERWORKS SYSTEM

APPROVAL – Schedule 1 Activity

REGISTRATION – Schedule 2 Activity



**APPLICATION FORM AND GUIDE
FOR APPROVAL OF A
MUNICIPAL WATERWORKS SYSTEM**

Section 1: Administrative Information

1.1 Name and Address of the Owner (Municipality/Commission/Company/Individual)

Name: _____

Address: _____

Contact Person: _____ Title: _____

Telephone: _____ Fax: _____

1.2 Name of the Waterworks Facility: _____

1.3 Location or Development this Facility is to Service: _____

1.4 Certified Operators and Operating Staff assigned to the operation of the waterworks system

OPERATOR'S NAME	POSITION	CERTIFICATION		WORK PHONE #
		NUMBER	CLASS	

1.5 If this application is for a waterworks system including health-related treatment, as a requirement of the Environmental Protection and Enhancement Act (Section 69), receipt of this application must be advertised. Therefore, please provide the name of the newspaper(s) most widely distributed in the area where the facility is located. Also, you may suggest other methods of public notification.

A. Newspaper(s): _____

B. Other methods: _____

1.6 Has an Operations Program been prepared for the Waterworks Facility? Yes ____ No ____

Section 2: Waterworks System (Technical Data)

2.1 Number of service connections in the system: _____

2.2 Approximate length (in kilometres) of the distribution system: _____

2.3 Required raw water analysis (recent) included with application: Yes:_____ No:_____ Date:_____

2.4 Present population served by the waterworks system: _____

Flows	Average Daily Flow	Maximum Daily Flow	Peak Hourly Flow
Current (anticipated)			
Design Capacity			

2.5 Are there any other municipality(ies), development(s) or commissions/companies outside the municipal boundaries obtaining potable water from the waterworks system (other than truck haul)? Yes ___ No___ If yes, please provide a complete list and address with name of contact person and approximate annual flows or population.

Name	Contact Person	Phone No.	Annual Flow or Population

2.6 Are there any truck fill stations? Yes _____ No _____ If yes, how many?

Are the truck fill stations metered? Yes _____ No _____ Average monthly flows: _____

2.7 Raw Water Supply

For Surface Supply:

Name of source: _____

- Intake location - Point of diversion: LSD_____ SEC_____ TWP_____ RG_____ M_____
- Raw water pumphouse location: Onstream _____ Offstream _____
- Water Resources Licence to Divert No. _____ Date issued: _____
- Raw water pumping:

Unit	Power Rating (kw)	Capacity (L/S)

For Supply from another EPEA authorized Waterworks System:

Name of Supplying Waterworks System: _____

For Groundwater Source (if applicable, please complete the following table).

Water Rights Licence No.	Well No.	Legal Description Sec-Twp-Rge-Mer.	Date Well Came Into Production Month/Year	Well Completion Depth (m)	Intake Depth (m)	Present Annual Water Use (m ³) per Year	Production Rate (L/s)	Rated Pump Capacity (L/s)
			/					
			/					
			/					

2.8 Number of raw water storage reservoirs (if applicable):

Location	Approximate Useable Capacity m ³	Type Onstream or Offstream, Etc.	How Often is it Filled and When
Total Capacity			

Are the raw water reservoirs aerated? Yes _____ No _____

If yes, please identify which ones and method of aeration _____

Intake from reservoir (fixed or adjustable) _____

Method of algae control if any _____

2.9 Water Metering

A. Please list all flow monitoring locations:

(a) Monitoring in the Treatment Process:

- Raw water monitoring location: _____

- Treated water monitoring location: _____

- Other monitoring location: _____

(b) In the distribution system (i.e. residential, commercial, industrial, public/government, or any combination of):

B. Please list all sampling locations for pH, turbidity, and chlorine residual (raw and treated water within the treatment process, if applicable):

2.10 Water Treatment (if applicable)

- Legal land description of the water treatment facility: LSD ___ Sec ___ Tp ___ Rg ___ W ___ M or other (i.e. street address) _____

- No treatment
- Disinfection only. Method: _____
- Aeration - Type of aeration _____
- Pressure filtration
- Number of pressure filters _____ Filter media _____
- Iron removal
- Manganese removal
- Other (specify): _____
- Conventional treatment process
- Pre-oxidation method _____
- Flocculation _____ Number of flocculants _____ Velocity gradient #1 _____ #2 _____

Clarification/Sedimentation

Number	Design Capacity	Retention Time	Volume	Rise Rate

Filtration: Number of filters _____
 Type of filter _____
 Filter media _____

Filter	Filter Media	Surface Area	Design Loading Rate m/h

2.11 Inventory of chemical used. (Please identify all the chemicals used seasonally or continuously, including chlorine as a pre-oxidant or disinfectant)

Chemical Name	Seasonal/Continuous	Its Purpose	Point of Injection

2.12 Disinfection (chlorine gas, sodium hypochlorite, calcium hypochlorite, ozonation, chlorine dioxide, ultra violet, others)

Type _____

Point of application _____

Disinfection contact time at design flows prior to entering distribution _____

2.13 Fluoridation Yes _____ No _____

Type of chemical _____ Chemical supplier _____

Bylaw No. _____ Date passed _____

2.14 Other treatment (please provide details and design criteria)

2.15 Disposal and handling of wastewater from plant

Type of Waste Stream	Method of Disposal	Monitoring
Clarifier Blowdown		
Lime Sludge		
Filter Backwash		
Filter to Waste		
Other (Specify)

Section 3: Treated Water Distribution System (all systems)

3.1 Treated Water Storage Reservoir

No.	Elevated, Surface, or Underground	Construction Material	Volume (m ³)	Location (Street address, legal land description)

Total volume of treated water storage _____ (m³)

3.2 Treated Water Pumping

Unit	Power Rating (kw)	Capacity (L/s)

3.3 Treated Water Distribution Pumps

Unit	Power Rating (kw)	Capacity (L/s)

3.4 Emergency Pumping

Unit	Power Rating (kw)	Capacity (L/s)

Total capacity of emergency pumps _____ (L/s)

Section 4: Laboratory and Monitoring

4.1 Extent of monitoring carried out by the municipality/commission/company (check the appropriate monitoring and frequency).

Type of Measurement	Number of Analysis per Week
<input type="checkbox"/> Chlorine residual (in the plant)	
<input type="checkbox"/> Chlorine residual (in the distribution system)	
<input type="checkbox"/> pH (raw)	
<input type="checkbox"/> pH (treated)	
<input type="checkbox"/> Turbidity (raw)	
<input type="checkbox"/> Turbidity (after filter)	
<input type="checkbox"/> Turbidity (treated)	
<input type="checkbox"/> Iron (raw)	
<input type="checkbox"/> Iron (treated)	
<input type="checkbox"/> Manganese (raw)	
<input type="checkbox"/> Manganese (treated)	
<input type="checkbox"/> Fluoride concentration	
<input type="checkbox"/> Others (Specify) _____ _____ _____ _____ _____ _____	

Section 5: Overall Review of the Waterworks System

The plans and specifications for the waterworks system must also be attached to an application in order to be considered complete. The application must also contain confirmation, by a professional engineer, that all aspects of the waterworks design conform to the requirements of the Regulations under the Act, or a statement identifying and justifying the deviation.

In addition, the information required in the attached Tables (Tables 1 and 2) must be submitted as part of the application for an approval in accordance with the Environmental Protection and Enhancement Act, Approvals Procedure Regulation 113/93.

It should be noted that the extent of information required will depend on the applicant's circumstance to ensure that they have adequately addressed each issue. However, as this application is a public document, it is important that it be as clear and concise as possible. Therefore, the suggested format for submission of the required information should be followed.

TABLE 1: APPROVAL APPLICATION INFORMATION REQUIREMENTS

INFORMATION REQUIREMENT	COMMENTS AND SUGGESTED FORMAT
1. A general description of the waterworks system should be provided.	<p>It is suggested that a map of the area showing the location of the following landmarks be provided:</p> <ul style="list-style-type: none"> (a) the raw water supply intake/well or surface runoff area (b) any raw water reservoirs or pump stations (c) water treatment plant (d) treated water reservoir and pump stations if any.
2. A brief description of the waterworks system to meet future demands.	<p>The applicant should address the following:</p> <ul style="list-style-type: none"> (a) quality and quantity of the raw water supply source to meet long term demand. (b) capability of the water treatment facility to meet the treated water quality as outlined in the Guidelines for Canadian Drinking Water Quality and community's quantity demand. (c) an outline of water conservation programs, if any, to control excess water use.
3. A description of the waste streams discharged from the water treatment plant, if any, and its possible impact.	<p>Quality and quantity of the waste streams discharged should be identified, including any environmental impact which may be experienced by the disposal method of the water treatment wastes.</p>
4. Any emergency response plans the applicant has to deal with any possible major problems/failures that could occur to the waterworks system.	<p>If the applicant has a formal emergency response plan a copy should be submitted with the application. In the absence of such a plan, the applicant should briefly outline the procedure that would be followed in the event of major problems with the waterworks system such as:</p> <ul style="list-style-type: none"> (a) water shortage, raw water quality problems, treatment plant problems (alternative water supply source should be identified and assessed) (b) presence of coliforms and/or E. coli, low chlorine residual (c) etc.

TABLE 2: APPROVAL APPLICATION INFORMATION REQUIREMENTS – CHECK LIST

SECTION 3.1 of AR 113/93 Approvals Procedure (Consolidated up to 251/2001) ALBERTA REGULATION 113/93 Environmental Protection and Enhancement Act APPROVALS AND REGISTRATIONS PROCEDURE REGULATION 3(1) An application must be made to the Director and must be accompanied by the following information relative to the activity, the change to the activity or the proposed amendment, addition or deletion of the term or condition:	Required
(a) the name and address of the applicant;	X
(b) the location, capacity and size of the activity to which the application relates;	X
(c) the nature of the activity, the change to the activity or the amendment, addition or deletion, as the case may be;	X
(d) where the applicant requires an approval from the Energy Resources Conservation Board or the Natural Resources Conservation Board in relation to the activity, the date of the written decision in respect of the application	
(e) an indication of whether an environmental impact assessment report has been required;	
(f) copies of existing approvals or registrations (if applicable) that were issued to the applicant in respect of the activity under this Act or a predecessor of this Act	X
(g) the proposed or actual dates for construction commencement, construction completion and commencement of operation;	X
(h) a list of substances, the sources of the substances and the amount of each substance that will be released into the environment as a result of the activity, the change to the activity or the amendment, addition or deletion, as the case may be, the method by which the substances will be released and the steps taken to reduce the amount of the substances released (sediment and release?)	X
(i) a summary of the environmental monitoring information gathered during the previous approval or registration period (if applicable);	
(j) a summary of the performance of substance release control systems used for the activity during the previous approval or registration period;	X
(k) the justification for the release of substances into the environment as a result of the activity, the change to the activity or the amendment, addition or deletion, as the case may be;	X
(l) the measures that will be implemented to minimize the amount of waste produced, including a list of the wastes that will or may be produced, the quantities and the method of final disposition of them;	X
(m) any impact, including surface disturbance, that may or will result from the activity, the change to the activity or the amendment, addition or deletion, as the case may be;	X
(n) confirmation that any emergency response plans that are required to be filed with the local authority of the municipality in which the activity is or is to be carried on or with Alberta Public Safety Services have been so filed;	X
(o) confirmation that there are contingency plans in place to deal with any unforeseen sudden or gradual releases of substances to the environment	X
(p) the conservation and reclamation plan for the activity	X

SECTION 3.1 of AR 113/93 Approvals Procedure (Consolidated up to 251/2001) ALBERTA REGULATION 113/93 Environmental Protection and Enhancement Act APPROVALS AND REGISTRATIONS PROCEDURE REGULATION 3(1) An application must be made to the Director and must be accompanied by the following information relative to the activity, the change to the activity or the proposed amendment, addition or deletion of the term or condition:	Required
(q) a description of the public consultation undertaken or proposed by the applicant	X
(r) information required under any other regulation under the Act to be submitted as part of or in support of the application (WATER ACT licenses / approvals);	X
(s) any other information required by the Director, including information that is addressed in a standard, code of practice or guideline in respect of the activity that is published or adopted by the Department (well completion details, water quality information)	X

Section 6: Signature Page

The Environmental Protection and Enhancement Act and Regulations, provide a specific definition for the "owner" and "person responsible for a waterworks system". Therefore, the person(s) responsible/person signing this document should be well familiar with the Environmental Protection and Enhancement Act and the Regulations.

The sections of the Environmental Protection and Enhancement Act and Regulations that are of particular relevance to waterworks system are:

- i) Environmental Protection and Enhancement Act Part 2, Division 2 (Approvals and Certificates); Part 7 (Potable Water); Part 10 (Enforcement)
- ii) Approvals Procedure Regulation 113/93
- iii) Potable Water Regulation 122/93

I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief, such information is true, complete and accurate.

PRINTED NAME OF PERSON SIGNING TITLE

ADDRESS POSTAL CODE

TELEPHONE NUMBER FAX NUMBER

DATE OF APPLICATION SIGNATURE