

Model Well Regulation Bylaw

A Guide for Local Governments



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Ministry of
Community, Sport and
Cultural Development

Model Well Regulation Bylaw: A Guide for Local Governments

Model Well Regulation Bylaw.....	2
Benefits of the Bylaw	3
Groundwater in British Columbia	3
Groundwater Legislation, Regulation and Strategic Initiatives.....	3
Why Adopt a Model Well Regulation Bylaw?	5
Choosing the Right Bylaw	5
Bylaw Considerations	6
Steps to Adopting the Bylaw	7
Subsequent Steps	8
Further Information.....	9
Groundwater Policy, Regulation and Management Links.....	10
Organizations	10
Glossary.....	11
Acronyms	12
Appendix A: Model Well Regulation Bylaw.....	14

Purpose of the Guide

The Model Well Regulation Bylaw: A Guide for Local Governments (Guide) is intended for municipal and regional district staff. The Guide was developed to provide the information, tools, and resources needed to adopt a Model Well Regulation Bylaw (Bylaw). The Guide was designed to complement two other documents: the [Groundwater Bylaws Toolkit](#) and the [Well Protection Toolkit](#). These two toolkits were developed for local governments to provide guidance in the protection of groundwater quality and quantity.

The Model Well Regulation Bylaw Guide:

- describes the Bylaw;
- provides an overview on the benefits of adopting a Bylaw;
- describes the legislative framework for groundwater protection;
- describes the Bylaw options;
- outlines subsequent steps; and,
- provides groundwater-related links and information.

Model Well Regulation Bylaw

The Model Well Regulation Bylaw was developed jointly by the Ministry of Community, Sport, and Cultural Development and the Ministry of Environment. The Bylaw provides local governments with the authority to require the closure of privately-owned wells on properties that are connected to the community drinking water system.

Groundwater Toolkits

Groundwater Bylaws Toolkit

The Groundwater Bylaws Toolkit was developed in 2009 by the Okanagan Basin Water Board (OBWB). The toolkit presents the basic principles of groundwater science, outlines the jurisdictional authority for managing groundwater, and provides local governments with the practical tools needed to protect groundwater.

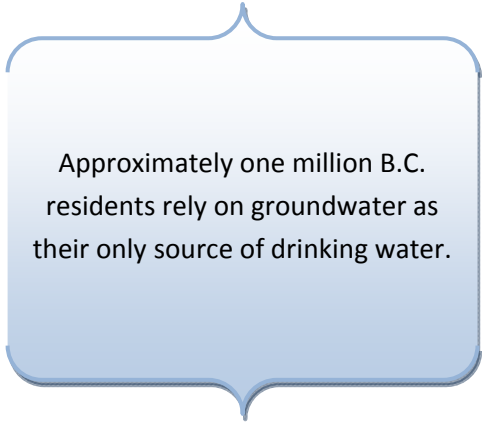
Well Protection Toolkit

In 2000, the Province of B.C., Environment Canada and the British Columbia Ground Water Association jointly published the Well Protection Toolkit. The toolkit outlines the steps communities can take to develop a comprehensive well protection plan. Steps include: defining the well protection area, identifying potential contaminants, developing contingency plans and management strategies. The toolkit also outlines monitoring and evaluation techniques.

Benefits of the Bylaw

Adopting the Model Well Regulation Bylaw and closing privately-owned wells on properties that are connected to the community drinking water system:

- reduces the potential for back-flow contamination and cross-connections;
- protects public health and community water systems;
- protects groundwater resources;
- is consistent with current and emerging groundwater regulations and;
- can improve understanding of groundwater use and monitoring.



Approximately one million B.C. residents rely on groundwater as their only source of drinking water.

Groundwater in British Columbia

Groundwater is integral to the health and well-being of British Columbians. Groundwater is a critical component of community life, the provincial economy and maintenance of a healthy ecosystem. In B.C., groundwater is primarily utilized for the following:

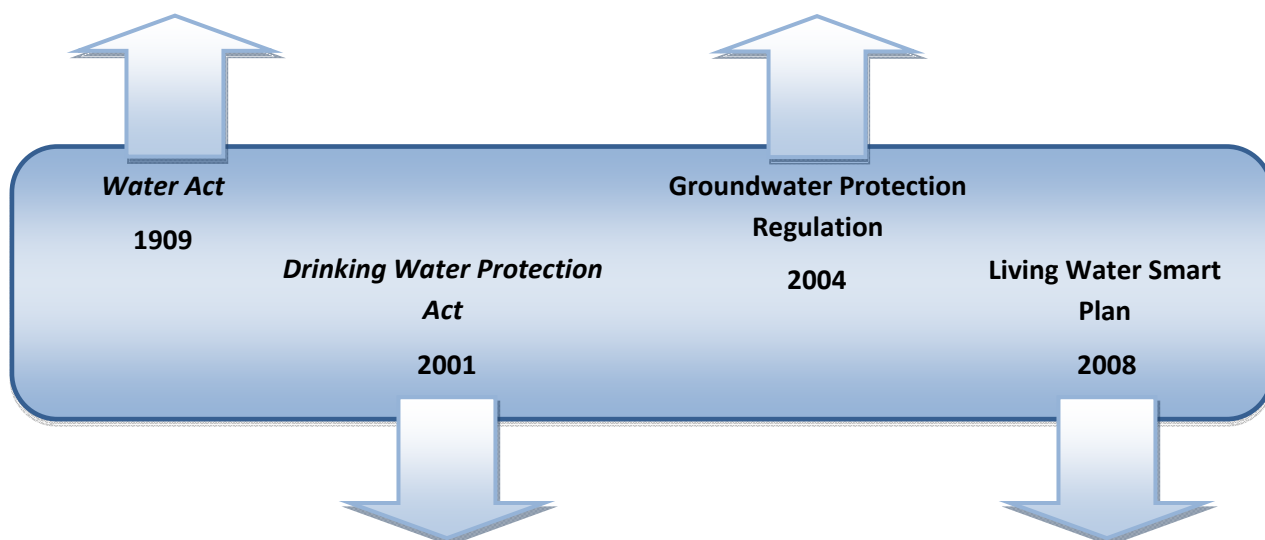
- consumption (e.g., drinking);
- domestic uses (e.g., cooking, washing);
- processing (e.g., pulp mills, mining operations);
- food production (e.g., irrigation, land-based aquaculture), and;
- recreational activities (e.g., swimming pools, spray parks).

Groundwater Legislation, Regulation and Strategic Initiatives

Historically, groundwater in B.C. has been unregulated. However, over the past 10 years the provincial government (Province) has taken meaningful action to protect groundwater through legislation, regulation and strategic initiatives. These initiatives include: the *Water Act*, Groundwater Protection Regulation (GWPR), *Drinking Water Protection Act* (DWPA) and the Living Water Smart Plan.

The foundation of water management legislation in B.C. The *Water Act* sets out rules regarding the diversion and use of provincial water resources. The *Water Act* has undergone numerous revisions over the last 100 years.

Sets out qualifications for those working on wells, contains a registry of qualified well drillers and pump installers, and describes some basic practises and safeguards that must be followed during the well installation and deactivation process.



Sets out specific requirements that water system operators and suppliers must follow to ensure that they provide safe, clean drinking water to their communities.

A province-wide initiative designed to secure access to safe sources of water for British Columbians now, and in the future.

Why Adopt a Model Well Regulation Bylaw?

In British Columbia, water ownership is vested with the Province. As such, the Province is committed to ensuring appropriate legislation and regulatory measures are in place to protect groundwater quality and quantity and the health and safety of British Columbians. Local governments play a pivotal role in providing safe, clean drinking water to their residents.

Most communities in B.C. rely on a single source of water; any contamination of that source seriously threatens the health and safety of residents as well as the viability of local industry. The *Drinking Water Protection Act* requires local governments, as water operators and/or suppliers, to protect groundwater source areas and provide safe, clean drinking water for their residents.

The Bylaw gives local governments the authority to require the closure of privately-owned wells on properties that are connected to the community drinking water system. The closure of private wells on properties that are also connected to the community drinking water system reduces the potential for contamination of the system, which in turn protects the health and safety of residents and the natural environment.

In addition to the health and safety benefits, the adoption of a Model Well Regulation Bylaw is a requirement of certain provincially-funded infrastructure grant programs. Local government infrastructure projects that involve well construction, well decommissioning, and/or the extension of water services to areas with private wells require a Well Regulation Bylaw as a condition to infrastructure grant funding.

Choosing the Right Bylaw

The Model Well Regulation Bylaw was developed as a model with three variations to meet the unique needs of B.C. communities. The three variations provide local governments with a highly flexible Bylaw that can be modified to accommodate the circumstances of individual communities.

Variation 1—Well Owner Pays for Closure

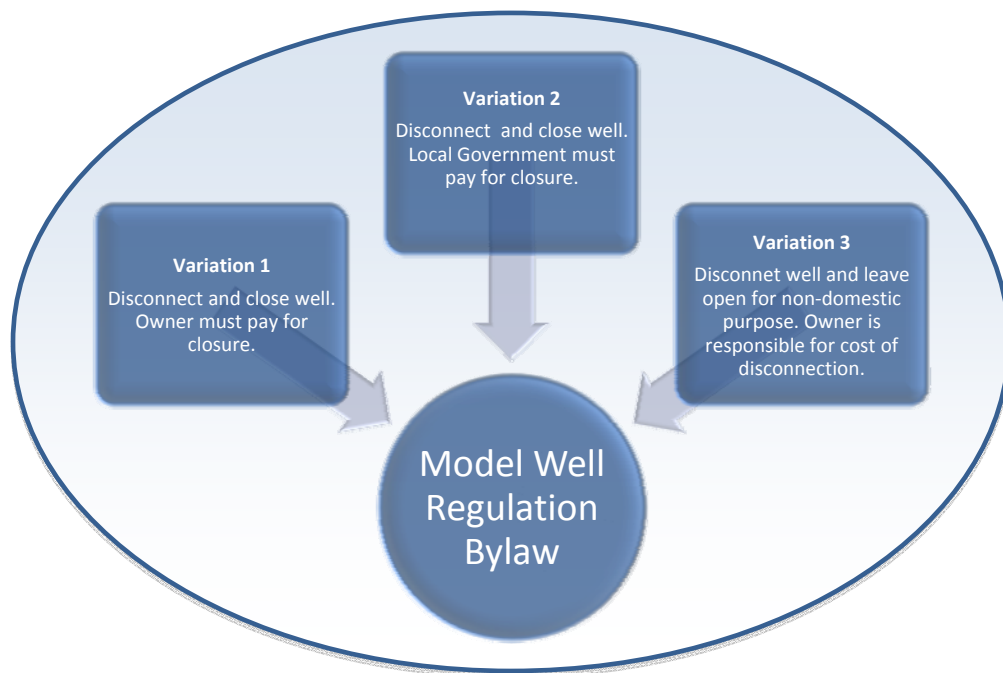
Upon connection to the community water system, the private well is disconnected, and no later than 90 days after connection the well must be closed. Cost of well closure is the responsibility of the private well owner.

Variation 2– Local Government Pays for Closure

Upon connection to the community water system, the private well is disconnected, and no later than 90 days after connection the well must be closed. Cost of the well closure is the responsibility of the local government.

Variation 3–Well Owner Pays for Disconnection

Upon connection to the community water system, the private well is disconnected from the residence and remains in use for non-domestic purposes. Disconnection costs are the responsibility of the private well owner.



Bylaw Considerations

Many factors can determine which variation of the Bylaw local governments may choose to adopt.

These factors include the:

- size and/or demographics of the community;
- availability of local government funds;
- extent to which the community drinking water system is reliant on groundwater; and/or;
- number of wells in the community that could pose significant health, safety and environmental risks.

There are distinct advantages and disadvantages to consider when adopting a Model Well Regulation Bylaw.

In Variation 1 and 2 of the Bylaw, the potential for groundwater contamination originating from a private well is eliminated as the well is disconnected and closed once the property is connected to the community system. However, Variation 1 and 2 do not offer the same degree of flexibility as Variation 3. Communities concerned with dwindling groundwater supplies and contamination issues may wish to adopt Variation 1 or 2.

Whether local governments choose to adopt Variation 1 or 2 will depend in part on the ability of the local government to fund well closures. The local government may pay for the well closure or the cost of closure may be the responsibility of the private well owner.

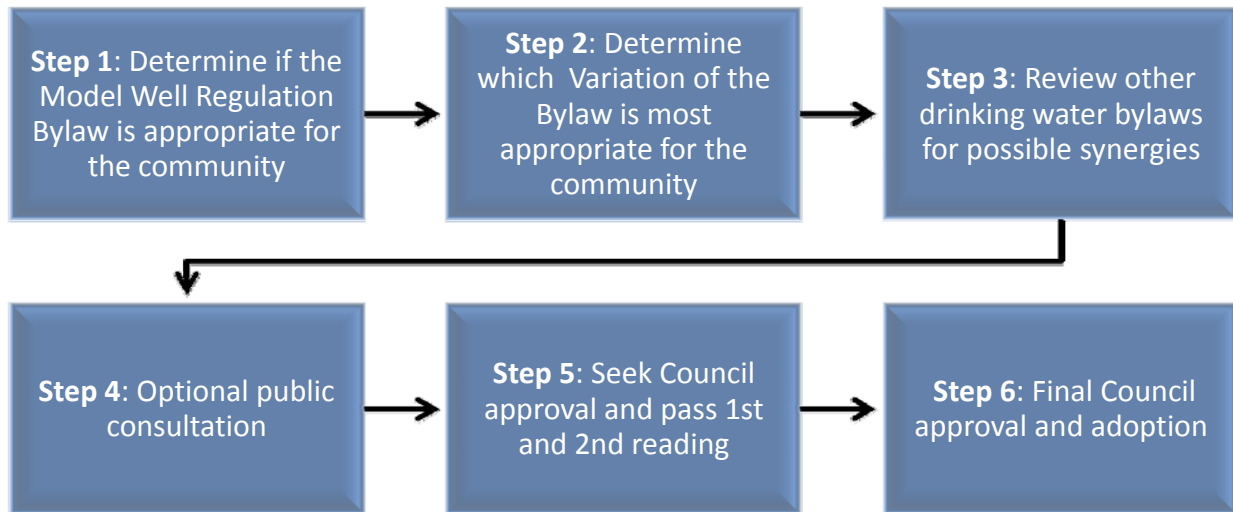
Variation 3 of the Bylaw offers the greatest degree of flexibility as private well owners are allowed the continued use of their well for non-domestic purposes. Variation 3 is also the least expensive – the cost of disconnection is less than the cost of well closure.

In Variation 3, the potential for backflow contamination and cross-connections between the private well and the community system are eliminated as the well is disconnected from the residence. Communities heavily reliant on groundwater may wish to adopt Variation 3 of the Bylaw so wells can continue to be used for non-domestic purposes. However, groundwater contamination originating from the private well may be a significant risk and could affect the decision-making process.

Steps to Adopting the Bylaw

Approaches to adopting the Model Well Regulation Bylaw may vary based on the specific and unique circumstances of each community. However, the majority of local governments will follow similar steps in adopting the Bylaw as those illustrated in the flowchart below.

Six Steps to Adopting the Bylaw



Subsequent Steps

Provincial ministries with a vested interest in groundwater such as the Ministry of Health and the Ministry of Environment will need to be notified of the Bylaw once it has been approved and adopted. In accordance with the Public Health Bylaw Regulation the Bylaw must be deposited with the Ministry of Health (see Further Information). The Ministry of Environment is notified of the well closure through the submission of the well closure report.

In addition to the above requirements, there are several steps that can be taken to ensure the successful implementation of the Bylaw. These can include:

- reporting to Council or Board;
- establishment of a review schedule to update the Bylaw; and,
- establishment of a monitoring and compliance program.

Further Information

For further information on the Model Well Regulation Bylaw, please contact the Ministry of Community, Sport and Cultural Development, Local Government Infrastructure and Finance Branch at:

Local Government Infrastructure & Finance Branch
Ministry of Community, Sport and Cultural Development
800 Johnson Street, 4th Floor
PO Box 9838 Stn Prov Govt
Victoria, BC V8W 9T1
Tel.: 250 387-4060
E-mail: INFRA@gov.bc.ca

To deposit the Bylaw with the Ministry of Health please send to:

Health Protection
Ministry of Health
1515 Blanshard Street, 4th floor
Victoria, BC V8W 3C8
Tel.: 250 952-1469
E-mail: David.Fishwick@gov.bc.ca

Groundwater Policy, Regulation and Management Links

Buried Treasure: Groundwater Permitting and Pricing in Canada

<http://www.buriedtreasurecanada.org/>

Drinking Water Protection Act

<http://www.hls.gov.bc.ca/protect/dwact.html>

Groundwater Bylaw Toolkit

http://www.obwb.ca/groundwater_bylaws_toolkit/

Groundwater Protection Regulation

http://www.env.gov.bc.ca/wsd/plan_protect_sustain/groundwater/index.html

Groundwater Regulation – What Private Well Owners Should Know

http://www.env.gov.bc.ca/wsd/plan_protect_sustain/groundwater/gw_regulation/GWPR_private_well_owners.pdf

Living Water Smart

<http://www.livingwatersmart.ca/>

The Sustainable Management of Groundwater in Canada

<http://www.scienceadvice.ca/en/assessments/completed/groundwater.aspx>

Water Act

http://www.env.gov.bc.ca/wsd/plan_protect_sustain/groundwater/index.html

Well Protection Toolkit

http://www.env.gov.bc.ca/wsd/plan_protect_sustain/groundwater/wells/well_protection/wellprotect.html

Organizations

British Columbia Ground Water Association: <http://www.bcgwa.org/>

British Columbia Water and Waste Association: <http://www.bcwwa.org/>

Ministry of Community, Sport and Cultural Development: <http://www.gov.bc.ca/cscd/>

Ministry of Environment: <http://www.gov.bc.ca/env/>

Ministry of Health: <http://www.gov.bc.ca/health/>

Glossary

Aquifer – An underground layer of sand, gravel, or fractured rock that is water bearing and capable of storing, transmitting and yielding water.

Connection – The line from the water main to a dwelling, campsite or premises.

Contamination – Introducing a substance into water that causes harm by contact or association, that will render the water unfit for its intended use.

Cross-Connection – Connection between the piping system from the community system service and that of any other water supply that is not, or cannot be, approved as safe and potable for human consumption, whereby water from the unapproved source may be forced or drawn into the community water system.

Disconnect – To disconnect a well from the private system on the parcel on which the well is located, in a manner that prevents water from the well from entering the system.

Domestic purpose – the use of water for human consumption, food preparation or sanitation.

Drinking Water System – A system by which water is provided or offered for domestic purposes.

Groundwater – Water located within the earth that supplies wells and springs.

Local Government – The council of a municipality, the board of a regional district, and a local trust committee under the *Islands Trust Act*.

Owner – In relation to a water supply system includes a person who is responsible for the ongoing operation of the water supply system, or in charge of managing that operation.

Potable Water – Water provided by a domestic water system that meets the standards prescribed by regulation, and is safe to drink and fit for domestic purposes without further treatment.

Private Dwelling – A structure that is occupied as a private residence.

Service Area – In relation to a regional district, the area in which a service is provided, being comprised of the participating areas for the service.

Well – An artificial opening in the ground, usually made by drilling, driving, or excavating, made for the purpose of withdrawing and using groundwater.

Acronyms

GWPR – Groundwater Protection Regulation

DWPA – Drinking Water Protection Act

MCSD – Ministry of Community, Sport and Cultural Development

MoE – Ministry of the Environment

OBWB – Okanagan Basin Water Board

QWD – Qualified Well Driller

Appendix A – Model Well Regulation Bylaw

LOCAL GOVERNMENT OF ANYWHERE

BYLAW NO. XXXX

The purpose of this Bylaw is to regulate the disconnection and closure of Wells on properties connected to the Water Supply and Distribution System.

WHEREAS:

- A. The *Local Government of Anywhere* (the “*Local Government*”) currently operates a Water Supply and Distribution System (the “*System*”) established by Bylaw No. YYYY (e.g. Town of Drinksville Water Service Bylaw; e.g. *Regional District of ABC Water Service Electoral Area “A” Establishing Bylaw No. 123* or *Regional District of ABC Well Closure Service Bylaw No 134*) within the boundaries of the Local Government (*where applicable*: and in the area outside of the boundaries of the Local Government as authorized by Bylaw No. VVVV and section 13 of the *Community Charter*);

- B. The Local Government’s *Council/Board* deems it necessary and desirable to regulate the disconnection and closure of Wells on properties served by the System.

NOW, THEREFORE, the *Council/Board* of the *Local Government of Anywhere*, in open meeting assembled, enacts as follows:

1. Citation

This Bylaw may be cited for all purposes as the “*Local Government of Anywhere Well Regulation Bylaw.*”

2. Interpretation

- (1) In this Bylaw

“Bylaw” means the *Local Government of Anywhere* Well Regulation Bylaw.

“Close” means to take a Well out of service permanently in accordance with section 9 of the Groundwater Regulation.

“Connect” means to connect the Private System on a parcel to the System.

“Contractor” means the person responsible for the performance in compliance with this Bylaw of the work of Closing a Well.

“Disconnect” means to disconnect a Well from the Private System on the parcel on which the Well is located, in a manner that prevents water or other substances from the Well from entering the System.

“Domestic Purpose” means the use of water for human consumption, food preparation, sanitation, or other household purposes.

“Groundwater Regulation” means the Groundwater Protection Regulation, B.C. Reg. 299/2004, under the *Water Act*.

“Non-Domestic Purpose” means a purpose that is not a Domestic Purpose.

“Owner” means the owner of a Well on a parcel Connected to the System.

“Private System” means the onsite pipes and other apparatus on a parcel, connected to the System at the property line and used to convey water from the System to the plumbing fixtures in the buildings and structures on that parcel.

“System” means the Water Supply and Distribution System established by *Local Government of Anywhere* Bylaw No. YYYY.

“Well” means a well that was used for supplying water for Domestic Purposes prior to the Connection of the parcel on which the well is located.

“Well Closure Report” means a report that complies with Schedule 3 of the Groundwater Regulation or a successor enactment of similar intent.

- (2) In this Bylaw, the first letter of a word or words in a phrase defined in this section is written in upper case to indicate that its interpretation is limited to its defined meaning.

3.1 Well Disconnection and Closure Option

- (1) As a condition of connecting a parcel on which a Well is located to the System, the Owner of the parcel must, promptly upon the Connection, Disconnect or cause the Well to be Disconnected at the Owner's expense.

OR

- (1) As a condition of connecting a parcel on which a Well is located to the System, the Owner must permit the Local Government to, promptly upon the Connection of the parcel, Disconnect or cause the Well to be Disconnected at the Local Government's expense.

- (2) No later than 90 days after the Connection, the Owner must

- (a) ensure the Well is Closed in accordance with this Bylaw and all applicable provincial enactments, and
- (b) at the Owner's expense, obtain and submit a Well Closure Report prepared by the Contractor to the Local Government and Ministry of the Environment.

OR

- (2) No later than 90 days after the Connection the Local Government must

- (a) ensure the Well is Closed in accordance with this Bylaw and all applicable provincial enactments, and
- (b) at its expense, obtain and file a copy of a Well Closure Report prepared by the Contractor with the Local Government and submit it to the Ministry of the Environment.

3.2 Non-domestic Purpose Option

- (1) If, despite section 3.1(2), an Owner wishes to be Connected to the System and to use the Well for Non-domestic Purposes, the Owner must submit to the Local Government, at the same time as the *Application for Connection*,

- (a) an *Application for Permission to Use a Well for Non-Domestic Water after Connection (see appendix)*;

- (b) a map showing

- (i) the location of the Well in relation to the buildings and structures on the parcel on which the Well is located, and

APPLICATION FOR PERMISSION TO USE THE PRIVATE WELL FOR NON-DOMESTIC WATER AFTER CONNECTION

I, _____ being the property Owner of the premises legally described as:
(Name of applicant)

_____ located in the _____ hereby make application for
(Address of property) *(Community name)*

the following services:

_____ use of private well for non-domestic purposes after Connection to the System.

Dated at _____ day of _____, 20____.

APPLICANT _____
(Signature)

(Date)

(Witness)

DECLARATION OF WELL USE

I, _____ being the property owner of the premises legally described as:
(*name of applicant*)

_____ located in the _____ intend to use the private well
(*address of property*) (community name)

for the following non-domestic water uses (*list possible uses*):

-
-
-

In addition, as the private well Owner, I agree to:

- (A) operate and maintain the Well in good order;
- (B) ensure the Well is Closed immediately when required by the Local Government if it is not operated or maintained in good order;
- (C) not reconnect the Well to the Owner's private water distribution system as long as the Owner's parcel is Connected; and,
- (D) not use the Well for Domestic Purposes.

Dated at ____ day of _____, 20____.

APPLICANT _____
(*signature*)

(*Date*)

(*Witness*)