

A high-speed photograph of water splashing, with a stream of water falling from the top right and creating a large splash in the center. The water is clear and blue, with many bubbles and droplets visible.

*W*ATER ACT Regulations

Proposed Well Construction Regulations – *Plain Language Summary*

PrinceEdwardIsland.ca/wateract



Communities, Land
and Environment

Department of Communities, Land and Environment

Proposed Water Act Well Construction Regulations

Plain language summary of key points

INTRODUCTION

The Prince Edward Island *Water Act* was passed in the legislature in the fall of 2017. The *Water Act* demonstrates the Province’s commitment to protecting the Island’s water resources and the ecosystems that support them. To operationalize the Act, there are three sets of regulations that are initially required to replace the previous regulations of the *Environmental Protection Act (EPA)*.

Under the **Environmental Protection Act**, the extraction of water from wells and surface water bodies were controlled by separate regulations (Water Well Regulations and Watercourse and Wetland Protection Regulations. As shown below, under the *Water Act* all water withdrawals will be controlled under a single, new regulation. This document focuses on the proposed Well Construction Regulations only, and the other two regulations needed to support the Water Act are discussed in separate documents

Previously, under the *EPA*:

EPA Watercourse and Wetland Protection Regulations

dealt with:

- Surface water extraction

EPA Water Well Regulations

dealt with:

- Well specifications
- Licensing of drillers
- Groundwater extraction

In the future, under the *Water Act*:

WA Water Withdrawal Regulations

will deal with:

- Groundwater extraction
- Surface water extraction

WA Well Construction Regulations

will deal with:

- Well specifications
- Drilling of wells for geothermal purposes

Highlights

- These regulations are renamed as the “Well Construction Regulations” reflecting the focus on construction of wells rather than their use to extract groundwater.
- There are no substantial changes to basic well design, construction, or location requirements in the amended regulations.
- The process for approvals for the construction and use of high capacity wells has been removed from these regulations, and will be dealt with in a new regulation, which includes water withdrawals from surface water and groundwater sources - the new “Water Withdrawal Regulations”. The amended Well Construction Regulations focus on:

- Licensing of well drillers and contractors
- Standards for well construction

- It is proposed that the licensing requirement for drilling experience in Prince Edward Island be loosened to more closely align with current trends to reduce inter-provincial trade barriers.

- Geothermal wells are now explicitly recognized under the regulations:
 - A licensed well driller must construct all geothermal wells, including those for “closed – loop” systems.
 - Specific requirements for some elements in the construction of geothermal wells are included in the amended regulations.

- The previous, very broad references for requirements for materials used in well construction are replaced with a list of specific standards for selected well components.

SECTION 1 - INTERPRETATION

Section 1 sets out the definitions for the terms used within the regulations

SECTION 2 – APPLICATION

Section 2 states that the regulations apply to all wells, including vertical geothermal wells, but not including horizontal-loop geothermal systems.

SECTIONS 3 and 4 – WELL DRILLER’S AND WELL CONTRACTOR’S LICENCES

Sections 3 and 4 set out the eligibility requirements, application process and terms for well driller’s and well contractor’s licences.

Well driller’s licence

No person is permitted to construct a well unless supervised by a well driller. The requirement to obtain a well driller license includes 4,000 hours of work experience in operating a well-drilling machine under the supervision of a well driller; the successful completion of a written or oral examination and a field test to demonstrate a practical knowledge of well construction; a working understanding of the Act and its regulations; and payment of the fee. Some of these requirements may be waived if the well driller holds a valid licence or similar approval to drill wells in another province.

Well contractor’s licence

Well contractor’s licences can be issued to applicants who (a) are a well driller or employ a well driller; (b) possess well construction equipment capable of constructing wells to the prescribed standards; and (c) pay the appropriate fee. Well Drillers and Well Contractor’s licenses are effective for a period of 24 months and may be renewed on application and payment of the renewal fee.

SECTION 5 - WELL CONSTRUCTION REPORT

Section 5 states the reporting requirements for well drillers. Well construction reports document important details about a well such as its location, depth, length of casing, as well as information on the depth to the water table and the geological formation the well penetrates. This section explains how a well contractor is to provide copies of a well construction report following well construction. Copies of the report are to be provided to the owner as soon as reasonably possible and to the Department no later than 60 days after the well's completion.

SECTION 6 - WELL PERMITS

Section 6 outlines the circumstances where a well permit is required. There are areas within the province designated as "restricted well drilling areas" where, due to existing groundwater contamination or in order to protect the quality of groundwater in sensitive areas, extra precautions in well construction may be necessary. There may also be cases where it is not possible or practical to follow the exact provisions of the regulations for well design. In these either of these cases, a person must apply for a Well Permit. Section 6 sets out the rules for applying for a Well Permit. Where a Groundwater Exploration Permit is required under the *Water Act* Water Withdrawal Regulations, a Well Permit is not needed.

SECTIONS 7 to 11 - PROVISIONS RESPECTING WELL CONSTRUCTION

Sections 7 to 11 detail the physical standards for well construction. One of the main objectives of the Well Construction Regulations is to ensure that wells are constructed in a manner that will minimize the chance of being contaminated, and will provide a reliable source of water for well owners. Sections 7 to 11 describe the requirements for the distance between wells and potential sources of contamination; and for well design, construction, completion, and pump installation.

Section 7 contains the general requirements to construct wells in a manner that maintains existing natural protection against contaminants entering the well. It describes the need to use materials that meet specific standards for various well components such as pitless adapters, well casing, and grout material.

Section 8 describes the distance that must be maintained between wells and common sources of contamination or other safety hazards such as septic systems, petroleum storage tanks or abandoned wells. This section also prohibits the establishment of potential sources of groundwater contamination within certain distances of wells. Where the location of a well is identified on a development permit, there is also a requirement to ensure it is constructed at the location indicated on the plan.

Section 9 describes requirements for the installation of well casing in a well. Well casing and the grouting material that seals it in the ground are the main components of a well that are intended to prevent contaminants entering a well. Specific, more stringent requirements for wells supplying central supply systems, and exemptions for wells that are used as components of closed-loop geothermal systems are included.

Section 10 describes the procedures that must be carried out after a well has been completed including assessing the yield of the well to ensure it will meet the well owner's needs, and securing a vermin proof well cap on top of the well casing to keep contaminants, insects, etc. out of the well.

Section 11 describes the manner in which pumps must be installed in a well including how they can be connected to a plumbing system and power supply, and the requirement for providing a means of sampling the water from the well. Special provisions are also laid out where a well is being used for both water supply and as a supply well for an open-loop geothermal system.

SECTIONS 12 and 13 - WELLS USED AS COMPONENTS OF EARTH ENERGY SYSTEMS

Sections 12 and 13 describe requirements that apply specifically to wells used as part of an earth energy system. In the past, the main focus of water well regulations has been limited to wells used to extract groundwater for use. As the popularity of earth energy systems to meet energy needs continues to grow, it is important to ensure that the wells constructed to support these systems are constructed in a manner that will not compromise groundwater quality. This section sets out specific provisions that apply to geothermal wells. Many of the provisions mirror standards established by the Canadian Standards Association for earth energy systems.

The provisions include a prohibition on discharging water from an open-loop system to a septic system or sewer system and a requirement that return wells be able to accept discharging waters without overflowing. In addition, standards are specified for the materials used in closed loop systems including heat transfer fluids and grouting requirements.

SECTION 14 - ABANDONMENT OF WELLS

Section 14 states the requirements for properly abandoning wells that are no longer in use. Unused wells can act as pathways for surface and near surface contaminants to reach deeper into the ground. In addition, old dug wells represent a public safety hazard. Section 14 of the regulations places responsibility for ensuring unused wells are properly abandoned with the land owner. It also specifies who may engage in the business of abandoning wells, following the procedures described in Schedule D. Particular measures are prescribed for the abandonment of wells used for closed-loop geothermal systems.

SECTION 15 - COMMENCEMENT

The commencement date when these regulations come into force is provided in this section.

SCHEDULES

Schedule A lists the Restricted Areas identified in Section 6 of the Regulations. These are the areas that have been established because of known cases of groundwater contamination or areas where protecting groundwater quality is particularly important, such as in the vicinity of municipal well fields. There are currently 29 such areas across the Province, described in Schedule A of the regulations.

Schedule B prescribes standards for well construction equipment, materials and devices.

Schedule C sets out the required methods for disinfecting water wells after construction.

Schedule D sets out the required methods for filling in unused wells.

Schedule E lists the fees for licensing of well drillers and well contractors, and for the renewal of these licences.

[*PrinceEdwardIsland.ca/wateract*](http://PrinceEdwardIsland.ca/wateract)



Communities, Land
and Environment