Questions and Answers for the Water Withdrawal Regulations

General

Q1 What are the Water Withdrawal Regulations?

A1 These regulations are intended to control how we withdraw water from wells, watercourses or wetlands. They are one of three sets of regulations that need to be put in place before the new *Water Act* legislation can be proclaimed and brought into force. The other two sets of regulations are Well Construction Regulations and Water Supply and Waste Water Treatment System regulations.

The *Water Act (2017)* provides scope and direction for water management, whereas individual regulations lay out how government will fulfill the goals of the Water Act.

The *Water Act* identifies government's leadership role in managing and protecting water. It recognizes water as a resource for the "common good", prioritizes human and ecological wellbeing and brings more transparency and accountability to the management of water.

Q2 How are water wells defined under these new regulations?

A2 Wells will now be categorized into three types, with the following approval and permitting requirements:

Well Type	Flow Rate	Approval requirements
Domestic	Less than 25 m^3 (cubic metres) per day	None – follow Well Construction Regulations
Low capacity	Greater than 25 m^3 and less than 345 m^3 per day	Assessment and permit
High capacity	Greater than 345 m^3 per day	Detailed assessment and permit

The criteria for the definition of high capacity wells and the requirement for an approval is unchanged, but low capacity wells are a new category, and will require approvals for wells not previously regulated by the Province.

Domestic wells for residential use will not require permits (although a licensed well driller is required under the Well Construction Regulations).

Q3 How much water is 25 m^3 per day? Is it enough water for my day-to-day household needs?

A3 Twenty-five m^3 per day is more than ample to supply a normal domestic residence, as well as many smaller business or agricultural operations. One cubic metre (one m^3) is the same volume as 1,000 litres. Twenty-five m^3 is equivalent to the amount of water required to:

- fill a standard bathtub 83 times,
- do 150 loads of laundry, or
- take 350 showers.

Q4 **I do not have a meter on my well, how do I know if I pump more than 25 m^3 of water per day?**

A4 If you are unsure you should contact the Department of Environment, Water and Climate Change; however, as a general guide, the following activities would likely use more than 25 m^3 of water per day:

- watering a herd of 165 dairy cattle or 300 beef cattle, or
- operating a car wash doing 120 cars a day.

Q5 **Are there exemptions to the permits?**

A5 Yes, there are exemptions. No approval is needed for:

- Emergency fire suppression,
- Occasional filling of mobile tanks/swimming pools,
- Diversion of water for construction purposes, and
- Geothermal wells.

Q6 **Do I need a permit to withdraw water? What if my well already exists?**

A6 Yes, under these regulations a permit will be required to withdraw water from a wetland, watercourse or new or existing well if the amount of water to be withdrawn is more than 25 m^3 in a day. This is equivalent to pumping water at a rate of about four imperial gallons per minute all day long.

From the date when *the Water Act* is brought into force, you will have five years to apply for and obtain a water withdrawal permit for an existing well but it is recommended to obtain the permit as soon as possible.

Q7 **I have an open loop geothermal system and may use more than 25 m^3 per day during the peak heating season. Do I need a permit?**

A7 No. In assessing permits, the net water extraction will be considered. Since the water used by the geothermal system will be returned to the aquifer (groundwater), it would not be counted toward the total daily water consumption.

Q8 **How do I get a permit to use a low capacity or high capacity well and how much does it cost?**

A8 A Water Withdrawal Permit can be applied for from:
The Department of Environment, Water and Climate Change
Phone: (902) 368-5014;
Email: qli@gov.pe.ca;
Webpage: https://www.princeedwardisland.ca/en/information/environment-water-and-climate-change/groundwater-exploration-and-extraction-permit.

The fee ranges from $100 to $3,000 depending upon how much water will be used.

Q9 What kind of information will be required for my application?

A9 New application forms will be made available online and from the Department of Environment, Water and Climate Change when the Water Act is brought into force.

Q10 Can a permit be transferred?

A10 Yes, approvals are transferable at the land owners' discretion. A transferee is bound by the conditions on the permit including reporting conditions and expiry dates.

Q11 Are there circumstances when a permit would cease to be valid?

A11 Yes, water withdrawal permits cease to be valid after the expiry date, if there is a change of land ownership, or if the land owner rescinds permission from the permit holder.

Water Management

Q12 How will government decide how much water an applicant can be pumped from a well?

A12 It depends on a number of factors including:

- How much water is available in the watershed as a whole, and how much of it has already been allocated to other users;
- What the impact of removing the water is expected to have on stream flow in the watershed and the impact on fish populations;
- The effect on other water users in the watershed; and,
- The intent or content of any water management plans that are designated under the *Water Act*.

In cases where there are competing interests in withdrawing water, the priority assigned to use of water may be a factor, with the use of water for domestic purposes being the highest priority (with the exception of water withdrawal for fire protection).

Q13 How will government be able to tell how much water is available?

A13 The Province of Prince Edward Island has maintained a monitoring network that tracks the quantity of water in rivers, and the level of the water table in locations across the province for many years, and the new regulations will require water users to measure and report their water use. With this information, government can determine how much water is being used and how much is available.

Groundwater data: https://www.princeedwardisland.ca/en/service/view-groundwater-level-data
Stream level data:
https://www.princeedwardisland.ca/en/service/find-stream-level-information and,
https://wateroffice.ec.gc.ca/

Q14 Once I get a permit to withdraw water, are there limits on how long is it valid?

A14 Yes, a water withdrawal permit is valid for a period of five years from the date of issue, and can be renewed provided the conditions under which it was issued have not changed significantly.

Q15 I already have a Groundwater Extraction Permit for a well. Is it still valid?

A15 Yes, Groundwater Extraction Permits that have been issued under the *Environmental Protection Act* Water Well Regulations will be valid for a period of five years from these regulations coming into force.

You must apply for a Water Withdrawal Permit under the *Water Act* Water Withdrawal Regulations to extract water prior to the end of the five-year period.

Q16 I get a permit to withdraw water from a stream each year. Can I still get this permit?

A16 You can still get a permit to withdraw water from a stream but the process is changing. You will now apply for a permit which will be valid for a period of five years. It can then be renewed instead of getting a new permit.

Q17 What if I have several low capacity wells that are connected together. Is this treated the same way as a single high capacity well?

A17 Yes. Multiple low capacity wells will be treated as a high capacity well when connected to a single system with a collective pumping rate of more than 345 m^3 per day, within 15 metres of each other, or having a similar effect as a high capacity well.

If the total extraction is greater than 345 m^3 per day, the moratorium on new wells for agricultural irrigation still applies.

Q18 Can I get a permit to irrigate an agricultural crop?

A18 Perhaps. You may be able to a permit to irrigate an agricultural crop if you will be using a well that pumps under 345 m^3 per day or are using a stream as a source. You cannot get a permit to drill a new high capacity well for agricultural irrigation nor can you repurpose an existing high capacity well to be an agricultural irrigation well. Existing agricultural high capacity irrigation wells already have permits.

<u>Water on Prince Edward Island</u>

Q19 How many high capacity wells are there on PEI and who uses them?

A19 There are 308 high capacity wells on PEI and the largest category is for municipalities. Information on water use, including high capacity wells is available online at https://www.princeedwardisland.ca/en/service/high-capacity-wells.

Q20 Will high capacity wells deplete our groundwater supply?

A20 No, high capacity wells do not affect the demand for water; they just represent a centralized and often safer and more efficient approach to tapping groundwater. The amount of groundwater withdrawn from an aquifer is controlled by the demand for water, not the manner in which it is withdrawn (high capacity, low capacity, or domestic).

For example, there is no reason to expect the amount of water used by a family in a house in a town served by a high capacity municipal well, would be any different than a family living in a rural area and relying on its own domestic well. The amount of water used by washing machines, toilets etc. is the same regardless of where the water comes from.

In the case of urban and suburban areas, it is it more efficient to pump water from a few larger wells in an area where they can be protected, rather than relying on dozens of smaller wells placed close to each other and potential sources of contamination.

Q21 What types of water use have the biggest effect on our groundwater resources?

A21 The environmental effect of withdrawing water from a well depends solely on the rate of withdrawal and not the purpose for which the water is being withdrawn. In PEI, water withdrawal for domestic uses represents the greatest demand for groundwater.

Q22 What is the difference between a high capacity well, (sometimes referred to as a deep water well) and a regular household well.

A22 All wells, regardless of their size or depth are constructed and operate in the same fashion, and tap the same supply of groundwater. In fact the largest portion of water generally comes from the top most portion of the well regardless of its size or depth. The only significant difference is the amount of water we withdraw from them.

Q23 Should I worry that if we use too much water there won't be anything left for future generations?

A23 No, our groundwater is constantly being recharged, moving in a continuous cycle (sometimes called a "groundwater flow system") from the point at reaches the water table to where it discharges through springs and seeps into our streams or at the shoreline.

As a consequence we cannot "save" this water for future generations, and when we pump water from a well, we are simply diverting a portion of the water from this flow system that would otherwise be discharging to the surface.

Q24 I hear about declining groundwater levels in many parts of the world, so why are we not concerned here?

A24 The level of the water table depends on the relative rate at which groundwater is recharged to the aquifer and the rate at which it is discharging or being pumped from the aquifer. Problems occur when the amount of water pumped out of an aquifer than is greater than the amount of water recharging the aquifer; a situation referred to as "mining" of groundwater.

In some areas of the world (a good example would be the southwest US and parts of Mexico) rainfall rates are low and temperatures are high so groundwater recharge rates are just a fraction of what they are in PEI. In addition, water demand in these areas can be very high as a result of high population densities or a reliance on agricultural irrigation in an arid climate.

Q25 I hear about streams going dry. Should I worry about my well going dry as well?

A25 Most of the water in our streams comes from groundwater and the water level in a stream represents the very top of the water table.

The water table naturally rises and falls throughout the seasons, sometimes by several metres. As this occurs, it affects the level of our streams and wells; however, while a rise or fall of water levels by a few metres in a stream can be very significant, it makes little difference to a well unless the well is very marginal (in terms of depth) in the first place.

Q26 What about climate change? Are we accounting for it when we set the rules for water withdrawal?

A26 Yes, because the amount of water allowed to be withdrawn will be based on the effect on stream flow, it automatically takes into account any changes in the stream flow regime. Also, while some areas of the country are expected to be drier, in PEI overall annual precipitation is actually expected to increase slightly.

There are likely to be some changes in the seasonal distribution of rainfall with more rainfall occurring in the winter/spring period and less frequent rain in the summer. Since the largest portion of our groundwater recharge occurs in the spring, water table levels are not expected to change substantially.

Q27 A high capacity well is being constructed near my property. What steps is government going to take to ensure it doesn't affect my water supply or nearby streams?

A27 In assessing an application for a high capacity well, a number of steps are taken to ensure its operation will not affect other well owners or harm local streams.

Applicants for high capacity wells are required to conduct pump tests to assess the effect of pumping on the local water table and surface water bodies. The information from these tests is submitted to the Department of Environment, Water and Climate Change, and an approval to operate the well is issued only if the data demonstrates that the well will not compromise any existing wells or threaten the health of local watercourses.

In the more sensitive cases, the proponent may also be required to hire a hydrogeologist to conduct a detailed assessment involving stream flow measurements and computer modelling. If a permit to withdraw is issued, the permit holder is required to provide records of their pumping activity to the department on a regular basis.

Q28 **A portion of the stream near my property dries up each summer. Is this because of high capacity wells?**

A28 It is normal for some portion of streams to dry up during warmer summer weather. Most of the water in our streams comes from groundwater discharging from springs. As the water table gets progressively lower through the summer, water levels in small streams also falls, and in some cases will leave a dry stream bed.

While this is a normal, natural process, it can be made more severe if very high levels of groundwater are being extracted in that particular watershed. That is why the assessment of high capacity wells is intended to minimize such impacts. Pumping activity outside the watershed should have no effect on stream levels.