



Policy and Procedures for Responding To Groundwater Interference Complaints

As approved by Regional Council on May 5, 2015

Document 1828706

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Policy and Procedures for Responding To Groundwater Interference Complaints, Regional Municipality of Waterloo Adjacent Counties and Townships

Pumping of municipal water supply wells may cause interference with existing private wells. This document outlines the procedures for responding to groundwater interference complaints within the Regional Municipality of Waterloo and in adjacent counties and townships where nearby private wells may be impacted from pumping Region supply wells. Specifically, this document is organized to present:

- technical information on water level responses to pumping of a well;
- process followed to commission new water supply wells;
- identification of policy areas for which Region staff will respond to allegations;
- procedures for responding to complaints in Historic Compensation Areas;
- procedures for responding to complaints within and outside of groundwater taking policy areas;
- procedures for responding to complaint where a previous complaint has been received; and
- process for appealing complaints.

1.0 Impacts of groundwater pumping

Extracting water from a well lowers water levels around the well. The extent of lowering or drawdown depends on the amount of water being pumped, and the hydrogeologic setting in which the well is constructed. The drawdown is greatest close to the well and decreases as the distance from the well increases. The Zone of Influence is the area in which drawdown can be measured or inferred as result of pumping. The Zone of Capture for a well is the area in which groundwater flows into and is captured by a pumping well. When the groundwater table is sloped, the Zone of Influence and Zone of Capture overlap but differ in location as shown in Figure 1. In general, the zone of influence in the aquifer is greater in fractured bedrock, and where the aquifer is separated from the ground surface by clay-rich sediments. There is a greater likelihood of impacting shallow private wells where the municipal well pumps from the same aquifer as the private wells, and/or on the short time period (several years) following well commissioning.

2.0 Procedures before well operation commences

Before developing new water supply wells, the Region undertakes extensive studies to identify impacts and takes appropriate measures to mitigate unacceptable impacts.

These studies are required as part of the **Ontario Water Resources Act** and the **Environmental Assessment Act**. The study requirements for these acts are described below.

The Environmental Assessment Act requires all municipal water supply projects in Ontario to complete a Class Environmental Assessment (EA). The Class EA process is designed to determine the effects a proposed water supply may have on the environment, to identify remedial measures that are necessary to avoid or minimize these effects, and to recommend appropriate monitoring to evaluate the effects of the project. Public consultation as part of this process ensures that potential interference concerns from existing groundwater users will be considered prior to commissioning of the well.

Under **Section 34 of the Ontario Water Resources Act**, a Permit To Take Water (PTTW) is required for any water supply well that will extract more than 50,000 litres per day. The permit, issued by the Ministry of the Environment, requires a proponent to determine if the proposed water taking will have any significant effect on surrounding water supplies or surface water features. For municipal wells the previously completed EA is used to support the permit application. The permit usually includes some or all of the monitoring locations recommended in the EA. It also puts the onus on the permit holder to mitigate any impacted caused by the pumping.

Developing long-term monitoring programs as part of the EA and PTTW processes, and in conjunction with the Region's Water Resources Protection Strategy, ensures that an ongoing record of the impact of municipal groundwater extraction is maintained.

3.0 Identification of policy areas

In the past, the Well Interference Appeal Committee (WIAC), formerly the Regional Water Liaison Committee (RWLC), has awarded compensation to several complainants because of historical precedent. Region staff conducted a geographic analysis of all properties which had previous well interference complaints. The outermost area of these properties defines areas of historic compensation. Procedures for responding to complaints from property owners in Historic Compensation Areas are presented in Section 4. Because these areas are delineated based on historic compensation records, these boundaries will not normally be modified as subsequent complaints are resolved. It is important to note that Historic Compensation Areas are not necessarily areas where well interference has occurred or could occur. Historic Compensation Areas are identified in Figure 2.

Modification of this Policy and Procedures in 1995 identified generalized areas around Region wells representing groundwater taking areas. These areas were based on a

combination of technical information from Environmental Assessments, studies conducted as part of the Water Resources Protection Strategy, and locations of previous compensation as documented since the Region incorporated in 1973.

Complaints received by Regional staff will be categorized as those located within Groundwater Taking Policy Areas and those located in areas with no Regional groundwater taking. Groundwater Taking Policy Areas are identified in Figure 2. The location of a complaint will be interpreted in favour of the complainant where any reasonable doubt exists.

Procedures for addressing complaints within and outside of Groundwater Taking Policy Areas are presented in Sections 5 and 6, respectively. A complainant may request compensation under either or both policy areas where the well is located in both Groundwater Policy and Historic Compensation Areas.

The investigation of surface water interference complaints will follow the procedures set out below for groundwater interference complaints.

4.0 Procedures within historic compensation areas

A small number of well interference complaints are occasionally received from applicants located within Historic Compensation Areas. The Region will provide a one-time compensation of \$4,000 for water supply replacement to any private well owner within the Historic Compensation Area alleging interference from municipal water taking.

This lump sum payment will only be available to applicants who have not previously signed a compensation waiver form, and will be applied towards the costs of connecting the applicant's residence to the municipal water supply (where available) or installation of a replacement well, abandonment on the old well, and filling of water tanks for the temporary water supply.

The procedures listed below will be undertaken to address allegations within Historic Compensation Areas:

- Region contacts plumber to confirm problem is not mechanical (i.e., pump malfunction).
- Staff will arrange temporary water system hookup and removal, and the first load of water to the system.
- Staff will request in writing that well owner sign a waiver form and provide receipts for well drilling, well deepening or connection to a municipal supply and confirmation that the old well has been properly plugged according to Regulation 903.

- Response to complainants will document the appeal process as outlined in Section 8.0.
- Upon receipt of signed waiver and receipts, staff will issue a cheque.

If the applicant believes that they deserve additional compensation, an appeal of the compensation limit can be initiated prior to signing the waiver as described in Section 8.0.

Compensation awards provided to complainants in Historic Compensation Areas will not be treated as valid in reference to Section 7.0 of this document (Procedures Where Previous Complaints).

5.0 Procedures within groundwater taking areas

Within Groundwater Taking Policy Areas, Region staff will provide a temporary water supply to affected supplies, and will investigate complaints to determine whether interference has occurred. The procedures listed below will be undertaken to address allegations within Groundwater Taking Policy Areas:

- Region contacts plumber to confirm problem is not mechanical (i.e., pump malfunction).
- Staff provides temporary water system hookup and removal, and water supply to the temporary system.
- Staff conducts investigation to determine validity of complaint.
- Where the results of the investigation indicate interference from municipal supply wells has occurred Region staff will make arrangements to provide compensation. Compensation must be acceptable to the Region, and could include all or part of the costs associated with connection to a municipal supply, drilling of new well, deepening of existing well, abandonment of the old well, water delivered to fill a temporary water system, and associated costs.
- If compensation is to be awarded, staff will request in writing that the well owner sign a waiver form and provide receipts for well drilling, well deepening or connection to a municipal system, and confirmation that the old well has been properly plugged in accordance with Regulation 903. The waiver is required to ensure that the complainant does not seek future compensation for an occurrence which has already been compensated, and to limit Region liability. Upon receipt of these items, staff will issue a cheque.
- Where the results of the investigation do not indicate municipal well

interference, Region staff will provide a letter report summarizing the results of the investigation to the property owner. The letter will notify the property owner of the appeal procedures as documented in Section 8.0 of this document.

6.0 Procedures outside groundwater taking areas

Complaints located outside of Groundwater Taking Policy Areas are not considered to be valid groundwater interference complaints. The Region will take no action with complaints located outside Groundwater Taking Policy Areas.

The procedures listed below will be undertaken to address allegations outside Groundwater Taking Policy Areas:

- Staff will confirm that the complainant is located outside of groundwater policy areas.
- Staff will respond in writing to the complainant within seven days, stating that applicant is located outside groundwater taking areas and that the Region will take no further action on this complaint.
- Letters to the complainant will also document the appeal process as outlined in Section 8.0.

7.0 Procedures where previous complaints

Complaints that have been dealt with by the appeals process in the past are received occasionally by staff. These past complaints typically fall into two categories: complaints for which the Region has awarded compensation; and complaints for which the Region has recommended that no further action be taken. The process for responding to these types of situations will be different, as described below.

7.1 Previously recognized complaints

From time to time, a problem arises in a private well that was constructed in response to a valid, historic well interference complaint. An example of this is where water quality problems developed as a result of the construction of the new well. These circumstances fall outside of the normal release signed by the complainant, following compensation.

With recognized past complaints, staff will determine based on available information the nature of the water supply problem. Based on this investigation, staff will take one of the following actions:

- If it is determined that the new water supply problem is a result of the work done to resolve the original complaint for which compensation was awarded,

staff will take appropriate action to provide a temporary water supply as per Section 5.0 and/or rectify the problem.

- If new interference by municipal pumping has occurred, staff will provide a temporary water supply as per Section 5.0.
- If it is discovered that the water supply problem is not the result of groundwater interference, staff will inform the complainant that the water supply problem is not the responsibility of the Region. Possible factors leading to lack of water supply include poor operation and maintenance to ensure an adequate water supply system.
- Letters to complainant will document the appeal process as outlined in Section 8.0.

7.2 Unsupported complaints

In the case where a complaint has previously been found to be unsupported, and/or the Region recommended that no further action be taken, staff will take the following actions:

- Staff will determine as best as is possible the nature of the water supply problem.
- If it is determined that there is new evidence of Regional interference, the complaint will be treated as a new complaint, and staff will follow the actions described above in Section 5.0. This includes new evidence from the previous complaint, or evidence of subsequent interference.
- If it is determined that circumstances involving the original complaint have not changed (i.e. no interference from Regional groundwater taking activities),
- Staff will inform the complainant in writing that the water supply problem is not the responsibility of the Region.
- Letters to complainant will also document the appeal process as outlined in Section 8.0.

8.0 Appeals

An applicant may believe that compensation is warranted where a complaint has been ruled invalid by a staff investigation, where the well is located outside a Groundwater Taking Policy Area or where the compensation provided did not cover the entire costs of the new supply. In these cases, the applicant may request that the Commissioner of Transportation and Environmental Services (Commissioner) meet to hear the appeal.

As documented in the previous sections, complainants are advised that they are entitled to appeal staff's decisions on the complaint. They are advised that the appeal must be lodged within one month of the date of the letter, and the formal written appeal must state the reasons they feel that interference has occurred and/or why full compensation is warranted.

The procedures listed below will be taken where an applicant requests an appeal of the application:

- Staff will acknowledge receipt of the appeal request in writing within seven days of receipt of the letter.
- Staff will arrange a meeting with the Commissioner within a reasonable time of the request to appeal.
- Staff will provide the location and time of the meeting in writing to the complainant at the earliest possible time and no later than seven days prior to the meeting with the Commissioner.

Where the Commissioner concludes that the applicant should receive compensation or additional compensation, staff will follow the procedure for compensation listed above in Section 5.0 (Groundwater Taking Policy Areas).

9.0 Compensation

Compensation will be provided for complaints where a well is unable to provide an adequate supply of water because of interference from municipal groundwater taking. The preferred approach to resolve the lack of water is to connect the residence to a municipal water supply system as this is the most secure option for the long term supply of safe water to a residence. In areas where municipal water supply is not available, compensation would partially or fully cover the costs of a drilled replacement well.

Compensation may also be awarded to offset the costs of water supply for a temporary water system installed during the investigation of the complaint, and for the plugging of the unused water well that is being replaced. Plugging (abandonment) of these wells is required under the Ontario Water Resources Act to prevent the movement of surface water and potential contaminants into a well, and to prevent the contamination of underlying groundwater resources. An unused well is one that is dry or is not being used or maintained for future use as a well.

Compensation will not cover costs associated with normal operation and maintenance of the replacement water supply. Since well rehabilitation is part of a normal well maintenance program, compensation will not be awarded to cover well rehabilitation

costs.

Figure 1: Zone of influence for a pumping well

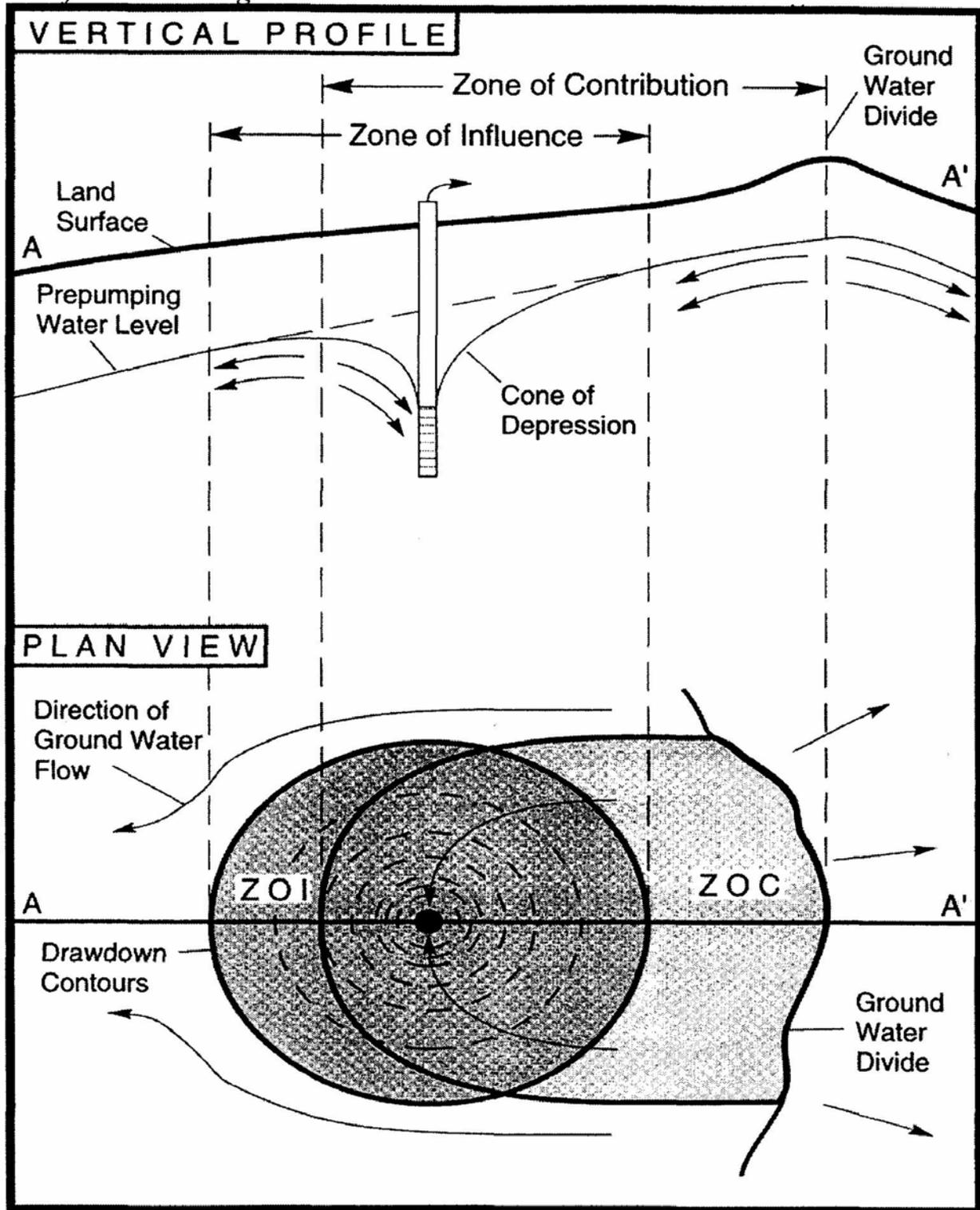


Figure 2: Groundwater taking policy and historic compensation areas

