

Special Committee of the Whole Meeting Agenda

Consolidated as of November 4, 2016

**Monday, November 7, 2016 – 7:00 p.m.
Council Chambers, Guelph City Hall, 1 Carden Street**

Please turn off or place on non-audible all electronic devices during the meeting.

Please note that an electronic version of this agenda is available on guelph.ca/agendas.

Call to Order – Mayor

Disclosure of Pecuniary Interest and General Nature Thereof

Items for Discussion – Infrastructure, Development and Enterprise Services

Chair – Councillor Bell

**COW-IDE-2016.18 Process to Support the City's Submission to the
Ministry of the Environment and Climate Change
Regarding Ontario's Water-Taking Regulations**

Presentation:

Cathy Kennedy, Manager, Policy and Intergovernmental Relations
Barbara Swartzentruber, Executive Director, Policy, Intergovernmental Relations
and Open Government

Recommendation:

That Staff be directed to consider public comments, made through delegations at the November 7th Committee of the Whole meeting, and report back to Council on November 28th with a recommended resolution for approval and submission to the Ministry of the Environment and Climate Change regarding the province's water-taking review process.

**COW-IDE-2016.19 Nestlé Waters Canada – Permit to Take Water
Technical Report**

Presentation:

Peter Busatto, General Manager, Environmental Services
Dave Belanger, Water Supply Program Manager

Delegations:

Martin Keller, Grand River Conservation Authority (presentation)

Mike Schreiner

Patrick Sheridan

Recommendation:

That this technical staff report on the 2016 Nestlé Aberfoyle Permit to Take Water renewal application be received for information.

Councillor Gordon's Motion Regarding Permit to Take Water**Delegations:**

Karen DelVecchio

Maureen Blackwood & David Cadogan-Blackwood

Shayne Ward

Arlene Slocombe, Wellington Water Watchers (withdrawn)

Mike Nagy, Wellington Water Watchers

Rob Case, Wellington Water Watchers

Tamanna Kohi, Wellington Water Watchers

Debbie Moore, Nestle Waters Canada (presentation)

Andreanne Simard and Catherine O'Brien, Nestle Waters Canada (Ms. O'Brien withdrawn) (presentation)

Jennifer Nikolasevic, Nestle Waters Canada

Sam Gordon, Nestle Waters Canada (withdrawn)

Carolyn Fell, Canadian Beverage Association (withdrawn)

Jim Goetz, Canadian Beverage Association

Hugh Whiteley (presentation)

Elizabeth Griswold, Canadian Bottled Water Association

Joseph St. Denis

Sean Roberts (presentation)

John Farley

Susan Watson

Isaak Tonelli

Karen Rathwell (presentation)

John Cherry (presentation)

John Cowan

Harry Oussoren

Charity Curtis

Cynthia Bragg

Rob Frizzle

Catherine Kormendy

Sheri Longboat, Haudenosaunee Confederacy

Lin Grist, Council of Canadians: Guelph Chapter

Maria Shallard

Geoff Krauter, Guelph NDP

Mark Darmon

Terry O'Connor, Guelph & District Labour Council

Sel Mullins

Diane Hurst

Maddison Ford

Correspondence:

Line Levesque

Maria Pezzano

Hugh Whiteley

Leslie Dema

Susan Watson

John Cowan

Mayor Dennis Lever, Township of Puslinch

Russell Boals, Project WET Canada

Sean Roberts

Jennifer Kerr, Nestle Waters Canada

John Farley

Susan Watson

Recommendation:

That Council, with administrative assistance from Intergovernmental Relations, Policy and Open Government staff, submit comments through the Ontario Environmental Registry Process expressing Guelph's concern about the future sustainability of water-taking from the watershed shared by the City of Guelph.

Mayor as Chair**Adjournment**



SOURCE WATER PROTECTION

***City of Guelph – Committee of the Whole
Monday, November 7, 2016***

Protecting our water

- We need safe, abundant drinking water supplies to survive and prosper
- Walkerton water crisis showed us the importance of protecting water supplies
- Walkerton inquiry recommended a 'source water protection program'



The Ontario Clean Water Act

- Passed in 2006 to implement recommendations on source protection in the Walkerton Report
- Protect current and future drinking water sources from contamination and depletion
- One of five layers in a 'multi-barrier' approach



Tier 3 Approach

- **Main phases of a Tier 3 Water Budget project**
 - Conceptual Model Report
 - Numeric Model Report
 - Water Quantity Risk Assessment (WQRA)
- **Reports are sequential, require provincial peer review and sign-off before next phase**
- **Supplies with moderate or significant risk require completion of a Risk Management Measures Evaluation Process (RMMEP)**

Guelph/Guelph-Eramosa Tier 3

- Finalising Water Quantity Risk Assessment (WQRA) Report as part of Peer Review process
- WQRA identifies *significant* risks to municipal drinking water supplies under future scenarios
- Next steps Risk Management Measures Evaluation Process (RMMEP) to identify strategies that mitigate risks to municipal water supply infrastructure sustainability
- Water quantity policies to be developed



Role of the GRCA

- **Partnership of municipalities that manages water and resources on a watershed basis using sound science and technical information**
- **Lead Source Protection Authority for the Lake Erie Source Protection Region**
- **Responsible for scientific technical support to Source Protection Committee and financial management of Source Protection Program**
- **Uses collaboration to facilitate practical and implementable solutions to water resource issues**

Conclusion

- Expected growth will result in increased water demand
- Water resources will need to be managed more effectively
- Tier 3 Water Budget model provides tool to better understand water resources and for agencies to make informed decisions
- GRCA supporting this work through its lead role in the Source Protection Program under the Clean Water Act.

Questions?

Presentation for the City of Guelph Committee of the Whole

Debbie Moore

President, Nestlé Waters Canada

November 7, 2016



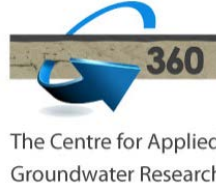
The Healthy Hydration Company™



We are Nestlé Waters Canada and We're Proud to Manufacture in Aberfoyle



Community First: Creating Shared Value



**CANADIAN
RED CROSS**



*The Water Line to
The Homeless*



United Way



**MUSÉE DE L'AGRICULTURE
ET DE L'ALIMENTATION
DU CANADA**



Community First: Supporting Local Business



Presentation for the City of Guelph Committee of the Whole

Dr. Andreanne Simard, Ph.D.

Natural Resource Manager, Nestlé Waters Canada

November 7, 2016

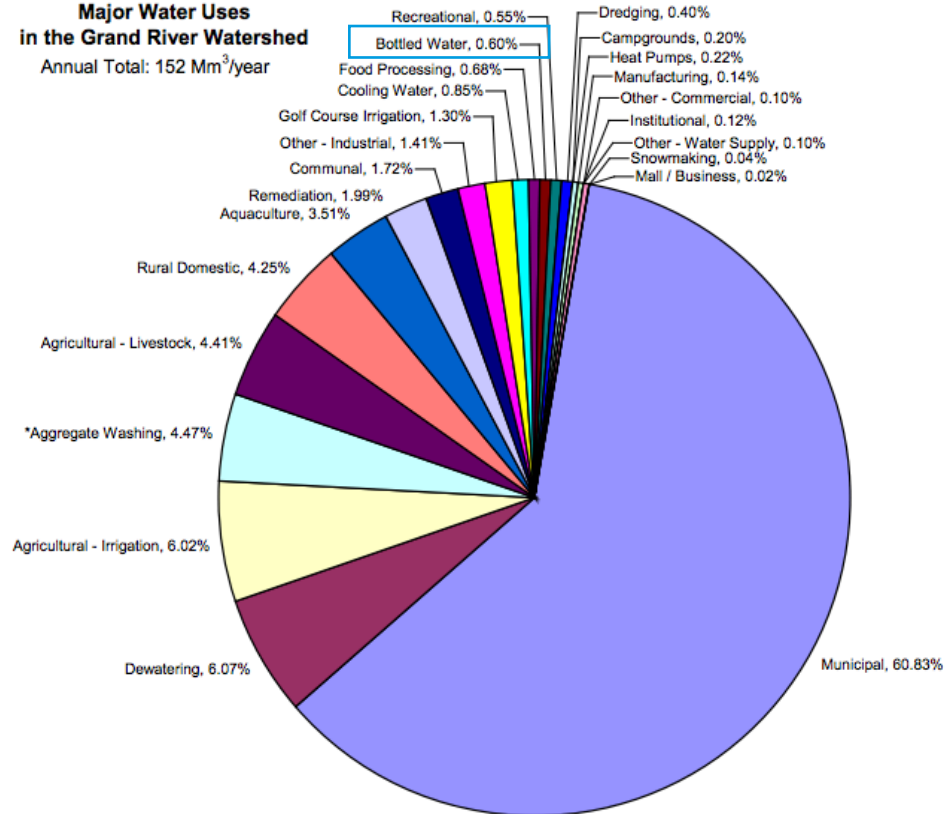


The Healthy Hydration Company™



A Holistic Water Resource Management Discussion: Grand River Watershed

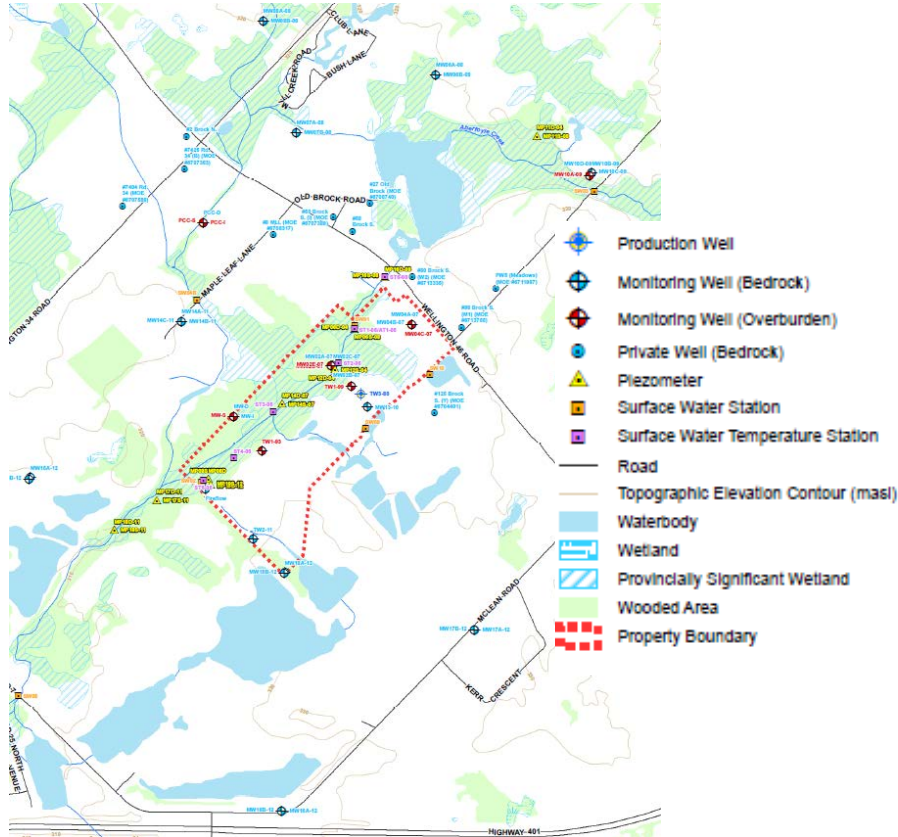
**Major Water Uses
in the Grand River Watershed**
Annual Total: 152 Mm³/year



* Accounts for recirculation

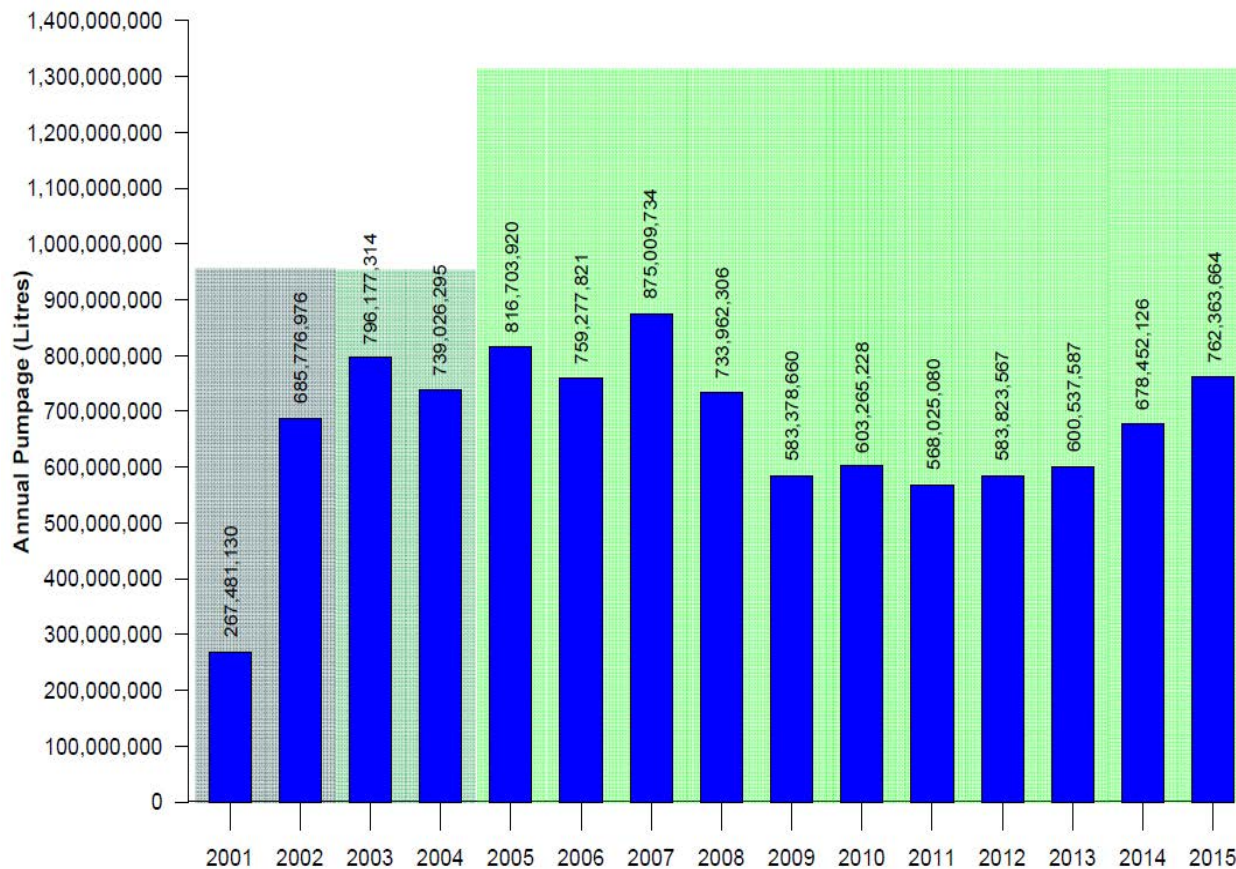
Source: https://www.grandriver.ca/en/our-watershed/resources/documents/wmp/water_wmp_report_wateruse.pdf

Aberfoyle Well TW3-80: Driven By Science

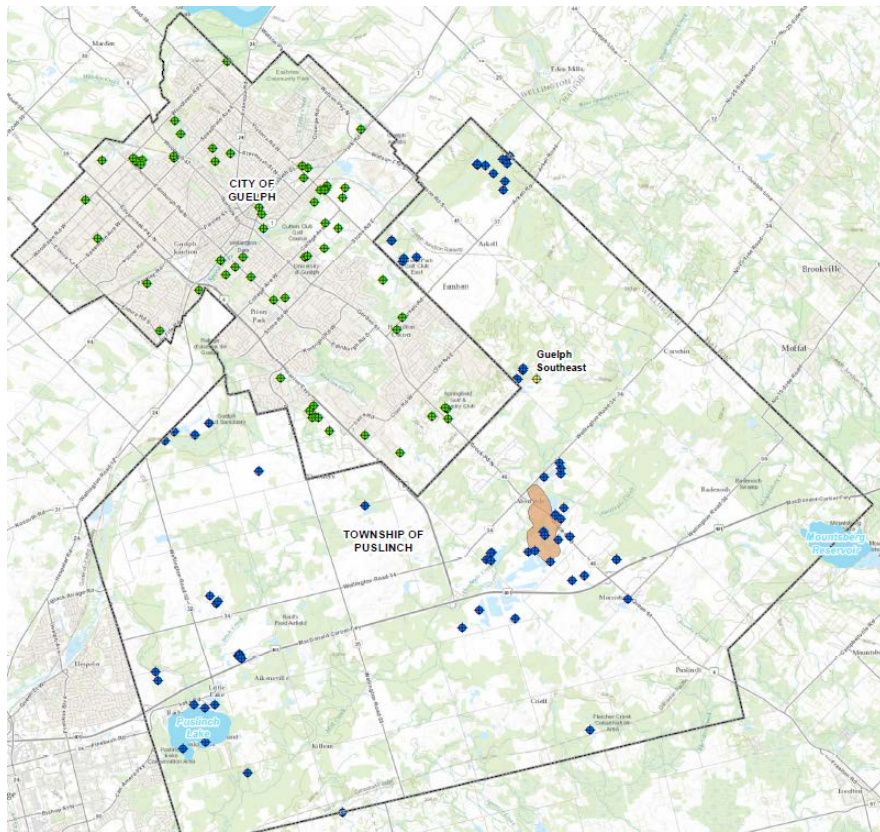


- Groundwater and surface water monitoring program
 - 16 monitoring well nests with a total of 40 monitors
 - 7 surface water stations
 - 9 mini-piezometer nests with a total of 18 monitors
 - 6 temperature stations
 - 11 private wells
- Terrestrial/biological monitoring program
- Community water taking comes first
 - Well protection agreement with the Township of Puslinch

Aberfoyle Annual Water Takings



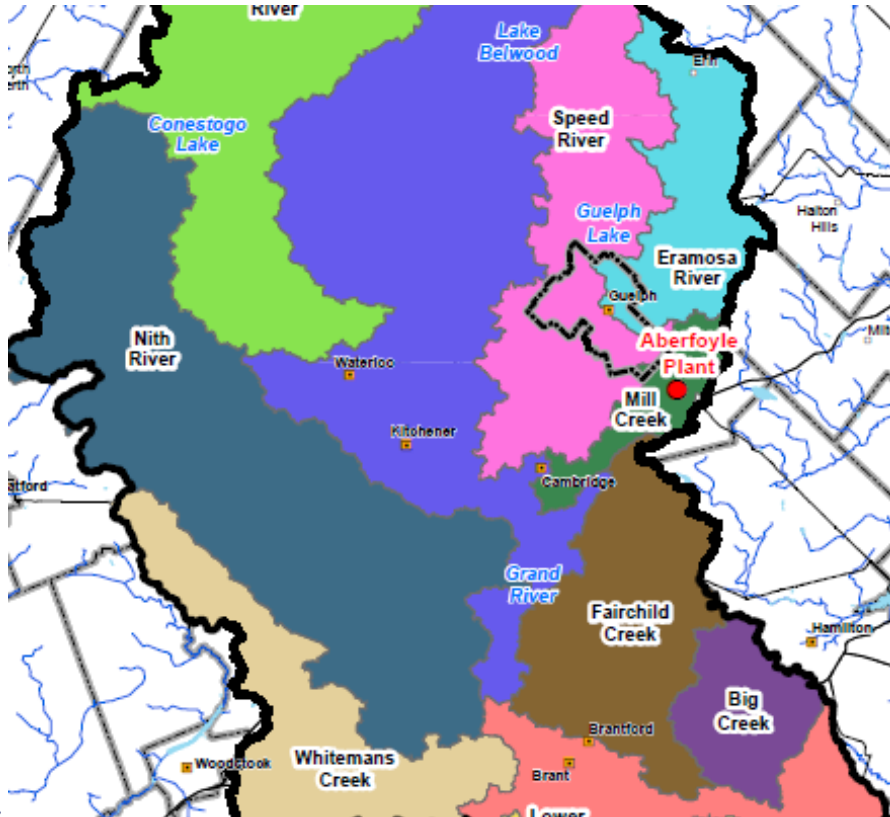
Regional Water Takings



Summary

- Nestlé Waters Canada has monitored water levels in the Goat Island/Gasport Aquifer for 15 years. The withdrawal has not resulted in long-term declines in the aquifer.
- The TW3-80 water taking has not resulted in measurable environmental impacts. Nestlé gauges stream flow rates, and monitors the wetland and fish communities in and along Aberfoyle Creek.
- The area of influence from Nestlé Waters pumping is very small compared to the City of Guelph Wellhead Protection Area – Quantity Zone.
- Nestle Waters Canada's water taking does not interfere with existing City of Guelph water supply wells.

Appendix 1 – Grand River Watershed



- The Nestlé Waters Canada property is located within the Mill Creek watershed.
- The City of Guelph is located mainly within the Eramosa and Speed River watersheds with other smaller watersheds located within these watersheds.

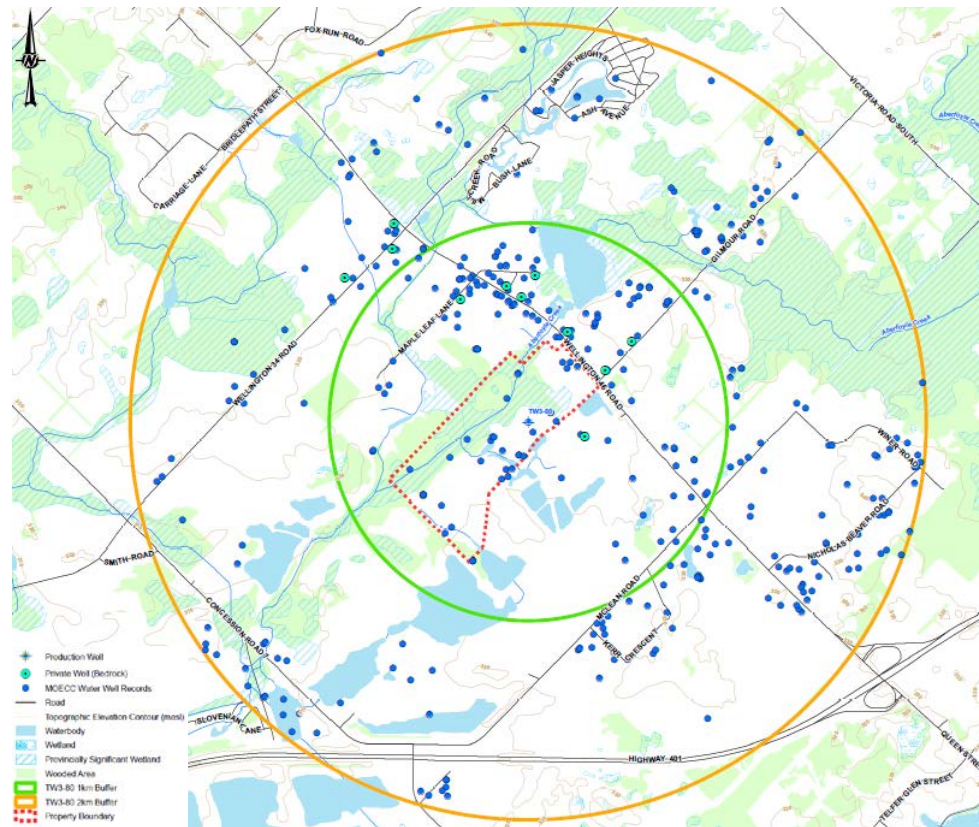
Appendix 2: Aberfoyle Well TW3-80

- TW3-80 was constructed in 1980 for a proposed fish farm operation.
 - Pumping was initiated at 5,455 L/min
- In December 2000, Nestle purchased the site.
 - From 2000-2004 permitted pumping rate was 1,816 L/min
 - From 2005 to present permitted pumping rate is 2,500 L/min
- Numerous studies have been completed to address data gaps with work including:
 - 5 pumping tests (1980, 2004, 2007, 2010 and 2012)
 - Stream temperature survey
 - Installation of additional mini-piezometers and monitoring wells
 - Single well response testing
 - Downhole geophysical logging
 - Water quality sampling
 - Biological monitoring



Appendix 3: Nestlé Well Protection Agreements

- Nestlé Waters has a Well Protection Agreement with the Township of Puslinch because community water needs come first.
- The agreement sets out the procedure and terms on which a complaint raised by well owners about their wells being affected by Nestlé may be received, investigated and remedied.



Managing Water as a Public Trust: Policy Guidance for the City of Guelph



Core Principle: Water is a Public Trust

- Water and air are essential for all plants and animals to live.
- Water and air are circulating fluids of finite constant mass with cycles that are global in extent.
- Both water and air are a “res communis”, not subject to ownership, to be available to all life, with custodianship entrusted to government.

Ontario Water Resources Act

Purpose

- to provide for the conservation, protection and management of Ontario's waters and for their efficient and sustainable use, in order to promote Ontario's long-term environmental, social and economic well-being.

SWISS WATER LAW

Purpose

- to protect waters against harmful effects to preserve the health of people, animals and plants.

Swiss Water Law- Specific Aims

Human life

- Guarantee supply and economic use of water for drinking and other purposes
- Ensure irrigation of agricultural land
- Permit use of water for leisure activities
- Preserve water as an element in the landscape

Natural Ecosystems

- Ensure natural functioning of the hydrological cycle
- Preserve the natural habitats of indigenous fauna and flora.
- To preserve waters suitable as a habitat for fish

Guelph Initiatives in Water Management

- Established and regularly update master plans for all aspects of water management – water supply, regeneration of building return flows by WRRF and stormflow regeneration by stormwater treatment systems.
- Established adequate secure and sustained funding through user fees for operation, management and monitoring of the required management systems

Guelph's supply forecast has ample factor of safety

- Forecast needed permitted supply capacity of 107,000 m³/d (with allowance for drought) is 2.0 times the average daily demand of the 2041 forecast population of 191,000.
- Model testing for effects of extreme drought on supply capacity uses City pumping of 73,400 m³/d , 60% larger than current pumping rate and accommodating a population of 212,000 (21,000 > 2041 forecast)

City Communication with the Province on Water Management

- Declare water as a public trust as the core principle of management of water in Ontario.
- Declare that water as a public trust cannot be owned and cannot be priced and sold.
- Establish adequate, secure and sustained provincial funding for comprehensive management and monitoring of water-use allocation in Ontario (based on user fees in needed).

Management of Consumptive Uses

- The central and most urgent water-management issue.
- Balance between (some) irrigation for production of food crops and maintaining groundwater levels and flow in streams to sustain natural ecosystems is the big challenge.
- The allocation of water should be based on careful evidence-based determination of what water is needed for sustaining the health of people animals and plants.

Message to the Province on water-taking for beverage sales

- Establish a priority system for water-taking based on long-term sustainability of stable natural ecosystems with urban areas at their built-out limits.
- In all water-taking-permit applications require demonstration of net benefit for Ontario's long-term environmental, social and economic well-being.

Guelph Committee Presentation

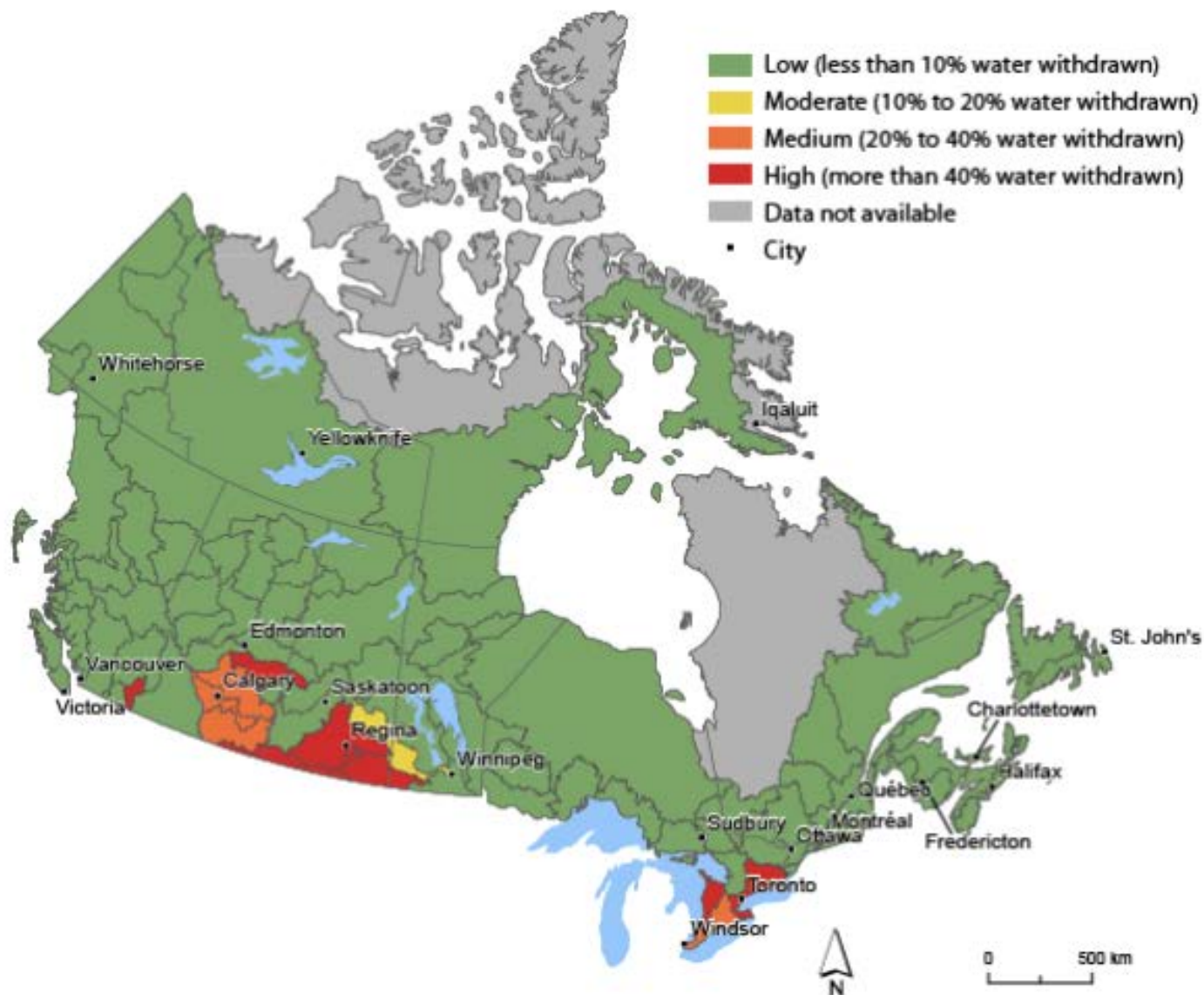
Nov 7, 2016

Subject: Water taking permits

Presentation by: Sean Roberts

Threats to water availability in Canada

- **High** (more than 40% of available water is withdrawn): severe water stress. At this level of consumption there is an increasing dependence on desalination and groundwater is being used faster than it is replenished. Water use patterns and withdrawals may not be sustainable and water scarcity can become a limiting factor to economic growth.
- **Medium** (between 20% and 40% of available water is withdrawn): both water supply and water demand need to be managed and conflicts among competing uses will need to be resolved. Aquatic ecosystems may require special attention to ensure they have adequate water flows.
- **Moderate** (between 10% and 20% of available water is withdrawn): water availability becomes a constraint on development and investment is needed to increase water supply and reduce demand.
- **Low** (less than 10% of available water is withdrawn): low water stress.
- **Caveats and limitations**
This indicator does not account for the water stock in lakes and groundwater aquifers. As a result, water availability may be underestimated and the threat to water availability overestimated for areas relying primarily on lakes, oceans or other water sources to satisfy human water demand. Where the threat is high, there are longer-term risks that withdrawal exceeds recharge for these water bodies.



02K	Central Ottawa	Low
02B	Northeastern Lake Superior	Low
02D	Wanipitai and French, Ontario	Low
02C	Northern Lake Huron	Low
02M	Upper St. Lawrence	Low
02E	Eastern Georgian Bay	Low
02F	Eastern Lake Huron	High
02H	Lake Ontario and Niagara Peninsula	High
02G	Northern Lake Erie	Medium

Note: The Canadian Environmental Sustainability Indicators (CESI) Water Availability Indicator aggregates sub-drainage areas, as defined by the [Standard Drainage Area Classification](#) developed by Statistics Canada, into the following 76 groupings.

[A] Evaluated at the sub-sub drainage area level.

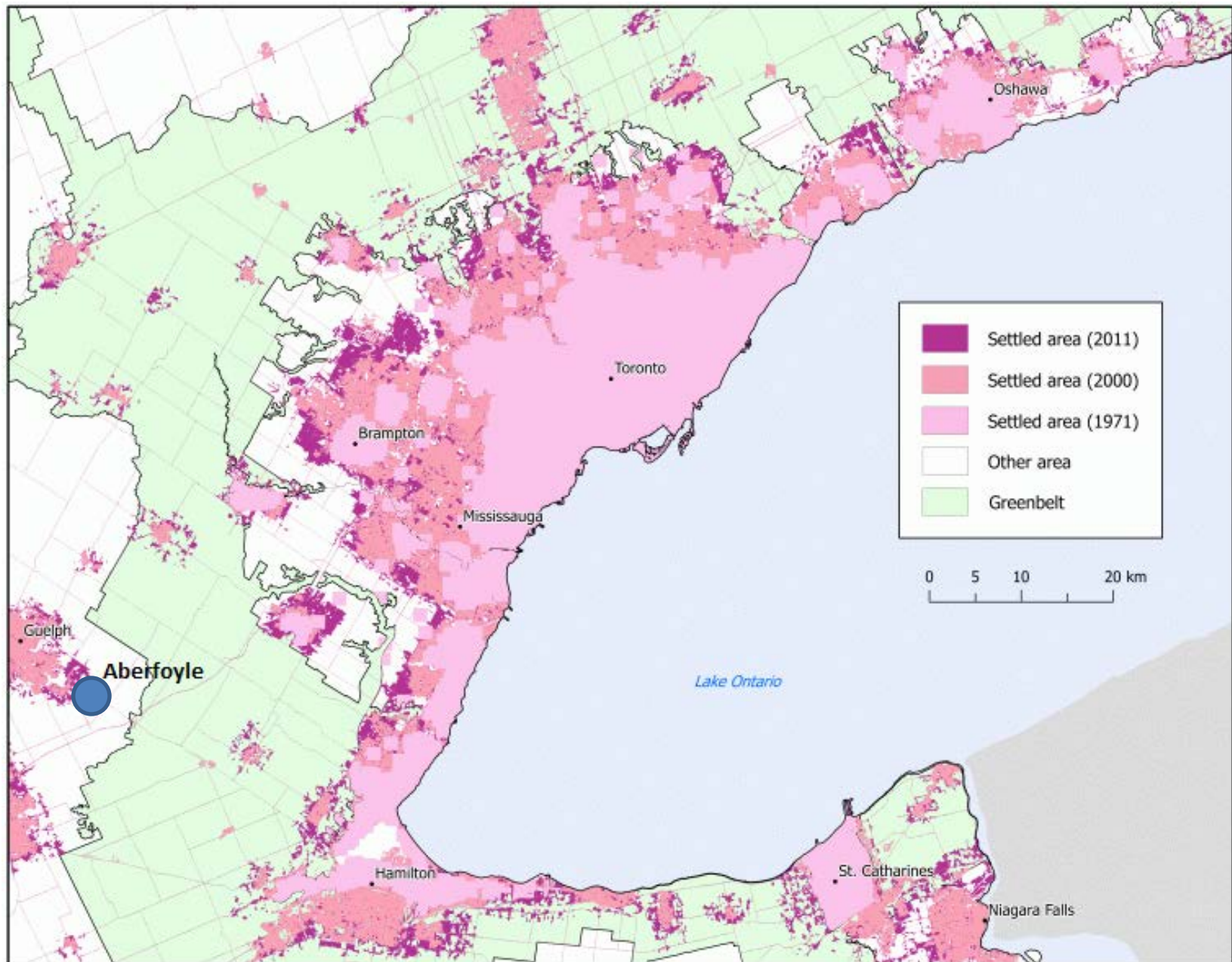
[Download data file](#) (Excel/CSV; 5.87 KB)

[Go to indicator map](#)

Date modified: 2016-02-17



Sub Drainage Area – 02H Threat to water availability “High”



Ontario needs better data on its groundwater supply, says environmental watchdog

“We’re making decisions with our eyes closed,” said the environmental commissioner and warned that climate change will increase the amount of stress on water.



A pair of hands, one from the left and one from the right, are gently holding a small, realistic-looking globe of the Earth. The globe is positioned centrally, showing the continents of North and Central America in shades of green and yellow, surrounded by deep blue oceans and swirling white clouds. The hands are a warm, golden-brown color, with fingers curled around the base of the globe. The background is a solid, dark black, which makes the hands and the globe stand out prominently. The lighting is soft, highlighting the texture of the skin and the details of the Earth's surface.

Monday, Nov 7, 2016
Guelph City Hall



Photo: City of Guelph Website



Photo: City of Guelph Website

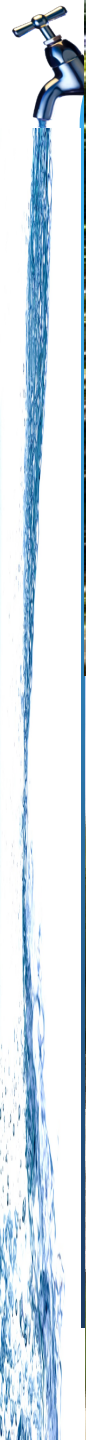


Photo by Bruce Yang 2016



Video Clip by Mayor Guthrie



There is a bigger question:
Whose water is it?
Who gets to decide?

Potential Impacts on Future Water Supply:

The City of Guelph, as part of its 50-year Water Supply Master Plan, identified two potential future water supply areas in the Mill Creek watershed for potential future development. The two areas are: one in the southeast end of the City and in the Mill Creek watershed for potential future development; and one in the central part of the Mill Creek watershed on the Mill Creek/Irish Creek boundary. (Note: The WSMP was developed as water supply sources with the cooperation and approval of the City of Guelph and the Ministry of the Environment.)



File No.

13.221.008

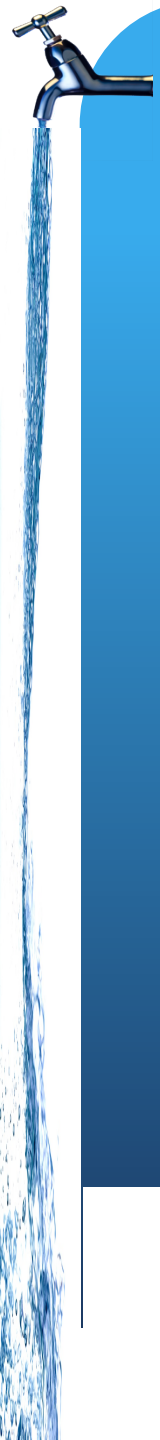
To: Janet Laird, Director of Environmental Services
From: Dave Belanger, Water Supply Program Manager
Division: Waterworks
Date: May 2, 2007
Subject: Notification of Application for Permit to Take Water
Ministry Reference Number: 0275-6ZSQSL

May 2, 2007

The WSMP identified these areas based on an understanding of *available* groundwater, which in turn was dependent on assumptions of current water takings in the watershed versus the amount of groundwater recharge across the area (i.e. the water budget for the watershed). Since the amount of available groundwater is finite, any increases in the water taking would reduce the amount of available groundwater for municipal use. Future municipal drinking water supplies may be limited if Nestlé or other users maintain or increase the total water taking from the Mill Creek watershed.

Recommendation:

Waterworks recognizes that the Permit to Take Water process is intended to allow for the beneficial use of waters while ensuring the fair sharing, conservation and sustainable use of waters of Ontario. However, Waterworks would prefer that no new water takings be permitted in the City and surrounding area, other than for municipal, domestic and agriculture use. It is important that the MOE recognize that there are limits to the local drinking water supply and controls must be placed on local water use to accommodate future municipal growth.



Message
in the bottle



June 13, 2016
 Letter
 Stan Denhoed
 Harden Environmental
 To
 Ms. Landry
 Puslinch Township CAO

* Groundwater discharge to
 Aberfoyle Creek is diminished as
 a result of present rate of taking
 by Nestle

* Potential to effect private
 well water quality because of
 Nestle pumping

* Potential for degradation of
 the water quality in the
 Goat Island and Gasport
 Aquifers



Harden Environmental Services Ltd.
 4622 Nassagaweya-Puslinch Townline Road
 R.R. 1, Moffat, Ontario, L0P 1J0
 Phone: (519) 826-0099 Fax: (519) 826-9099

Groundwater Studies
 Geochemistry
 Phase I / II
 Regional Flow Studies
 Contaminant Investigations
 OMB Hearings
 Water Quality Sampling
 Monitoring
 Groundwater Protection
 Studies
 Groundwater Modeling
 Groundwater Mapping
 Permits to Take Water
 Environmental Compliance
 Approvals

Our File: 0215

June 13, 2016

Township of Puslinch
 7404 Wellington Road 34
 Guelph, ON, N1H 6H9

Attention: Ms. Karen Landry
 CAO

Dear Ms. Landry;

Re: Nestle Waters Canada – Renewal of Permit to Take Water

We are pleased to submit our comments on the 2016 renewal of the
 Permit To Take Water. As part of our review we reference the following
 documents;

*Golder Associates Ltd, 2016, 2015 Annual Monitoring Report, Aberfoyle
 Site, Nestle Waters Canada*

*Matrix Solutions, 2014, Tier 3 Water Budget and Local Area Risk
 Assessment for the City of Guelph and the Communities of Rockwood
 and Hamilton Drive*

*Harden Environmental Services Ltd., 2011, Letter to the Township of
 Puslinch Regarding 2011 Permit to Take Water Renewal*

*Harden, 2011 is a comprehensive review of the pumping tests and
 potential impacts potentially arising from the water taking. The main
 conclusions of this review are:*

a) Groundwater discharge to Aberfoyle Creek is presently
 diminished as a result of the present rate of water taking by Nestlé
 Waters Canada and increased water taking will further decrease
 groundwater discharge to Aberfoyle Creek;

b) There is the potential to indirectly effect private well water
 quality as a result of the water taking by Nestlé Waters Canada and

f Aberfoyle. Individual wells in the Hamlet may inadvertently become conduits for
 contaminants originating at the ground surface, septic systems or buried tanks. The
 identification of these wells and evaluation of their water quality and flow through

CLERK'S DEPARTMENT	
TO	Council
Copy	electronic copy provided
Please Handle	
For Your Information	
Council Agenda	July 20/16
File	

RECEIVED

JUN 13 2016

Township of Puslinch



The justification for these conclusions is detailed in the 2011 letter. There are now five more years of data available and upon review of this data we have the following comments.

1) Annual pumping has increased from 588 million (2011) to 762 million litres (2015) per year. Average taking between 2002 and 2008 was 720 million litres and the maximum annual taking occurred in 2007 with 875 million litres. The increase in pumping has resulted in lower average groundwater levels in the pumping well TW3-80. Based on visual inspection, ~~the average daily low groundwater elevation in 2011 was approximately 303 m AMSL and in 2015 was 301 m AMSL.~~ There are observational trends toward lower water levels in the following monitors; MW6A-07, MW7A-08, MW10D-09, MW14A-11, MW15A-12, MW16A-12, MW17-12, MW18A-12, TW2-11. The water levels in these monitors represent the potentiometric surface of the Gasport aquifer. There may be climatic variations that account for the observed lower water level; however this factor is difficult to separate out from the variation in pumping volume



* Similar lower water levels not found in aquifer closer to the surface

* Reversal to Aberfoyle Creek

* Depressurization of deeper aquifers causing vertical movement of water and possible future Contamination.

2) We do not find similar observational trends to lower water levels in the wells completed in the Eramosa, Guelph or overburden aquifers.

3) Data from mini piezometers located within and adjacent to Aberfoyle Creek indicate both upward and downward vertical hydraulic gradients, similar to those observed prior to 2011. The 2010 pumping test confirms a hydraulic connection between TW3-80 and Aberfoyle Creek. The taking is sufficient to cause a reversal of groundwater flow resulting in water flowing from the creek to the aquifer. However, there is no indication that groundwater conditions in the vicinity of Aberfoyle Creek have changed between 2011 and 2016.

Our conclusions from the 2011 review have not changed. The water taking by Nestle Waters Canada results in the depressurization of the Gasport Aquifer beneath the hamlet of Aberfoyle. Individual wells in the Hamlet may inadvertently become conduits for contaminants originating at the ground surface, septic systems or buried tanks. The identification of these wells and evaluation of their water quality and flow-through volumes is recommended.

Sincerely,

Harden Environmental Services Ltd

Stan Denhoed, P.Eng., M.Sc.
Senior Hydrogeologist



Data from Nestle Annual Report 2015

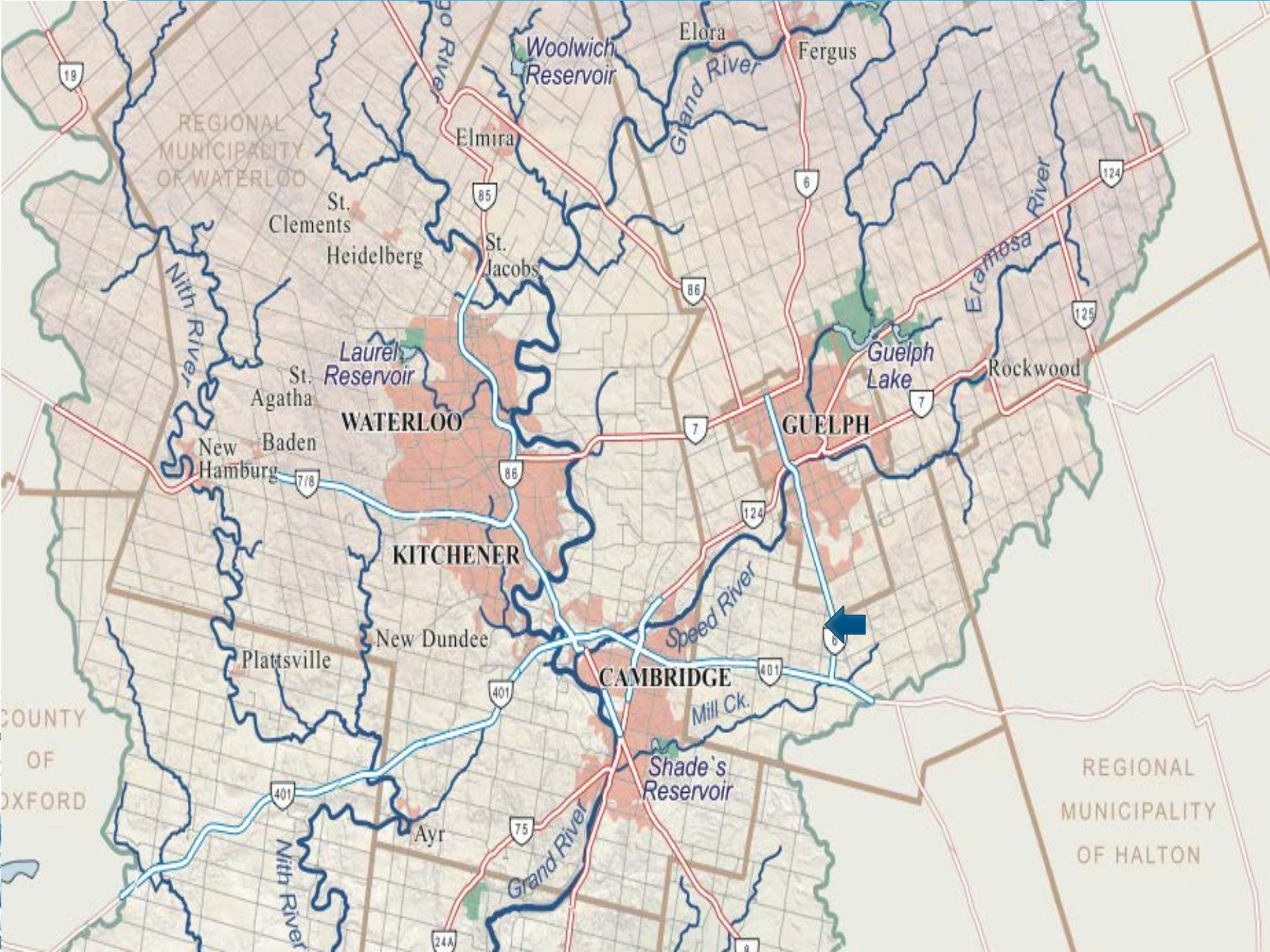
- * Increase in pumping from 2011 – 2015 = 33%
- * Average decline in water level supplying Nestle well between 1.5 – 2 m
- * Pattern of less pumping late summer, the total volume taken accounted for approximately 58% of the permitted volume.

TW3-80 pumped quantity
relative values from Graph

	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
2011	31	43.5	35	30	50	44	47.5	53	43	39	35.5	22.5
2012	31	32	43	41	50	46	53	57	41	33	31	28
2013	35	32	46	50.5	53	40.5	46.5	50	42.5	36	40	28
2014	40	31.5	50	48	50	56	62	53	40	49	45	41
2015	44	48	59	60	63	65	64	57.5	47.5	49	45	33

Monthly pumped amount in L

2011	37314815	52361111	42129630	36111111	60185185	52962963	57175926	63796296	51759259	46944444	42731481	27083333
2012	37314815	38518519	51759259	49351852	60185185	55370370	63796296	68611111	49351852	39722222	37314815	33703704
2013	42129630	38518519	55370370	60787037	63796296	48750000	55972222	60185185	51157407	43333333	48148148	33703704
2014	48148148	37916667	60185185	57777778	60185185	67407407	74629630	63796296	48148148	58981481	54166667	49351852
2015	52962963	57777778	71018519	72222222	75833333	78240741	77037037	69212963	57175926	58981481	54166667	39722222



REGIONAL
MUNICIPALITY
OF WATERLOO

REGIONAL
MUNICIPALITY
OF HALTON

COUNTY
OF
OXFORD

WATERLOO

KITCHENER

GUELPH

CAMBRIDGE

Woolwich
Reservoir

Laurel
Reservoir

Shade's
Reservoir

Guelph
Lake

Nith River

Speed River

Eramosa
River

Grand River

Grand River

Nith River

Elmira

Elora

Fergus

St. Clements
Heidelberg

St. Jacobs

Rockwood

New Hamburg

Plattsville

New Dundee

Ayr

19

85

86

6

124

125

7

7

124

401

86

7/8

401

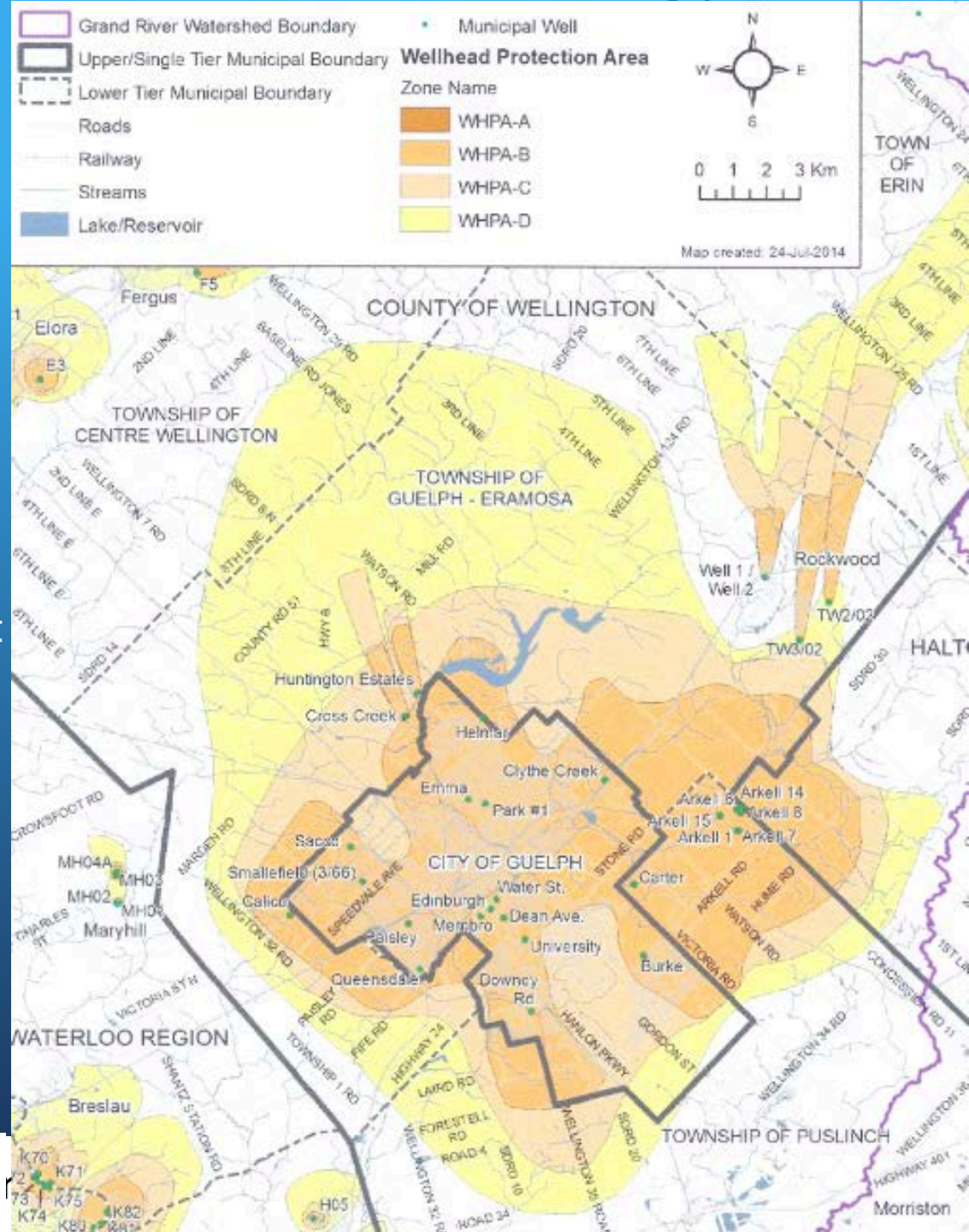
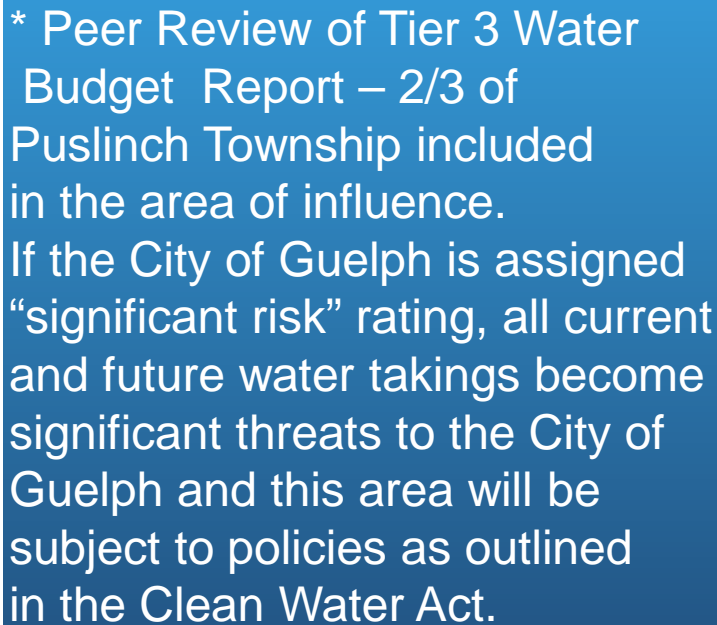
401

75

24A

9







County of Wellington, Township of Puslinch, Township of Eramosa and the Grand River Conservation Authority. The County of Wellington expressed concern about the “significant risk” associated with the Grand River Water Protection Authority (WRPA) to the City of Guelph WHPA-Q1. In response, on April 21, 2015, the County received a chronology of events resulting in the assignment of a ‘significant risk’ level from the Grand River Conservation Authority.

Tier 3 Water Budget Peer Review

COUNTY OF WELLINGTON

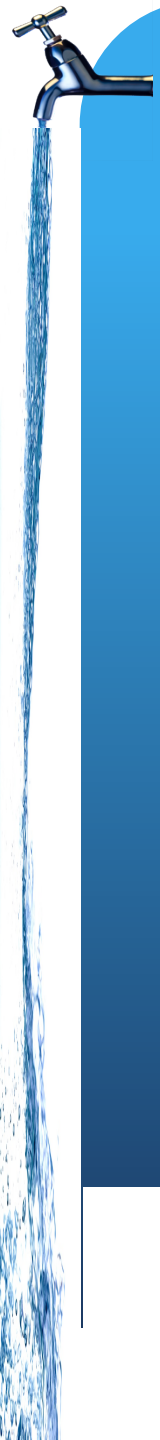
June 12, 2015

Page 5

4) Extent of WHPA-Q1

The water taking by Nestle Waters Canada and another commercial water taking in the

There is a bigger question:
Whose water is it?
Who gets to decide?



Water for Life

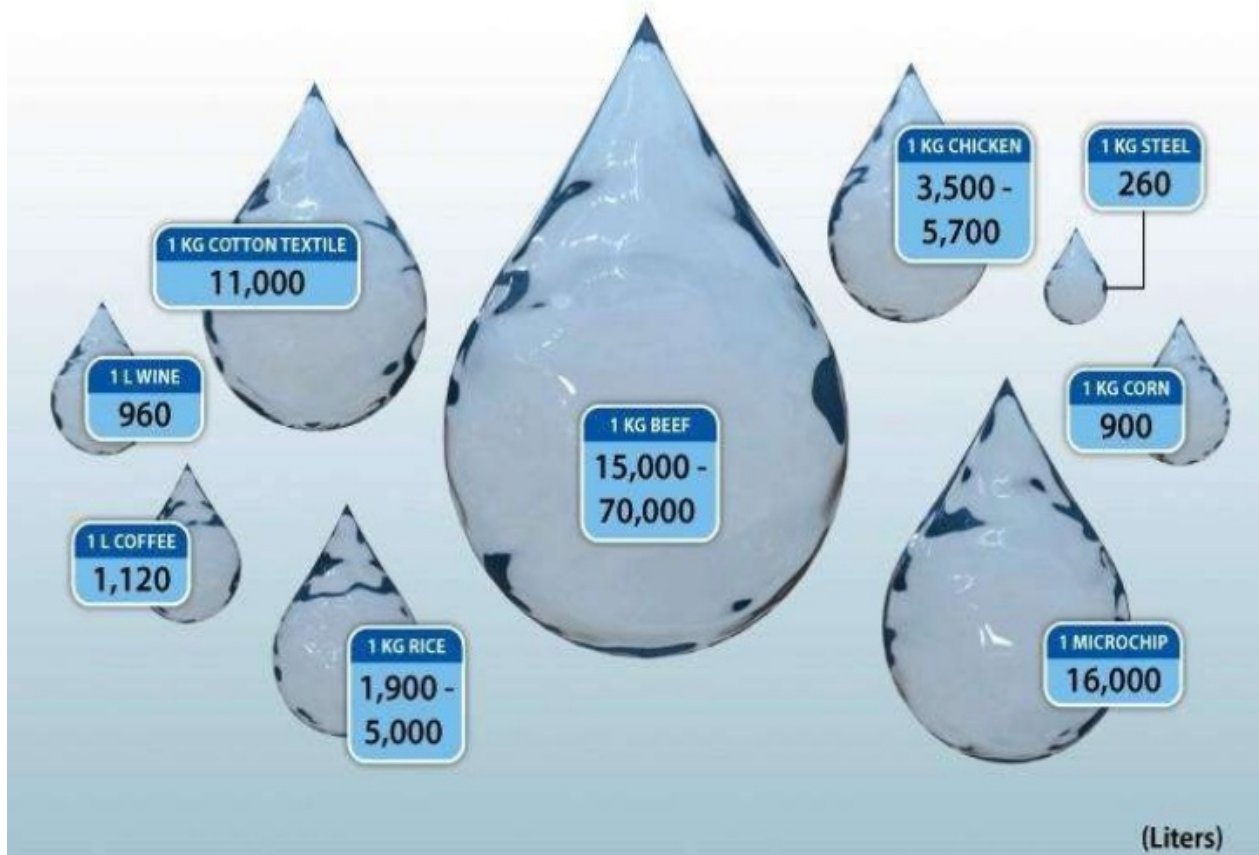
Not for Profit

John Cherry
Hydrogeologist and Professor
University of Waterloo, 1971-2006

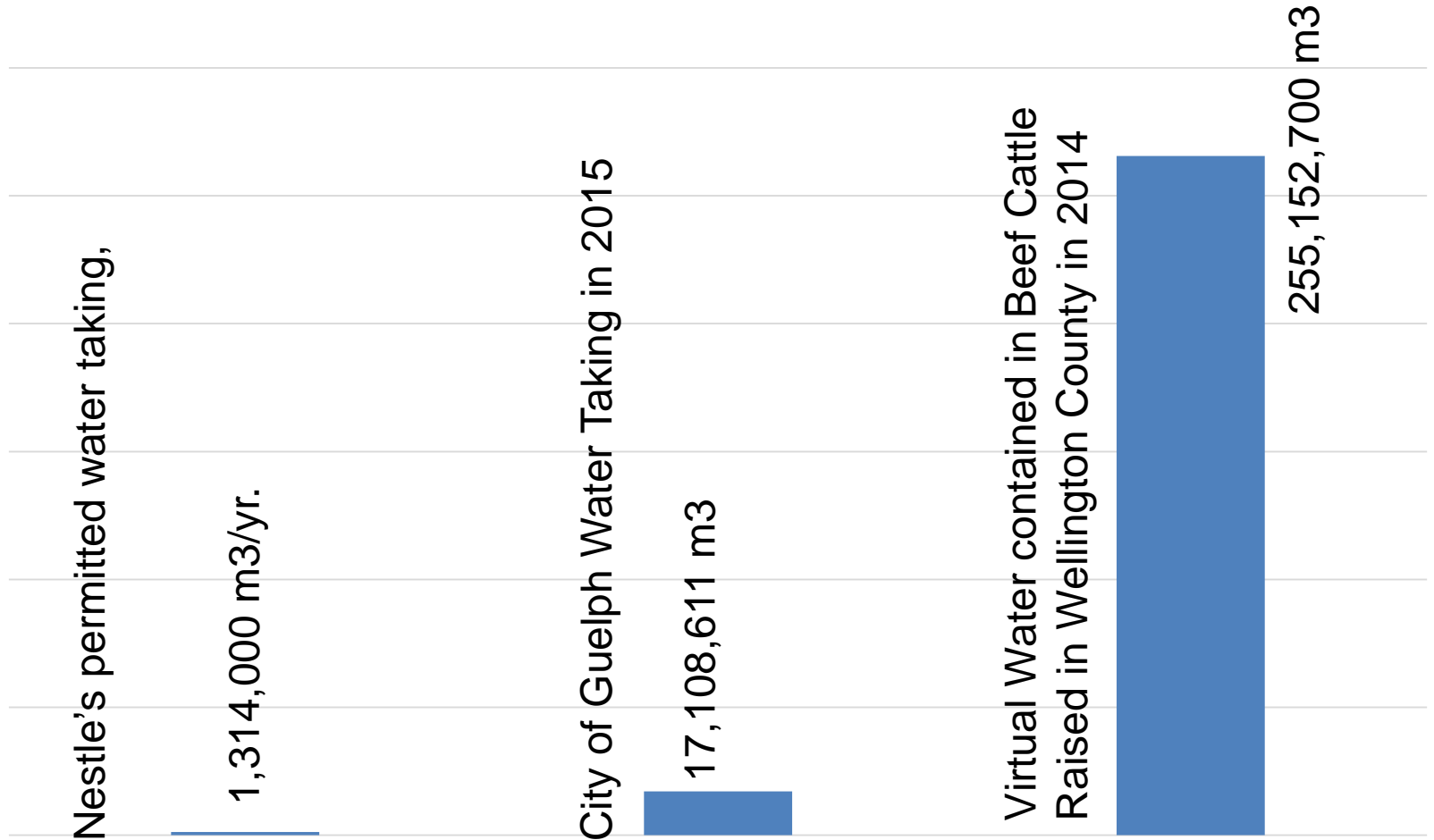
Adjunct Professor
University of Guelph, 2007-present

Guelph Area Resident and Well Owner

Virtual Water



Comparison of City of Guelph, Nestle Water Taking to Beef Production in Wellington County



Guelph Water Supply

Population ~ 120,000 (2010 Census)

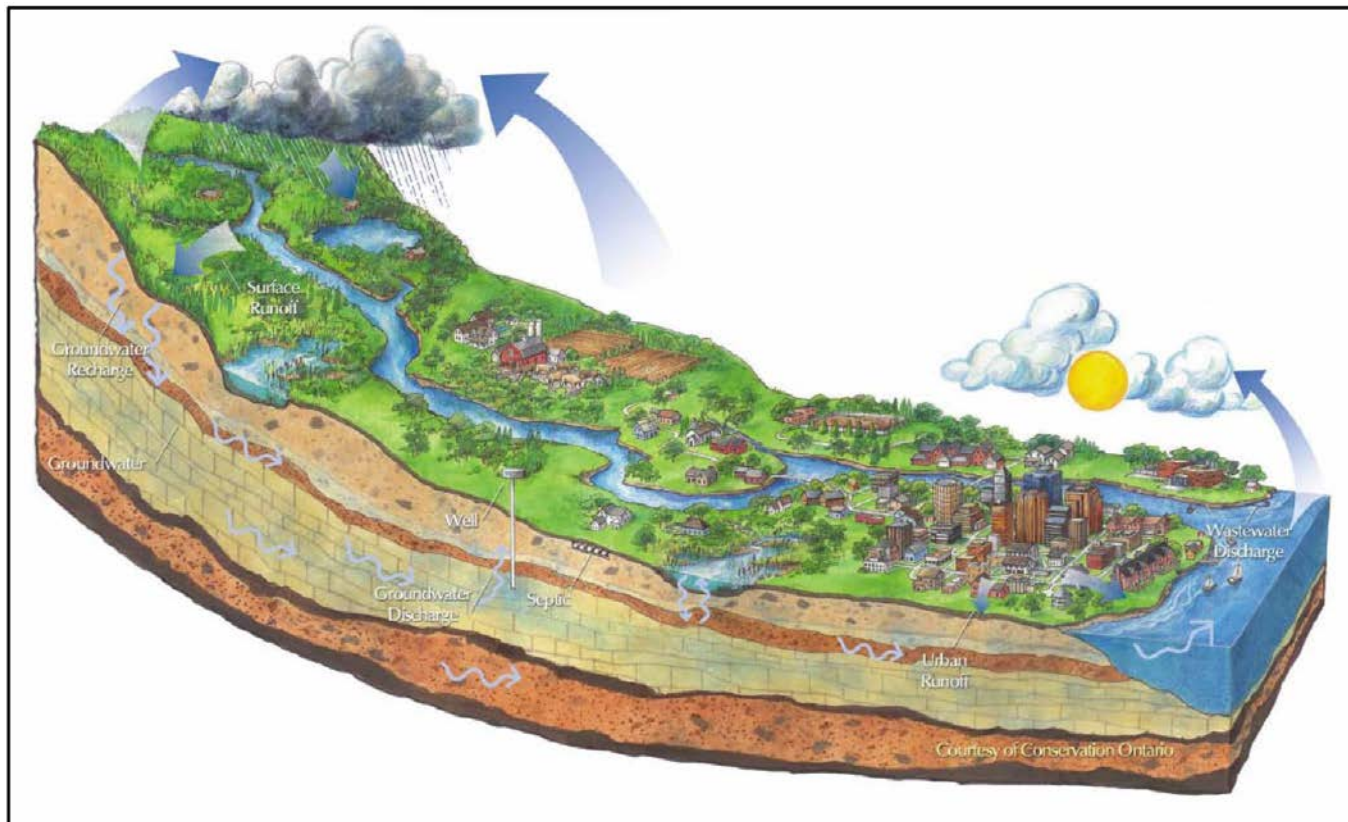


Fractures in dolostone bedrock aquifer
Provide Guelph Municipal water supply

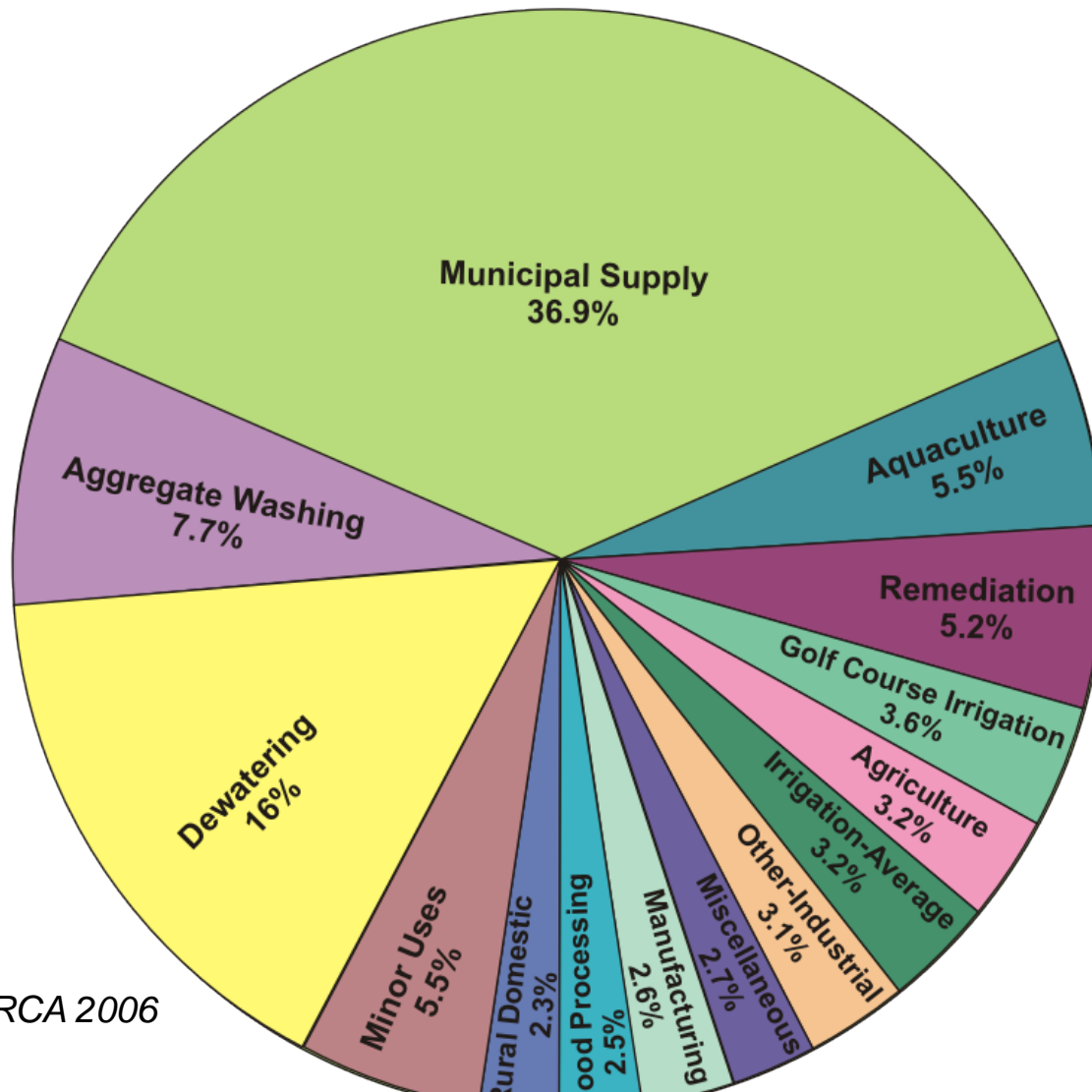
Fractured Bedrock Aquifer Material



The Hydrologic Cycle



Annual Groundwater Usage Grand River Watershed

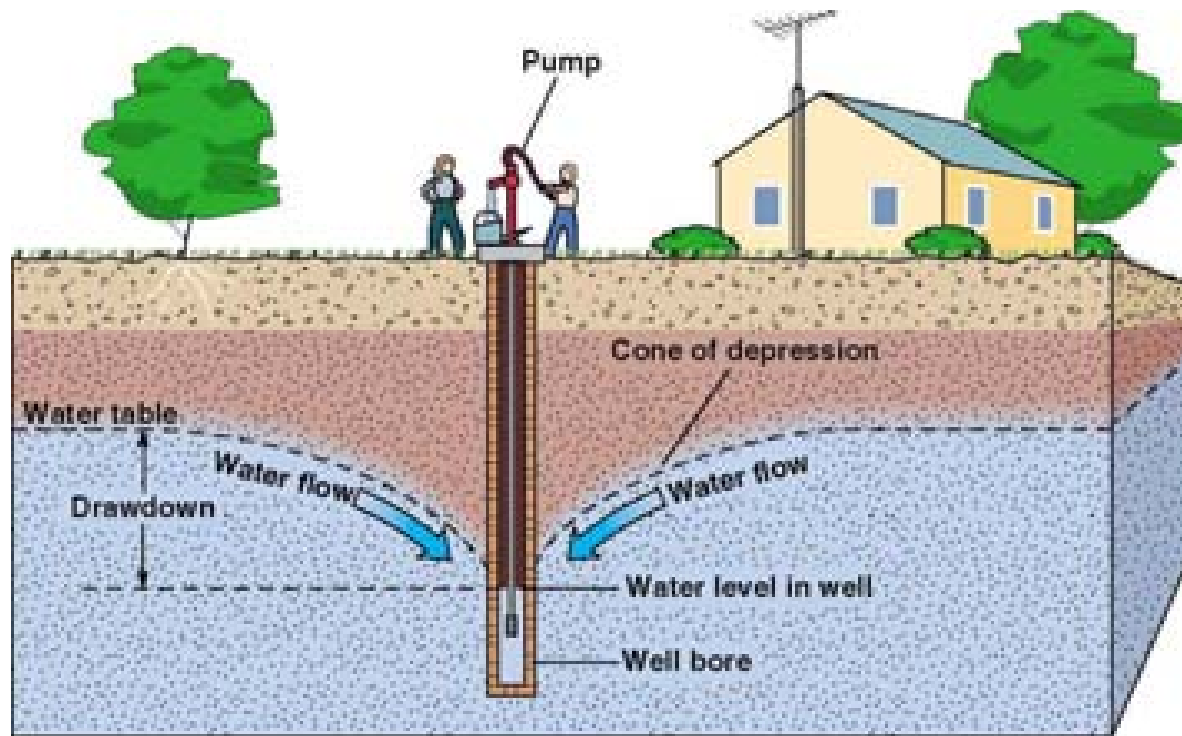


City of Guelph 2015
withdrawal: 0.54
m3/sec

Nestle 2015
withdrawal: 0.02
m3/sec

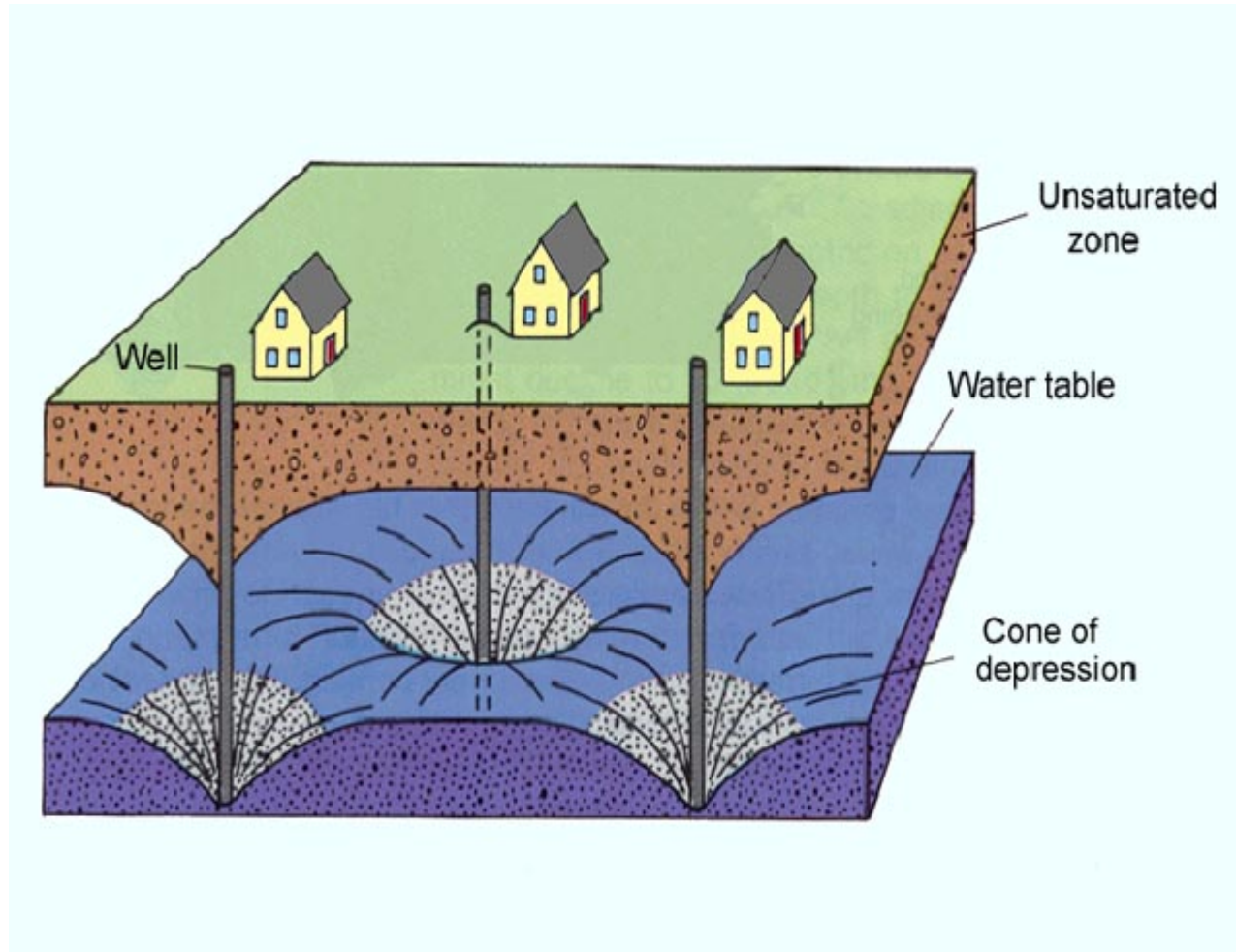
4.5% of city
withdrawal

Pumping causes a cone of depression

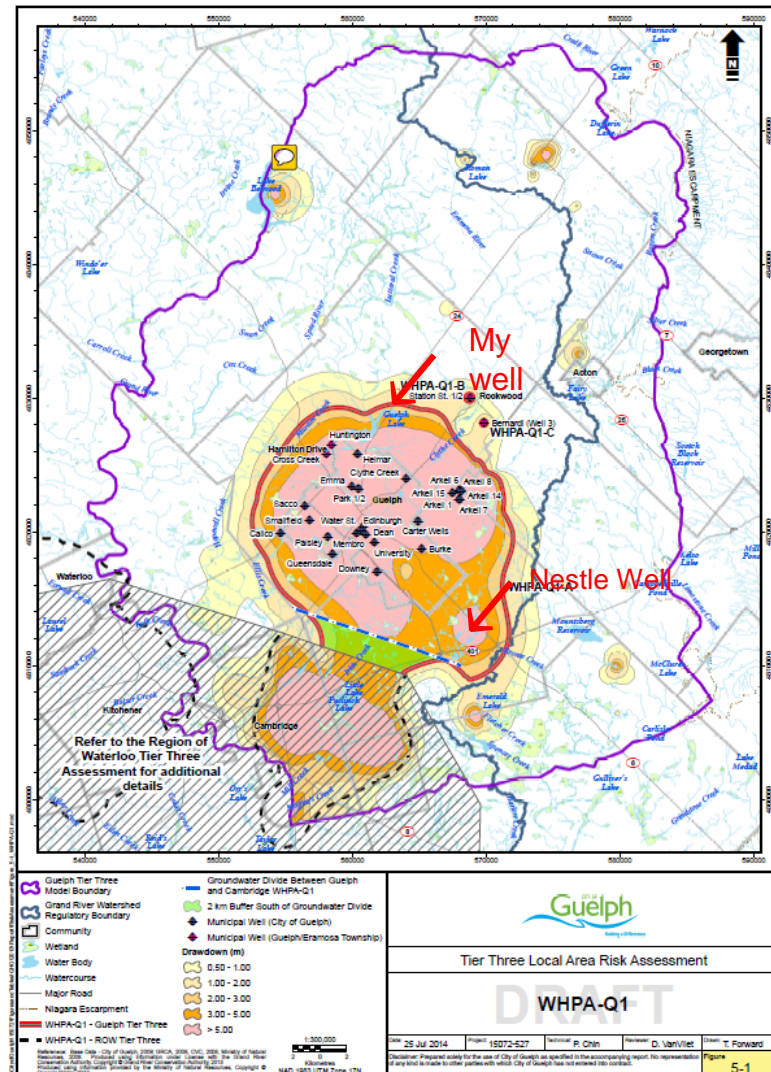


© 2011 BlackCat - Thomson Learning

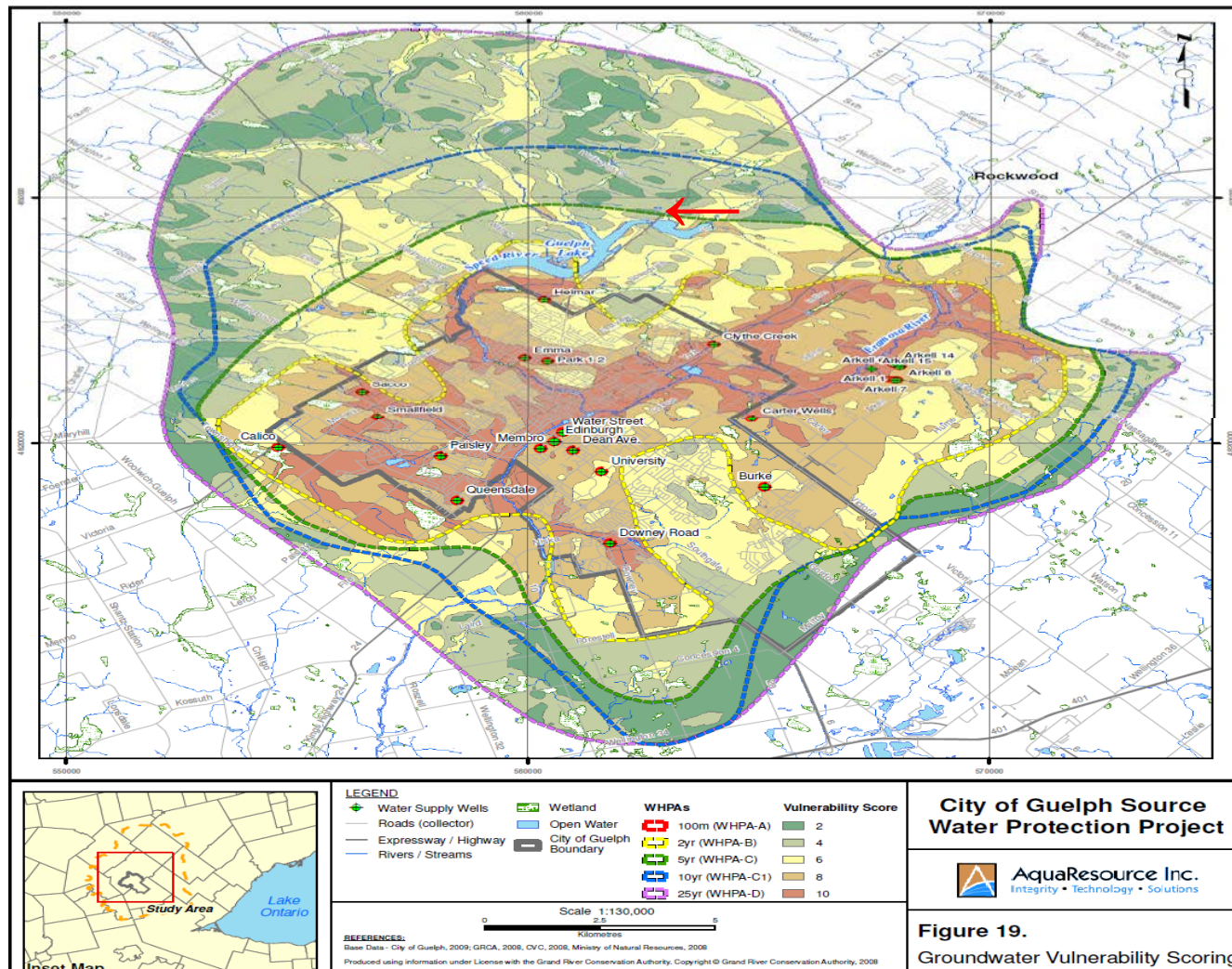
Multiple Pumping Wells Can Cause Multiple Cones of Depression



Area of Drawdown from City of Guelph Wells



City of Guelph Well Head Protection Areas



Groundwater exposed

Nature Geoscience **9**, 85 (2016) | doi:10.1038/ngeo2655

Published online 02 February 2016

“...what we know about the available reservoirs of groundwater and their interactions with other components of the Earth system is outweighed by what we do not know.”

We need better groundwater monitoring

September 2016 Kathleen Wynnes's Mandate letter: Environment and Climate Change

“.....immediate improvements are needed when it comes to water bottling practices, particularly in the face of climate change, the increasing demand on water resources by a growing population, and concerns about water security.



Township of Puslinch

7404 Wellington Rd 34, Puslinch, ON N0B 2J0

P: 519-763-1226 F: 519-763-5846

www.puslinch.ca

October 31, 2016

City of Guelph
1 Carden Street
Guelph, ON N1H 3A1

SENT VIA EMAIL – Stephen.OBrien@guelph.ca

Attention: Mayor Cam Guthrie and Guelph Councillors

Re: Permits to Take Water in Puslinch

There has been much discussion recently about PTTW renewals in Puslinch and the proposed renewal of the permit for Nestle Waters Canada.

Nestle is a key Puslinch and Wellington County employer, a significant tax payer and an important member of our industrial community. They have been very professional to deal with and support many local events.

Puslinch provides formal comments on EBR posted PTTW's and we have been consistent in recommending that all permits have a maximum of 5 years duration. Puslinch also has peer reviews done on the mandatory water taking reports that are issued. We will be providing comments on the proposed Nestle renewal when it is posted.

To put the Nestle permit in perspective, according to the MOECC data from July, the number of active PTTW's in Puslinch was 106 totaling 542 million litres/day. The City of Guelph's total was 286 million l/day and the aggregate industry total was 198 million l/day. The Nestle permit was for 3.6 million l/day.

Next door to the Nestle site is an aggregate operation with a permit for 8 million l/day and next door to that is another aggregate site with a permit for 23 million l/day. While some may say that the aggregate industry reuses the water for washing, the industry will agree that 5 to 10% is lost through evaporation.

Currently, more than 50% of Guelph's water comes from wells in Puslinch. New policies and protection programs required by the Clean Water Act have been put in place to protect the wellhead areas around your wells. Addressing the costs associated with this has yet to be resolved.

Approximately 2 ½ years ago, representatives from Guelph visited Puslinch Council to discuss the Guelph Water Supply Master Plan. We were invited to and attended meetings outlining the current situation, water conservation efforts, proposed growth and future water needs for your city. Two of the future options presented included an additional well in Puslinch in the Maltby and Victoria Rd. area and another one in Guelph/Eramosa Township. It was also very clearly stated that Guelph would not proceed with any new well without the full support of the host municipality. Based on the now known significant impacts that Guelph's water taking is having on Puslinch residents and potential impact on our industrial/commercial base, support for any additional water taking by Guelph in Puslinch is very unlikely.

The Water Supply Master Plan report also outlines that Guelph has a number of wells that are not used due to various quality issues. The cost to remedy each situation is also included in the report. If you have not already read the report, I would encourage you to do so and ask what the plans are for sites like the Admiral well.

Groundwater is a complex science and water taking needs to be looked at in a comprehensive manner and not focus on one permit. Even the extensive Tier 3 study that is currently underway has unanswered questions.

Puslinch has and will continue to support important research in groundwater and decisions on water taking that are science based.

Regards,

A handwritten signature in blue ink, appearing to read "Dennis Lever", with a stylized flourish at the end.

Mayor Dennis Lever

c: Puslinch Council

CWRA - Project WET Canada
c/o Canadian Water Resources Association
Financial & Membership Office
176 Gloucester Street, Suite 320
Ottawa, ON, K2P 0A6

October 28, 2016

Andreanne Simard, Ph.D.
Natural Resource Manager
Nestle Waters Canada
101 Brock Road South
Guelph, ON, N1H 6H9

Dear Dr. Simard:

Re: Appreciation for grant to support Project WET Canada 2016 educational programming in Ontario.

Project WET water education programming for teachers, environmental educators and youth in Ontario has been growing over the past year thanks to the financial support of Nestlé Waters Canada grant to the Canadian Water Resources Association. As you are aware, the purpose of Project WET youth education is to encourage learners to conserve water and learn about their role as future citizens in the sustainable management of water resources, for use now and into the future.

Since January 2016, over 100 educators have participated in Project WET Professional development educational workshops of one or two days in length. The July 2016 Facilitator Leadership Workshop, which Nestlé Waters Canada hosted at your facilities at your Guelph plant, allowed us to certify 14 new Facilitator Leaders from across Ontario, including Ottawa, Sudbury and Windsor.

At the same time, five experienced Project WET Facilitators participated in Advanced Leadership Training so that they can now deliver Facilitator Leadership Workshops in the future. Curricular documents were also prepared linking the Project WET learning activities with the Ontario provincial science curricula for grades 1-8. Similar documents are currently in development for high school science courses.

In addition to these certificate level professional development workshops for environmental education professionals, a number of additional education events were offered during the year to date. In June, over 180 grade one to five students at École Harris Mill Public School in Rockwood, Ontario participated in Project WET educational learning activities focusing on ground water.

Two Project WET mini-workshops were held for educators: one at the University of Waterloo in March and one at the Ontario Society for Environmental Education (OSEE) in Peterborough in April with a total of 22 participants. Approximately 50 educators met face-to-face with Project WET Facilitators at displays at both OSEE professional development events this past spring.

Of special note is the presentation at the National Teacher Educators' Roundtable on Pre-service Teacher Environment, Land and Sustainability Education, held at Trent University in Peterborough last June. Along with other private contributions, your funding enabled two Teacher Educator Project WET Facilitators from Saskatchewan's NORTEP program to attend and present on how the Project WET education program has been embedded into the NORTEP curriculum for Indigenous teacher education students in northern Saskatchewan. As the Ministry of Education in Ontario has now mandated environmental education as a pre-requisite course for teacher certification, we were pleased to be able to present the value of Project WET as a resource for teacher education.

Between now and calendar year's end, there are four more Project WET professional development workshops tentatively scheduled, including both Queen's University and the University of Ottawa teacher education programs. Two more are scheduled for environmental education staff in Peel County and one in the Toronto Regional Conservation Authority. During the winter semester of 2017, another two professional development workshops are tentatively planned by recently trained Facilitators, one for the Peel Board of Education staff as well as one for the Algonquin and Lakeshore Catholic District Schoolboard staff. Altogether, these professional development workshops will prepare between 80 to 130 educators to use Project WET learning activities and materials with youth.

On behalf of Project WET Canada, I want to thank Nestlé Waters Canada for their grant to CWRA which has allowed us to offer this water education programming in Ontario. We look forward to on-going funding to further grow the program and make the learning materials available to more Ontario educators for use with youth.

Sincerely,

A handwritten signature in blue ink that reads "Russell Boals". The signature is fluid and cursive, with the first name "Russell" being more prominent than the last name "Boals".

Russell Boals, P. Eng.

Director, Project WET Canada

cc. D. Murray, President, CWRA
L. Nicholls, National Education Coordinator

To the Honourable Glen Murray,

As someone who values water, and access to water, greatly, I demand that you deny Nestle's water-taking extension in Aberfoyle.

In times of climate instability, often indicated by longer and longer periods of drought, we cannot afford to commit to a long term, large draw on our water resources.

This aquifer has already been drawn on by Nestle, and there is no long term evidence that expresses that the aquifer can support the citizens who rely on it and Nestle's giant draw.

As well, the commodification of water should not be happening in a province where some citizens do not have access to clean water in their own cities. Water should be a basic right of all Ontarians and selling our water resources so that Nestle can profit from them is an in conscionable act in a province where some go without clean water.

Sincerely,

Sean Roberts

Link to petition:

<http://www.thepetitionsite.com/687/043/428/ontario-deny-nestle-water-taking-permit-in-aberfoyle/>

Note:

This petition has over 98,000 signatures at the point in time that this was submitted to the delegation on Nov 7, 2016

To:	Mayor Guthrie and Members of Guelph Council
From:	Jennifer Kerr, Nestlé Waters Canada
CC:	Andreanne Simard, Nestlé Waters Canada
Date:	Friday, November 4, 2016
Subject:	Information in Advance of the Committee of the Whole

Dear Mayor Guthrie and Members of Guelph Council,

I hope that this email finds you well. Ahead of the Monday night's Special Committee of the Whole, I wanted to clarify some information regarding our water taking in the community to Mayor and Council.

We have carefully reviewed the findings from the Infrastructure, Development & Enterprise Services City Staff report regarding the impact of water taking on local supply as it pertains to future growth. As Councillors are aware, the report draws the following conclusion:

At this point in time, the Nestlé permit to take water does not conflict with Guelph's water supply. However, recent City studies and projects point to a need to develop comprehensive water resource management plans to sustain and protect the City's water supply sources. Steps are underway, through the Clean Water Act and the City's Source Protection Program to protect water quantity and quality and to ensure that the City and other water takers have a sustainable water supply in the future.

We agree with the City that the best way to determine the potential impact of water taking on local supply is through continued investment in science and data collection because community needs must come first. We look to the City of Guelph and their independent scientists and engineers to collect the data necessary on the "Guelph South Site" to demonstrate what could or couldn't happen in the proposed Guelph growth scenarios. It is our understanding that data on this site does not currently exist. However, Nestlé Waters stands ready to support City Staff in developing plans pertaining to water resource management for projected 2038 growth plans.

If the Guelph South Well is chosen as the best option to support Guelph water needs in 2038, subject to agreement from the Township of Puslinch, it is important to consider the impact on water resources for all private and industrial wells in Puslinch. At 3.6 million litres per day, Nestlé Waters accounts for under 1% percent of permitted taking in Puslinch. A full picture of water taking for all users, supported by data, is needed to understand the potential impacts.

We encourage all the regional municipalities, particularly Guelph and Puslinch to work together, with the other 99 percent of the industrial water users and all the private well owners in Puslinch, to develop a long-term solution for water taking into 2038. We certainly are committed to being part of those discussions, and sharing the scientific data and resources we have to support a holistic, evidence based water resource management plan.

However, in the immediate future, Nestlé Waters Canada does not conflict with Guelph's water supply. We understand community needs come first. And we are committed to working

collaboratively with our municipal partners, as we have done over the last 15 years, investing in science and data collection to ensure water sustainability and conservation.

We have spoken with City Staff responsible for the report about these findings, and would welcome any questions that you may have for Nestlé Waters Canada before, during, or after the November 7th meeting pertaining to this report. Andreanne Simard, Natural Resources Manager at Nestlé Waters Canada will be appearing as a delegate before the Committee of the Whole and will be prepared to answer your technical questions.

Additionally, we have noticed some statistics in the public discourse about Nestlé Waters Canada's water taking in Wellington County, and specifically the claim we're taking 20.3 billion litres per year. As indicated in the Nestlé Waters Aberfoyle Summary Report, prepared by Golder Associates and referenced in the City Staff Report prepared for this meeting, our water taking in Aberfoyle for 2015 was 762,363,664L (58% of the amount of water allowed to be withdrawn), and our water taking in Erin for 2015 was 78,485,480 (19% of the amount of water allowed to be withdrawn).

Combined, this represents 840,849,144L of water drawn in Wellington County – a very different reality than the 20.3B litres which has been circulated.

Lastly, I wanted to share with you [an article](#) that was recently published in the Guelph Mercury which reiterates the commitment that we have to putting community water needs first.

On behalf of all Nestlé employees, we are looking forward to speaking with you. Please reach out to me if you have any questions prior to Monday.

Thank you in advance.

Jennifer Kerr
Director, Corporate Affairs
Nestlé Waters Canada
P: 519-767-6441
Jennifer.kerr@waters.nestle.com



The Healthy Hydration Company™



NESTLÉ IN CANADA

PROUD TO MANUFACTURE IN ONTARIO

NESTLÉ IN CANADA



A TOP CANADIAN CONSUMER PACKAGED GOODS COMPANY



2,900 EMPLOYEES ACROSS ONTARIO (INCL. NESTLÉ WATERS)



SIGNIFICANT MANUFACTURING FOOTPRINT WITH 10 LOCATIONS INCLUDING:
TORONTO, MISSISSAUGA, BRAMPTON, LONDON, TRENTON, ABERFOYLE



YOUTH EMPLOYMENT INITIATIVE INCLUDES OVER 5,000 YOUNG CANADIANS



PURCHASES OVER \$44 MILLION IN CANADIAN DAIRY PER YEAR



USES OVER \$700 MILLION IN GOODS AND SERVICES FROM
5000 VENDORS ACROSS THE COUNTRY

NESTLÉ WATERS



OVER 308 DEDICATED EMPLOYEES IN ABERFOYLE



MANUFACTURES MARKETSHARE-LEADING NATURAL
SPRING WATER: NESTLÉ PURE LIFE



15 YEARS OF SUSTAINABLE OPERATIONS IN WELLINGTON COUNTY



OVER 80 MONITORING POINTS IN ABERFOYLE TO ENSURE
LONG-TERM SUSTAINABILITY



OVER 1,000,000 BOTTLES DONATED IN 2016

FOR MORE INFORMATION:

JENNIFER KERR, DIRECTOR, CORPORATE AFFAIRS, NESTLÉ WATERS CANADA
JENNIFER.KERR@WATERS.NESTLE.COM | 519-767-6441

5 PURE FACTS ABOUT NESTLÉ WATERS CANADA

1

Water sustainability is Nestlé Waters Canada's number one priority. In our over 15 years of operating sustainably in Wellington County, Nestlé has collected a solid body of third party scientific data on the local water resources. We monitor daily aquifer levels, spring flows, water quality and surface water levels to ensure long-term sustainability of the watershed and ecosystems for all users.

2

Nestlé Canada is committed to enhancing people's quality of life by promoting healthy hydration through our passion for water.

3

In Ontario, Nestlé Canada has two active Permits to Take Water (PTTW); one is for 3,600,000 litres/day in Aberfoyle and the other is for 1,113,000 litres/day in Erin, totalling 4.7 million litres/day.

4

Currently only 5% of all issued PTTWs in the province including bottled water companies, pay a \$3.71/million litre permit fee for water drawn. The remaining 95% of water takers pay no fee while pumping over 99% of the water in Ontario.

5

The bottled water industry in Canada uses just 0.6% of the PTTWs in the Grand River watershed and just 0.2% of permitted water in Canada.

FOR MORE INFORMATION:

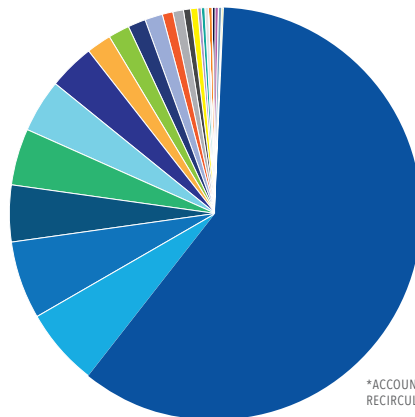
ANDREANNE SIMARD, NATURAL RESOURCE MANAGER
ANDREANNE.SIMARD@WATERS.NESTLE.COM | 519-767-6422

WATER USE SUMMARY

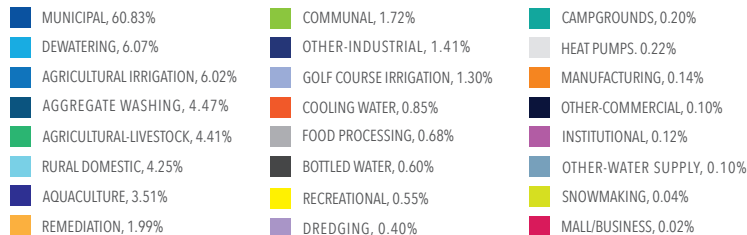
MAJOR WATER USERS IN THE GRAND RIVER WATERSHED
ANNUAL TOTAL: 152 MM³/YEAR



The Healthy Hydration Company™



*ACCOUNTS FOR RECIRCULATION



SOURCE:
[HTTPS://WWW.GRANDRIVER.CA/EN/OUR-WATERSHED/RESOURCES/DOCUMENTS/WMP/WATER_WMP_REPORT_WATERUSE.PDF](https://www.grandriver.ca/en/our-watershed/resources/documents/wmp/water_wmp_report_wateruse.pdf)

PRINTED ON RECYCLED PAPER

DATE: NOVEMBER 4th, 2016

TO: GUELPH CITY COUNCIL | COMMITTEE OF THE WHOLE | MON NOV 7, 2016

FROM: JOHN FARLEY BSc MPLAN

RE: PERMIT TO TAKE WATER COMMENTARY

I recently wrote a Letter to the Editor of the Guelph Tribune titled 'What will have to happen before The Government of Ontario takes water seriously?' My subtext for this title is 'Where is our Water Use Planning Legislation?'

History is a self-similar process and the provincial government has provided legislation directly or indirectly related to water protection in two ways. First, should always be with forethought and planning like the Oak Ridges Conservation Act which was the driver for the Greenbelt Act and the Places to Grow that protected water infiltration (watershed function), agricultural lands and directed appropriate growth. The second, unfortunately, was through tragedy at Walkerton, which produced Source Water Protection and the Clean Water Act.

This is not solely about the Permit to Take Water process and supposed fees. It's about an all encompassing 'Water Use Planning Act' that fully protects are water, for everyone. A Permit to Take Water is a privilege not right. The only true water right is for the people of Ontario.

The practices of high-risk water takers, although disturbing, I do not fault. They are only doing what they are legally allowed to do to support their businesses. With the summer's severe drought and the need for Ontario communities to adapt to the advance of global warming it is important that our governments, both provincial and municipal, act now to insure that the people of Ontario have their water protected currently and for future generations.

The Oak Ridges Moraine Conservation Act was initiated by the people and the municipalities and then was supported by the local MPPs. As a group, we not only need to respond to this Permit to Take Water application appropriately, we also need to keep the 'water' pressure up on the Ontario government to insure there is all encompassing water protection legislation in place, before it's too late.



Guelph Lake

From: Susan Watson
Sent: November-04-16 6:49 AM
To: Dan Gibson; Bob Bell; James Gordon; Andy VanHellemond; June Hofland; Phil Allt; Mike Salisbury; Christine Billings; Leanne Piper; Cathy Downer; Karl Wettstein; Mark MacKinnon; Clerks; Mayors Office
Subject: Groundwater: "We're making decisions with our eyes closed."

Mayor Guthrie and Members of Council:

In advance of the special meeting of the Committee of the Whole this coming Monday, I would like to draw your attention to this recent article from the Toronto Star, dated October 27th:

"Ontario needs better data on its groundwater supply, says environmental watchdog."

<https://www.thestar.com/business/2016/10/27/ontario-needs-better-data-on-its-groundwater-supply-says-environmental-watchdog.html>

Contrary to the reassurances in Mayor Guthrie's blog post of August 29th, the article reports the following:

"But environmental commissioner Dianne Saxe said the government doesn't have enough data to know what's happening with ground water in Ontario.

'We're making decisions with our eyes closed,' she said. 'We don't have enough information yet we're allowing millions of litres to be taken every day out of the ground.'

The environmental watchdog warned that climate change will increase the amount of stress placed on water with more frequent and longer droughts, but said the province still allows millions of litres to be taken every day out of the ground."

....."Saxe called the two-year moratorium on new bottled water operations using wells 'an excellent idea,' but said her predecessor had been raising problems with the province's water-taking permit program for years.

'It gives the government time to figure out what its rules are going to be, but we still have this situation where the problems my office reported on remain,' she said. 'We give away 100,000 litres of water for 37 cents for those very few people for whom we charge anything. Most water users in Ontario pay nothing.'"

....."The commissioner complained that the ministry of environment and climate change doesn't post enough of the water taking permits on the province's environmental bill of rights, and even when it does, there's a real lack of detailed information.

'The public gets no notice at all for three-quarters of water taking permits, including a large number of high risk permits,' said Saxe. 'And of the ones where they do give notice, they don't attach enough information so the public cannot make sensible comments.'"

Sincerely,

Susan Watson

This e-mail message (including attachments, if any) is intended for the use of the individual to whom it is addressed and may contain information that is privileged and confidential. If you are not the intended recipient, you are notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify the sender and erase this e-mail message immediately.