

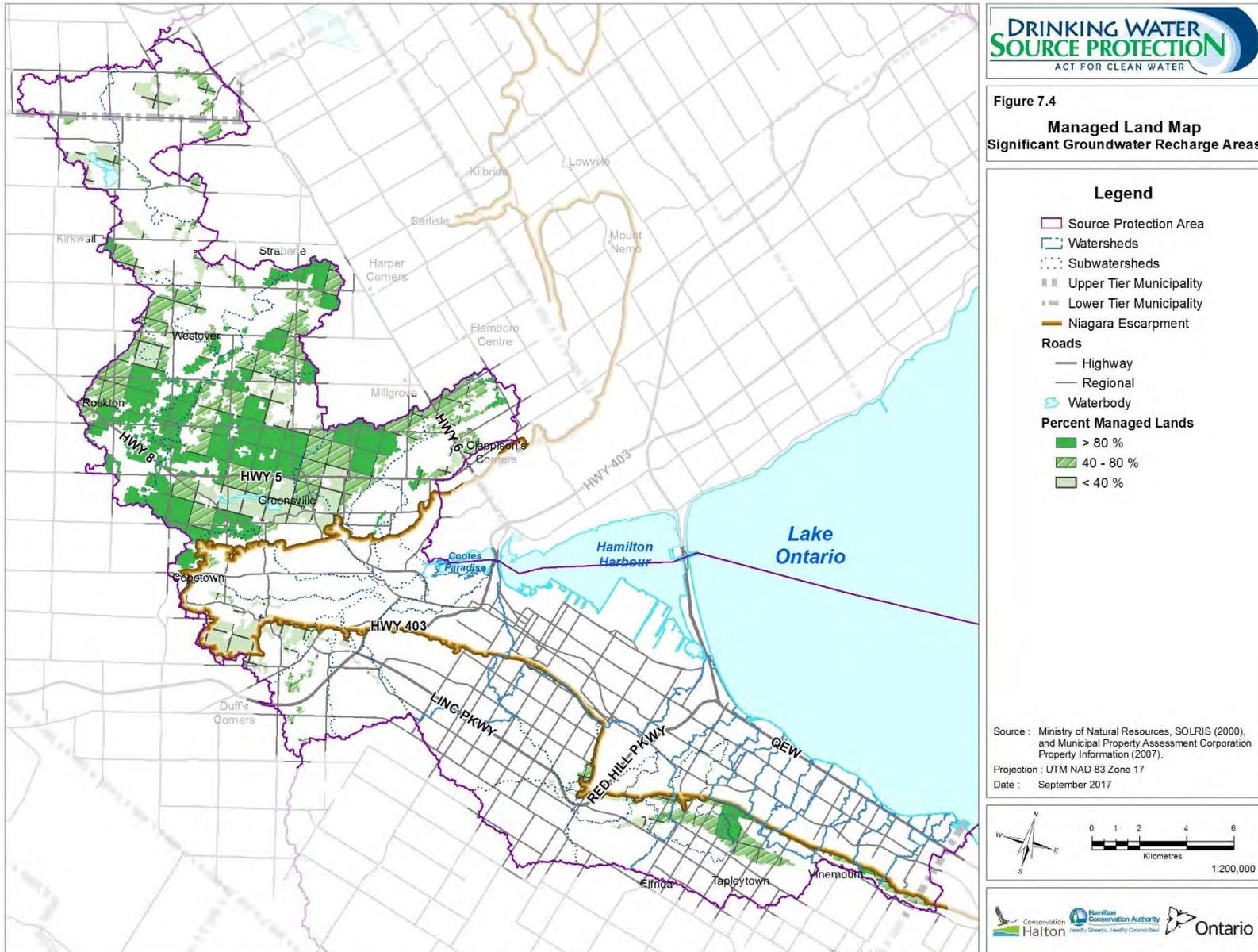


SPC Meeting – December 12, 2017

A decorative graphic consisting of two overlapping, wavy, light blue shapes that resemble water or a ribbon, positioned on the left side of the page.

Halton-Hamilton Source Protection Committee
Diane Bloomfield, Project Manager

Item 5. Action items from September 19, 2017



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Item 5. 2018 Annual Reporting Changes

- Received a new provincial report template and supplementary form
 - Minimal impact on municipal reporting
- Provincial ministries will report to an electronic database and SPAs will have access by February 1, 2018 to review and download SPR data
- Next year, by May 1, 2018, there will be an electronic supplemental form
 - Minor changes to content including yes, no or multiple choice answers rather than text
 - New guidance is being developed

Item 8. Public Consultation Summary

- Letters regarding sewage system threats sent to 51 homes and the Hamilton-Wentworth School Board
 - 1 request for printed copies of reports
 - 1 request for digital copies of reports
- Website consultation October 16 through December 4
- Tweeted by Conservation Halton, posted by Hamilton CA
- Request to two local councillors to relay notice
- City of Hamilton Class EA public information centre #2 held in Greensville on November 16 - 12 signed in plus the Councillor, mentioned letters received regarding sewage threats

Public Consultation Summary – Section 34

Results

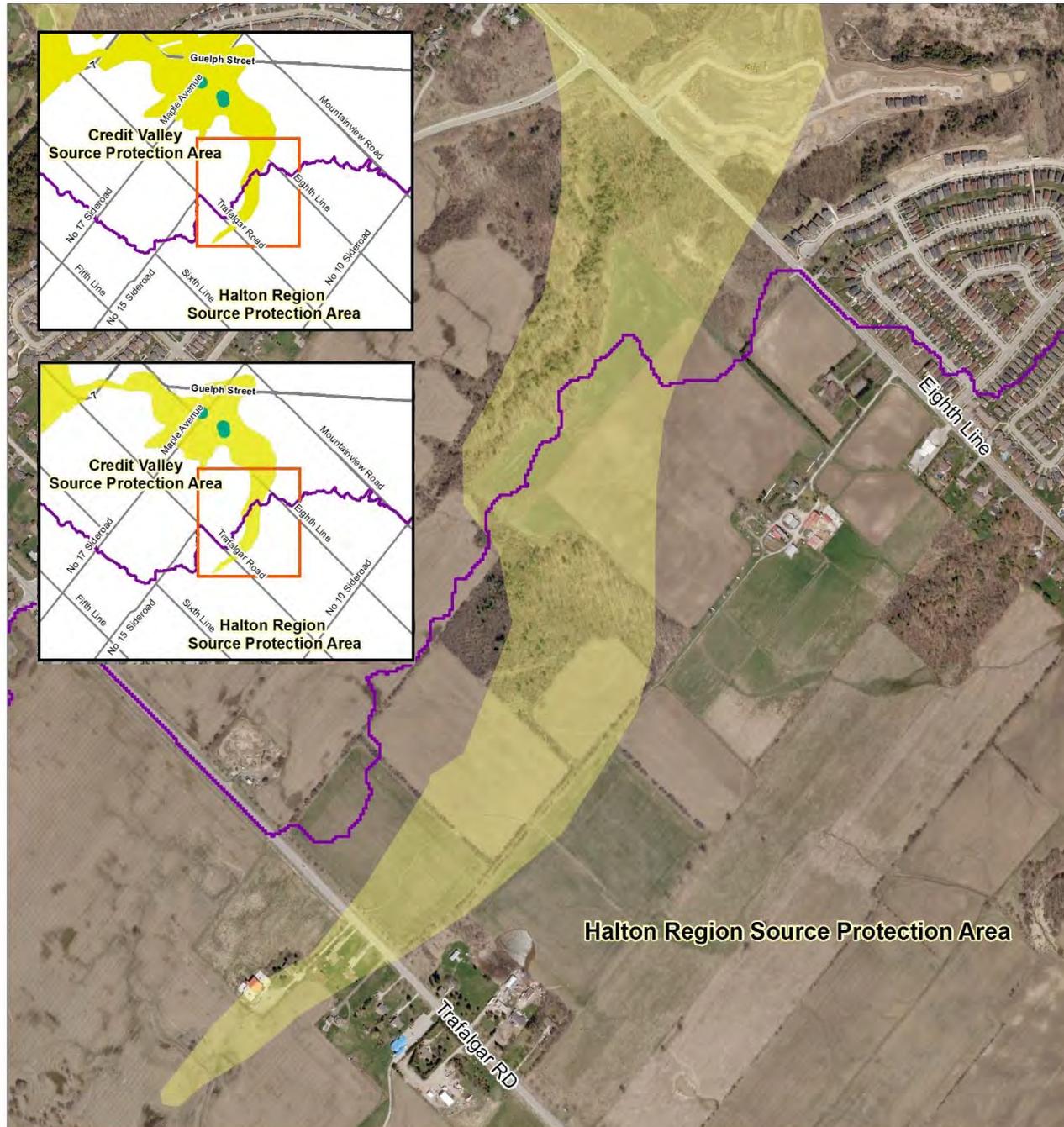
- comments received from City of Hamilton

Public Consultation Summary – Section 51

Results

- two comments received from Halton Region
 1. Consider changing bold text in assessment report
“Based on the proximity of the municipal wells to watershed boundaries **and because the surface watersheds are not aligned with the ground watersheds**, the study area included”
 - Rationale: The definition of watershed given in the appendix only refers to surface watersheds.
 2. Inset map on Figures 9 and 10 in the source protection plan should include WHPA-E.
- comments received from City of Hamilton

Figure 10
Cedarvale Issue Contributing Area for Chloride
Existing and would be significant
groundwater threat areas



Legend

- Source Protection Area
- ICA - Significant Threat - Group 6
- Cedarvale WHPA
- Municipal Well

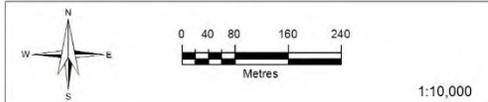
Group 6:

- Sewage - Discharge from stormwater retention pond
- Road Salt - Application
- Road Salt - Handling and Storage
- Snow - Storage

- WHPA: Wellhead Protection Area
- ICA: Issue Contributing Area

Reference: Prescribed threat circumstances as listed in the Ministry of the Environment Table of Drinking Water Threats (2009)

Source: Conservation Halton
 Date: December 2017
 Projection: UTM NAD 83 Zone 17



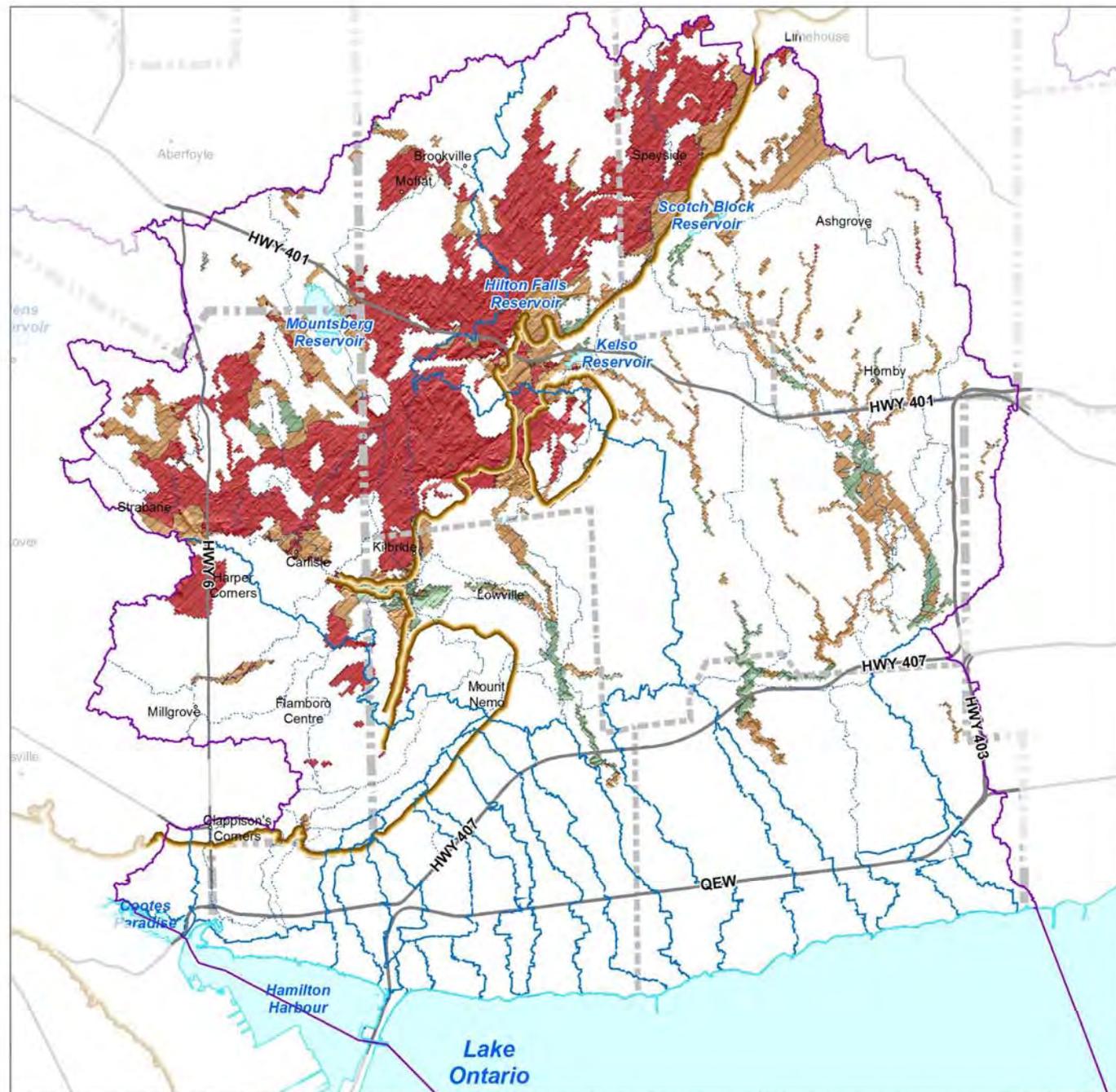
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Additional Section 51 Amendment

- Peel Region's Official Plan review started during consultation
 - It includes a source protection policy conformity exercise
 - They are planning to add SGRA mapping as schedules to their Official Plan
- Technical Rule changes in effect
 - Rule 45 – we need to revise SGRAs to meet the intent of the rule – only recharge that supports a drinking water source directly is to be mapped

“Despite rule 44, an area shall not be delineated as a significant groundwater recharge area unless the area has a hydrological connection to a surface water body (excluding Great Lakes, Connecting Channels, Lake Simcoe, Lake Nipissing, Lake St. Clair or the Ottawa River) or aquifer that is a source of drinking water for a drinking water system.”

Figure 6.13
Significant Groundwater Recharge Area Vulnerability



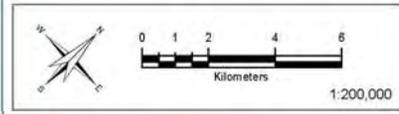
Legend

- Source Protection Area
- Watersheds
- Subwatersheds
- Upper Tier Municipality
- Lower Tier Municipality
- Niagara Escarpment
- Highway
- ~ Waterbody
- Significant Groundwater Recharge Area (SGRA)

Intrinsic Susceptibility Index (ISI)
 (Vulnerability)

- High (6)
- Medium (4)
- Low (2)

Source : Conservation Halton / Ontario Geological Survey, Groundwater Resources Improvement Project (2005), Earthfx PRMS (2010).
 Projection : UTM NAD 83 Zone 17
 Date : November 2014



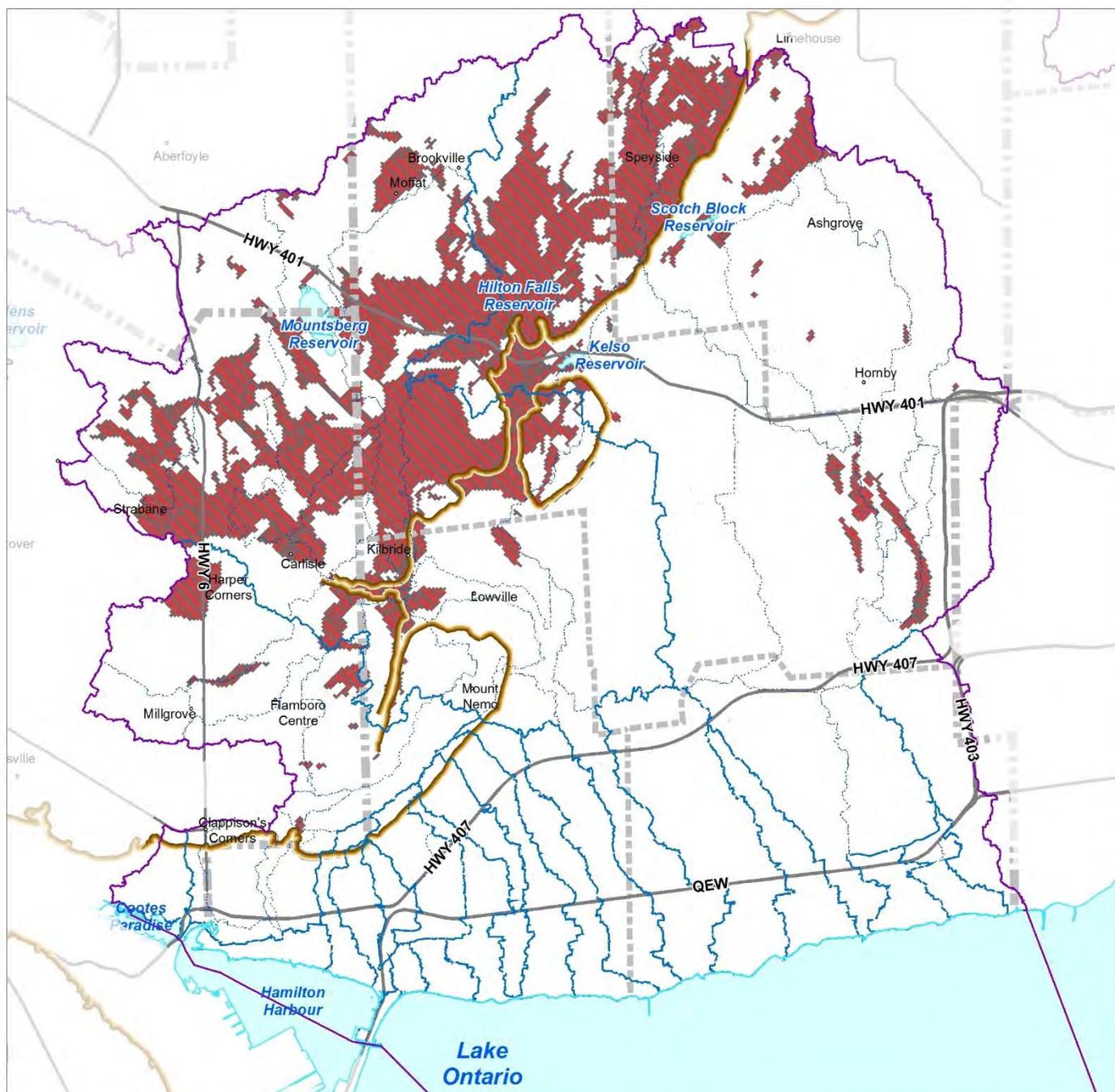
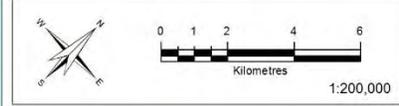
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Figure 6.12
Significant Groundwater Recharge Area

Legend

- Source Protection Area
- Watersheds
- Subwatersheds
- Upper Tier Municipality
- Lower Tier Municipality
- Niagara Escarpment
- Highway
- Waterbody
- Significant Groundwater Recharge Area (SGRA)

Source : Conservation Halton / Ontario Geological Survey, Groundwater Resources Improvement Project (2005), Earthx PRMS (2010).
 Projection : UTM NAD 83 Zone 17
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Section 51 Amendment SGRA Mapping

- Rules 80 and 81 were removed from the Technical Rules
- These required the assigning of vulnerability scores to the SGRAs
- However, SGRAs are for water quantity, not quality
- We do not need water quality vulnerability scoring for water quantity SGRAs
- Therefore, maps and discussion to be removed from assessment reports in current Section 51 update
- Doing this update now will assist Peel Region in adding correct mapping to their Official Plan

Item 9.

Section 36

Work Plan for

Source Protection Plan Review

Minister's Letter Summary – August 5, 2015

- The Halton Region Conservation Authority prepares and submits a work plan to the Ministry
 - in consultation with
 - the Halton-Hamilton source protection committee
 - the Hamilton Region source protection authority
 - participating municipalities of the source protection areas
 - the Ministry of the Environment and Climate Change
- The work plan shall propose the detailed steps for the review of the plan
 - which portions of the plans are to be reviewed
 - the timeframes for each step of the review
 - the consultation that would be undertaken
 - the rationale for each step
 - a summary of how the work plan was developed

Minister's Letter Summary - continued

- The development of the work plan must consider
 - experience gained from implementing the source protection plans
 - information from the first annual progress reports
- Submit the plan by November 30, 2018
- The Ministry
 - Reviews the work plan
 - May require additional consultation
 - Issues an order that specifies more detailed requirements outlining the content and timeframes that will govern the review

Guidance

- *Clean Water Act, 2006* – Section 36
- Bulletins
 - Overview of requirements for assessment report and source protection plan amendments under S.36 of the Clean Water Act
 - Supplemental information #1 – Municipal Engagement
- Slide decks
 - Source Protection Plan Amendments – Section 36 of the Clean Water Act - Source Protection Committee Chairs Meeting: March 28/29, 2017
 - Section 36 Work plans - Source Protection Committee Chairs Meeting: October 12/13, 2017
- Three work plans submitted in November 2017
 - Niagara, Lakehead and Mattagamy

Review is mandatory

- The review is a mandatory exercise, while the subsequent update depends on work plan findings:
 - If SPA recommends an update is appropriate, then it is likely to proceed after confirmation by Ministry / Minister's order
 - Reviews may also conclude that no update is needed
- The work plan is an initial step in the development of detailed requirements to govern the plans' review
- Work plan submission deadlines are based on year of source protection plan approval
 - November 30, 2017 – 3 (1 is optional)
 - November 30, 2018 – 16 (Halton-Hamilton) (1 is optional)
 - November 30, 2019 - 3

Development of the Work Plan

- Build in new information that advances understanding of risks to sources of drinking water and incorporates local growth
- At a minimum, the SPA should evaluate the following nine factors/considerations :
 1. Environmental monitoring results
 2. Growth and infrastructure changes
 3. Council resolutions
 4. Policy effectiveness
 5. Implementation challenges
 6. Technical rule changes (Phase 1: March 9, 2017)
 7. Agricultural prohibitions outside of WHPA-A
 8. Specific plan approval direction from Minister
 9. Other local considerations

Development of the Work Plan

The development of the work plan must take into consideration any experience that has been gained from

- implementing the source protection plans, and
- information from the first annual progress reports on plan implementation (due May 1, 2018).
 - Need to start with the results of the interim report for the 2016 implementation period and then add 2017 reporting
 - In the opinion of the SPC, are the policies effective? Do they need to change?
 - Are the policies implementable?
 - Is there a need for additional policies or to remove existing ones?
 - Difficulties with policy implementation
 - T-21-C, T-26-C, T-48-C (all OMAFRA)
 - Request for policy revision
 - G-2 – screen planning and building permit applications for threats

Work Plan Content

- Each workplan must be completed in a 'Word' format and contain the following 10 sections:
 1. Name of each plan that the work plan applies to
 2. Brief description of area/region and water systems
 3. Experiences to date on plan implementation
 4. Highlight information from first annual progress report
 5. Specific plan approval direction from Minister (not applicable)
 6. Details and rationale on what requires review / updates
 - a. portions of ARs, plan and ED to be reviewed with rationale
 - b. Who will do the review, studies, updates
 7. Detailed steps for the review
 8. Timeframes for the review
 9. Roles and responsibilities for plan amendments
 10. What consultation will be undertaken as part of the review

Submission and MOECC Review

- Work plan submitted electronically to the MOECC
- MOECC will review and consult with the SPA to finalize the scope of work
- The Minister would then consider the issuance of a further order under Section 36 of the Clean Water Act for undertaking the review
 - The order may exempt Minister approval of certain amendments as a way to circumvent the Act

Learning from others

- Spoke with project managers with Lakehead and Niagara Peninsula SPAs and read their work plans
- Key hints
 - Higher level of effort needed than expected
 - MOECC is emphasising “needs” not “wants” for review
 - Need to use strong language – “we will do this because of this”, rather than “we’d like to do this”
 - Neither SPA had a public meeting, just stakeholder meetings – Lakehead isn’t making any major changes to plan, Niagara’s stakeholder meeting was by invitation
 - Both pre-consulted with MOECC
 - Municipalities were interviewed by Lakehead PM and he made suggestions to them for changes to policies
 - Lakehead had 2 SPC meetings, Niagara had 3 plus SPC members attended the stakeholder meeting

Learning from others - continued

- Proposed changes to the Technical Rules were acknowledged and noted that they will be reviewed and included under a section 34 or a future section 36
- Due to the municipal election in 2018, if municipal council resolutions are needed we should have them by June, NPCA did not have any resolutions
- Timelines for review – NPCA used 3 years, CTC is using 5 years
- Conservation Ontario has prepared a work plan template that will be released soon and we'll consider using it

A preliminary look at
what needs to be reviewed

Studies Identified in Assessment Reports

- a reassessment of the risk to drinking water sources that the bulk fuel storage in Oakville poses
- a reassessment of the risk to drinking water sources that the oil pipeline releases pose
- further assessment of the need for and delineation of additional intake protection zone threes for each of the Lake Ontario intakes based on event-based modelling
- collection of stream flow data to improve the delineation of the intake protection zone two for the Woodward intakes
- verification of site specific conditions to improve the threats assessment
- an assessment of issues to drinking water systems in the highly vulnerable aquifer and significant recharge areas
- consideration of the inclusion of local threats in updated assessments
- an assessment of constructed pathways to improve the vulnerability scoring, particularly within the wellhead protection areas

Studies Identified in Assessment Reports

continued

- research to reduce the uncertainty surrounding the use of the travel times through the unsaturated zone as part of the vulnerability assessment within the wellhead protection areas
- research and identification of conditions that may exist due to past land use activities
- monitoring and assessment of the impacts of climate change on water resources in the Source Protection Area as predictive science improves and local studies are completed
- an assessment of impacts on water budget components due to development within the Source Protection Area
- inclusion of the findings of the City of Guelph and Guelph/Eramosa Township Tier 3 assessment including a count of significant threat activities occurring in the Area

Source Protection Plan Implementation Challenges

- difficulties with policy implementation
 - T-21-C – OMAFRA – nutrient management plans and contingency plans
 - T-26-C – OMAFRA – nutrient management plans
- request for one policy revision
 - G-2 – screen planning and building permit applications for threats for all land uses except solely residential uses

Phase 1 Program Amendments – in effect

MOECC says:

- Updates to the Technical Rules and the Tables of Drinking Water Threats:
 - Most rule amendments are enabling and not mandatory
 - What evidence is noted in current assessment reports to support adoption of new rules?
 - What new evidence does the SPA have to support s36 work plan recommendations?
 - Master Plans, expanded infrastructure, new or expanded systems, etc.

Amendments

- Rule 45 – re-evaluate SGRAs – including in current S.51 update
- Rules 80 and 81 were removed since don't need vulnerability for SGRAs
 - Maps and discussion to be removed from assessment reports – S.51
- Rule 95.1 – IPZ source vulnerability factor range changed from 0.5 to 0.7 to 0.5 to 1 when in shallow waters, close proximity to shoreline, history of water quality concerns – could have significant threats
- Revised names of threats and circumstances in Tables

Other things to consider

- There is a new method for determining road salt threats – not in effect but we could apply for Director's approval to use it if considered worthwhile at this time
- New initiative to develop climate change guidance for source protection – must be in draft by March 31, 2018 (due to funding)
- New technical work for systems will be at the expense of the municipality
- Natural heritage system rather than environmentally significant areas
- Urbanization – mapping updates
- Comments received in 2011 on proposed assessment reports
- Neighbouring activities that affect HH – Cedarvale well field, Guelph-Guelph/Eramosa, Grimsby water treatment plant
- Use of other methods to assess Lake Ontario threats rather than event based modelling

MTO's Salt Management Plan Update 2017

- 2004 – Environment and Climate Change Canada (ECCC) – Code of Practice for the Environmental Management of Road Salts
- 2005 – MTO's Salt Management Plan
- 2012 – ECCC completed a five-year review of progress on the Code of Practice
- 2013 – Transportation Association of Canada prepared the Salt Management Guide, Second Edition
- 2017 – Supplement to MTO's Salt Management Plan
 - MTO continues to use best management practices on all highways, not only salt vulnerable areas
 - MTO works with ECCC and MOECC seeking more efficient methods to identify salt vulnerable areas (*ECCC reports guidance in preparation to assist road authorities in identifying salt vulnerable areas – spring 2018 release with target of 2024*)
 - MTO works with industry and academia seeking innovative solutions for salt vulnerable areas
 - Supplement is a table of activities, goals and actions taken

Consultation With Others

- Implementing Bodies – MOECC, NEC, OMAFRA, MTO, MNRF, MMAH, Hamilton Port Authority, Hamilton CA, Conservation Halton, Environment Canada, NEB, OEB, oil pipeline owners, Suncor, de-icing contractors, airport authorities and operators, Agrichemical Warehousing Standards Association, landowners
- Stakeholders - fuel handlers, environmental groups, aggregate operators
- Affected landowners
- SPC
- SPAs

- Who would you like to hear from? What delegations would you like to see?
 - Oil pipeline companies have offered to speak to SPC

Planning Process and Timelines (draft)

- November 27, 2017 – municipal contact kick-off meeting
- December 12, 2017 – **SPC** kick-off – sector guidance for review
- January 2018 – municipal consultation survey
- March 6, 2018 – **SPC** meeting – annual reporting and S.36 update discussions and consultation plan
- April 5 and 26, 2018 – SPA meetings for annual report and overview of S.36 process
- April/early May 2018 – engagement of stakeholders, affected landowners, implementing bodies, municipal survey results – draft recommendations
 - SPC involvement in stakeholder engagement?
- May 2018 – **SPC** meeting – update discussions
- June/July 2018 – Staff write work plan
- August 2018 – municipalities and MOECC review draft work plan

Planning Process and Timelines (draft)

- September 2018 – finalize work plan
- October 2018 - **SPC** meeting for endorsement of work plan
- November 1 and 22, 2018 – SPA meetings for endorsement of submission of work plan
- November 30, 2018 – submission of work plan to Ministry

Item 12. Source Protection News



Item 12. Source Protection News

- The Great Lakes Chloride Forum – October 4, 2017
- WWF, U.S. Consulate General Toronto, Lake Simcoe Region CA, Gowling WLG
- Goals
 1. To understand and share the best practices, encompassing of liability and environmental objectives, in the application of road salt that balances public safety and healthy freshwater ecosystems.
 2. Establish a working group to ensure implementation of best practices and key learnings moving forward.
- Speakers from academia, MOECC, ECCC, CAs, Conservation Ontario, municipalities, Smart About Salt Council, WIT Advisers & Snow and Ice Management Association (USA), Canadian Environmental Law Association, Gowling WLG, New Hampshire Department of Environmental Services
- “Liability drives expectation but it is an excuse.”

Item 12. Source Protection News - continued

- Hamilton City Council endorsed the proposed changes to the source protection documents at its meeting of October 11, 2017
- Peel Region has initiated their Regional Official Plan Amendment process and it includes a conformity exercise for source protection policies – comments have been provided on their discussion papers
- Minister's Annual Report on Drinking Water 2017 – released
 - Progress on implementation of plans
 - Continuous improvement
- Lake Ontario Lakewide Action and Management Plan 2017 Annual Report – released
 - 2018 is the binational cooperative science and monitoring initiative field year
 - Nutrient research and control – nearshore
 - U.S. Geological Survey and U.S. Army Corps of Engineers project is establishing state-of-the-art flow measurement stations on the lower Niagara River and the upper St. Lawrence River – flow into and out of Lake Ontario will benefit efforts dealing with water quality and quantity

Item 12. Source Protection News - continued

- Canadian Water and Wastewater Association – Residential High Water User Research project
 - Identify if municipalities/utilities are actively working to collect their residential customer water consumption data
 - Identify how municipalities are using their residential customer consumption data to understand when water is being used, by who and for what purposes
 - Understand what initiatives, if any, municipalities/utilities are using to address higher than average water consumption in this customer category and lessons learned
 - Determine if any initiatives are being monitored and how progress is being measured
- Outcome – a municipal/utility best management practice or guideline for residential higher water users

Item 12. Source Protection News - continued

- Ontario First Nations receive \$13 million for water infrastructure
 - >100 First Nation communities across Northern Ontario will benefit
 - Goal for all to have access to clean water
 - Federal funding – \$8.8 million, 50% of the cost for 235 projects
 - Provincial funding - \$4.4 million, 25%
 - Includes water treatment, distribution, storm water, wastewater projects, etc.
- Nestle Waters is extending its partnership with the Alliance for Water Stewardship to have 20 global factories certified by 2020, including bottling plants in Canada
 - Rigorous process to help companies and other water users implement responsible practices that mitigate water risks, improve efficiency and address shared water challenges
 - Includes a series of actions, 30 core criteria, and indicators

Item 12. Source Protection News - continued

- International Joint Commission GLAM Committee studies
 - GLAM looks at adaptive management providing an assessment of water flow regulation plans under a range of actual and potential future hydrologic conditions
 - Primary responsibility is to assess how well currently available scientific data, information, models and tools reflect real world conditions so that improvements and updates can be made
 - One focus this year is on documenting the overall hydrological and climatic conditions across the Lake Ontario and the St. Lawrence River basin
 - Looking at impacts from high water levels – flooding and erosion, economic impacts, wetland plant response