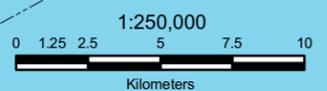
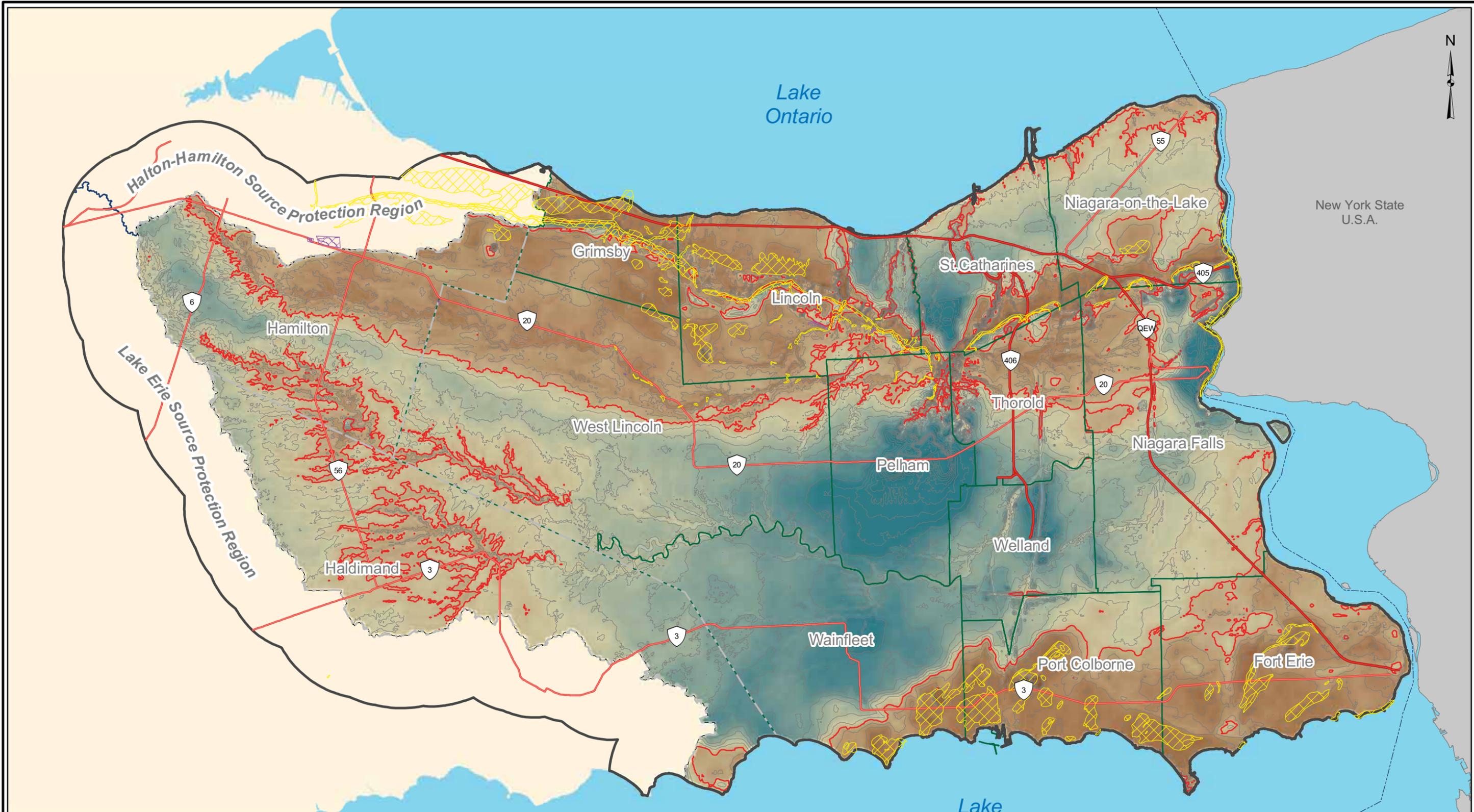


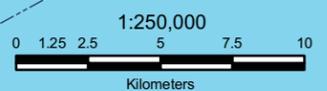
Disclaimer: This map is intended for illustrative purposes only. Figure is to be read in conjunction with the Niagara Peninsula Source Protection Area Assessment Report. Please refer to report text for digital mapping sources.
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Legend --- International Boundary Major Highways Highways Roads		Extended Context Area Niagara Peninsula Source Water Protection Area Lower Tier Municipality Upper Tier Municipality		Bedrock topography (m) above sea level High : 220 Low : 48 Bedrock Outcrop Escarpment 5 m Contours Bedrock Valleys		Note: 'Bedrock Outcrop' denotes areas where there is less than 1m of overburden. The bedrock topography depicted in the St. David's Buried Gorge area may not be accurately represented due to a lack of well data. Previous interpretations indicate the gorge cuts approximately 60 to 130 m into the bedrock.						NPSA Assessment Report	
						Figure 3.11: Bedrock Topography				Thursday, July 14, 2011			



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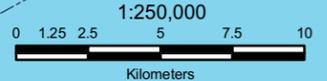


Legend --- International Boundary Major Highways Highways Roads		Extended Context Area Niagara Peninsula Source Water Protection Area Lower Tier Municipality Upper Tier Municipality		Bedrock Outcrop Contour 5m Interval 15 m Thickness Karst		Overburden thickness (m) above sea level High : 106.9 Low : 0.0 * Bedrock outcrop denotes areas where there is less than 1m of overburden						NPSA Assessment Report Figure 3.12: Overburden Thickness	
										Thursday, July 14, 2011			



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Legend

- International Boundary
- Major Highways
- Highways
- Roads
- ~ Watercourse
- ☪ Ponds, Reservoirs, Lakes
- Niagara Peninsula Source Water Protection Area
- Lower Tier Municipality
- Upper Tier Municipality
- Wells Constructed in Bedrock
- Wells Constructed in Overburden



NPSPA Assessment Report

Figure 3.13: Water Well Locations

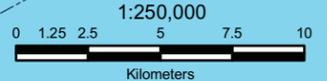


Thursday, July 14, 2011





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- Legend**
- International Boundary
 - Major Highways
 - Highways
 - Watercourse
 - Ponds, Reservoirs, Lakes
 - Extended Context Area
 - Source Water Protection Area
 - Lower Tier Municipality
 - Upper Tier Municipality
 - Other Water Wells
 - Water Supply Wells
 - Surficial Overburden Aquifers



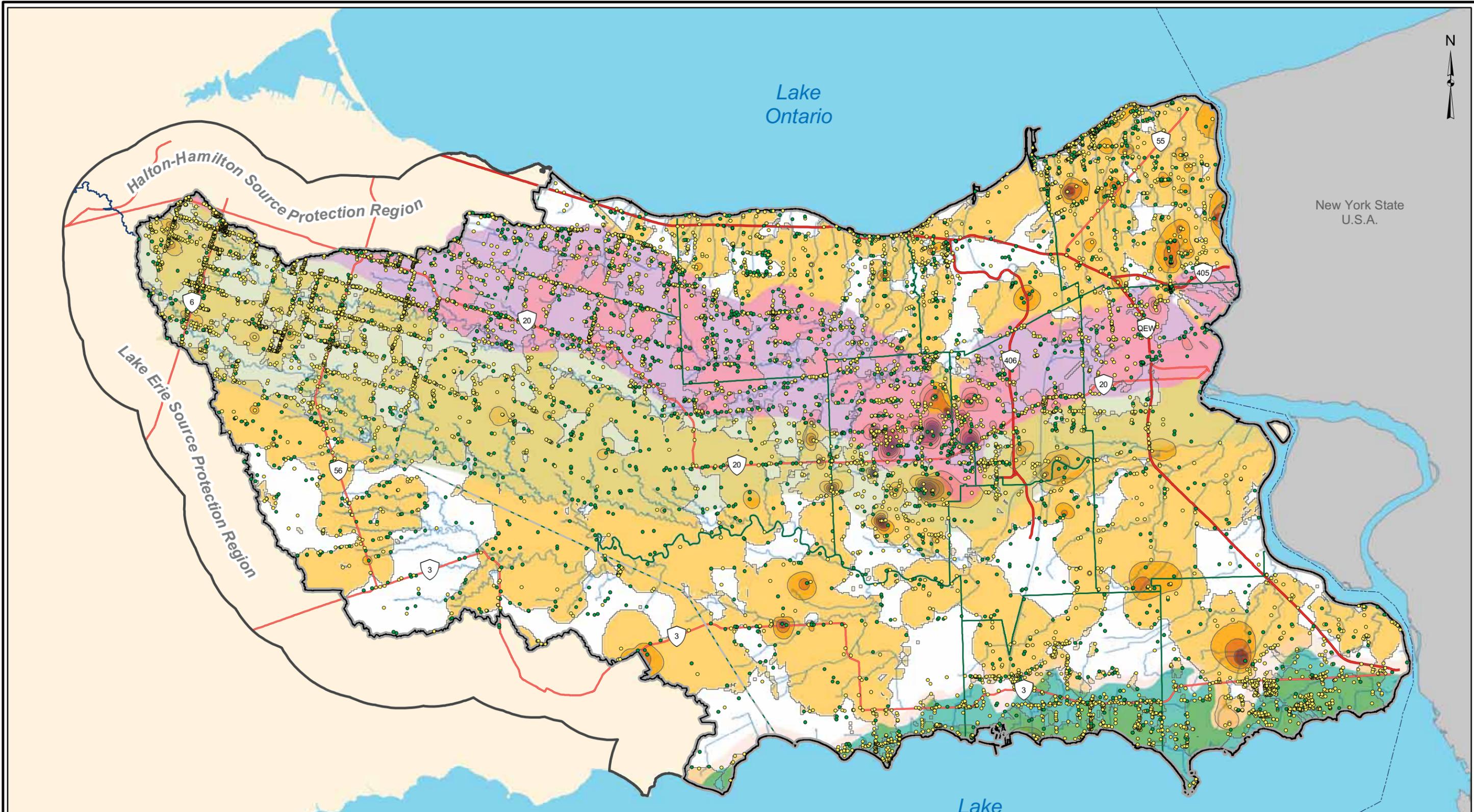
NPSPA Assessment Report

Figure 3.14: NPSPA Area Surficial Overburden Aquifers

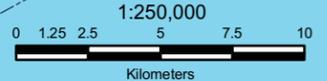


Thursday, July 14, 2011

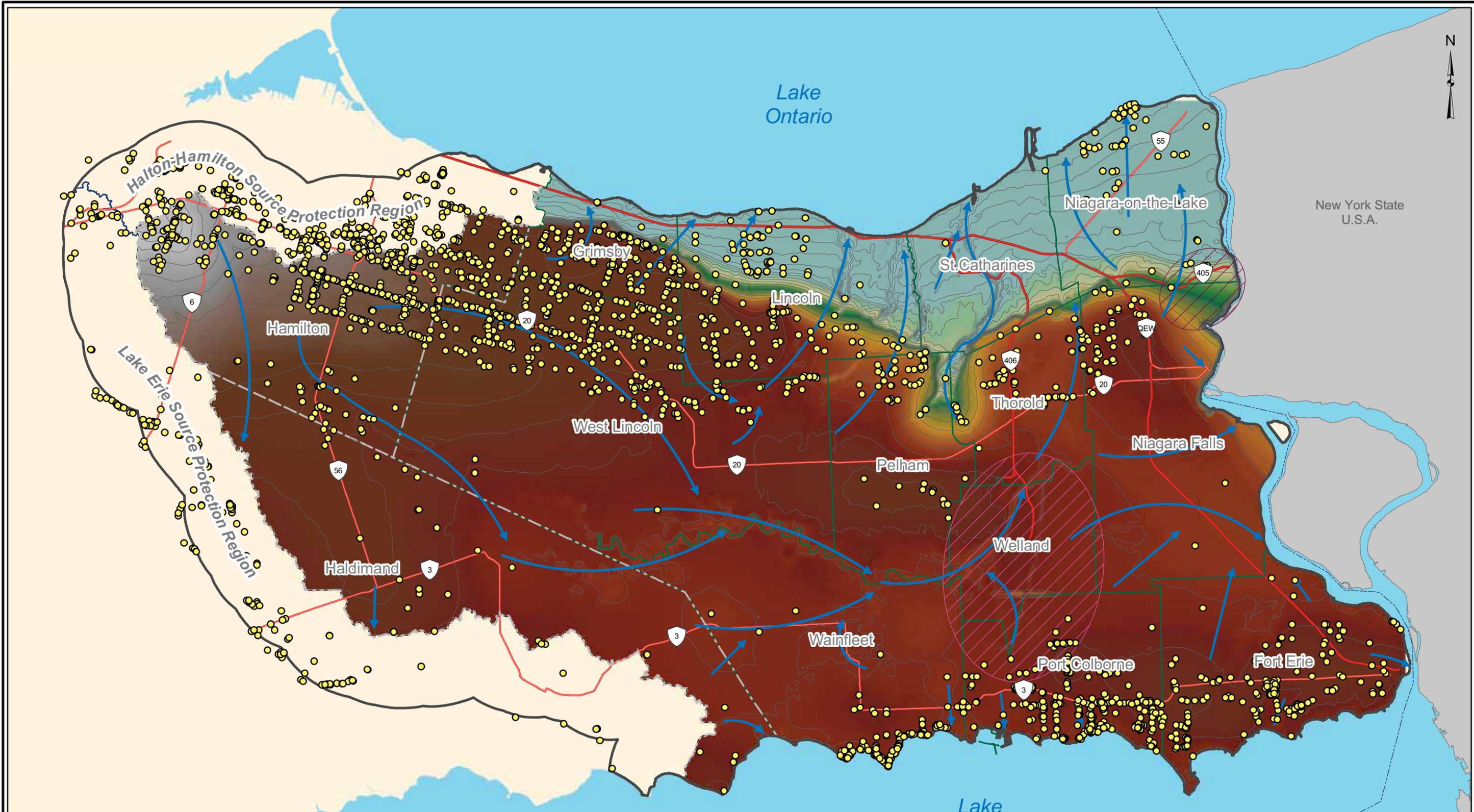




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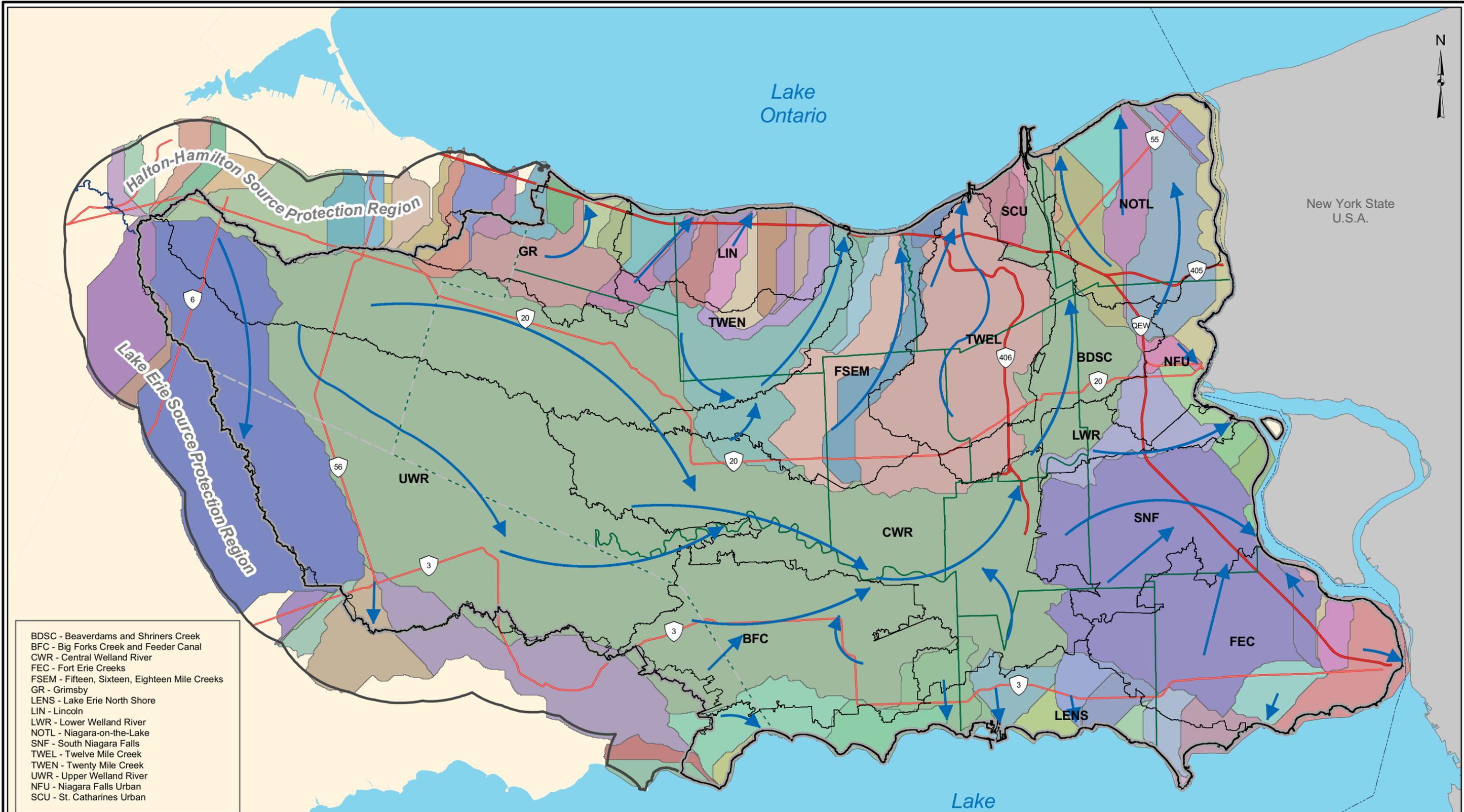
Legend --- International Boundary --- Major Highways --- Highways --- Watercourse Ponds, Reservoirs, Lakes Extended Context Area Source Water Protection Area Contour 5 m Lower Tier Municipality Upper Tier Municipality Other Water Wells Water Supply Wells		Bedrock Water Supply Aquifers Bois Blanc Formation Onondaga Formation Guelph Formation Lockport Formation	Sand and Gravel Aquifer Thickness Above Bedrock (m) 0 0.1 - 5 5.1 - 10 10.1 - 15 15.1 - 25 25.1 - 55		DRINKING WATER SOURCE PROTECTION ACT FOR CLEAN WATER NPSPA Assessment Report Figure 3.15: NPSPA Area Contact-Zone and Prominent Bedrock Aquifers Thursday, July 14, 2011
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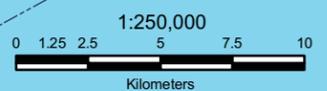
1:250,000
 0 1.25 2.5 5 7.5 10
 Kilometers

Legend - - - International Boundary - - - Major Highways [] Extended Context Area [] Niagara Peninsula Source Water Protection Area		[] Lower Tier Municipality [] Upper Tier Municipality ● Wells Used in Analysis - Contour 5 m		[] Ground Water Flow [] Welland Canal Dewatering [] PGS Reservoir Area *Elevation inaccurate due to radial outflow from power generating station reservoir (PGS)		Elevation (m) above sea level High : 243.377 Low : 73.1598						NPSA Assessment Report	
						Figure 3-16: Water Table Elevations				Thursday, July 14, 2011			

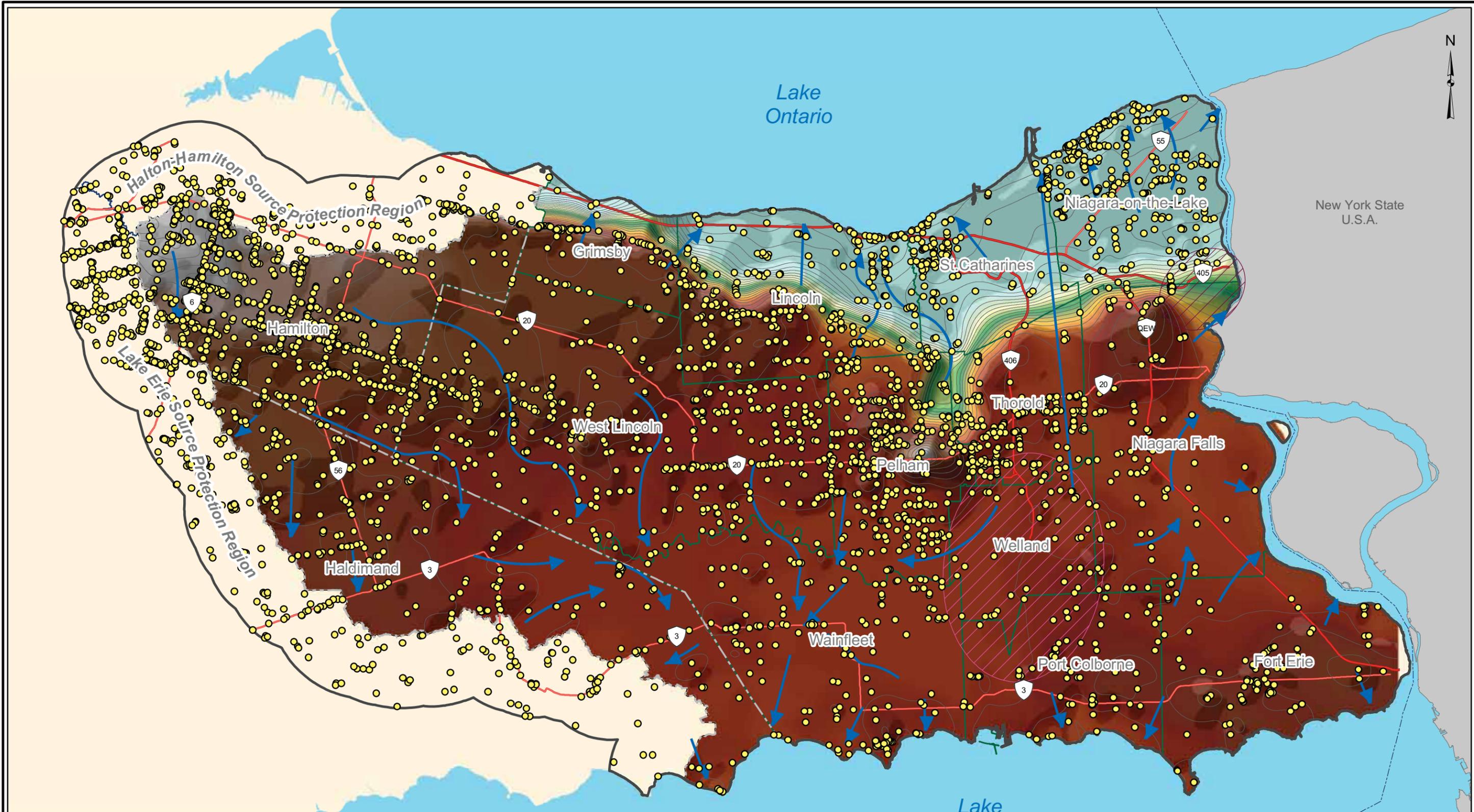


- BDSC - Beaverdams and Shriners Creek
- BFC - Big Forks Creek and Feeder Canal
- CWR - Central Welland River
- FEC - Fort Erie Creeks
- FSEM - Fifteen, Sixteen, Eighteen Mile Creeks
- GR - Grimsby
- LENS - Lake Erie North Shore
- LIN - Lincoln
- LWR - Lower Welland River
- NOTL - Niagara-on-the-Lake
- SNF - South Niagara Falls
- TWEL - Twelve Mile Creek
- TWEN - Twenty Mile Creek
- UWR - Upper Welland River
- NFU - Niagara Falls Urban
- SCU - St. Catharines Urban

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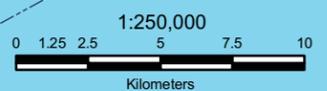


Legend --- International Boundary --- Major Highways --- Highways ~~~~~ Watercourse Ponds, Reservoirs, Lakes Extended Context Area NPCA Watershed Planning Areas Source Water Protection Area Lower Tier Municipality Upper Tier Municipality Groundwater Flow	Groundwatersheds	
		NPSPA Assessment Report
<i>Figure 3.17: Water Table Groundwatersheds</i>		
	Thursday, July 14, 2011	



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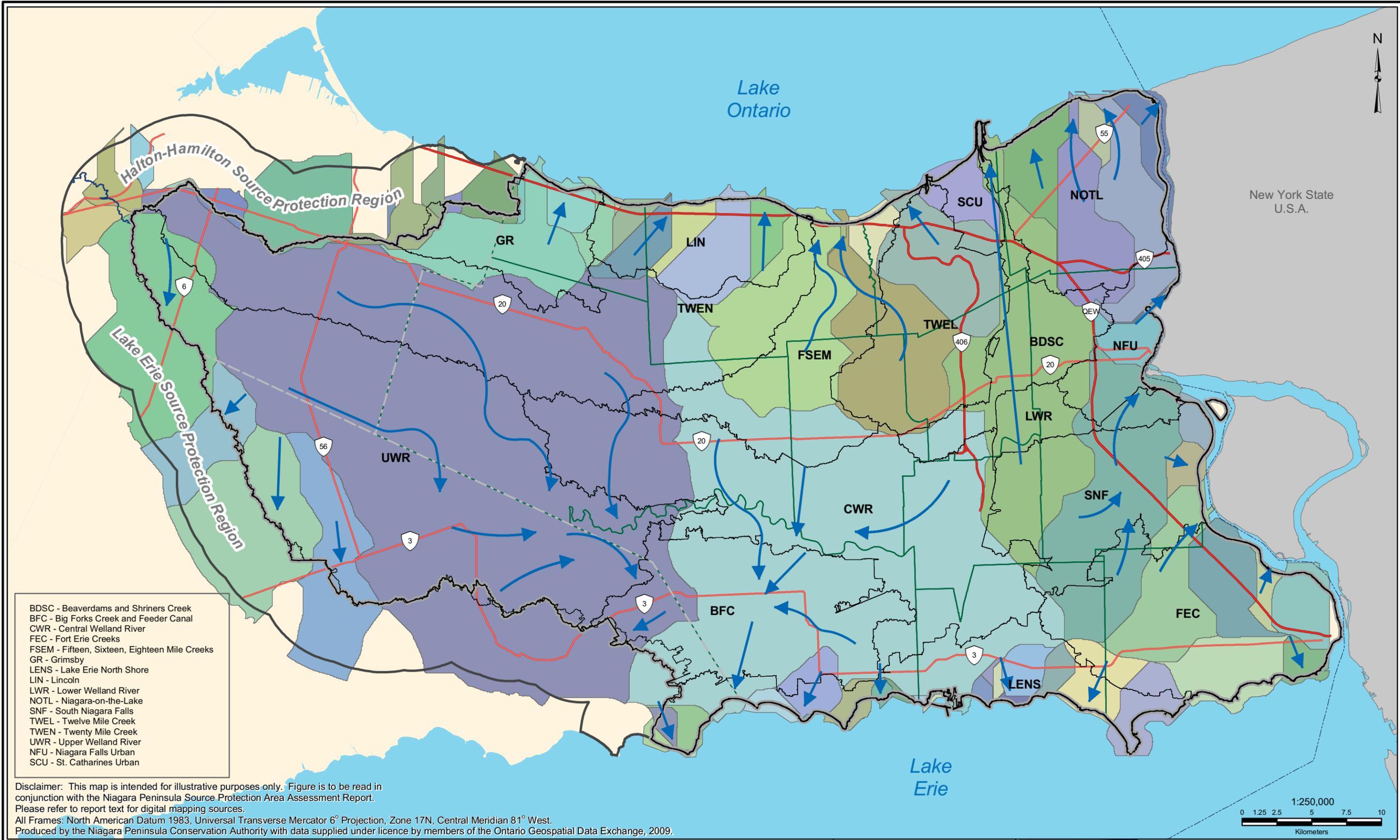


Legend

- International Boundary
- Major Highways
- ▭ Extended Context Area
- ▭ Niagara Peninsula Source Water Protection Area
- ▭ Lower Tier Municipality
- ▭ Upper Tier Municipality
- Wells Used in Analysis
- Contour 5 m
- ➡ Groundwater Flow
- ▨ Welland Canal Dewatering
- ▨ PGS Reservoir Area
- Elevation (m) above sea level
 High : 237.5
 Low : 69.6
Elevation inaccurate due to radial outflow from power generating station reservoir (PGS)



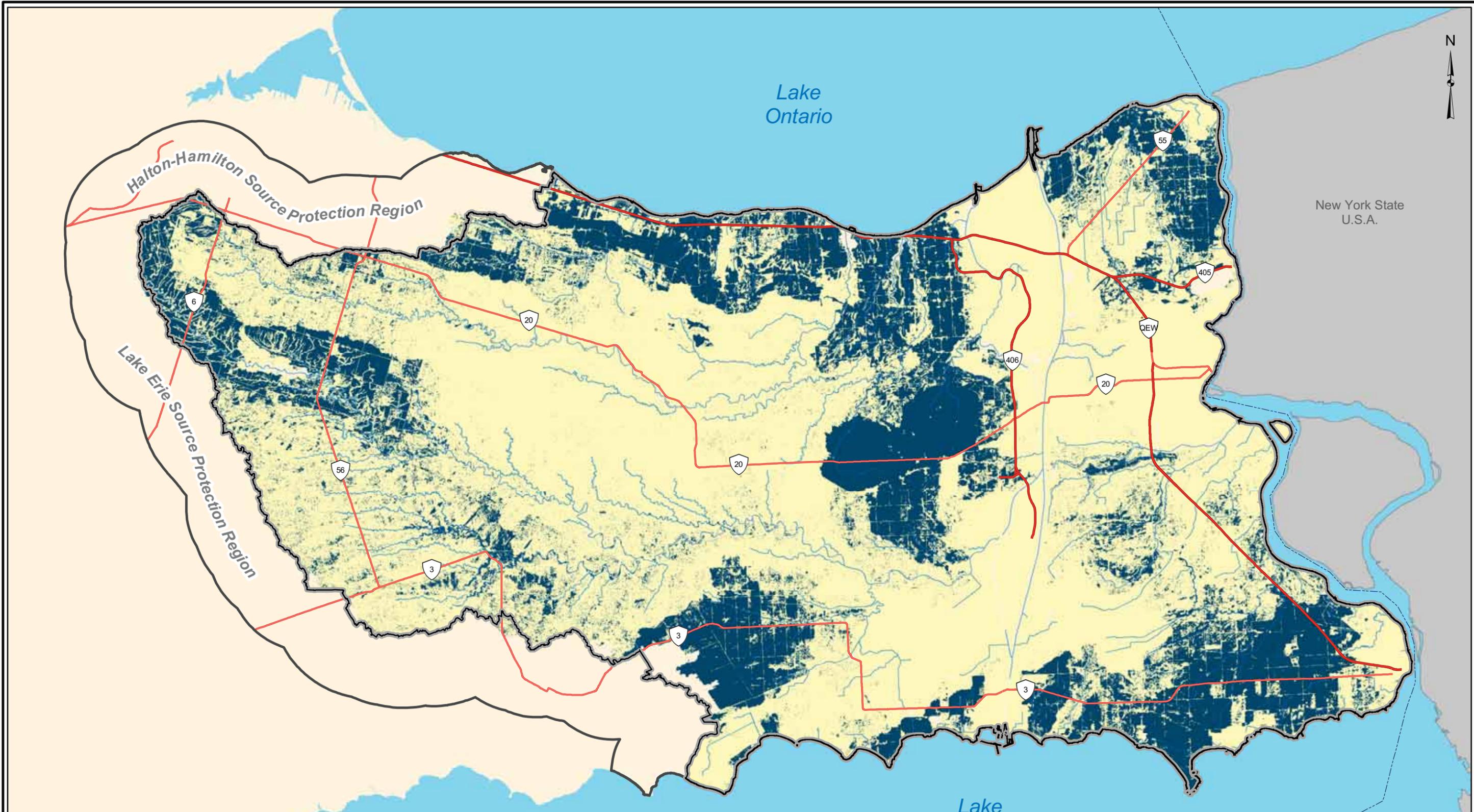
	NPSA Assessment Report
<i>Figure 3.18: Potentiometric Surface</i>	
	Thursday, July 14, 2011



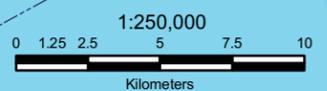
- BDSC - Beaverdams and Shriners Creek
- BFC - Big Forks Creek and Feeder Canal
- CWR - Central Welland River
- FEC - Fort Erie Creeks
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Legend --- International Boundary --- Major Highways --- Highways ~~~~~ Watercourse Ponds, Reservoirs, Lakes Extended Context Area NPCA Watershed Planning Areas Source Water Protection Area Lower Tier Municipality Upper Tier Municipality Groundwater Flow	 Groundwatersheds	
NPSPA Assessment Report		Figure 3.19: Potentiometric Groundwatersheds
		Thursday, July 14, 2011



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- Legend**
- International Boundary
 - ~ Watercourse
 - ☐ Source Water Protection Area
 - Major Highways
 - ☐ Ponds, Reservoirs, Lakes
 - HMS Rivers
 - Highways
 - ☐ Extended Context Area
 - ☐ Non Modeled Areas

Annual groundwater recharge (mm/yr) 1991 - 2005

- ☐ ≤ 53
- ☐ > 53, Potential SGRAs



Figure 3.20: Potential Groundwater Recharge Areas