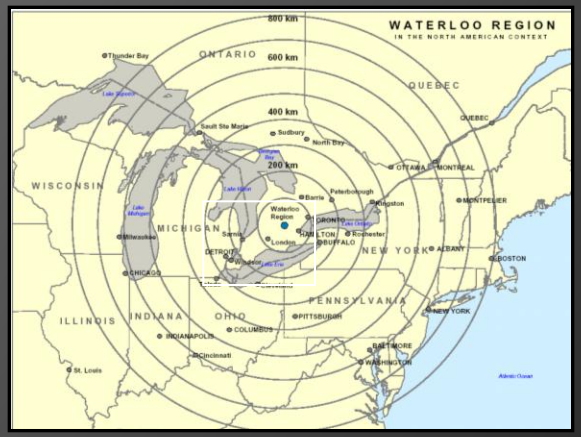
Region of Waterloo

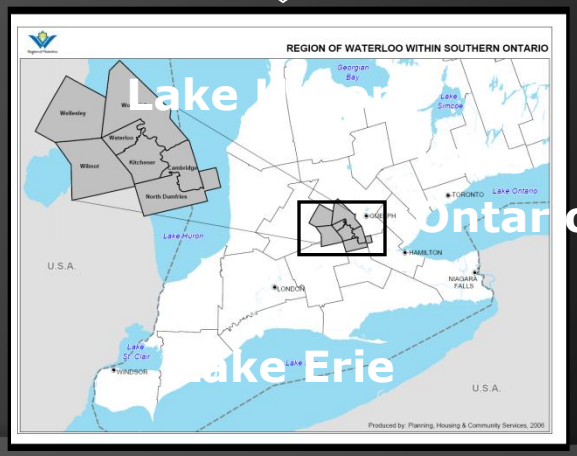
GRAND RIVER WATERSHED WATER FORUM: SUSTAINABLE WATER RESOURCES

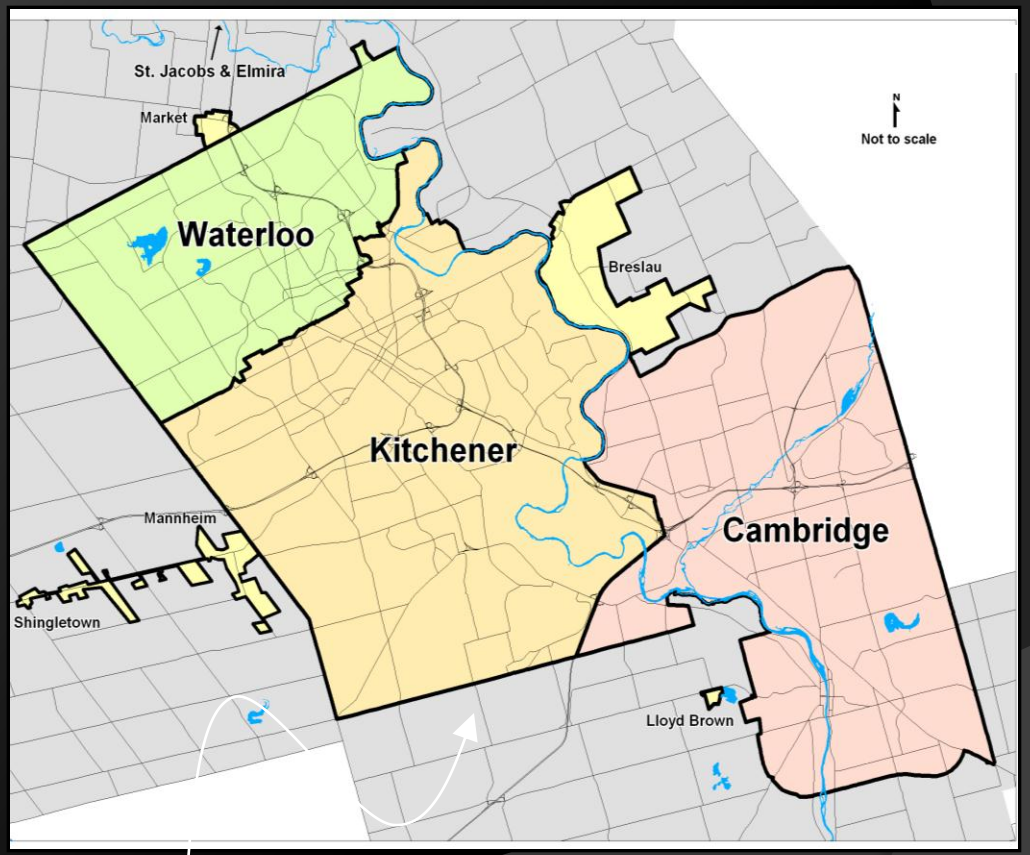
REGION OF WATERLOO

September 16, 2011

Region of Waterloo Geographical Location







"Integrated Urban System" (IUS)

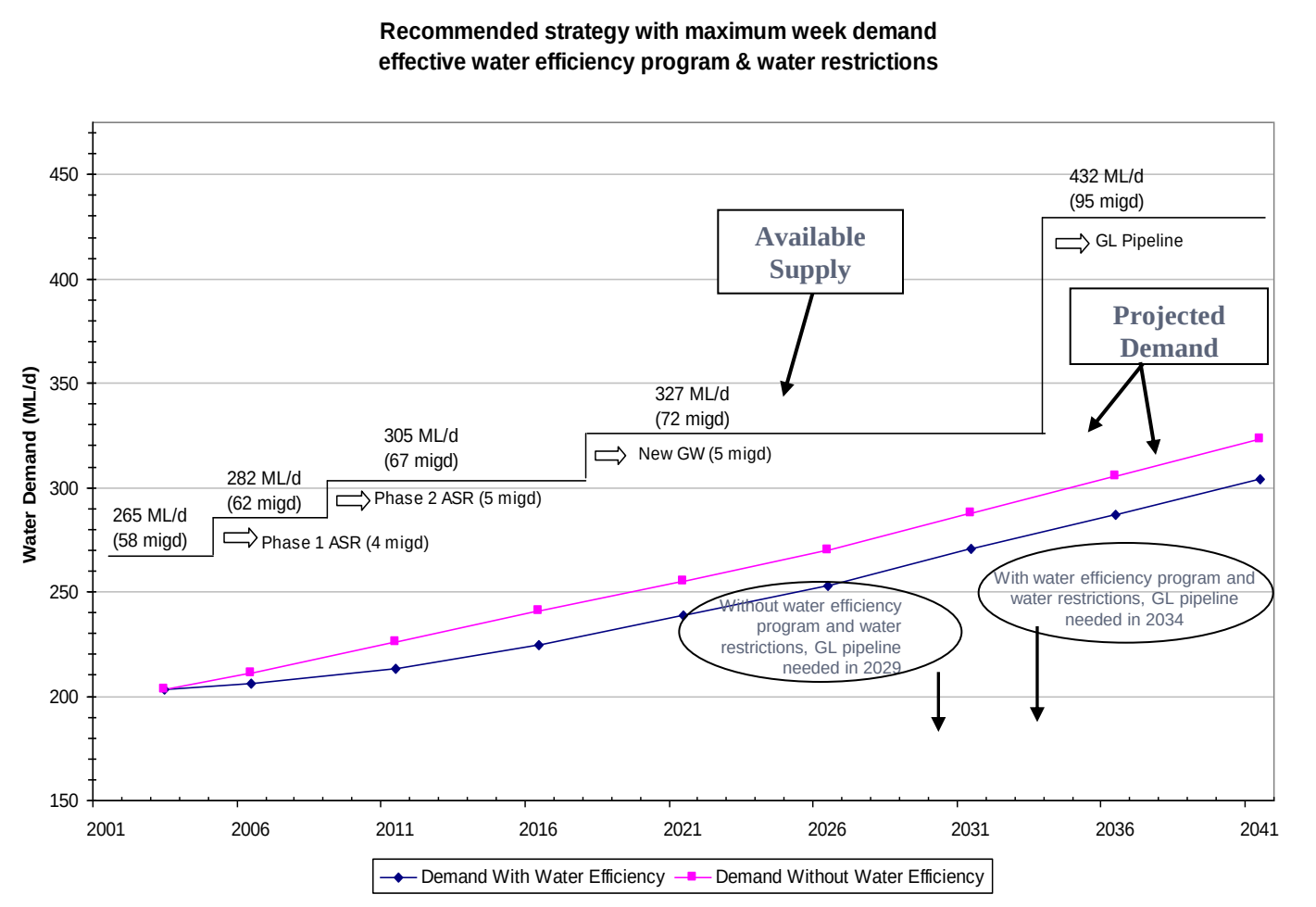
Water Supply

Region responsible for water source and treatment and recently distribution in 2 Townships

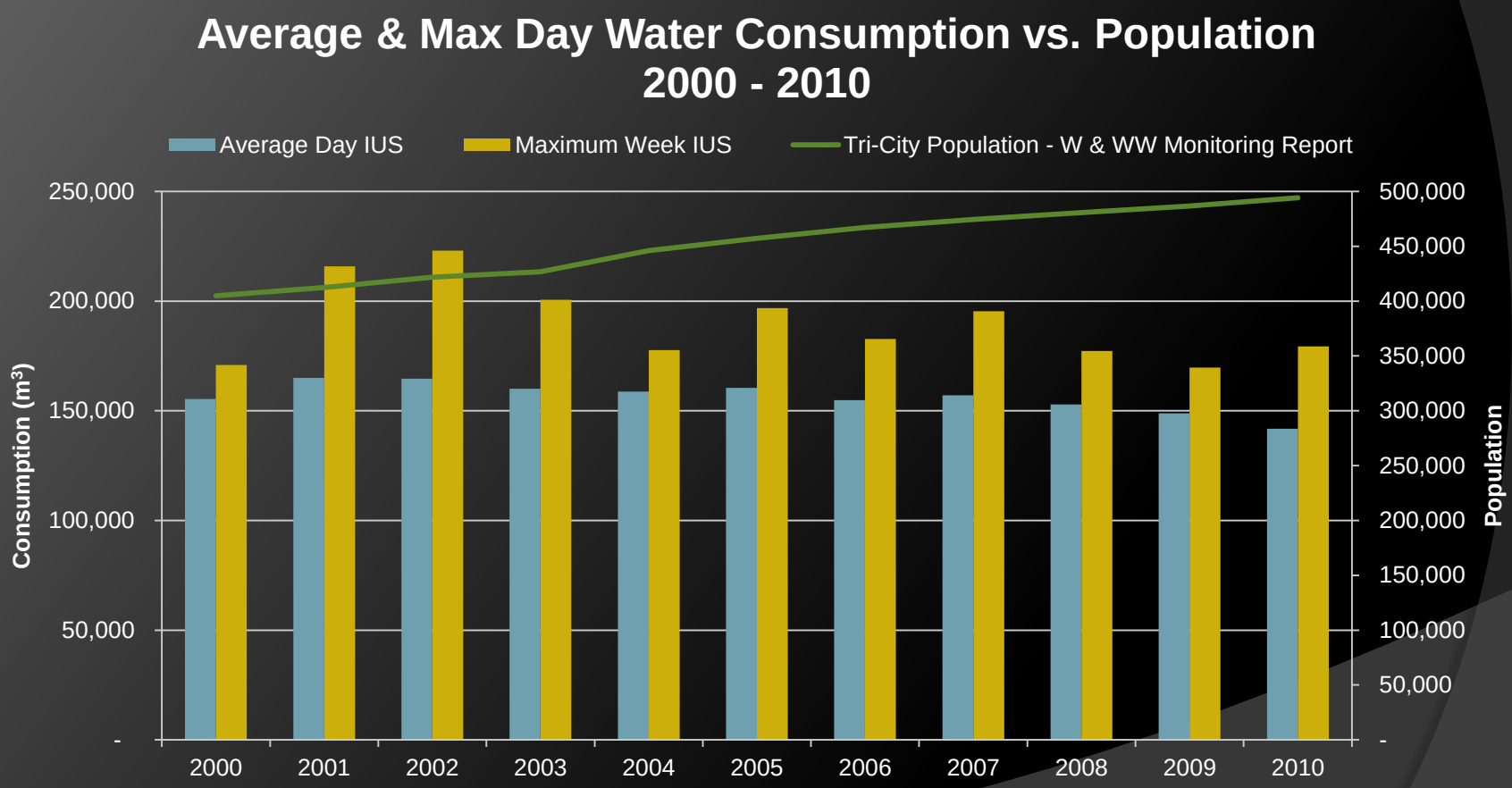
- Groundwater (75%)
  - 20 Groundwater Supply Systems (including 9 WTP)
  - 24 System Wells
  - 84 Raw Water Wells
  - 1 ASR – Aquifer Storage Recovery
- Surface Water (25%)
  - Mannheim Water Treatment Plant (Grand River)
- 21Water storage facilities in the IUS

ROW Water Supply Master Plan (2007)

The recommended water supply strategy for the Region of Waterloo is to maintain the original strategy (2000), but continue with water conservation efforts.



Water Consumption vs. Population



Why is consumption dropping?

- Economic Factors
  - Changing industry
- Outdoor Water Use Bylaw
- Changing technology – Front load washers
- Water conservation programs

How low will consumption drop?

- 150 -170 lpcd
- Predicting increasing water demand in next 3 to 4 years
- Water reuse
  - Potentially reduce water use even more
  - Potential health risks

Water Supply Master Plan

- Planning for a pipeline to Lake Erie
- Beyond 2035
- Potential impacts on Grand River
- Potential impacts of decommissioning wells

migd-million imperial gallons per day

and 1migd=4.545ML/d

What about wastewater?

- Impact of wastewater effluent on Grand River
- Improving effluent quality
  - Significant capital and operating costs
  - New technology
  - Reduced impact on ecology of river
- Potential for reuse
- Other concerns
  - Stormwater
  - Non point sources

migd-million imperial gallons per day

and 1migd=4.545ML/d

Sustainable???

- Yes
- Even lower future impacts
- Even lower future water consumption
- Even better effluent quality
- Even better technology