



**Lake Simcoe Region**  
conservation authority

*A Watershed for Life*



## **Town of Newmarket Committee of the Whole**

June 16, 2014

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**General Manager, Watershed Management**

# Rain Scaping

*Is a voluntary market transformation program working with our municipal partners and development community to promote Low Impact Development and more sustainable building practices.*



# Low Impact Development (LID)

- Is a new approach to managing stormwater runoff from urban development,
- Design each development site to maintain the natural hydrology of the site so that the overall integrity of the watershed is protected,
- Increased environmental, economic and social benefits.

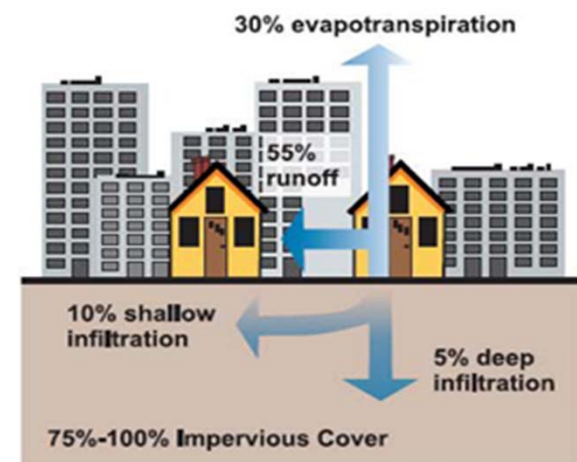
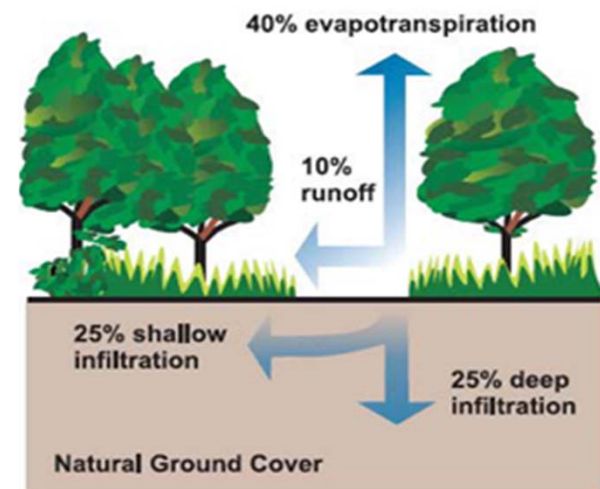
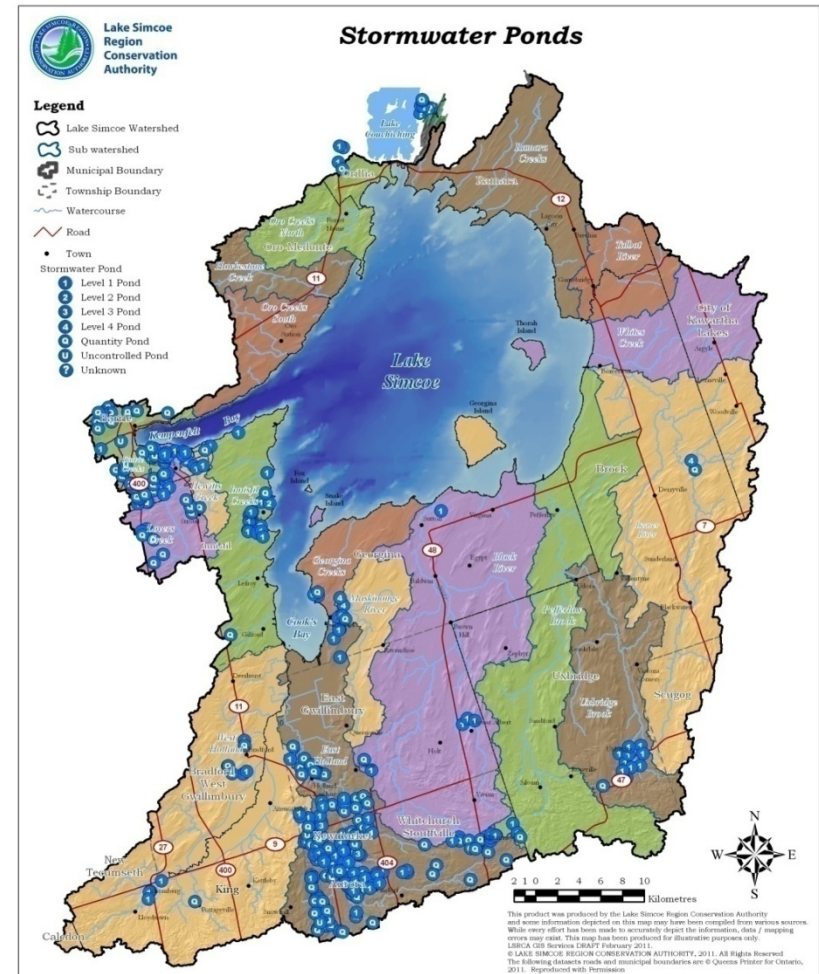


Image Source: U.S E.P.A, 2007

# Need for Change: Current SWM Practices

- Since 1995 all new development has been required to install stormwater controls, (stormwater ponds)
- Despite this the health and quality of our urban rivers and streams continues to decline,
- Ponds are costly to maintain and by themselves do not provide all the environmental benefits to protect our watershed.





# Need for Change: Current SWM Practices

- Decrease groundwater recharge, increase in surface runoff,
- Increases streambank erosion, and the risk of flooding,
- Requires costly routine maintenance,
- Can become a source of phosphorus pollution..



# Green Infrastructure: Low Impact Development

- Move away from the traditional end-of pipe approach to...

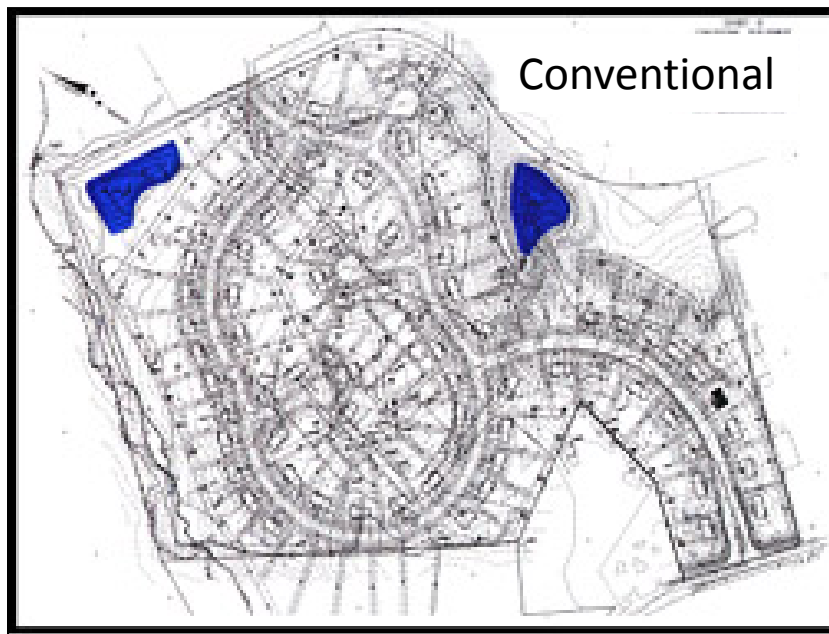


- Additional site controls which filter and infiltrate water back into the ground.



# Green Infrastructure: Low Impact Development

Low Impact Development tries to mimic the pre-development conditions on the site - it requires a change in urban design principles to reduce the urban footprint.



# Types of Low Impact Development (LID)

- Water harvesting
- Biofilters and Water Gardens
- Infiltration devices
- Pervious pavement\pavers
- Green Roofs





# Rain Scaping

## Protection

Greenfield\New  
Development



BILD, Developers, Builders  
and Municipalities



## Restoration (2014)

Retrofit Existing  
Urban Centers



Public Lands  
(Municipalities)

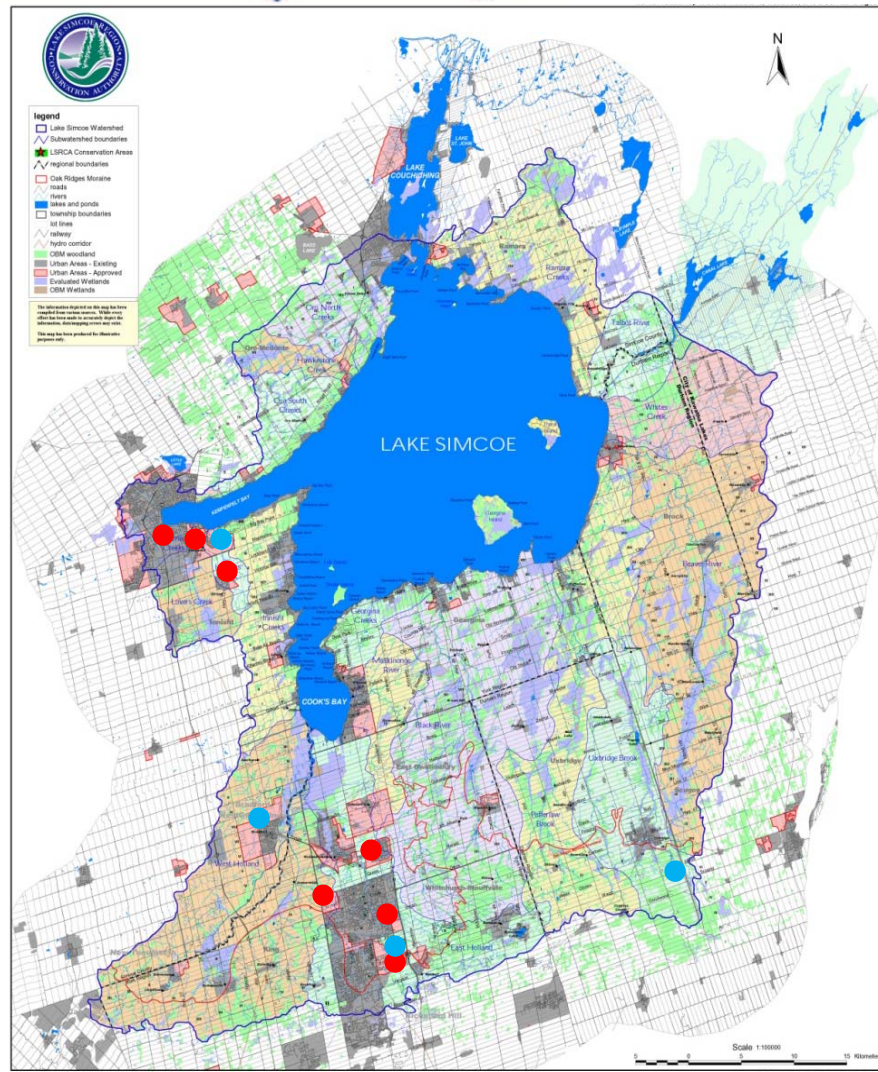
Private Lands  
(Institutional, commercial)



# Rain Scaping

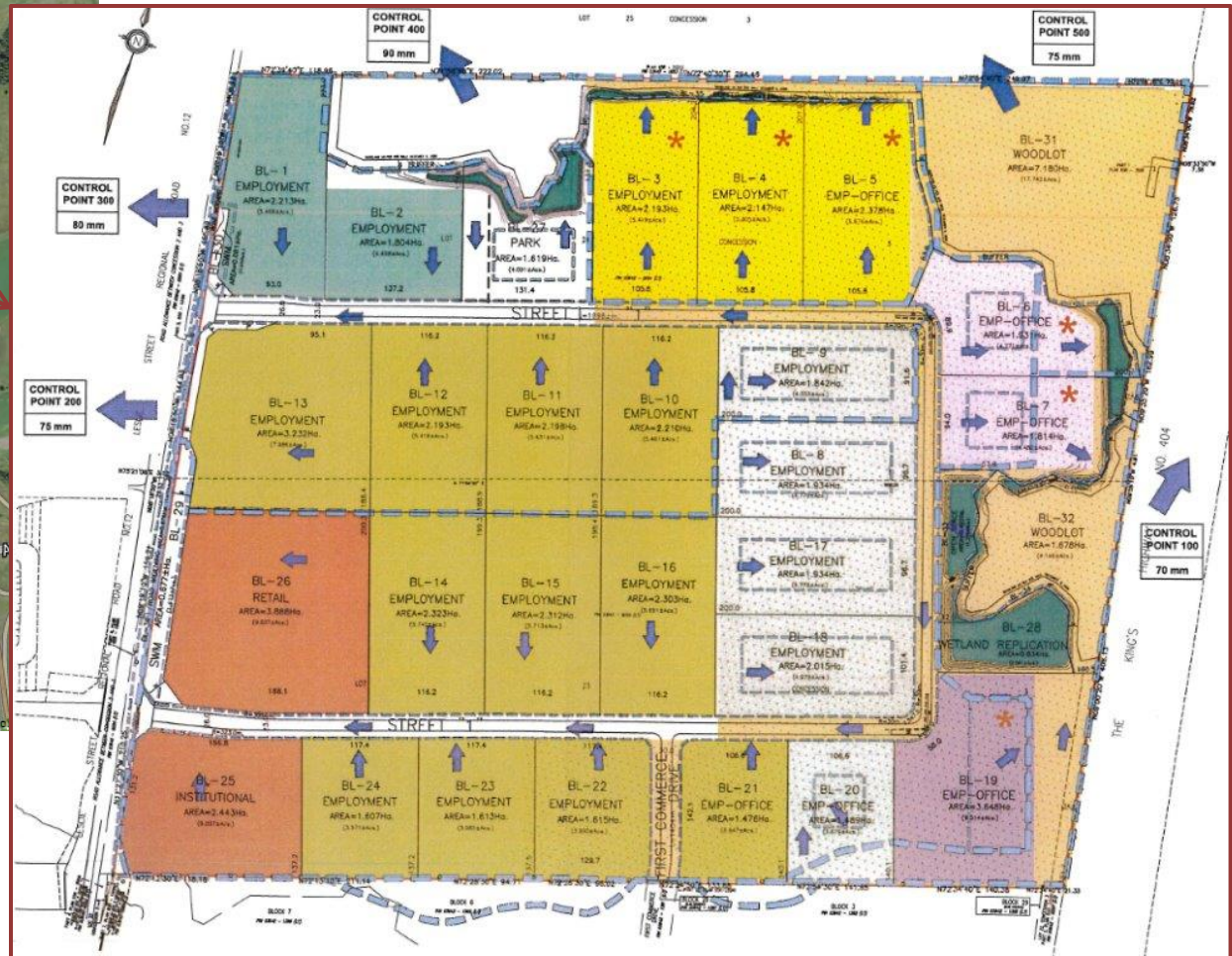
## Results to Date

- Seven (7) design workshops
- Another four (4) scheduled 2014,
- 4,341 acres of development,
- 1625 units have energy & water conservation devices.



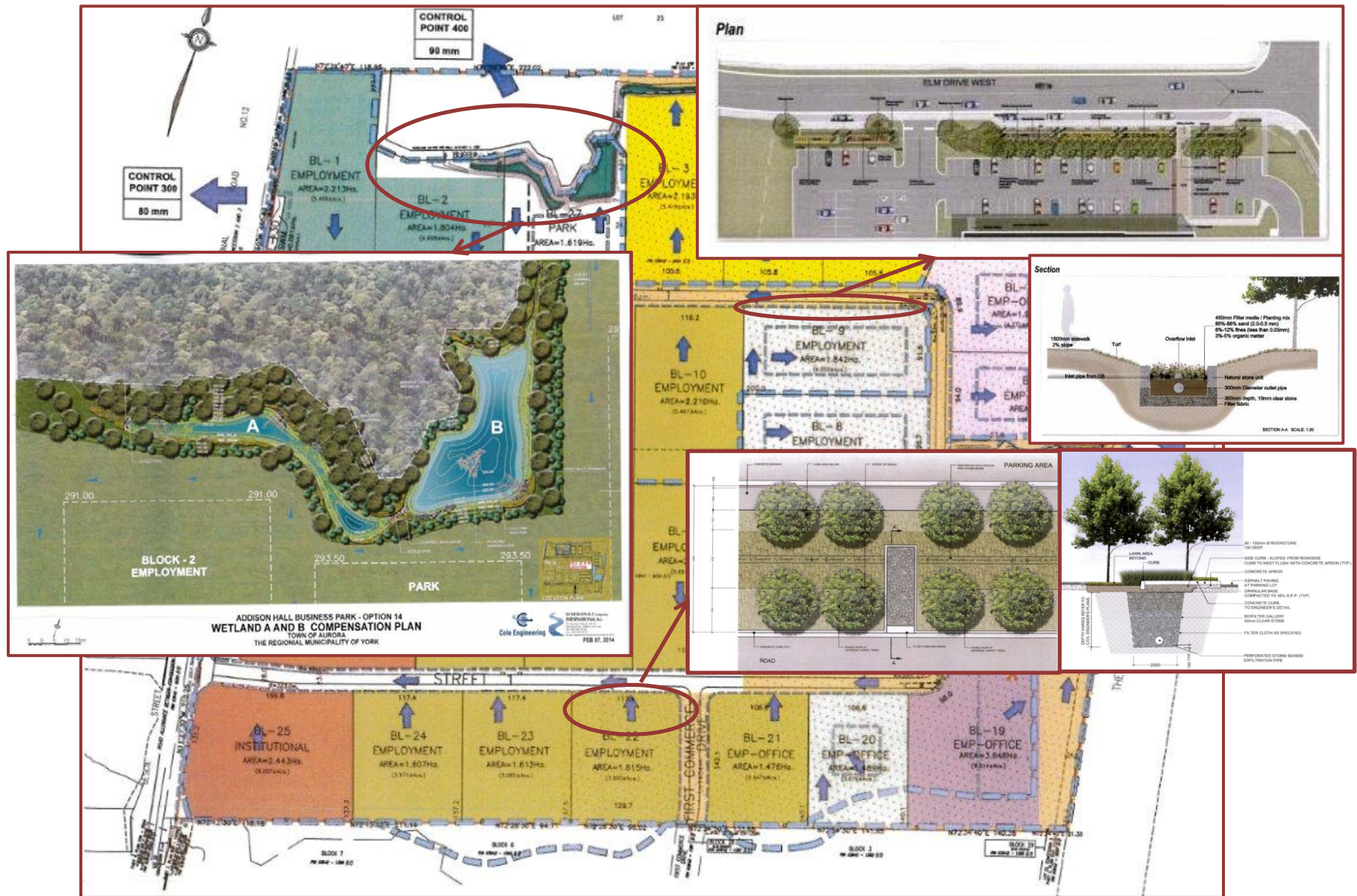


# Addison Hall Business Park - Town of Aurora





# Addison Hall Business Park - Town of Aurora





# Forest Green Homes- Town of Newmarket



- Townhome development freehold & plan of condominium,
- Total of XX units on XX hectares,
- Combination of LID and conventional SWM



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# *Rain Scaping* General Benefits

- Improved environmental protection,
- Reduced maintenance cost,
- Reduces streambank erosion and threat of flooding,
- Savings to the building community,
- Ensures groundwater aquifers are recharged,
- Increased resilience to climate change.







# Questions?