North Markham Future Urban Area

Planning for a New Community

Welcome to Public Open House #1

Presentation 7:00pm – Council Chambers

January 15, 2015

Markham Civic Centre

Purpose of the Open House

Markham is planning a new community in north Markham.

The need for the new community is identified in Markham's new Official Plan, which refers to the lands as the Future Urban Area.

This Open House provides one of several opportunities in the coming months to participate in the planning of this new community.

Organization of Information Panels

The information panels are organized according to the following broad topics:

Background: What is the Future Urban Area and why do we need to plan for a new community in north Markham? What is the planning process for the Future Urban Area?

Concurrent Studies Underway: Where are we in the process? Information is provided on the following work that is underway: Conceptual Master Plan, Subwatershed Studies, and Transportation, Water Servicing and Wastewater Servicing Studies.

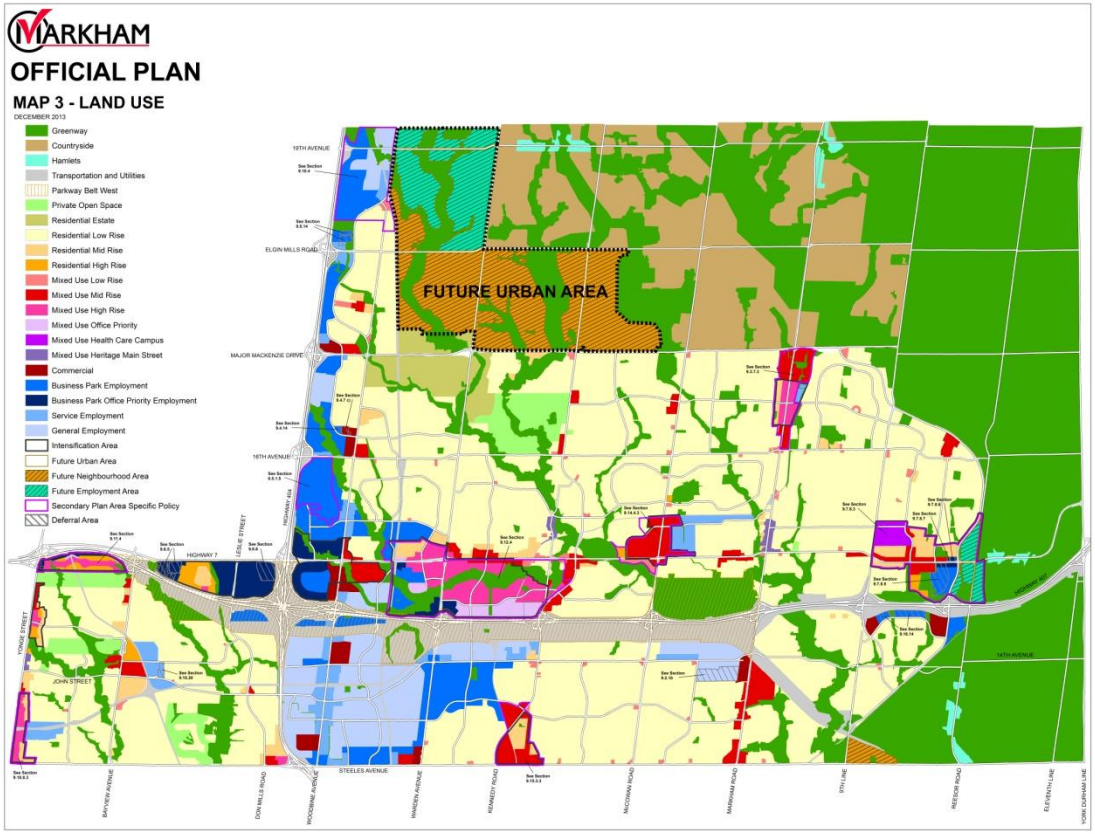
Next Steps: What happens after this Open House?

Markham Planning and Engineering staff and our consultants are available to answer your questions and to hear your comments.

DO NOT PRINT

BACKGROUND

What is the Future Urban Area?



- The Future Urban Area (FUA) is located north of Major Mackenzie Dr, east of Woodbine Ave (outlined with a dotted line on Map 3–Land Use).
- The lands shaded orange within the FUA – generally between Major Mackenzie Dr and Elgin Mills Rd – will be developed with new neighbourhoods.
- The lands shaded blue – generally between Elgin Mills Rd and the northerly City limits – will be developed for employment uses.
- The lands shaded green are part of the protected Greenway System and will not be developed.

Why do we need a new community in north Markham?

Provincial Direction

- Since 2006, through the Growth Plan for the Greater Golden Horseshoe (Growth Plan), the Province has been establishing population and employment forecasts for regional municipalities.

  Regional municipalities must then assign population and employment growth to their local municipalities.

- The Growth Plan also establishes minimum intensification and density targets in an effort to more carefully manage the amount of growth that is accommodated through urban expansion.

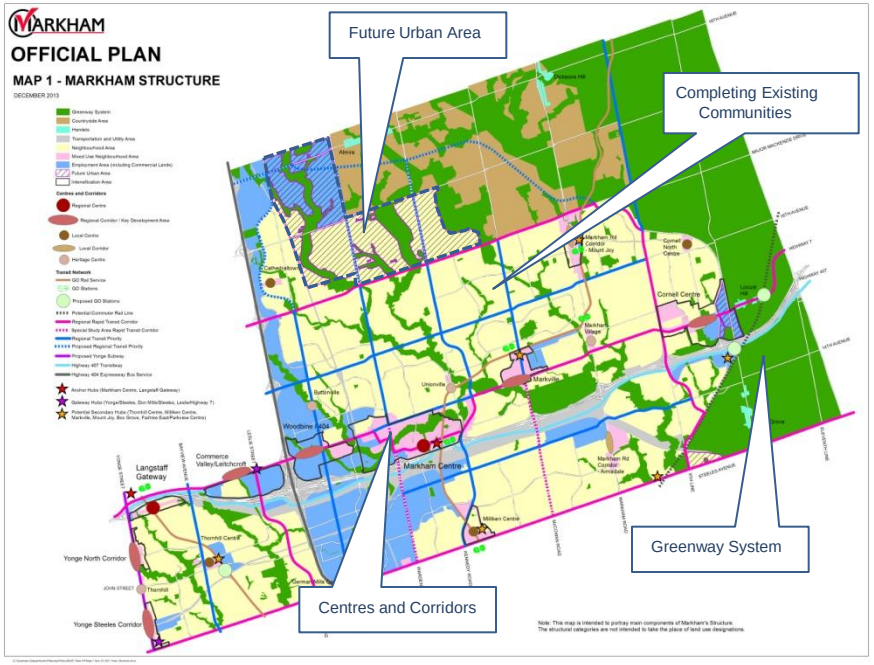
York Region Direction

- The 2010 York Region Official Plan identifies the following 2031 forecasts for Markham:

  Population: approx 422,000 residents
  Employment: approx 240,000 jobs

Markham's Official Plan must identify how this growth will be accommodated.

Markham's Strategy for Accommodating Growth



- Following extensive consultation, Council endorsed a strategy for accommodating this growth:

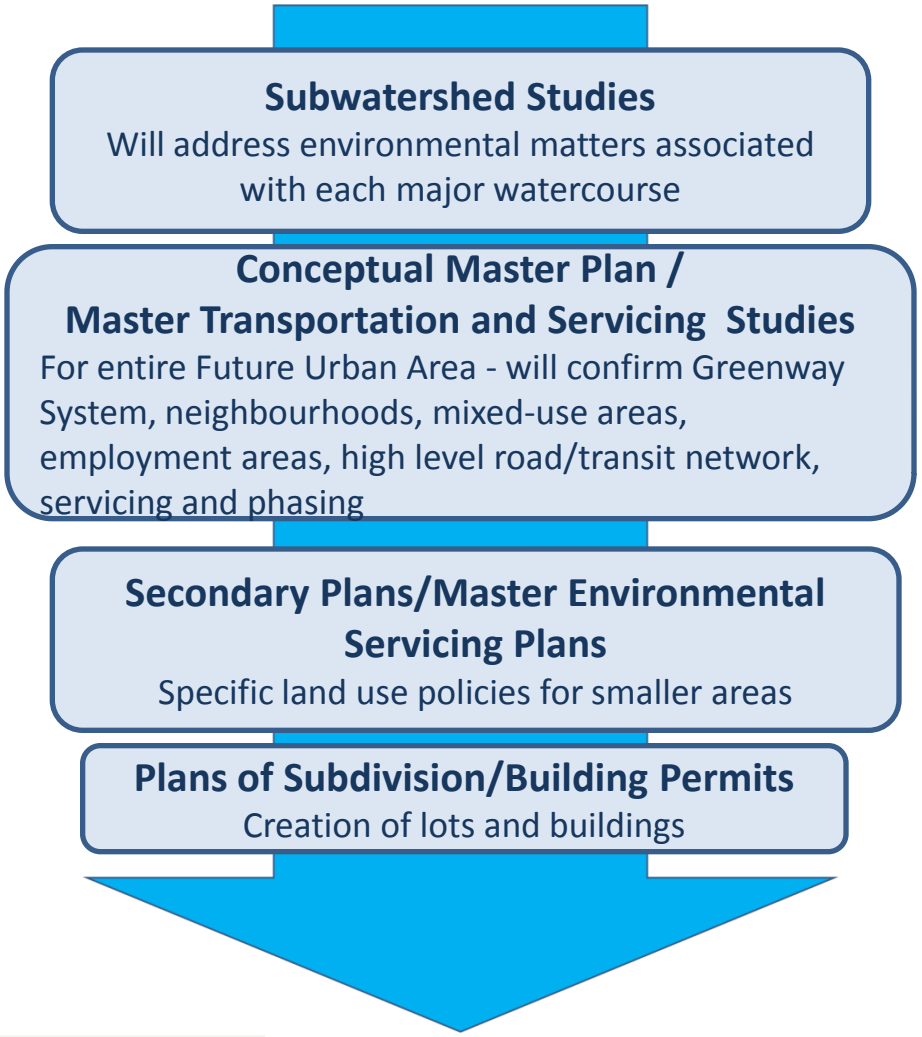
✓ Ensuring protection of the natural environment through an identified Greenway System that is off-limits to development

✓ Directing the majority of the growth to Centres and Corridors along rapid transit routes within the built boundary (intensification) - 60%

✓ Completing the existing urban area communities and employment districts - 20%

✓ Allowing limited expansion of the urban area **(i.e., the Future Urban Area)** - 20%

How are we planning for the Future Urban Area?



- Markham's Official Plan identifies a comprehensive planning process for the development of the new community in the Future Urban Area (FUA).
- The 1st step is undertaking Subwatershed Studies to better understand the environmental features and functions in and around the FUA.
- The 2nd step is the development of a master plan for all of the lands within the FUA (referred to as the Conceptual Master Plan). This step includes concurrent studies for Transportation, Water and Wastewater.
- The 3rd step is the preparation of more detailed Secondary Plans for smaller areas, which will be consistent with the Conceptual Master Plan.
- Finally, plans of subdivisions will be approved that are consistent with the detailed Secondary Plans, after which building permits can be issued.

Steps 1 and 2 are underway.

Public Consultation

Residents and Businesses

First Nations and Métis

Non-Government Organizations

Utilities

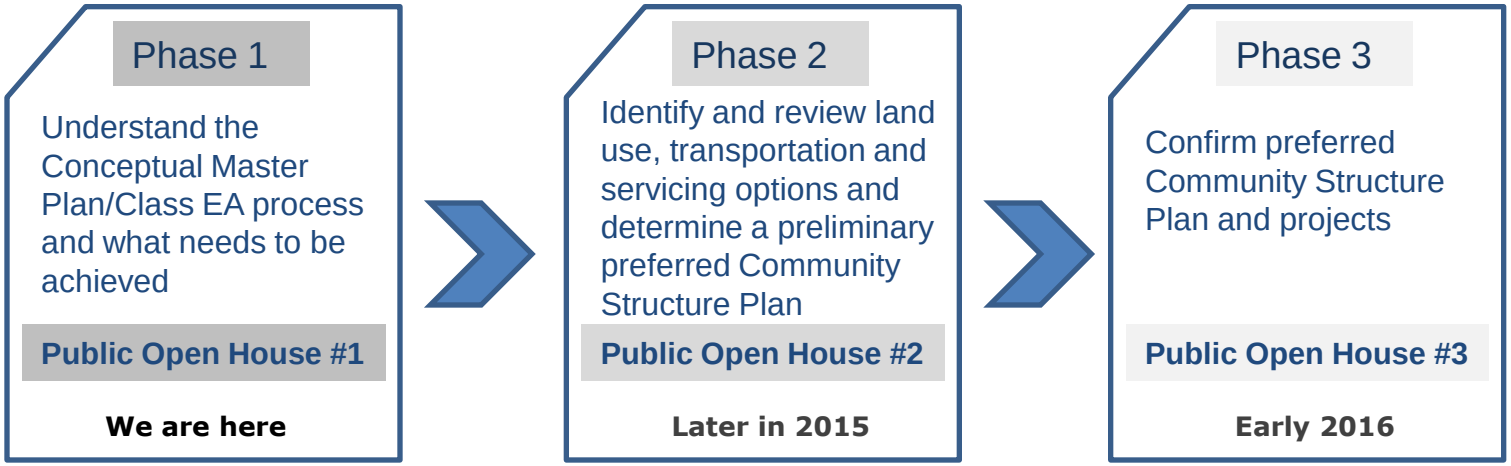
Landowners

TRCA, MNRF, MTO
York Region
School Boards

Input is being sought from a wide variety of interests through meetings, workshops, Public Open Houses, and meetings of Council.

Consultation Opportunities

The Conceptual Master Plan and the concurrent studies are being undertaken in three phases, each of which will include a Public Open House.




Greenway System
TOWN OF WHITCHURCH STOUFFVILLE
CITY OF MARKHAM
Almira
19TH AVENUE
WOODBINE AVENUE
WARDEN AVENUE
KENNEDY ROAD
McCOWAN ROAD
HIGHWAY 48
ELGIN MILLS ROAD
Victoria Square
HIGHWAY 404
FUTURE URBAN AREA
Cathedraltown
Angus Glen Community Centre
MAJOR MACKENZIE DRIVE
Devil's Elbow
Angus Glen
Woodbine North
Berczy Village
Wismer Commons
Buttonville North
16TH AVENUE

DO NOT PRINT

CONCEPTUAL MASTER PLAN

What is the Conceptual Master Plan expected to achieve?

FUA Statistics

- Developable lands: approx. 975 ha
- Population: approx. 38,000 people
- Dwelling units: approx. 12,000 (mainly low-rise)
- Jobs: approx.19,000

The new community in the Future Urban Area lands is intended to accommodate approximately 38,000 people, in approximately 12,000 dwelling units. The majority of the housing is expected to be in a low-rise (detached, semi-detached, townhouse) form.

The lands are also intended to accommodate approximately 19,000 jobs in total (including jobs in both the employment areas and in the neighbourhood areas).

The Conceptual Master Plan will identify high level land use designations to demonstrate how and where the population and jobs will be accommodated, and also where the necessary shopping areas, schools, parks and open spaces and other community facilities will be located to serve residents and businesses.

It will also identify the transportation, stormwater, water and wastewater systems necessary to support this new community.

Proposed Vision for the New Community in the Future Urban Area

Markham's Official Plan outlines a vision for sustainable growth leading to a vibrant, liveable city.

The vision is based on the inter-related themes of protection of the natural environment, building complete communities, increasing travel options, and maintaining a vibrant and competitive economy.

Consistent with this vision, the proposed vision statement for the new community in the Future Urban Area is:

> *"New neighbourhood and employment areas in the north Markham Future Urban Area will be designed as a complete, compact, healthy, and accessible community.*
>
> *This community will reflect the City's leadership in sustainable development with innovation, adaptability and resilience being the cornerstones of design."*





The New Community will planned in accordance with the following principles:

- Protection and integration of the natural environment
- Building a compact, complete community that includes:
  - a mix of housing and jobs
  - mixed use community cores that provide shops and services
  - an integrated parks and open space network
  - community facilities (e.g., schools, community centres)
- Provision of a range of travel choices (walking, cycling and transit in addition to the automobile)
- Creation of a healthy, sustainable, adaptable, and resilient community.

Protection and Integration of the Natural Environment means…

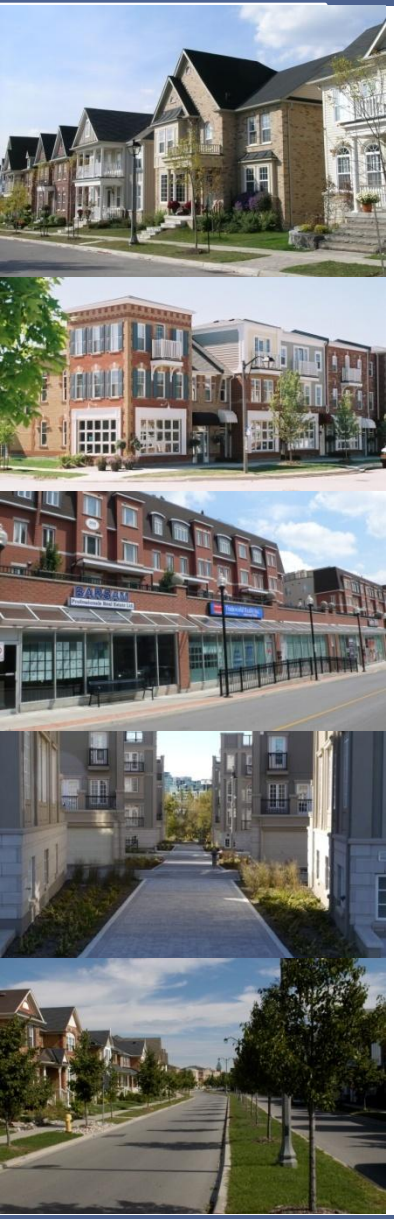
- Confirming the Greenway System through an understanding of the natural systems and their functions, including species at risk
- Protecting, restoring and enhancing the Greenway System
- Managing groundwater and surface water resources
- Providing an integrated natural heritage system/open space network that respects ecological sensitivities and supports healthy and active communities.





Protection and Integration of the Natural Environment also means…

- Designing with nature:
  - Designing the new community to support a healthy and robust natural heritage system in an urban context
  - Incorporating the natural environment as much as possible in community design
  - Integrating urban trees and landscaping in infrastructure and built form.



Building a Compact, Complete Community means…

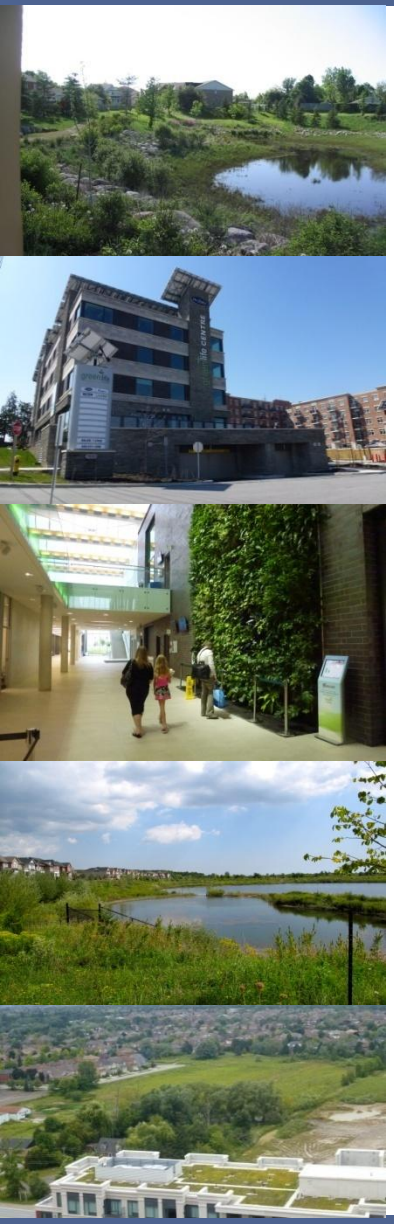
- Providing a range of housing types and sizes
- Providing employment opportunities close to where people live
- Providing for shopping and services in a mixed use, transit-supportive built form
- Designing walkable neighbourhoods
- Achieving minimum density targets (70 people and jobs per hectare).

Building a Compact, Complete Community also means…

- Integrating a range of parks and community facilities within neighbourhoods
- Integrating cultural heritage in neighbourhood design
- Creating identity through public art and landmarks
- Ensuring a high quality public realm and excellence in urban design.

Providing for Sustainable Travel Choices means…

- Providing increased travel options (walking, cycling, transit)
- Encouraging active transportation (walking, cycling, transit) by locating jobs and services close to where people live
- Designing street networks and pedestrian connections to facilitate mobility and accessibility.



Creating a Healthy, Sustainable, Adaptable, and Resilient Community means…

Adopting "Green" practices at the community, infrastructure, and building levels, such as:

- Managing use of potable water
- Conserving energy and use of green energy
- Sustainable stormwater management practices
- Community energy systems
- Waste diversion and reduction
- Enhanced interior air quality
- Improving public health through design of buildings and sites
- Planning infrastructure systems to increase resilience, affordability and adaptability.

DO NOT PRINT

CONCURRENT STUDIES

Concurrent Studies Underway

Four studies have been initiated to inform the Conceptual Master Plan:

- Subwatershed Studies
- Transportation Study
- Water Servicing Study
- Wastewater Servicing Study

Work Programs of the Transportation and Water Servicing and Wastewater Servicing Studies are phased to align with the Subwatershed Studies.

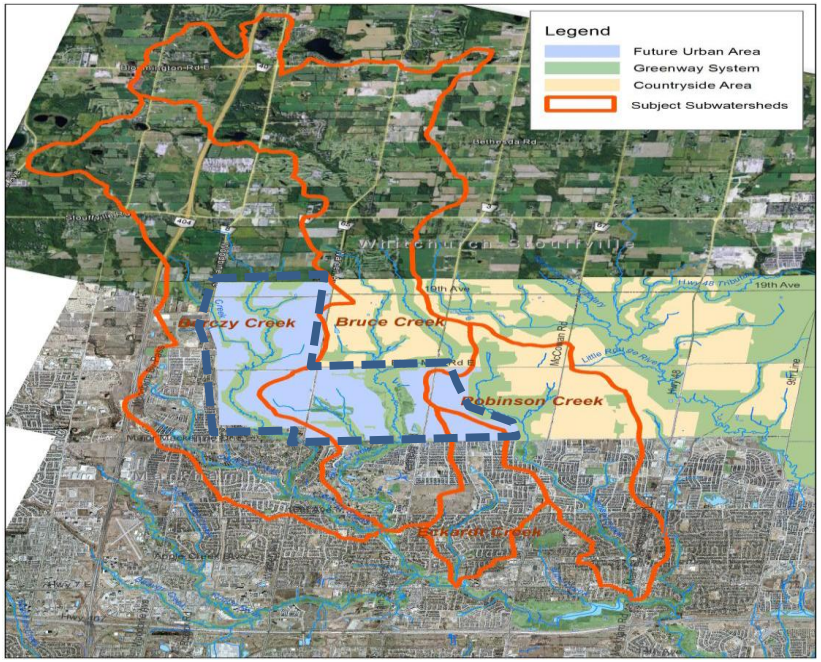
Class Environmental Assessment is also underway

- The studies being undertaken as part of the Conceptual Master Plan are following a Master Planning Class Environmental Assessment (EA) process.
- Work programs and public consultation for all studies are coordinated to meet the requirements of the Class EA process.
- Documentation of the Class EA process will be included in the Conceptual Master Plan documents.

Subwatershed Studies

The Future Urban Area lies within four subwatersheds:

- Berczy
- Bruce
- Eckhardt
- Robinson



Each of the Subwatershed Studies will:

- Characterize the existing natural resources and functions in the study area
- Assess the potential impacts of urbanization
- Establish fully integrated management strategies to preserve and enhance ecological features and functions and meet regulatory requirements.

Berczy, Bruce, Eckhardt, and Robinson Creek Subwatershed Studies

The process for these Studies includes:

- Review existing documentation (desktop).
- Conduct field investigations related to:
  - *Rainfall*
  - *Streamflow*
  - *Fisheries*
  - *Flora/fauna*
  - *Stream systems*
  - *Soil and Groundwater*
- Develop analytical tools to define the movement of surface water and groundwater.
- Use the tools to assess the impact of urbanization on the water cycle and predict potential impacts on natural systems.
- Establish an integrated management strategy based on evaluating a variety of alternatives.
- Consult with City, Region of York, TRCA, MNRF, landowners, other organizations and the public.

Fish and Fish Habitat

- Berczy, Bruce and Robinson Creeks each support diverse fish communities, that include Redside Dace (*Clinostomus elongatus*), an endangered species in Ontario.
- Target fish species have been identified for each of these creeks in the Rouge River Watershed Fisheries Management Plan (TRCA and OMNR, draft 2011).
- Through the North Markham Future Urban Area Subwatershed Studies, factors affecting the stream habitats are being investigated, including:
  - *Assessment of headwater drainage features that are tributary to the main creeks;*
  - *Water temperature monitoring;*
  - *Water quality monitoring.*
- The information gathered will document existing conditions, which will be the baseline to which future conditions, based on potential land use changes, will be compared.

Fish and Fish Habitat

Target Fish Species for each Subwatershed as per the Rouge River Watershed Fisheries Management Plan (TRCA and OMNR, draft 2011).

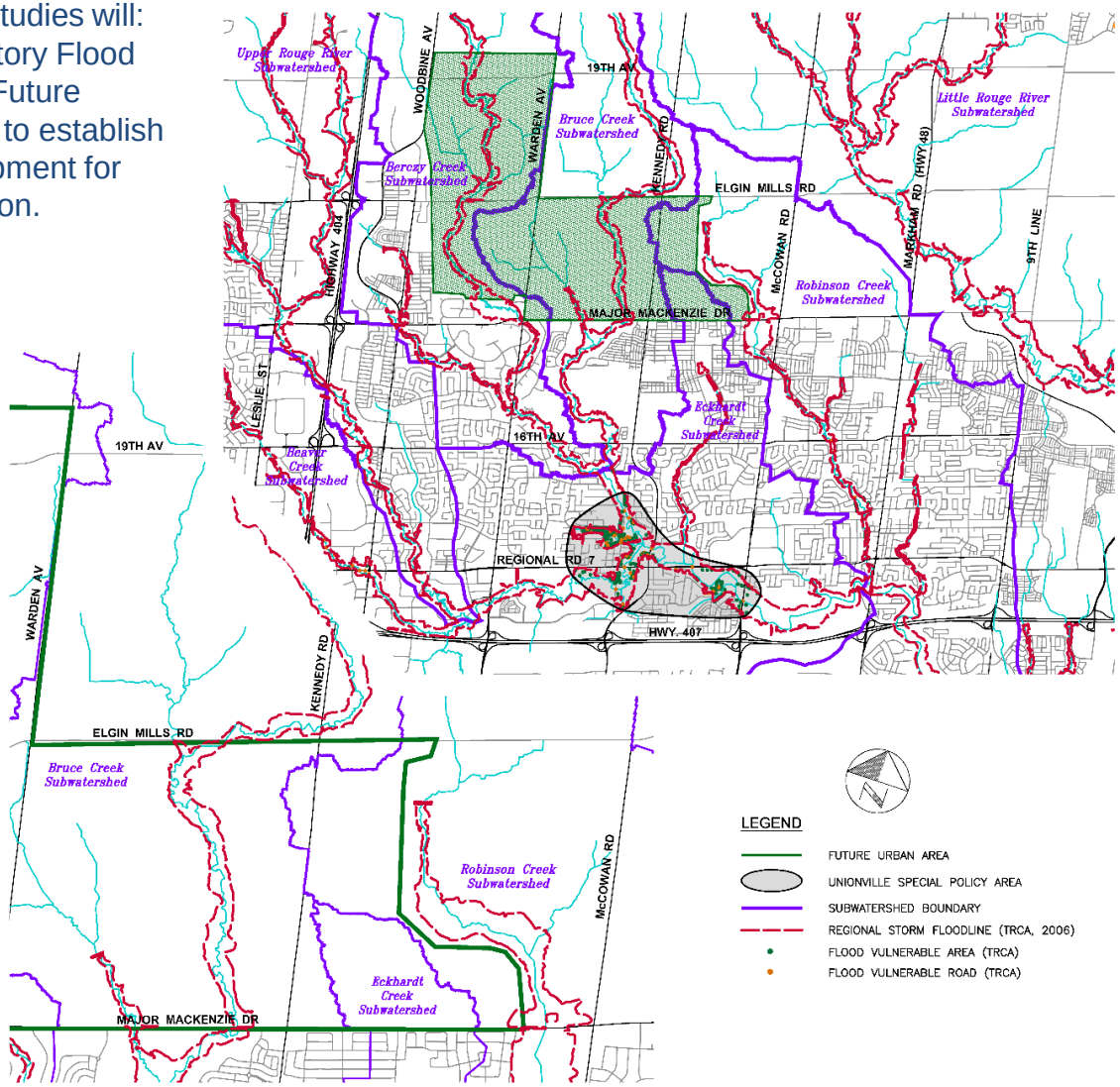
Berczy Creek	Bruce Creek	Robinson Creek
Redside Dace	Redside Dace	Redside Dace
Rainbow Darter	Rainbow Darter	Rainbow Darter
Rainbow Trout	Rainbow Trout	Rainbow Trout
American Brook Lamprey	American Brook Lamprey	
Brassy Minnow	Brook Trout	Pearl Dace
	Mottled Sculpin	

Updating/Establishing Hazards (Flood Limits)

- TRCA regulates hazard lands which includes those lands potentially affected by Regulatory flooding (ref. Ontario Regulation 166/06).
- Through the North Markham Future Urban Area Subwatershed Studies, flood risk mapping is being updated and refined through:
  - *Field monitoring of stream flows (and rainfall);*
  - *Field survey of hydraulic structures (culverts/bridges);*
  - *Preparation of new topographic base mapping;*
  - *Development of new hydrologic/hydraulic models.*
- Updated flood risk mapping will be used to define those parts of the North Markham Future Urban Area which will need to be protected through TRCA's regulation.
- The foregoing process will also provide input to the need and form of flood control necessary within the North Markham Future Urban Area to protect downstream lands from risk of flooding.

The Subwatershed Studies will:

- Refine the Regulatory Flood Plain through the Future Urban Area (FUA) to establish the limit of development for local flood protection.



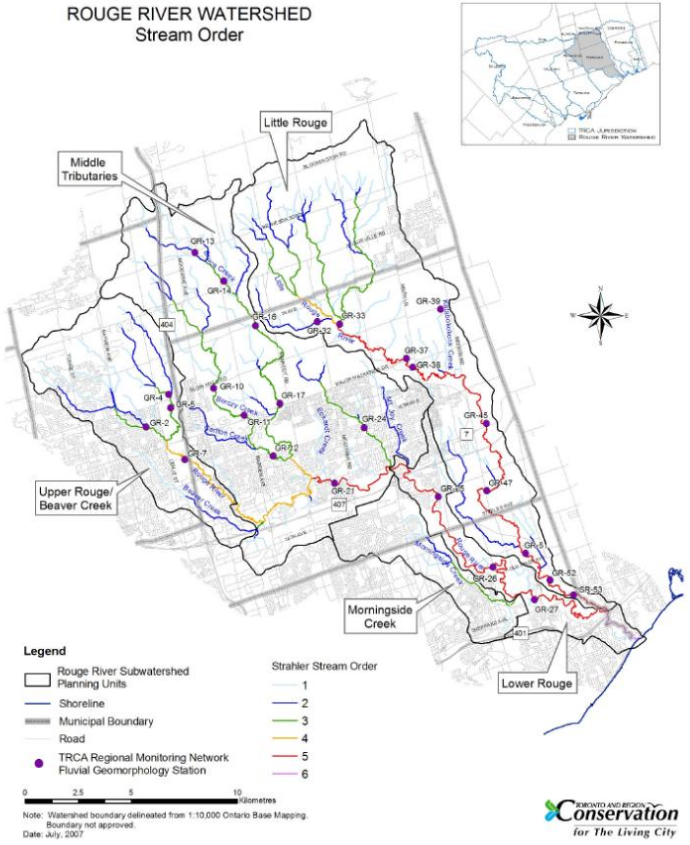
Identify requirements to replace existing bridges and/or culverts within the FUA.

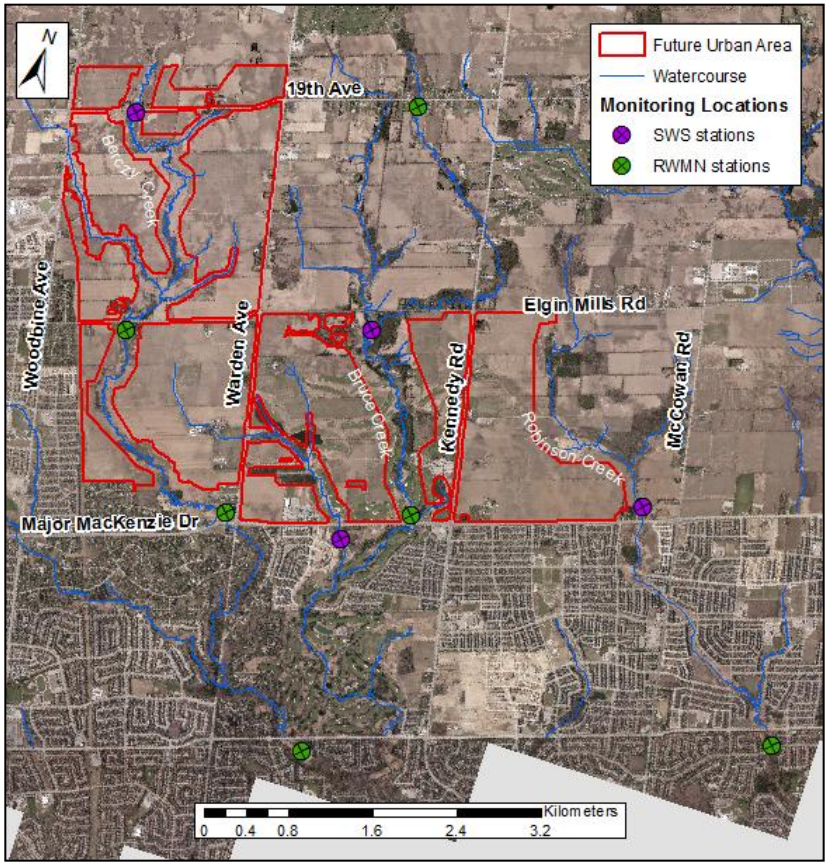
Define stormwater management requirements for the FUA to mitigate flood risk particularly in flood vulnerable areas like the Unionville Special Policy Area.

Establishing Hazard Limits and Development Targets/Constraints (Fluvial Geomorphology)

- Fluvial Geomorphology is the science of characterizing the form and function of watercourses and headwater drainage features.
- Characterization consists of:
  - Field monitoring of channel morphology (establishing ongoing changes);
  - General field reconnaissance (i.e., to determine dominant processes) and detailed field measurements (i.e., quantifying channel dimensions);
  - Review of historic aerial imagery (i.e., to understand historic changes and conditions);
  - Analyzing the existing sediment transport relations (i.e. to establish current sediment transport conditions).
- Assessment process leads to:
  - Delineation of meander belt widths which serve as a constraint to developable area based on the potential for future channel migration (i.e., corridor through which a channel is expected to physically migrate);
  - Erosion threshold values which guide stormwater management planning (i.e. limiting flows and durations to maintain watercourses in a stable balance with runoff);
  - Classification of channel stability and sensitivity to future land use change (i.e., to facilitate future management decisions).

Establishing Hazard Limits and Development Targets/Constraints (Fluvial Geomorphology)



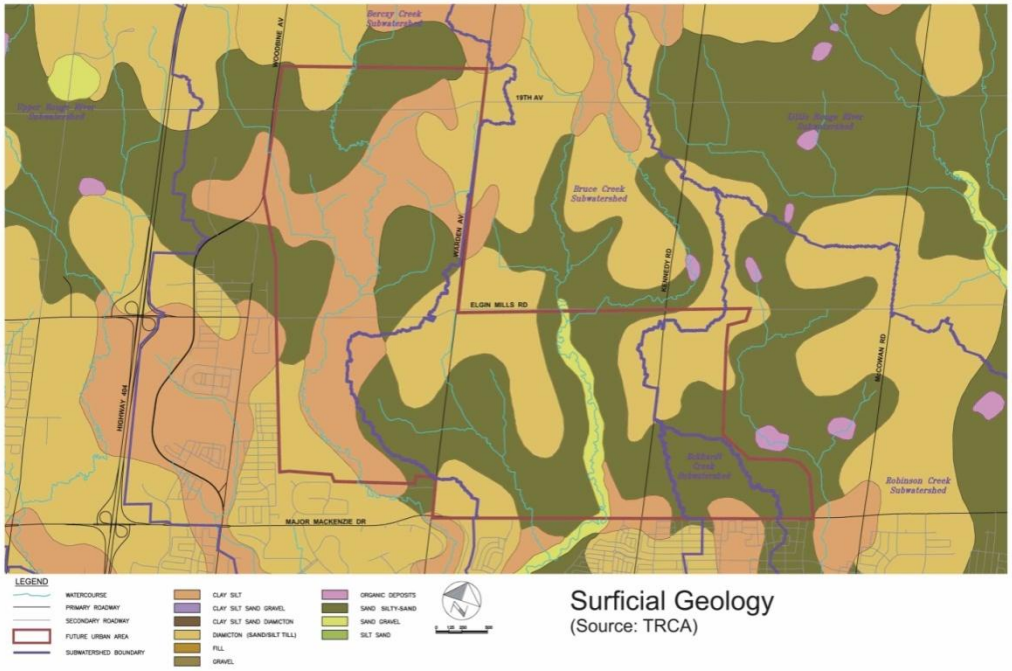


- Historic monitoring stations are located on all three study area Creeks as part of the TRCA Regional Watershed Monitoring Network (RWMN). To augment and complement the data at these sites, short-term monitoring is being conducted as part of the Subwatershed (SWS) Studies.

Soil and Groundwater (Hydrogeology)

- The Rouge River Watershed Plan provides direction for groundwater management through its goal of providing for:
  - *Groundwater of sufficient quantity and quality to support ecological functions, aquatic habitats, native fish communities and sustainable human needs*.
- A detailed hydrogeologic study is being carried out to characterize the groundwater flow system and the potential linkages to the terrestrial and aquatic systems within the study area.
- The study is building upon previous groundwater studies and ongoing field data collection. The characterization is being further advanced through a groundwater/surface water computer model.
- The updated characterization and groundwater modelling will provide the basis to:
  - *Assess the potential changes to the groundwater flow system, (groundwater recharge and discharge) as a result of planned land use changes;*
  - *Assess the appropriate management practices required to mitigate/reduce impacts on the groundwater.*

Soil and Groundwater (Hydrogeology)

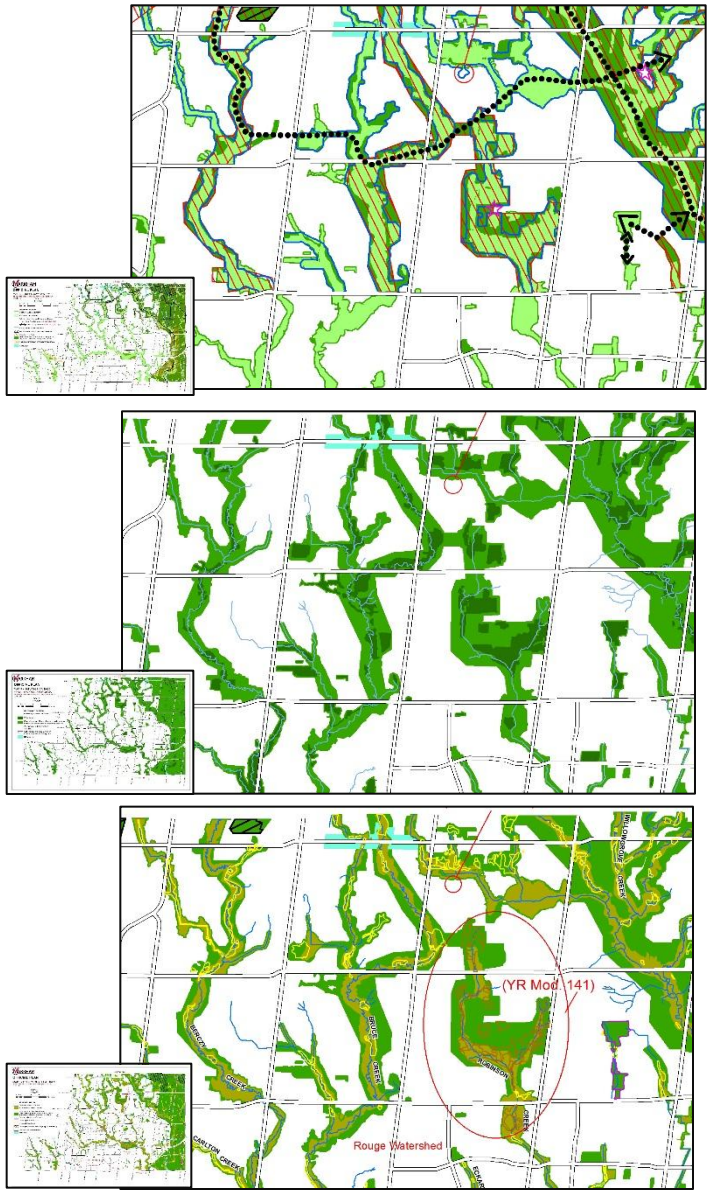


Surficial Geology
(Source: TRCA)

- The more permeable character of some of the surficial soils in the study area provides a greater potential for groundwater recharge and discharge.
- Groundwater discharge is expected to be significant in various reaches within Berczy, Bruce and Robinson Creeks based on the type and location of existing fish species and previous TRCA groundwater modelling.
- The Robinson Swamp is a significant feature which will be assessed as part of this study for its potential groundwater and surface water connection.

Terrestrial Resources

- Various terrestrial resources and natural areas (woodlands, wetlands, species, and wildlife habitat) within the North Markham Future Urban Area are regulated by the City, the Region, the TRCA, and the Province.
- As part of the North Markham Future Urban Area Subwatersheds Studies, the distribution, abundance, and significance of terrestrial resources will be documented through:
  - *Existing data provided by the TRCA, the City, and the Ministry of Natural Resources and Forestry (MNRF);*
  - *Field survey results for Ecological Land Classification, botanical inventories, wildlife inventories, and incidental records provided by landowners and their consultants, and the study team;*
  - *Updated wetland mapping provided by the MNRF;*
  - *Screening, which identifies terrestrial resources that are rare, sensitive, potentially significant, and/or confirmed significant;*
  - *Integration with other disciplines (e.g., hydrology, groundwater, aquatics, and fluvial geomorphology) to identify important functional links between physical processes and natural heritage.*
- Updated terrestrial resource mapping will be used to define those parts of the North Markham Future Urban Area which will need to be protected and/or compensated, particularly where resources are outside of the existing Greenway System defined in the Official Plan.



Terrestrial Resources

Linkages:

- Results from the natural heritage characterization will confirm the location and linkage of natural heritage elements within and outside of the Greenway System.

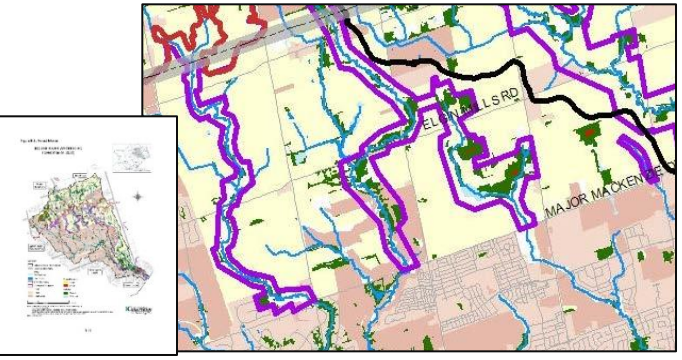
Composition, diversity, sensitivity:

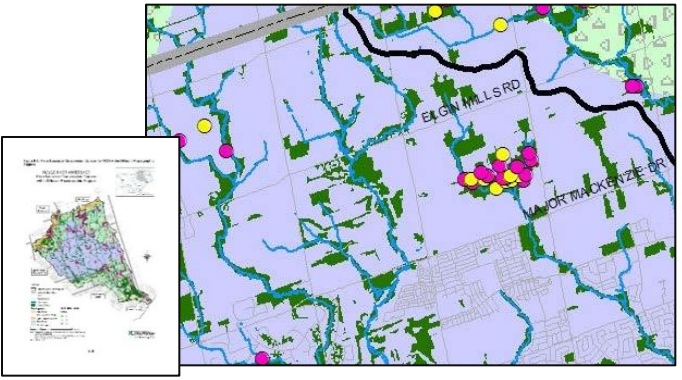
- The composition, diversity and sensitivity of upland natural features (e.g., forests, woodlands, and meadows) within and outside of the Greenway System will be confirmed through this process.

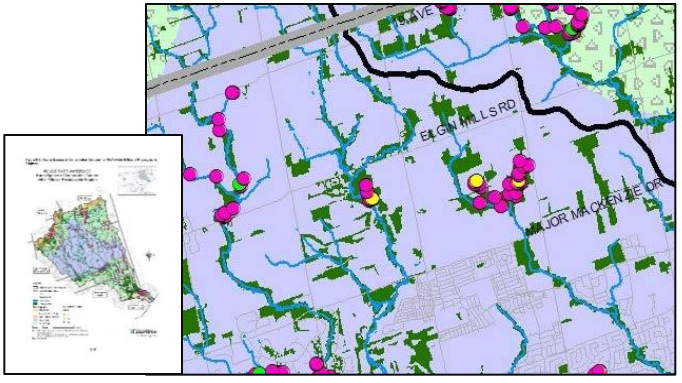
Wetlands:

- The location, composition, diversity, function, sensitivity, and significance of wetlands within and outside of the Greenway System will be established.

Source: City of Markham Official Plan







Terrestrial Resources

Forests:

- Results from the Rouge River Watershed Study notes the presence of large forested features with 100m interior areas adjacent to the North Markham FUA.
- Linkage to these features and other natural areas will help identify key nodes within the Greenway System.

Rare Flora:

- Natural features provide habitat for provincially and locally rare plants.
- Occurrences from background data and field inventory will be used to determine location and potential for significant habitat.

Rare Fauna:

- Natural features provide habitat for provincially and locally rare wildlife.
- Occurrences from background data and field inventory will be used to determine location and potential for significant habitat.

Source: Rouge River State of the Watershed Report: Terrestrial System

Stormwater Management Planning

Background

Urbanization and land development have the potential to alter surface runoff and groundwater function, possibly negatively affecting streams, wetlands and associated wildlife and fish in the area.

Stormwater Management techniques can both pro-actively and reactively manage and mitigate the impacts of urbanization on public health and safety.

Objectives

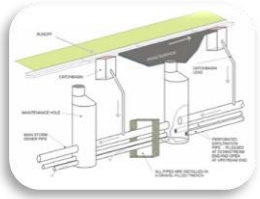
Stormwater Management is intended to address the following objectives:

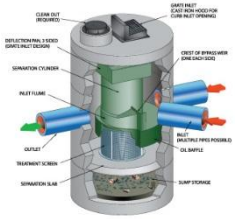
- Control flooding and associated risks
- Control stream erosion and associated impacts to infrastructure and stream habitats
- Maintain/improve water quality in accordance with Provincial requirements
- Work towards water balance preserving surface water infiltration.

Stormwater Management Alternatives

There are a number of Stormwater Management techniques available to address the objectives which fall into various categories as follows:

End-of-Pipe	Conveyance	Source Control	Low Impact Development
• Dry ponds • Wet ponds • Wetlands • Hybrids • Oil and grit separators	• Perforated pipes • Swales	• Enhanced swale • Bioretention (rain gardens) • Permeable pavement	• Rain water harvesting • Green roofs • Permeable pavement • Siting and layout of development • Preserving important on-site features and function





Transportation Study

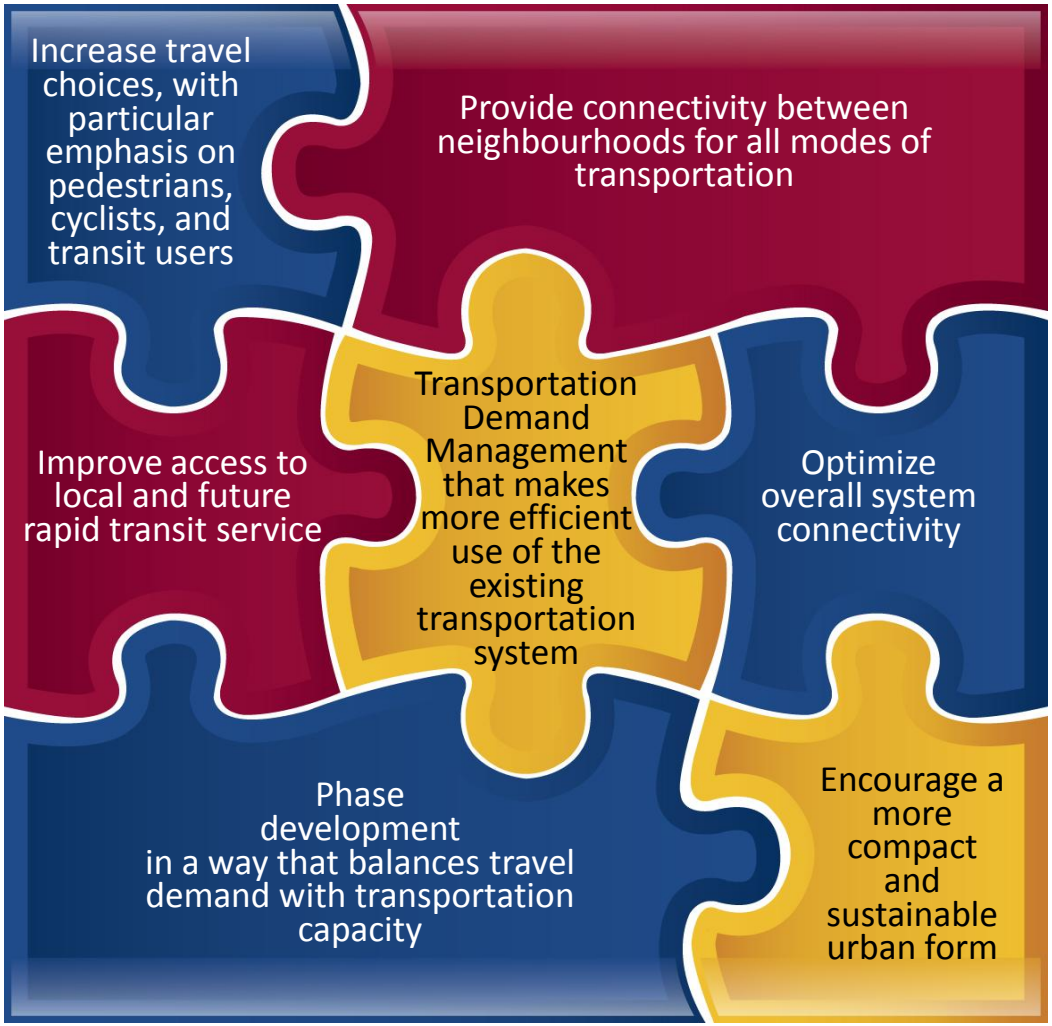
The purpose of the Transportation Study is to:

- Identify a transportation system and network to service the new community.
- Develop strategies and design principles to promote more sustainable travel within the new community.
- Inform the phasing strategy to ensure development is phased in a way that balances travel demand with transportation capacity.

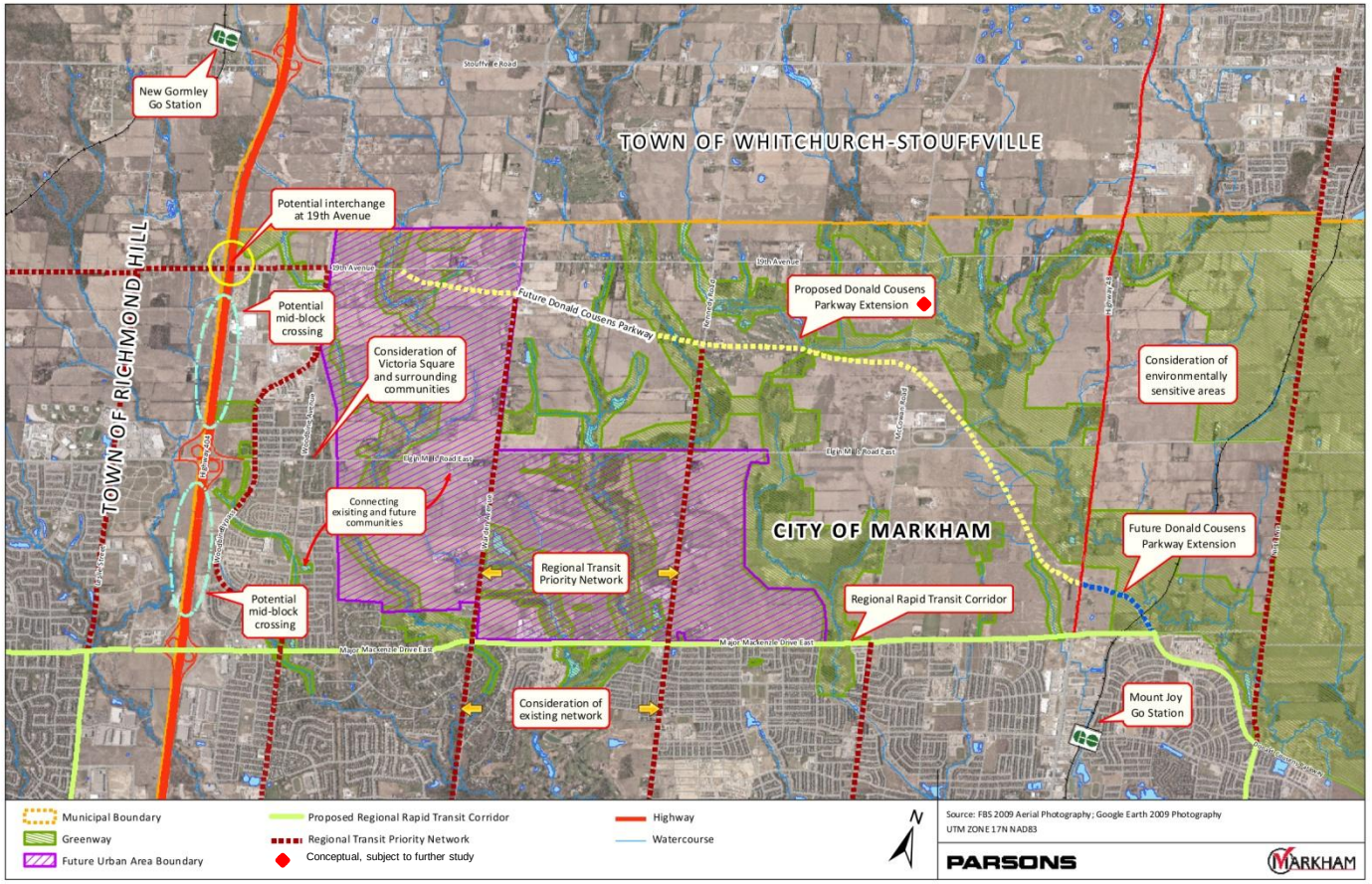
The Study will:

- Review existing transportation infrastructure and current operating conditions.
- Identify transportation opportunities and constraints.
- Provide input to the land use pattern to achieve sustainable travel.
- Evaluate transportation concepts and recommend a transportation network that supports the new community.

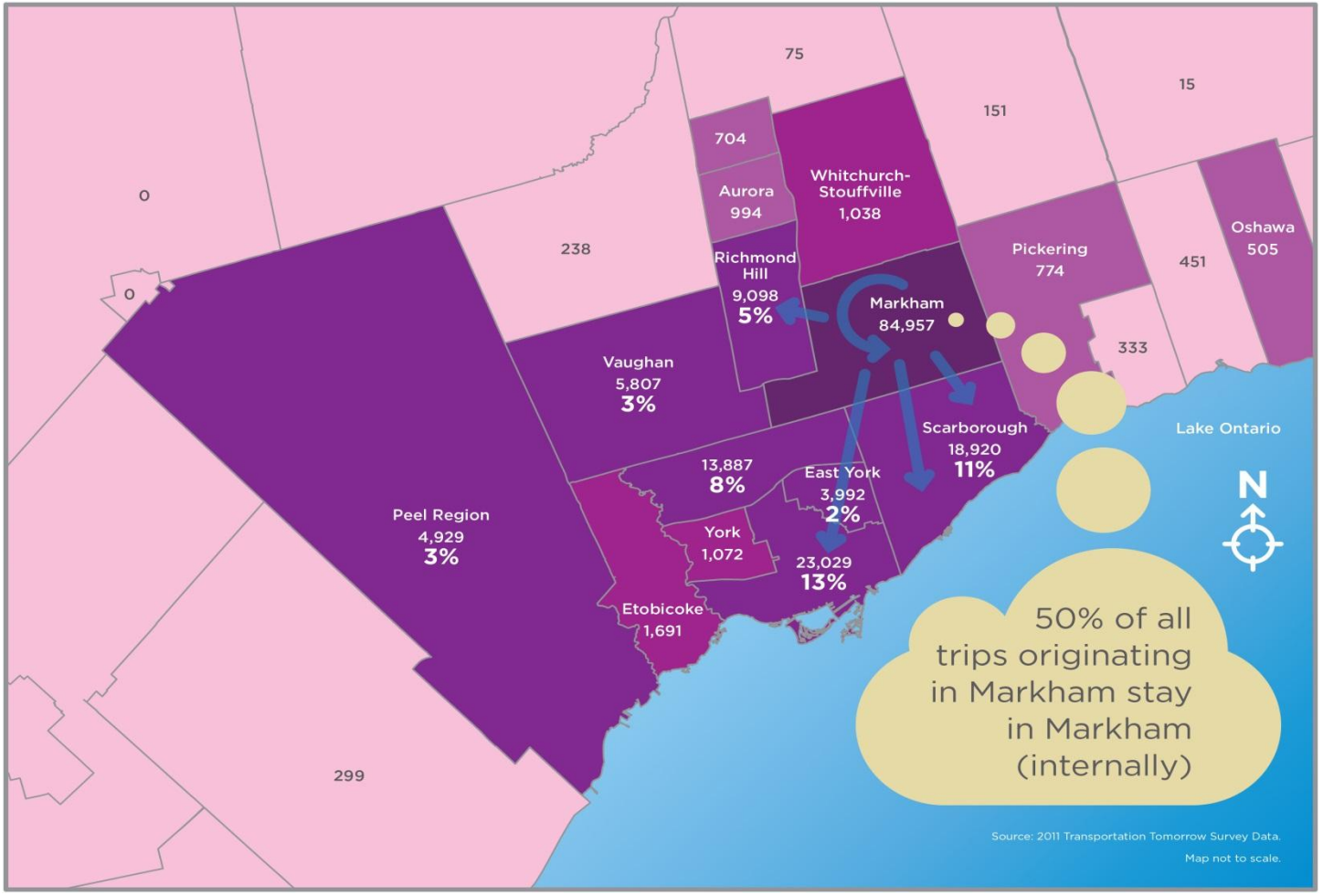
Transportation Planning Objectives



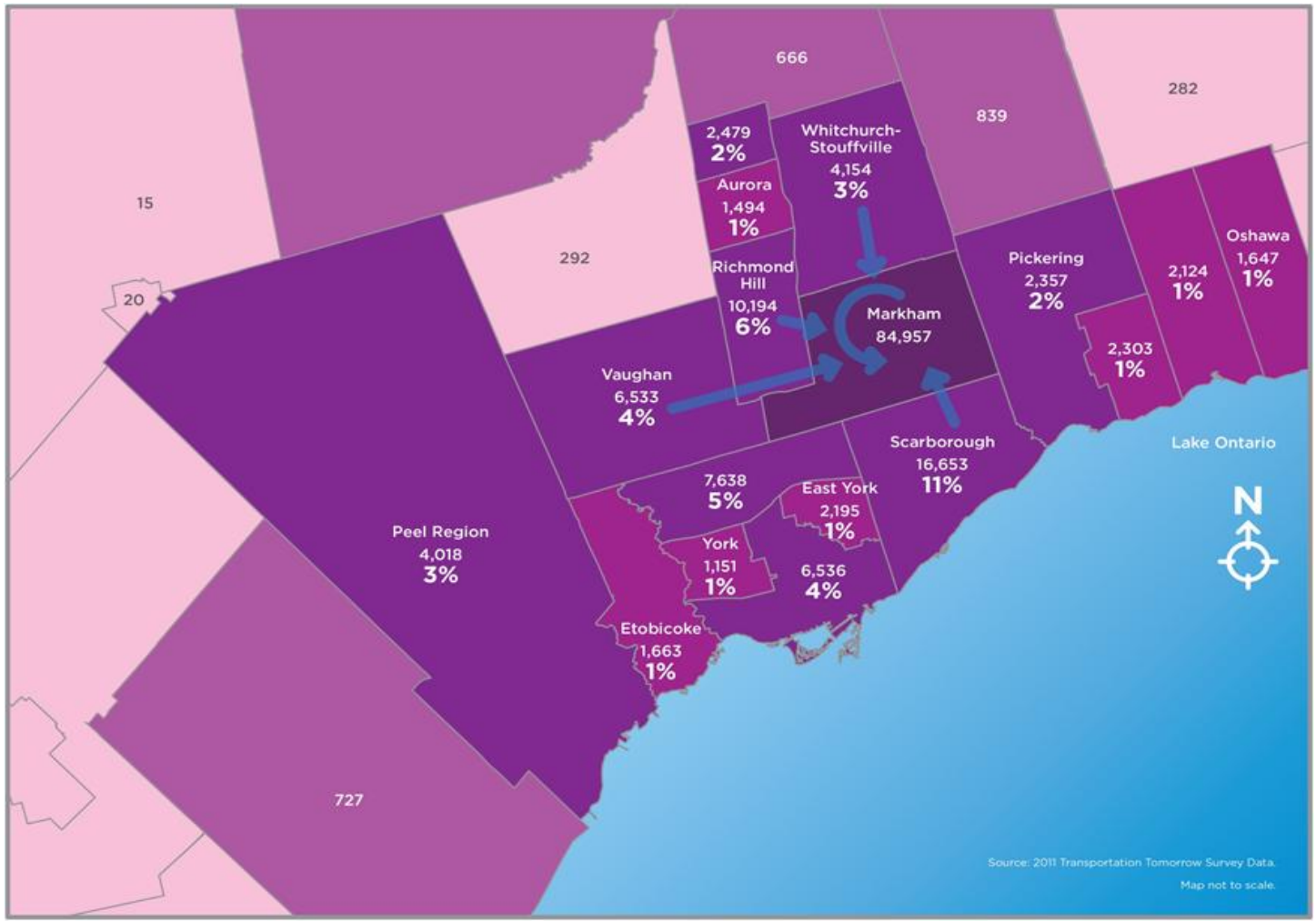
Transportation Opportunities and Constraints



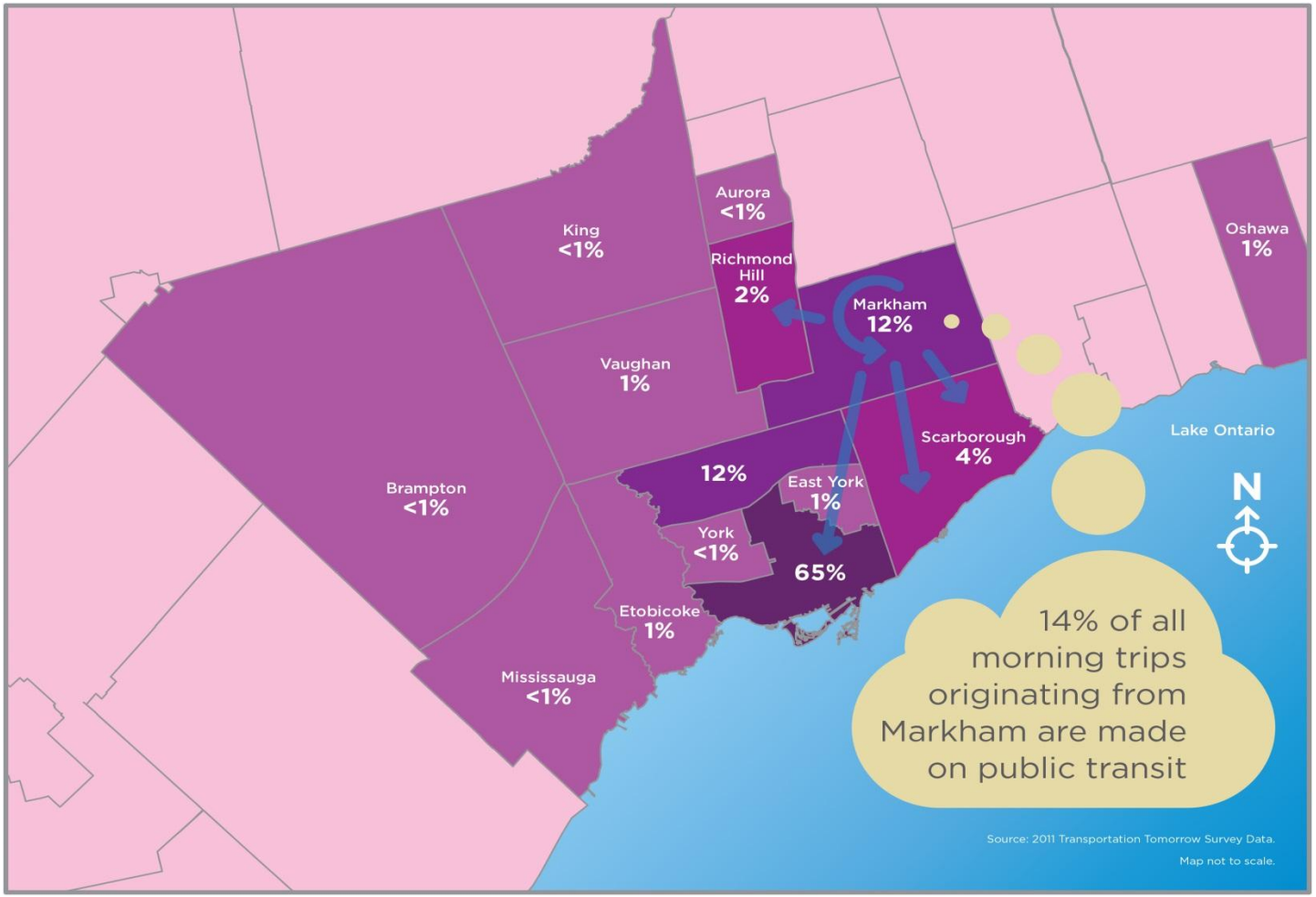
Morning Trips Originating from Markham



Morning Trips Destined to Markham

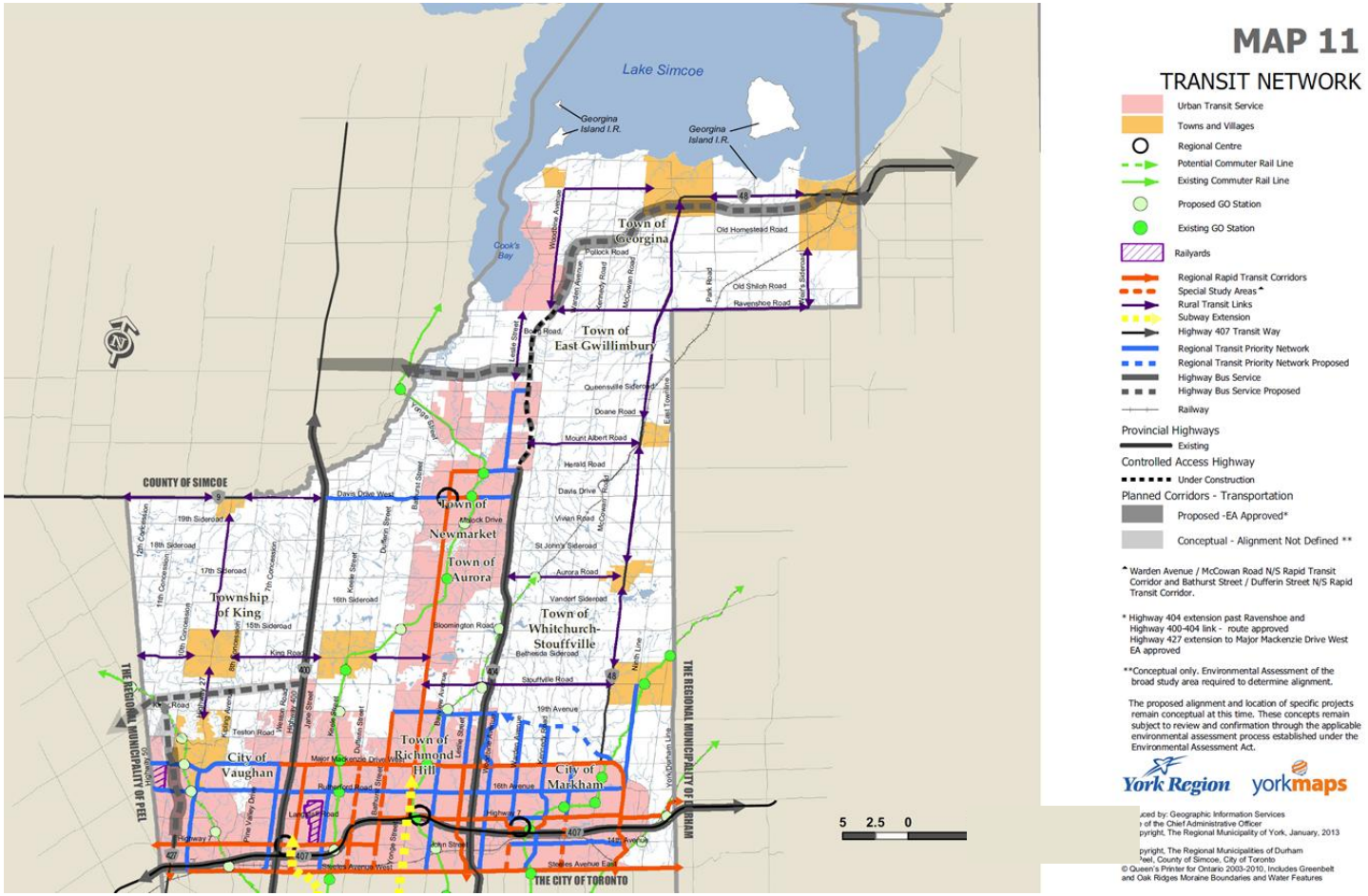


Morning Transit Trips Originating from Markham



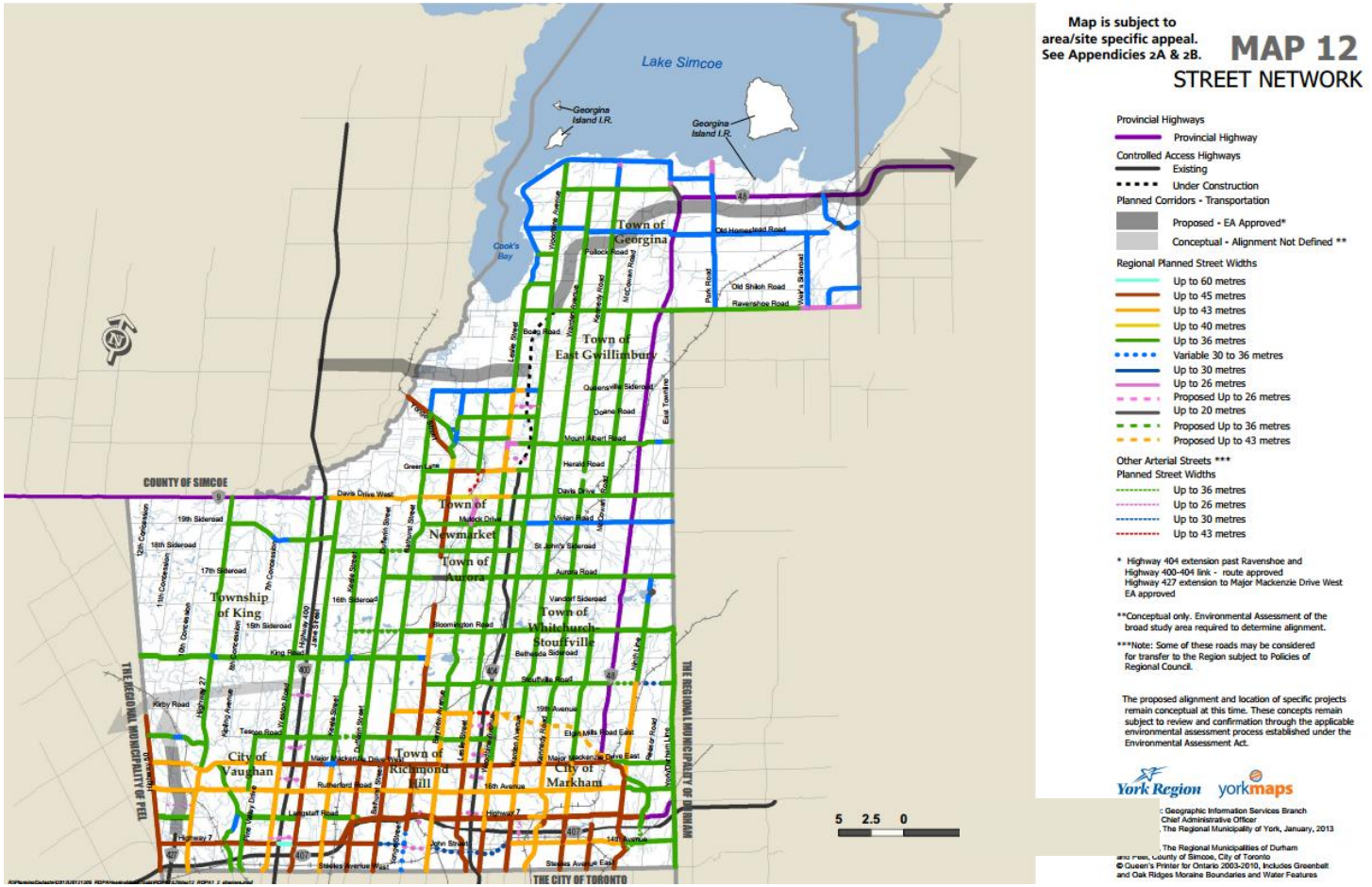
Planned Regional Transit Improvements

(York Region Official Plan)



Planned Regional Road Improvements

(York Region Official Plan)



Water Servicing Study

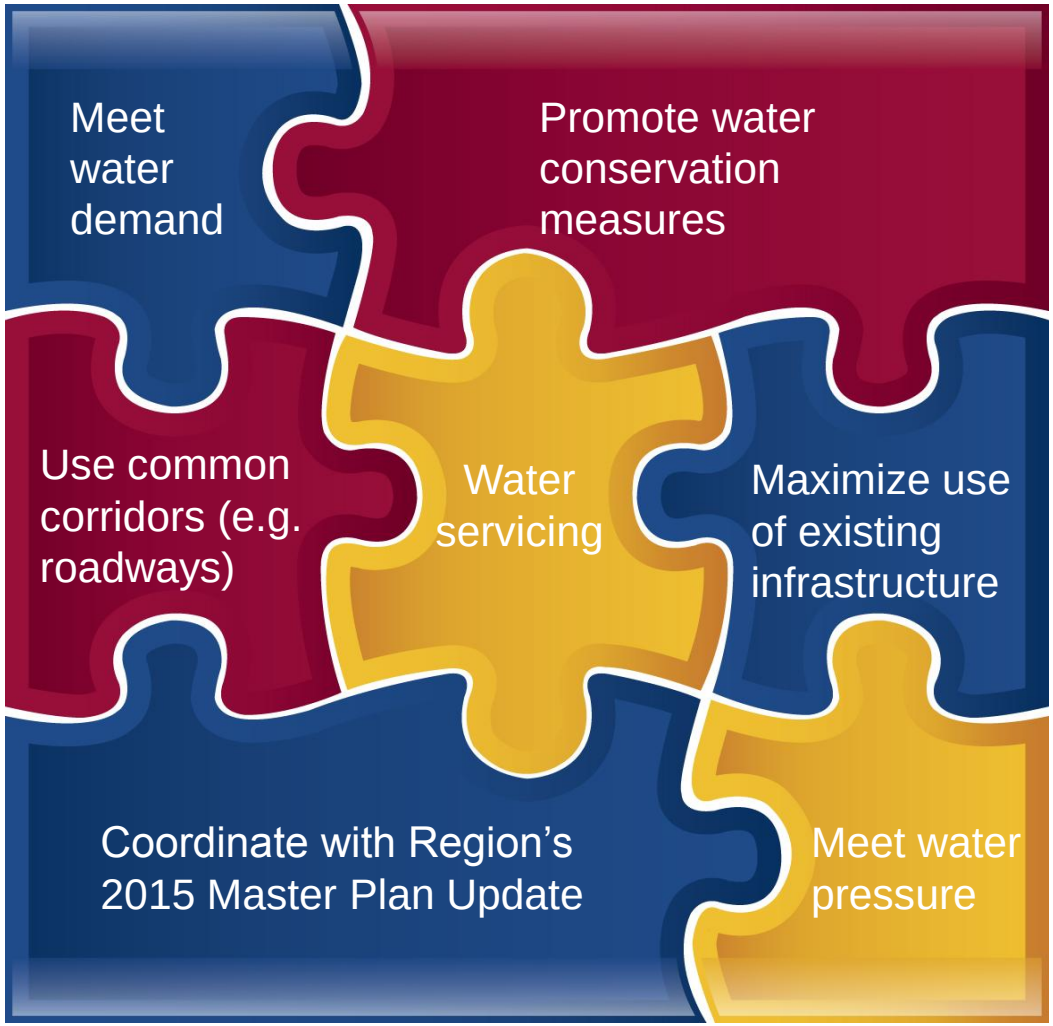
The purpose of the Water Servicing Study is to:

- Identify a preferred servicing strategy that supports the new community.
- Establish long term and cost effective water services.
- Maximize the use of existing water infrastructure.

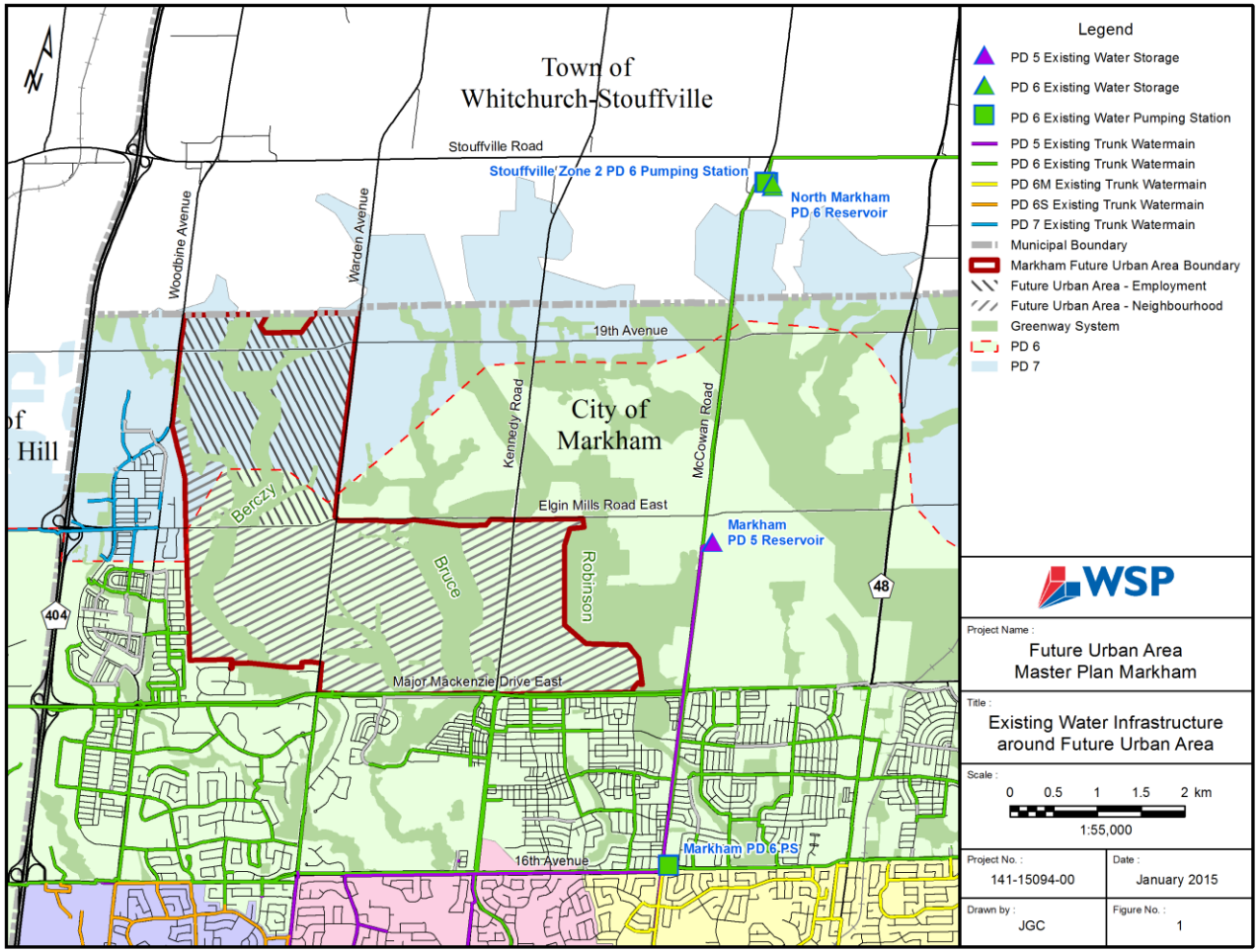
The Water Servicing Study will look at:

- Background information on existing systems and services.
- Servicing constraints and opportunities – environmentally sensitive areas, heritage and community features, topography and other infrastructure.
- Minimizing operation, maintenance, and energy costs.
- Alternative servicing strategies to support the new community (alignment, costs, feasibility).

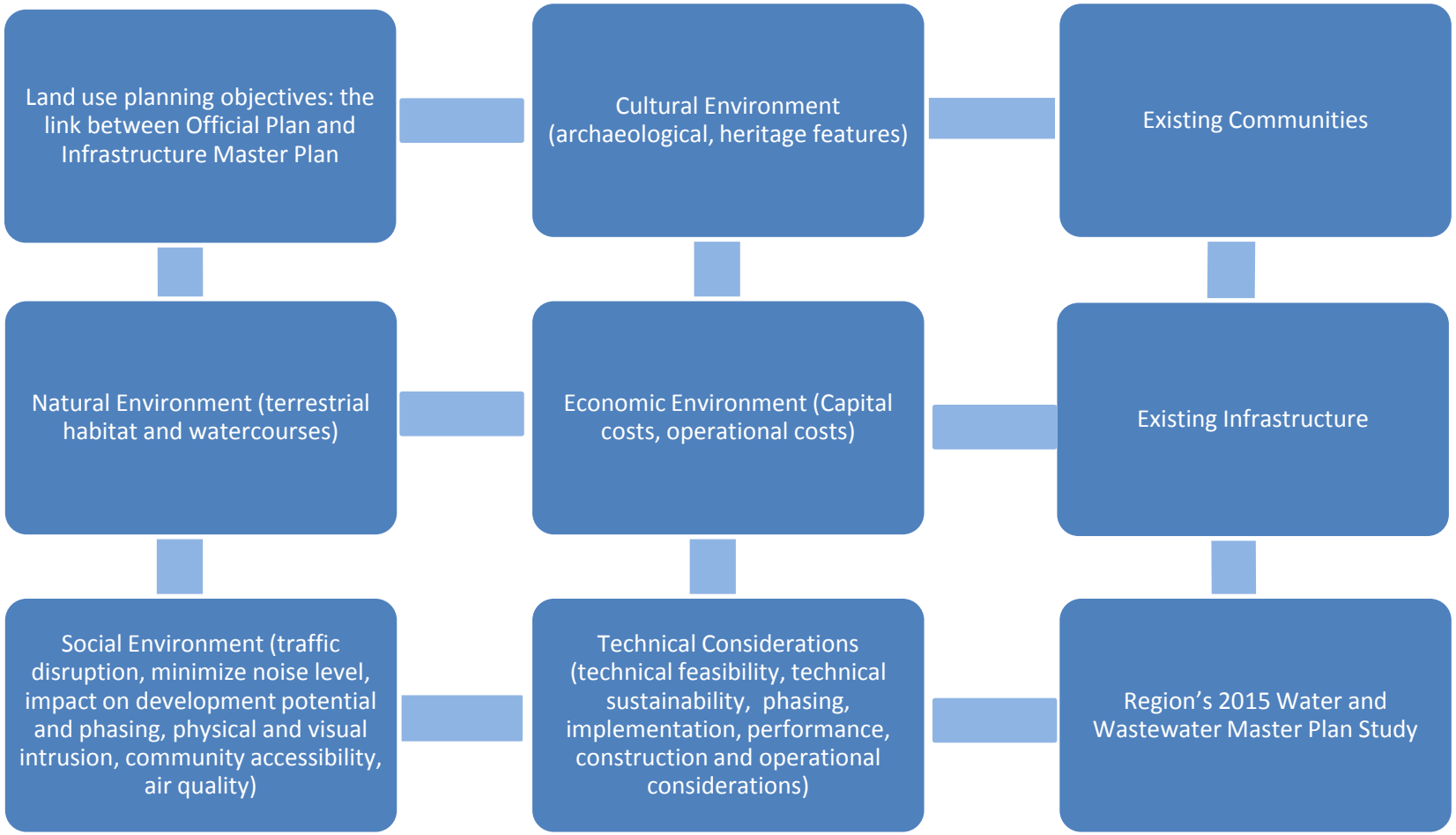
Water Servicing Objectives



Existing Water System



Water and Wastewater Servicing Constraints and Opportunities



Wastewater Servicing Study

The purpose of the Wastewater Servicing Study is to:

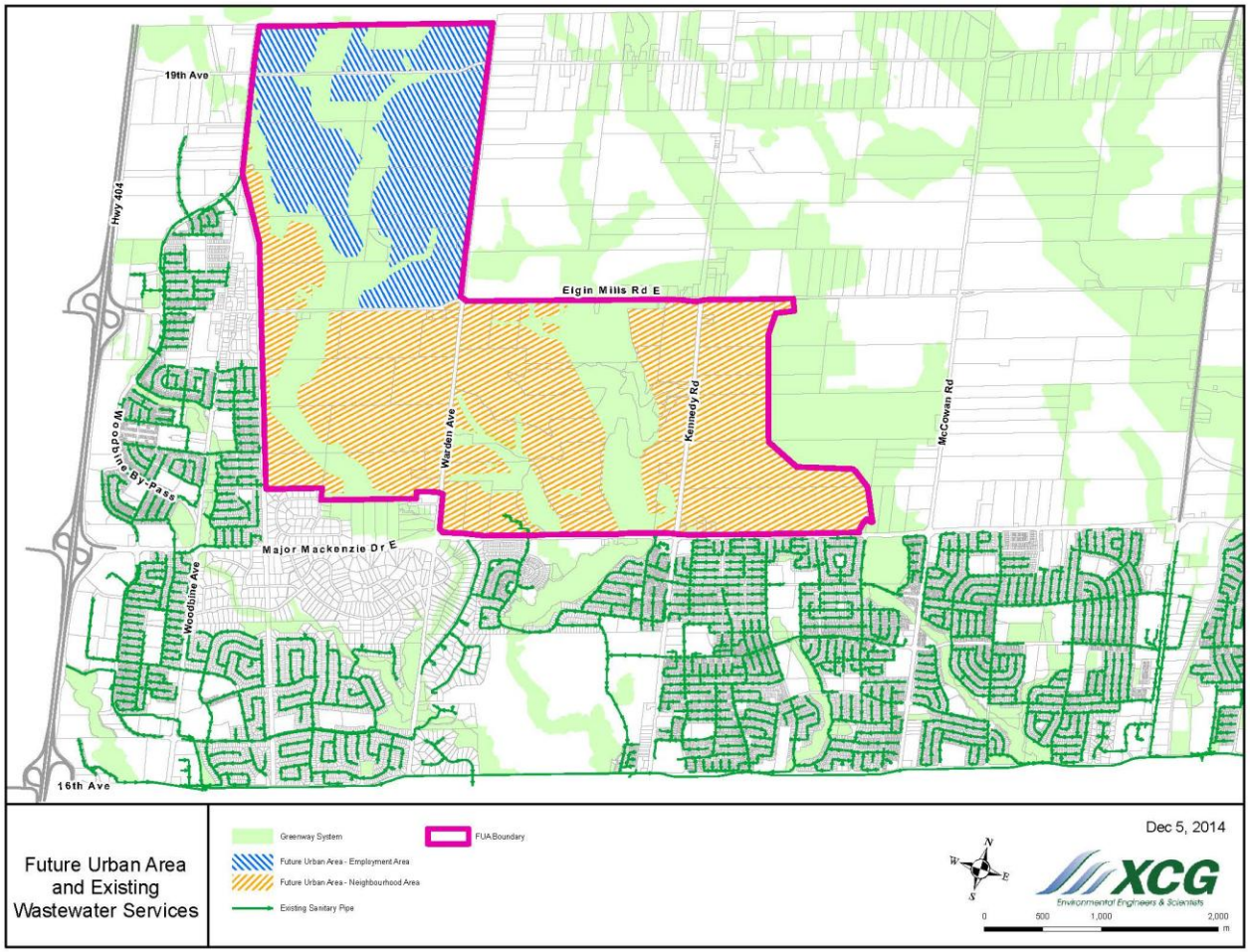
- Identify a preferred servicing strategy that supports the new community.
- Establish long term and cost effective wastewater services.
- Maximize the use of existing wastewater infrastructure.
- Protect the natural environment.

The Wastewater Servicing Study will look at:

- Background information on existing systems and services.
- Servicing constraints and opportunities – environmentally sensitive areas, heritage and community features, topography and other infrastructure.
- Developing modeling tools to assess performance.
- Minimize operation, maintenance, and energy costs.
- Alternative servicing strategies to support the new community (alignment, costs, feasibility).

Wastewater Servicing Objectives

Existing Wastewater System



Options for Municipal Servicing of the New Community

- No new or improved roads and servicing ("do nothing")
- Increase capacity of existing roads and servicing
- Build new roads and servicing within the Future Urban Area
- Combination of increased capacity and new roads and servicing

The Class Environmental Assessment process requires consideration of all of these options

Next Steps

Following this Public Open House:

- Preliminary high level land use concepts (Community Structure Plans) will be developed to be tested in Phase 2 of the Subwatershed Studies, Transportation and Servicing Studies.
- The results of Phase 2 will be presented at the next Public Open House later in 2015.

If you would like to stay involved:

- Add your contact information to the sign-in sheet to be notified of updates, including the next Public Open House.
- Fill in a comment sheet.
- Check our website www.markham.ca and local newspapers for updates and notices related to this study.