TOWN OF TECUMSEH

WATER AND WASTEWATER MASTER PLAN UPDATE

PUBLIC INFORMATION CENTRE

Board 1

WELCOME TO THE PUBLIC INFORMATION CENTRE

The Town of Tecumseh is currently completing a Water and Wastewater Master Plan Update in accordance with the Class Environmental Assessment (Class EA) process for Master Plans.

Public Information Centres (PICs) provide the public with the opportunity to formally participate in the process.

This PIC is structured as an open house with displays available for walk-through. Staff from the Town of Tecumseh and KMK Consultants Limited are available for questions.

You are invited to complete a comment sheet after reviewing the boards.

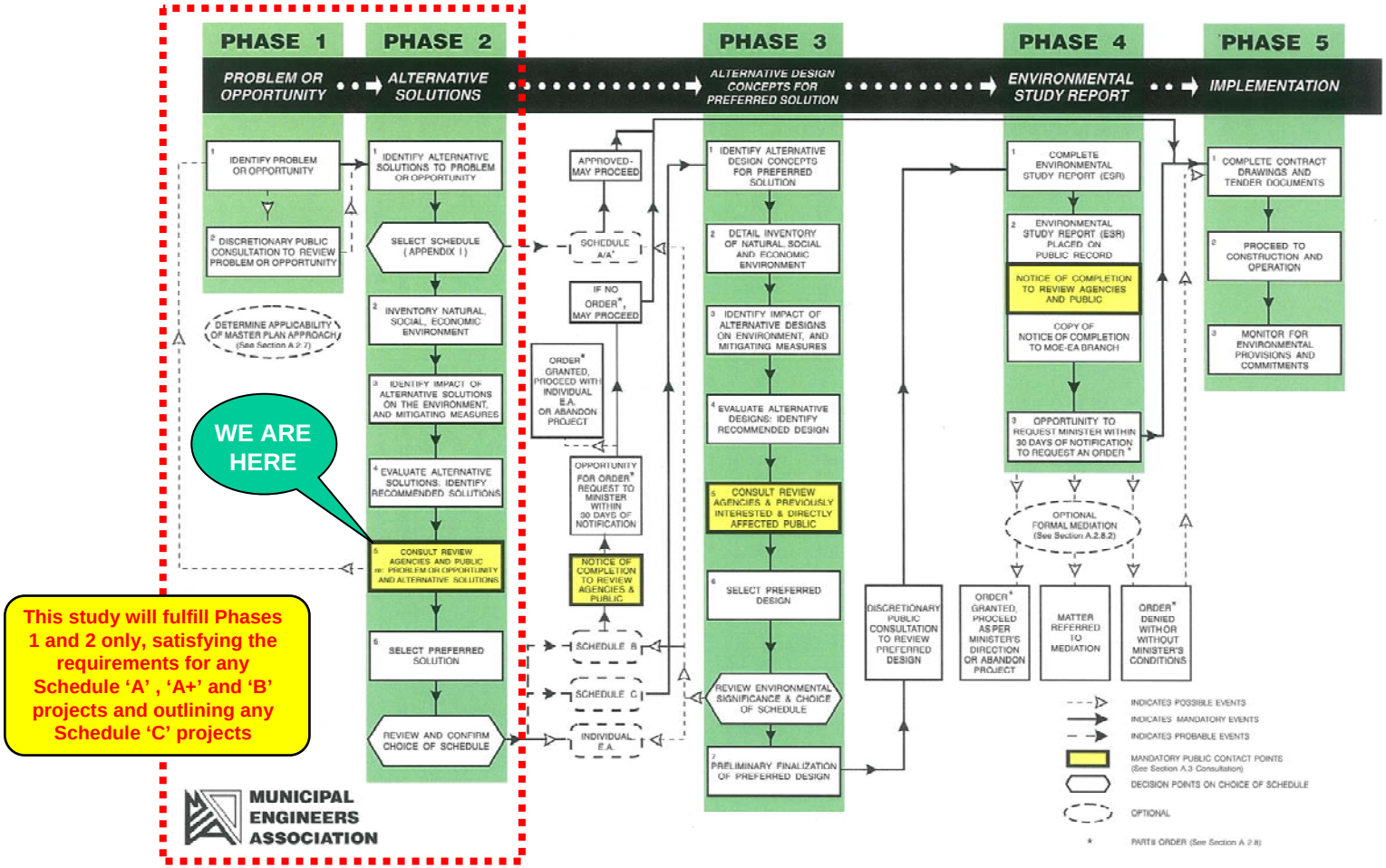
Board 2

PUBLIC CONSULTATION

- Public Consultation Plan
  - Project Web Site: **www.tecumseh.ca/EnvironmentalServices**
  - Mandatory Contact Letters
  - Public Information Centre (PIC)
    - Wednesday, March 26, 2008 (2 p.m. to 8 p.m.) – Fire Hall No. 2, Oldcastle Hamlet (South Service Area)
    - Thursday, March 27, 2008 (2 p.m. to 8 p.m.) - Town of Tecumseh Council Chambers (North Service Area)
- Purpose of this PIC
  - The purpose of this Public Information Centre (PIC) is to allow for a constructive exchange of ideas and information between the proponents of the project, the affected public, and other interested parties
  - Such an interaction not only broadens the project's information base, but it also facilitates effective and informed decision-making
- The Phase 2 PIC will:
  - Summarize the background project information
  - Provide additional project information including guidelines and drivers for the water and wastewater servicing requirements
  - Present the proposed updates to the water and wastewater servicing strategies
  - Allow members of the public and interested groups to review and comment on the available project information
  - Present the next steps

Board 3

MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS



ALL PUBLIC INFRASTRUCTURE PROJECTS IN ONTARIO ARE SUBJECT TO THE ENVIRONMENTAL ASSESSMENT (EA) ACT OF ONTARIO, WHICH SETS OUT A PROCESS FOR PLANNING AND CONSULTATION TO ENSURE THAT ALL ASPECTS OF THE ENVIRONMENT ARE CONSIDERED

OPPORTUNITY STATEMENT

- By 2028, the Town of Tecumseh could experience population growth to over 40,000 people – an increase of about 16,000 residents
- Water and wastewater infrastructure upgrades will be required to service future residential and non-residential lands
- A comprehensive Water and Wastewater Master Plan will ensure implementation of a sustainable growth strategy
- The Town of Tecumseh had completed a Water and Wastewater Master Plan in 2002 and a Water Plan amendment in 2005
- In light of new water and wastewater service agreements with the City of Windsor, the Town of Tecumseh has initiated an update to the Water and Wastewater Master Plan to confirm and update the preferred water and wastewater servicing strategy to support growth in the Town and continue to provide a high level of service

GOALS AND OBJECTIVES

- Complete a baseline review of existing water and wastewater systems
- Develop water and wastewater policies to provide guidelines to the process and to the development/evaluation of servicing strategies
- Integrate previous and concurrent related studies
- Complete and document the Master Planning process in accordance with the Class EA process with extensive public and agency participation
- Update the water & wastewater servicing strategies in consideration of:
  - meeting technical service requirements
  - optimizing existing infrastructure
  - minimizing impact to or enhance the natural, social and economic environments
  - providing cost effective solutions
- Establish a preferred long term servicing strategy and implementation plan to meet the existing and future servicing needs of the Town

Board 6

BEST PLANNING ESTIMATES

Residential Population Projections

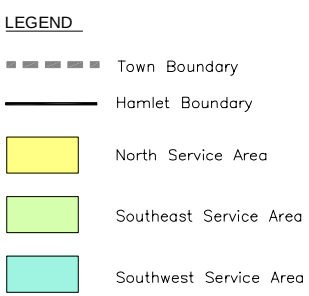
Service Area		2008 (Current)	2018 (10-Year)	2028 (20-Year)	Ultimate Urban Build-out
North	Tecumseh	13,773	14,029	14,029	14,029
	St. Clair Beach	3,957	4,138	4,138	4,138
	Tecumseh Hamlet	3,838	10,529	15,720	21,085
Southeast	Maidstone Hamlet	449	449	2,000	3,000
	Rural	1,300	1,490	1,680	2,300
Southwest	Oldcastle	466	1,066	2,052	2,437
	Rural	531	581	631	767
Total		**24,314**	**32,282**	**40,250**	**47,756**

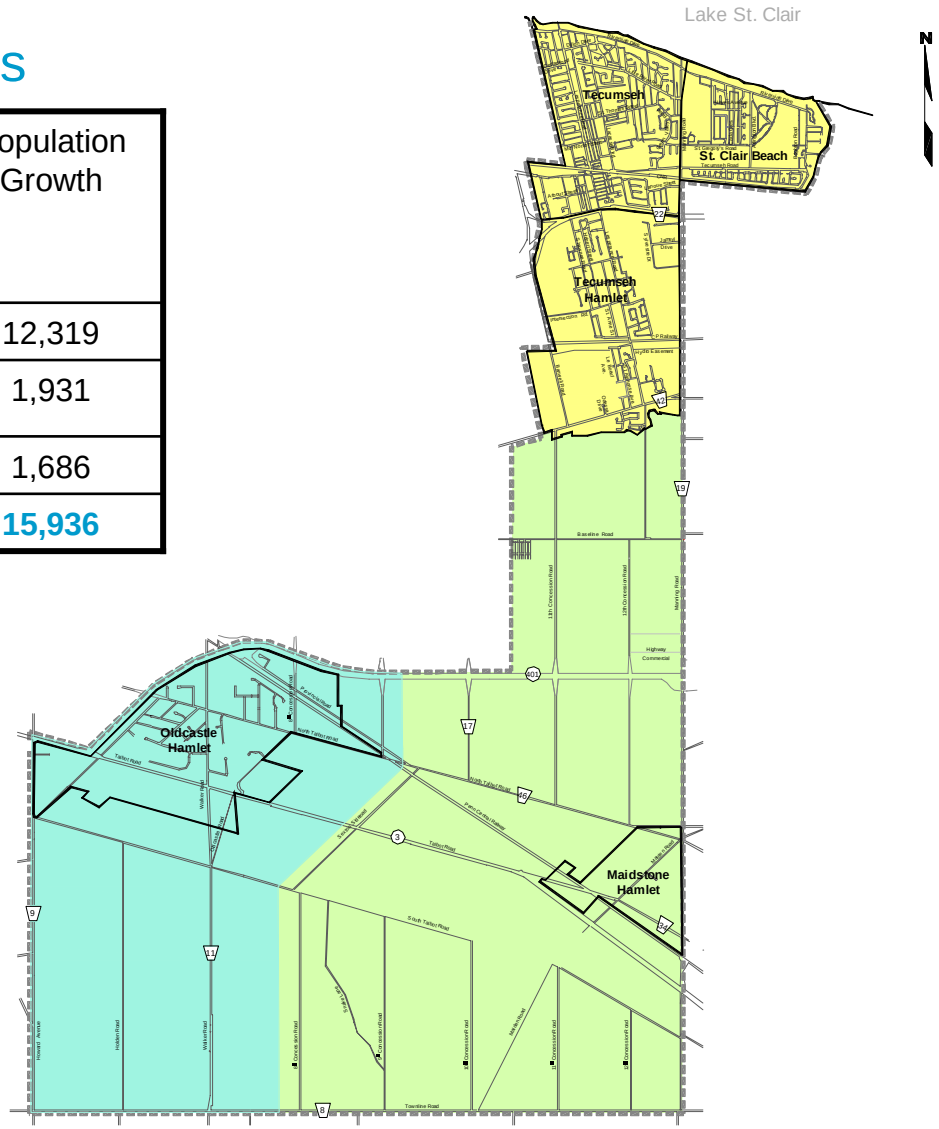
Basis:

1. 2006 Residential Population: 24,224 (Census Canada)
2. Best available planning information including local growth analysis in Tecumseh Official Plans/Planning Documents and Secondary Plans for Tecumseh Hamlet, Maidstone Hamlet and the Manning Road Development Area
3. Includes intensification of the urban settlement areas of Tecumseh, St.Clair Beach, Tecumseh Hamlet, Maidstone Hamlet and Oldcastle Hamlet

20-Year Planning Projections

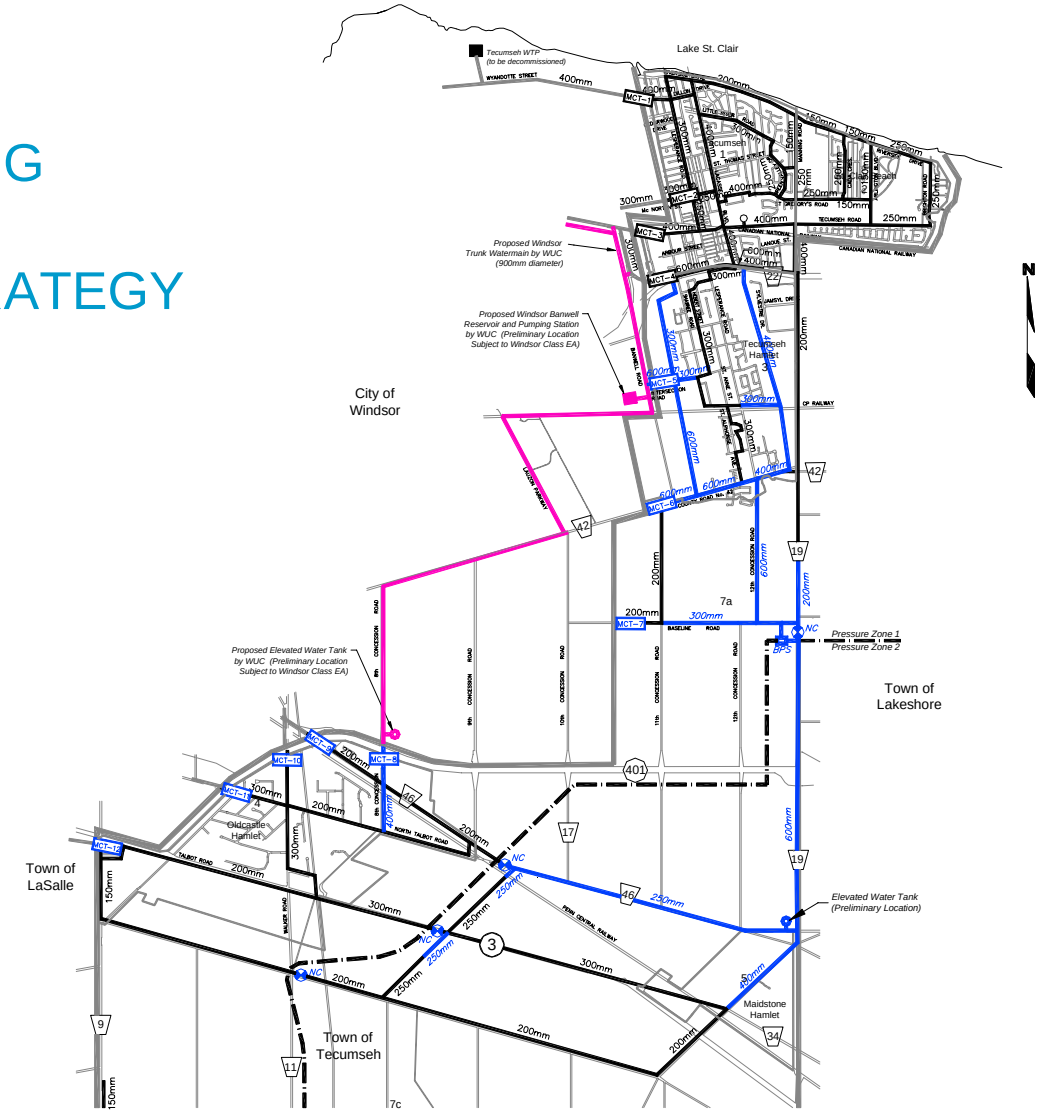
Service Area	Development Potential (hectares)		Population Growth
	Residential	Non-Residential	
North	325	38	12,319
Southeast	135	61	1,931
Southwest	120	165	1,686
Total	**580**	**264**	**15,936**





Board 8

2005 MASTER SERVICING PLAN ADDENDUM WATER SERVICING STRATEGY



LEGEND

- Town Boundary
- Hamlet Boundary

EXISTING / APPROVED

- 300mm — Trunk Watermain
- Tecumseh Elevated Water Tank
- Water Treatment Plant
- MCT-1 — Metering Facility and Connection to Windsor Water System

PROPOSED

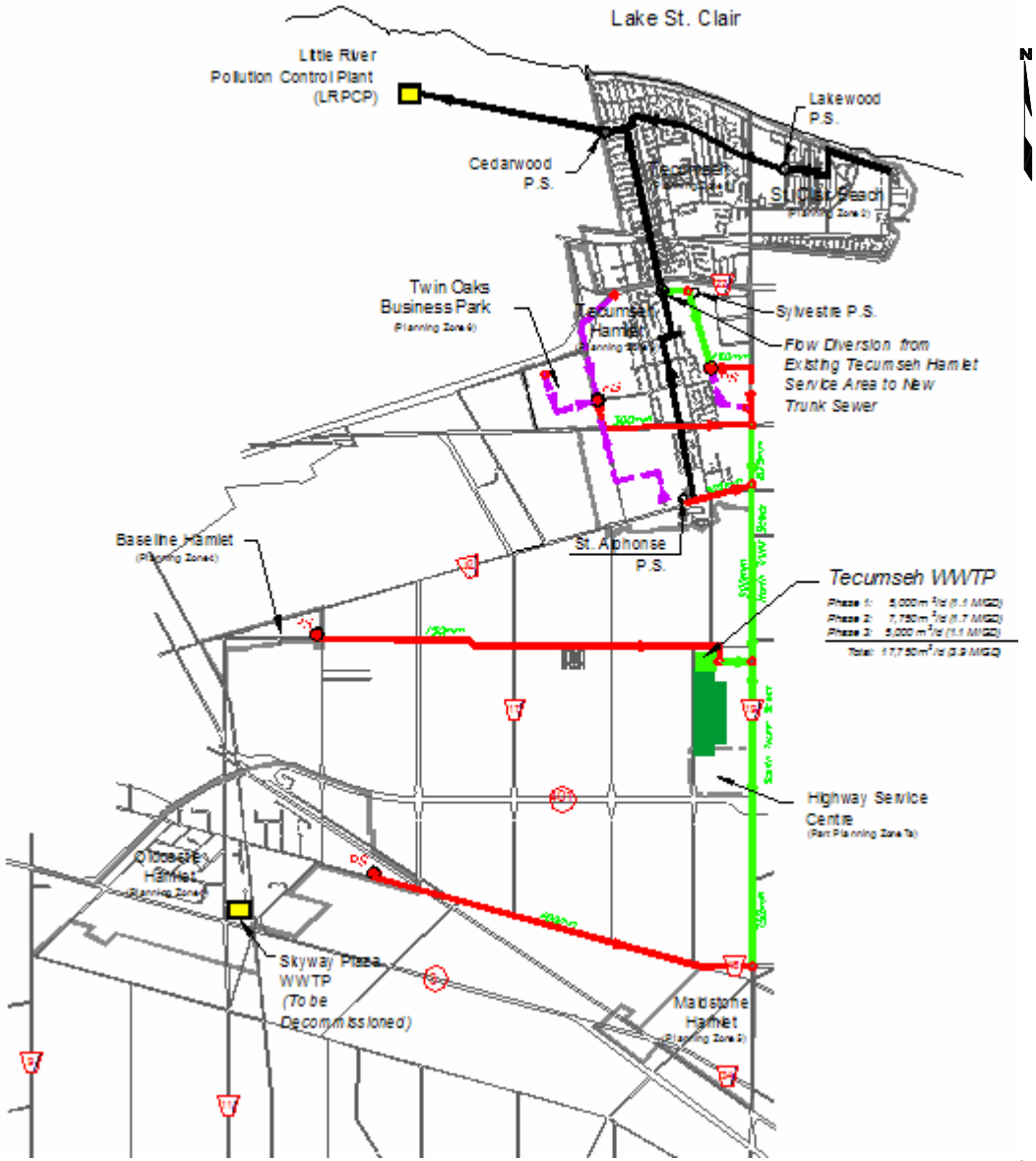
- *900mm Windsor Trunk Watermain (by WUC)*
- *Banwell Reservoir & Pumping Station (by WUC)*
- *Elevated Water Tank (by WUC)*
- *Pressure Zone Boundary*
- MCT-8 — *Metering Facility and Connection to Windsor Water System*
- *Trunk Watermain*
- NC — *Isolation Valve (Normally Closed)*
- *Elevated Water Tank*
- BPS — *Booster Pumping Station*

Notes:

The alignments shown for proposed trunk watermains are not finalized at this time and will be subject to change based on approved development plans.

Board 9

2002 MASTER PLAN WASTEWATER SERVICING STRATEGY



LEGEND

- Urban Area Boundary
- Commercial/Business Park Boundary
- Existing Trunk Sewer
- Existing Wastewater Treatment Plant (WWTP)
- Existing Pumping Station (P.S.)
- Existing Flow Control Chamber
- ESA No.38

PROPOSED INFRASTRUCTURE WORKS

- *Preliminary Location for Tecumseh Wastewater Treatment Plant (WWTP)*
- PS — *Preliminary Location for Wastewater Pumping Station (PS)*
- *Preliminary Location for Sub-Trunk Sewer*
- 750mm — *Preliminary Location for Trunk Sewer*

Note: Preliminary location shown for WWTP and Pumping Stations, and alignment and sizing of Trunk Sewers/Sub-Trunk Sewers/Forcemains are subject to change during Phase 3 of the Class EA after finalization of the site selection process.

Board 10

SYSTEM STATUS

WATER

- Amalgamation of Windsor and Tecumseh Water Systems
  - The change over in the source of supply from the Tecumseh WTP to the Windsor Water System took effect on March 31, 2006
  - Interim operation was established for the amalgamated system due to the delay by WUC in proceeding with construction of the Banwell Road Reservoir and BPS
  - In accordance with Article 3 of the 2004 Water Agreement, the Town completed or has commenced construction of the following works:
    - 12 new metering facilities and connections to the Windsor Water System along the Town boundary at Dillon Drive, McNorton Street, Tecumseh Road, County Road 22, Intersection Road, County Road 42, Baseline Road, 8th Concession Road, Provincial Road, Walker Road, North Talbot Road and Howard Avenue (Talbot Road)
    - New trunk watermains on McNorton Street, Lesperance Road, Tecumseh Road, Manning Road, County Road 22, County Road 42 and Provincial Road

WASTEWATER

- Banwell Road Outlet
  - In accordance with Article 11 of the 2004 Wastewater Agreement, the Banwell Road outlet and NE Windsor trunk sewer for discharge to the LRPCP in Windsor was constructed by the City in 2007
  - The invert elevation for the Northeast Windsor Trunk Sewer at the Banwell Road outlet was established to allow gravity servicing to Highway 3 in both Maidstone Hamlet and Oldcastle Hamlet
- County Road 22 (CR22) Relief Sewer
  - Construction of the CR22 Relief Sewer from Lesperance Road trunk sewer to the Banwell Road outlet is scheduled to be completed in 2008
  - The relief sewer will alleviate surcharging in the existing Lesperance Road trunk sewer north of County Road 22 during wet weather flow conditions and will ensure that the Town does not exceed the maximum discharge rate established by Agreement at the Cedarwood outlet

SERVICING REQUIREMENTS

WATER

- Terms and conditions of 2004 Windsor-Tecumseh Water Agreement and 2006 Amending Agreement:
  - The Windsor Utilities Commission (WUC) is responsible for supplying water to the Town on a continuous basis up to a maximum daily flow of 87 MLD
  - The Town is responsible for its own distribution system within the boundaries of Tecumseh and any new storage works that may be required to supply its fire flow of water
  - Storage for equalization and peak hour flow of water for the Town will be the responsibility of WUC
  - WUC will deliver peak hourly flow to the Town
  - The Tecumseh Water Treatment Plant (WTP) will be decommissioned and ownership will be transferred to the City of Windsor
  - WUC will proceed with a Class EA for the proposed Banwell Road Reservoir and Booster Pumping Station (BPS) and employ its best efforts to complete construction prior to future needs being required

WASTEWATER

- Terms and conditions of 2004 Windsor-Tecumseh Wastewater Agreement:
  - The ultimate servicing of the Tecumseh Urban Areas will be from a combination of capacities at the 64 MLD Little River PCP and/or the 159 MLD Lou Romano WRP in Windsor
  - Tecumseh will not construct a centralized Wastewater Treatment Plant (WWTP) as identified in the 2002 Master Plan; however, can provide interim treatment plants until conveyance is provided
  - The Town has a current treatment capacity allocation of 17 MLD at the Little River PCP and 2.7 MLD capacity at the Lou Romano WRP
  - The Town can purchase additional capacity at the Little River PCP for future growth up to a maximum 38.0 MLD
  - Maximum Discharge Rate Limitations
    - 935 L/s at the Cedarwood Outlet to Little River PCP
    - 1,308 L/s at the Banwell Road Outlet to Little River PCP
    - 85 L/s at the North Talbot Road Outlet to Lou Romano WRP

SERVICING OBJECTIVES

WATER

- Monitor water flow information (SCADA) and water quality at Town boundary
- Provide adequate flow and pressure to water users
- Provide adequate fire flows throughout the distribution system
- Provide reliability and security throughout the distribution system
- Maintain adequate water quality throughout the distribution system
- Provide adequate water storage, pumping capacity and standby power to meet emergency conditions
- Promote water conservation
- Utilize reasonable design and costing criteria for establishing and evaluating servicing scenarios

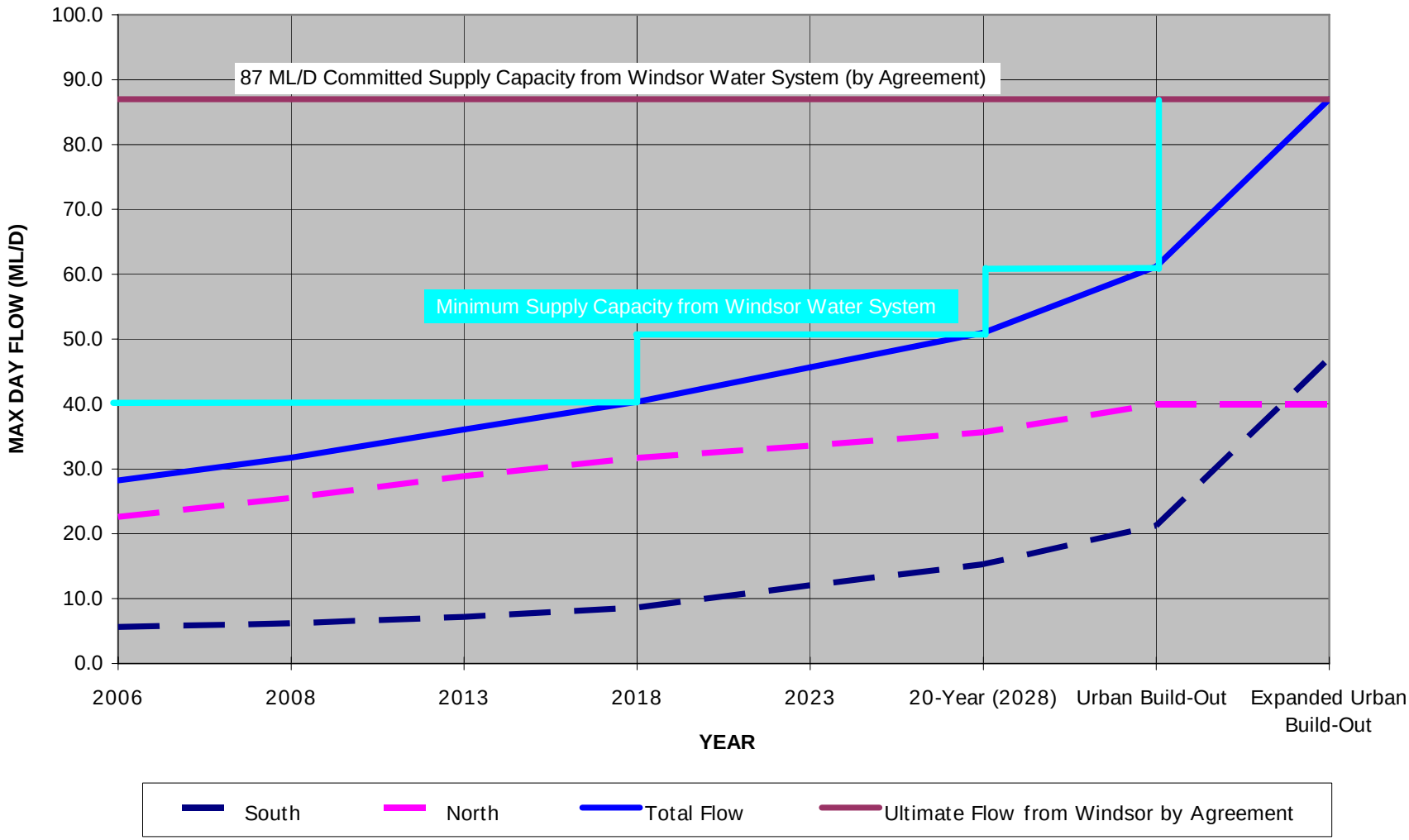
WASTEWATER

- Protect raw water sources
- Monitor wastewater flow information at Town boundary (SCADA)
- Reduce peak wet weather flows in the existing sanitary collection system
- Address public health issues and pollution problems with inadequate and/or malfunctioning private septic systems in Oldcastle Hamlet
- Ensure wastewater from industrial customers meets the sewer use by-law
- Provide reliability and security throughout the wastewater system
- Satisfy legislation
- Utilize reasonable design and costing criteria for establishing and evaluating servicing scenarios

STUDY GUIDELINES AND DRIVERS

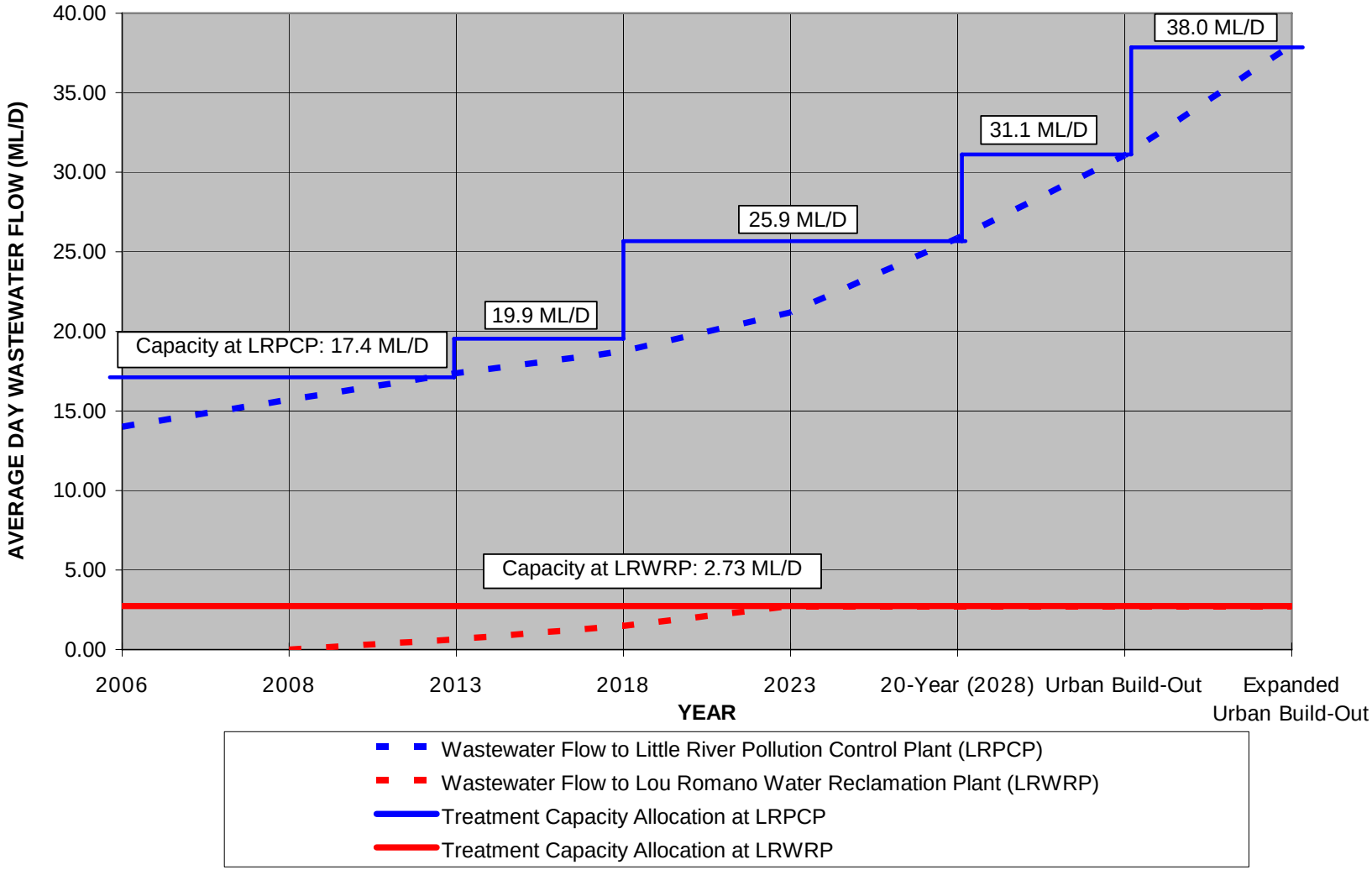
- Consolidate the Town's servicing strategies for the North and South Service Areas to make best use of the available capacities provided in the Water and Wastewater Agreements
- Based on recent Notice given by WUC that the proposed Banwell Road Reservoir Class EA is being deferred on the basis that the Windsor Water System has sufficient treatment and storage capacity to meet the projected 10 year demands for the amalgamated system, the time frame to implement full integration of the north and south water systems in Tecumseh must be reviewed to ensure that an adequate level of service is provided for existing customers and new growth
- Based on terms and conditions of the 2004 Wastewater Agreement that provide the Town with additional conveyance and treatment capacity in the Windsor Wastewater System, the basis and assumptions on which the preferred wastewater servicing strategies were developed for Tecumseh must be reviewed and new servicing strategies developed that fully utilize the available capacities

TOWN OF TECUMSEH
TOTAL WATER SYSTEM REQUIREMENTS



Board 15

TOWN OF TECUMSEH
TOTAL WASTEWATER TREATMENT CAPACITY REQUIREMENTS

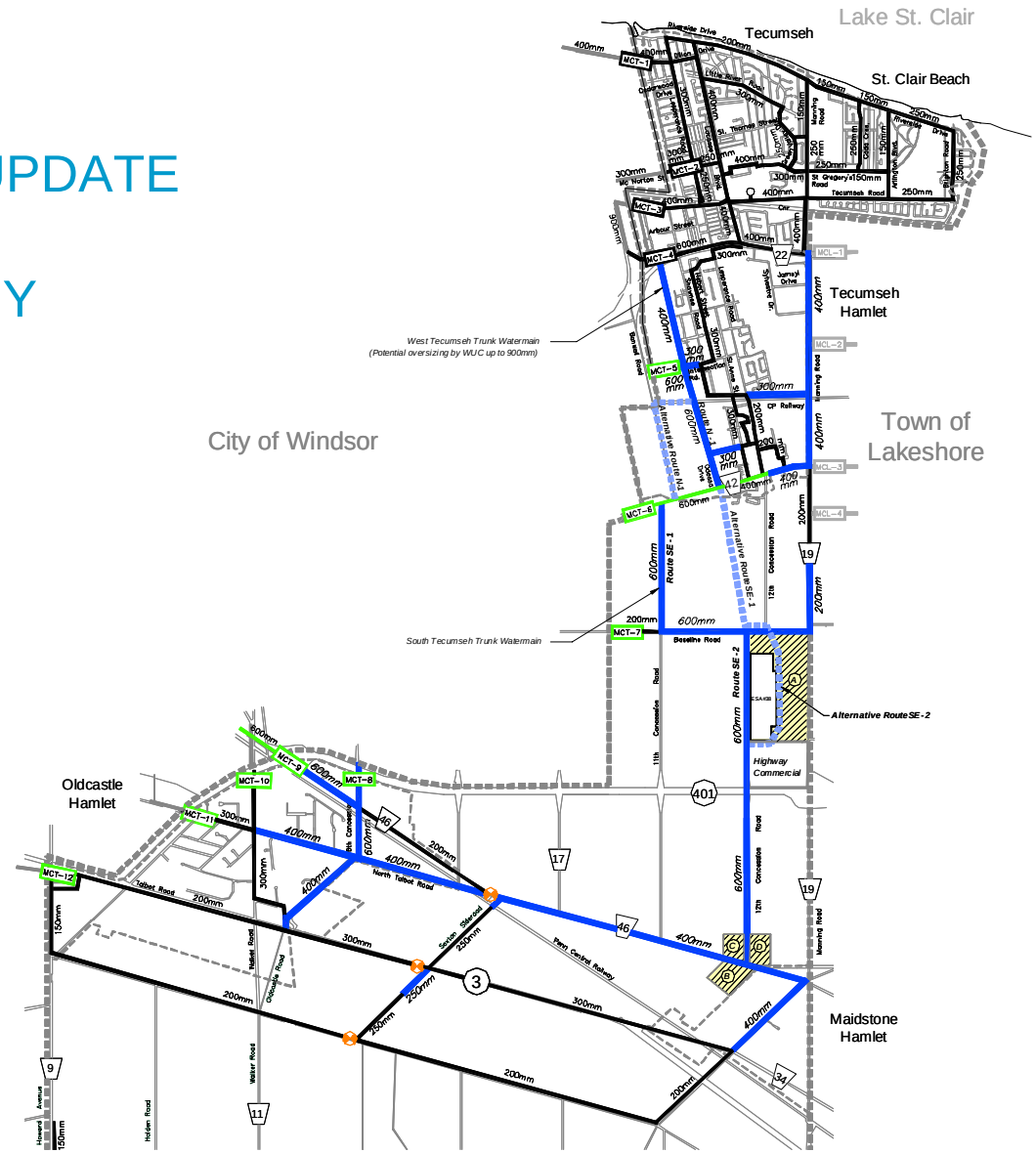


Board 16

SIGNIFICANT WATER STRATEGY UPDATES

- Provide additional trunk watermain capacity in North Service Area
  - Given the deferral of the Banwell Water Storage Reservoir by WUC in December 2007, additional trunk watermain capacity is required in Tecumseh Hamlet between CR 22 and CR 42 to service new growth to 2018
  - Potential oversizing of new trunk watermain in the north Tecumseh service area by WUC as part of an amalgamated Windsor – Tecumseh Water System to maximize use of available capacity and reduce future servicing costs
- Provide Zone 2 Booster Pumping Station
  - Increased pumping capacity is required in the SE Tecumseh service area to address existing system limitations and to service growth in Maidstone Hamlet
- Provide “floating” storage for Zone 2
  - Additional storage capacity for pump control in the SE Tecumseh service area and additional fire flow storage for the Town is required to meet servicing requirements
- Provide additional trunk watermain capacity in South Service Area
  - Based on existing limitations in the Windsor Water System serving the SW Tecumseh service area, additional trunk watermain capacity is required to service growth

2007 MASTER PLAN UPDATE
PREFERRED WATER SERVICING STRATEGY



LEGEND

- Town Boundary
- Hamlet Boundary

EXISTING

- 300mm — Existing Trunk Watermain
- Tecumseh Elevated Water Tank
- MCT-2 — Tecumseh Metering Chamber
- MCL-2 — Lakeshore Metering Chamber

2007/2008 CAPITAL WORKS

- CR42 Feedermain
- MCT-5 — Tecumseh Metering Chamber

PROPOSED

- *Trunk Watermain*
- *Alternative Trunk Watermain Route*
- A — *Alternative Site Locations for proposed Water Storage Facility and/or Booster Pumping Station.*
- *Isolation Valve at Potential Pressure Zone Boundary.*

Notes:

The routing shown for proposed trunk watermains may be subject to change based on approved development plans.

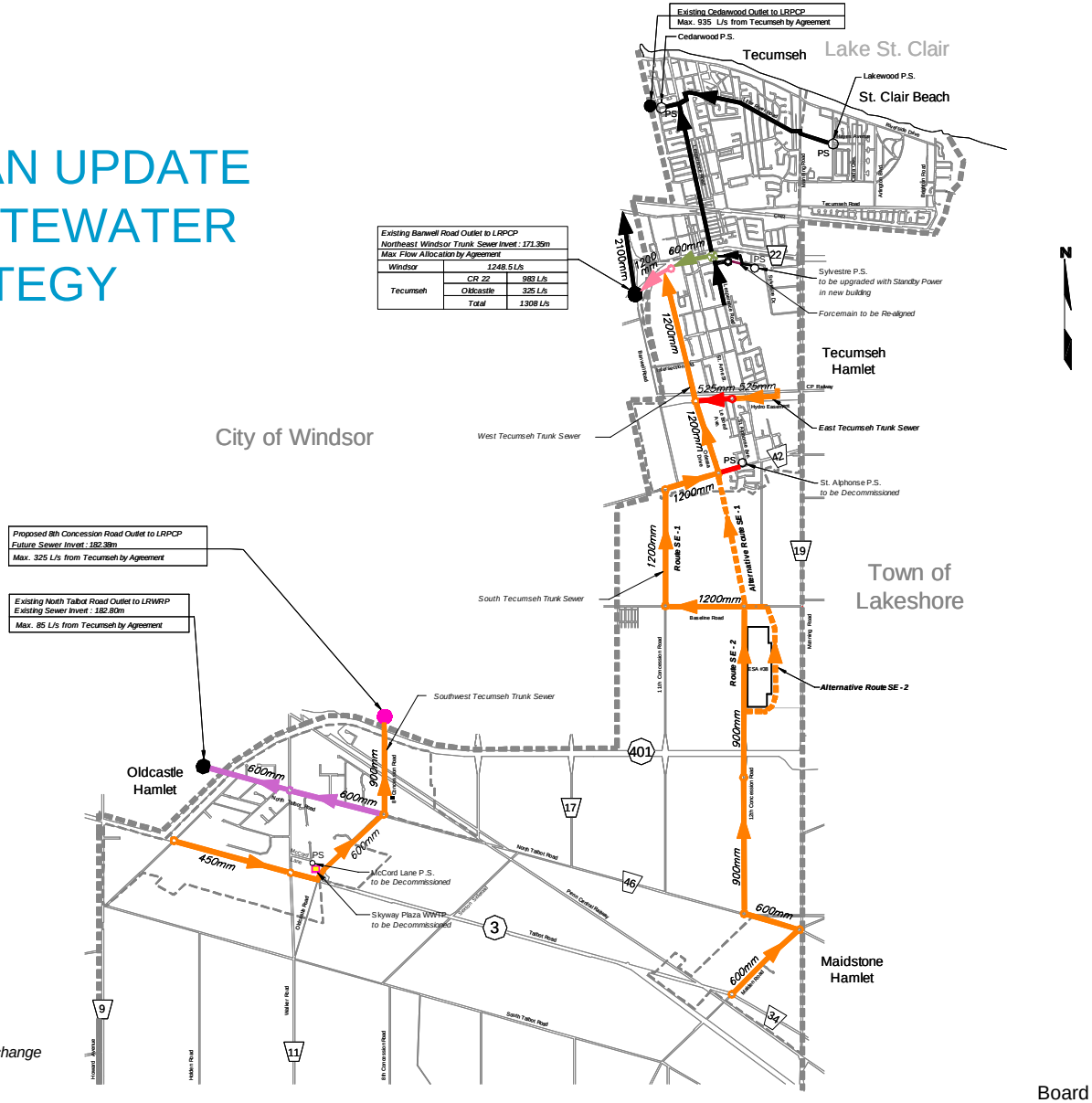
Property requirements for proposed Water Storage Facility and/or Booster Pumping Station are to be finalized after a site selection process and may be different than shown.

Board 18

SIGNIFICANT WASTEWATER STRATEGY UPDATES

- Provide new trunk sewers for growth in North and SE service areas with discharge to the Little River Pollution Control Plant (PCP)
  - West Tecumseh trunk sewer between CR22 and CR42 with capacity for the lands designated in the Tecumseh Hamlet Secondary Plan & south portion of the Manning Road Secondary Plan, and the SE service area
  - East Tecumseh trunk sewer within the existing utility corridor south of CP railway for lands on the east side of Tecumseh Hamlet
  - South Tecumseh trunk sewer between CR 42 and Highway 3 with capacity for the lands designated in the Maidstone Hamlet Secondary Plan, Highway Service Centre lands, and existing developments in the SE service area
- Provide continuous flow monitoring at Town boundary (SCADA)
  - A flow measuring flume is required at each location where flow from Tecumseh is discharged through an approved outlet at the Town boundary
- Utilize diversion sewers for east to west diversion in Tecumseh Hamlet to address existing system limitations and meet discharge limit at the existing Cedarwood Outlet
  - Divert flow at St. Alphonse Avenue and South Pacific Avenue through diversion sewer south of CP railway to the west Tecumseh trunk sewer
  - Divert flow at St. Alphonse Avenue and CR 42 through diversion sewer on CR42 to the west Tecumseh trunk sewer and decommission St. Alphonse Avenue PS
- Provide standby power facilities at the Sylvestre Pumping Station
  - Upgrade the existing station with a standby diesel generator in a new building
- Purchase additional capacity in Windsor Wastewater System as provided for in the 2004 Wastewater Agreement
  - Additional conveyance capacity in the Windsor NE trunk sewer and treatment capacity at the Little River PCP is required for new growth in SE and SW service areas
- Provide new trunk sewers for existing developments and growth in SW service area with discharge to the Lou Romano Water Reclamation Plant (WRP) and the Little River Pollution Control Plant (PCP)
  - North Talbot Road trunk sewer with discharge to the Lou Romano WRP through the existing North Talbot Road Outlet up to 85 L/s
  - SW Tecumseh trunk sewer with interim discharge to the Lou Romano WRP through the North Talbot Road trunk sewer and ultimate discharge to the Little River PCP through the future 8th Concession Road Outlet
- Decommission the Skyway Plaza WWTP in Oldcastle Hamlet
  - Divert flow from the temporary Skyway Plaza WWTP to the North Talbot Road trunk sewer (Lou Romano WRP) or the SW Tecumseh trunk sewer (Little River PCP)

2007 MASTER PLAN UPDATE
PREFERRED WASTEWATER SERVICING STRATEGY



LEGEND

- Town Boundary
- Hamlet Boundary

EXISTING

- Trunk Sewer
- Forcemain
- Skyway Plaza Wastewater Treatment Plant (WWTP)
- PS — Pumping Station (P.S.)
- Outlet Location for Discharge of Monitored flow from Tecumseh to Little River Pollution Control Plant (LRPCP) or Lou Romano Water Reclamation Plant (LRWRP)

2007/2008 CAPITAL WORKS

- CR22 Relief Sewer
- CR22 Outlet Sewer
- Flow Control Chamber

PROPOSED

- *Outlet Location for Discharge of Monitored flow from Tecumseh to Little River Pollution Control Plant (LRPCP)*
- *Diversion Sewer*
- *Trunk Sewer to LRPCP*
- *Alternative Trunk Sewer Route to LRPCP*
- *Trunk Sewer to LRWRP*
- *Wastewater Forcemain*

Notes:

The routing shown for proposed trunk sewers may be subject to change based on approved development plans.

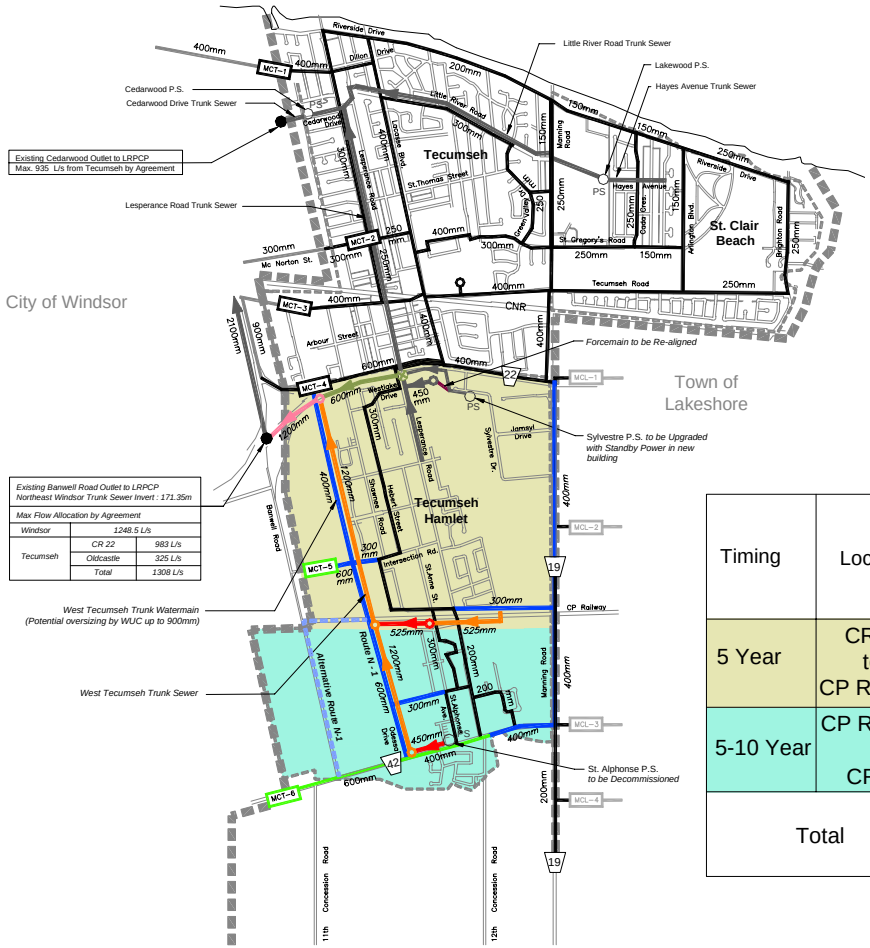
Board 20

CAPITAL COST UPDATE FOR 20-YEAR PLANNING PERIOD

Servicing Plan Update	New Infrastructure	Capital Cost Allocation (M - million)			***Comparison to Total Cost Estimate in 2002 Master Plan and 2005 Amendment***
		Existing Development	Growth	**Total**	
Water	• 31 km of trunk watermain • Zone 2 booster pumping station • 4.5 ML elevated water tank	$4.06 M	$18.94 M	**$23.0 M**	***$24.0 M***
Wastewater	• 35 km of trunk sewer • Conveyance Capacity in City of Windsor • Treatment Capacity in City of Windsor at Little River PCP	$6.58 M $2.71 M	$26.95 M $5.36 M $13.0 M	**$54.6 M**	***$56.09 M***
Total		$13.35 M	$64.25 M	**$77.6 M**	***$80.09 M***

Board 21

IMPLEMENTATION PLAN FOR THE NORTH TECUMSEH SERVICE AREA



LEGEND

- Town Boundary
- Hamlet Boundary

EXISTING

- 300mm — Trunk Watermain
- Tecumseh Elevated Water Tank
- MCT-2 — Tecumseh Metering Chamber
- MCL-2 — Lakeshore Metering Chamber
- Trunk Sewer
- Forcemain
- PS — Wastewater Pumping Station (P.S.)
- Outlet Location for Discharge of Monitored flow from Tecumseh to Little River Pollution Control Plant (LRPCP)

2007/2008 CAPITAL WORKS

- CR42 Feedermain
- MCT-5 — Tecumseh Metering Chamber
- CR22 Relief Sewer
- CR22 Outlet Sewer
- Flow Control Chamber

PROPOSED

- *Trunk Watermain*
- *Alternative Trunk Watermain Route*
- *Diversion Sewer*
- *Trunk Sewer to LRPCP*
- *Wastewater Forcemain*
- *5 Year Implementation Plan*
- *5–10 Year Implementation Plan*

Timing	Location	Estimated Capital Cost ($ Million)		
		Existing Developments	New Developments	Total
5 Year	CR 22 to CP Railway	$1.39	$8.18	$9.57
5-10 Year	CP Railway to CR 42	$0.90	$2.95	$3.85
Total		$2.29	$11.13	$13.42

Board 22

IMPLEMENTATION PLAN FOR THE SOUTHEAST TECUMSEH SERVICE AREA

LEGEND

- Town Boundary
- Hamlet Boundary

EXISTING

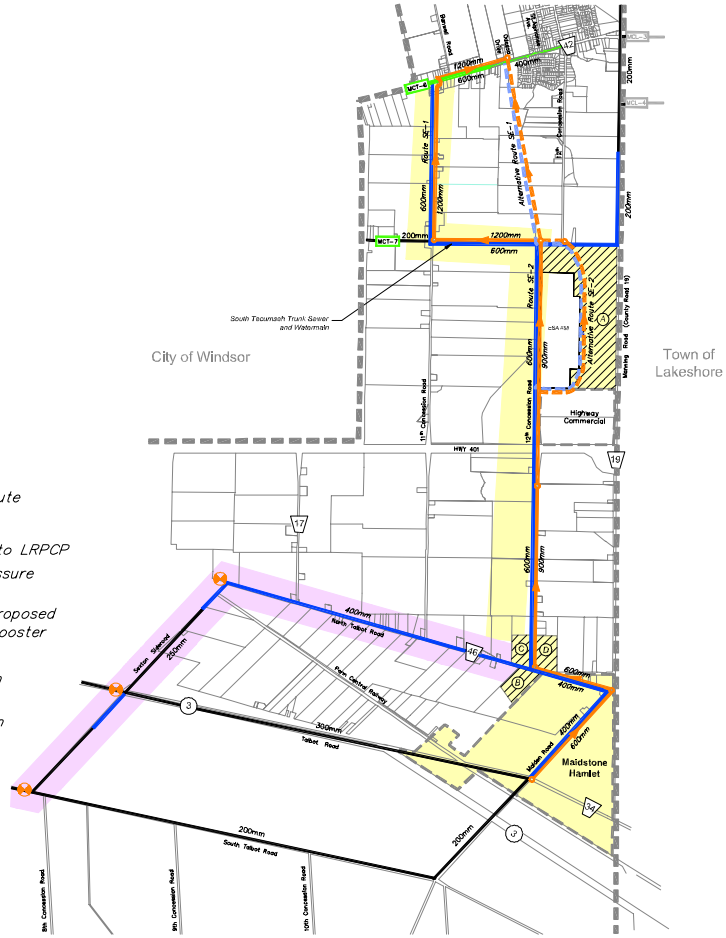
- 300mm Trunk Watermain
- MCL–3 Lakeshore Metering Chamber

2007/2008 CAPITAL WORKS

- CR42 Feedermain
- MCT–7 Tecumseh Metering Chamber

PROPOSED

- *Trunk Watermain*
- *Alternative Trunk Watermain Route*
- *Trunk Sewer to LRPCP*
- *Alternative Trunk Sewer Route to LRPCP*
- *Isolation Valve at Potential Pressure Zone Boundary.*
- *Alternative Site Locations for proposed Water Storage Facility and/or Booster Pumping Station.*
- *10–15 Year Implementation Plan*
- *15–20 Year Implementation Plan*



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Timing	Location	Estimated Capital Cost ($ Million)		
		Existing Developments	New Developments	Total
10-15 Year	CR 42 to HWY 401	$1.37	$13.21	$14.58
	HWY 401 to CR 34	$2.20	$10.19	$12.39
15-20 Year	CR 46	$0.63	$1.20	$1.83
Total		$4.20	$24.60	$28.80

Board 23

IMPLEMENTATION PLAN FOR THE SOUTHWEST TECUMSEH SERVICE AREA

Timing	Location	Estimated Capital Cost ($ Million)		
		Existing Developments	New Developments	Total
5 Year	North Talbot Road	$1.75	$3.86	$5.61
15-20 Year	Oldcastle Hamlet	$2.40	$6.30	$8.70
Total		$4.15	$10.16	$14.31

LEGEND

Town Boundary

Hamlet Boundary

EXISTING

300mm Trunk Watermain

Skyway Plaza Wastewater Treatment Plant (WWTP)

PS Wastewater Pumping Station (P.S.)

Outlet Location for Discharge of Monitored flow from Tecumseh to Lou Romano Water Reclamation Plant (LRWRP)

2007/2008 CAPITAL WORKS

Feedermain

MCT-8 Tecumseh Metering Chamber

PROPOSED

Trunk Watermain

Isolation Valve at Potential Pressure Zone Boundary.

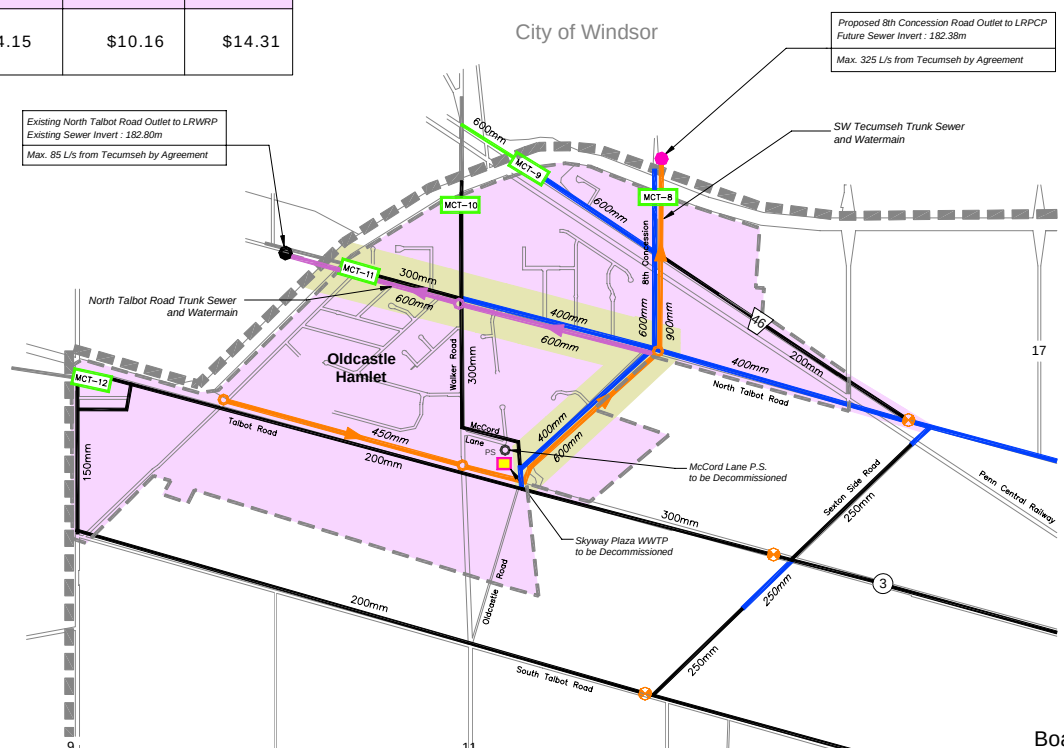
Outlet Location for Discharge of Monitored flow from Tecumseh to Little River Pollution Control Plant (LRPCP)

Trunk Sewer to LRPCP

Trunk Sewer to LRWRP

5 Year Implementation Plan

15-20 Year Implementation Plan



Board 24

NEXT STEPS

- The project team will:
  - Compile information received from you and other stakeholders to finalize the servicing strategies
  - Respond to other comments and questions we receive
  - Document the water and wastewater servicing strategy update and public consultation process
  - File the documentation on public record for the 30-day review period
- Schedule A, Schedule A+ and Schedule B projects not requiring further study would move forward to implementation based on the identified schedule
- Schedule C projects would move forward to complete Phases 3 and 4 under stand-alone studies based on the identified schedule

THANK YOU FOR ATTENDING