



Bay, and Merlin. The rural areas of the municipality use non-municipal systems such as septic tanks and tile beds.

There are two main issues with the Wastewater system in Chatham-Kent; malfunctioning septic systems which could potentially create groundwater contamination and limitations of the capacity of municipal treatment facilities.

There are several options for improving the existing wastewater system deficiencies. The deficiencies were grouped into three subcategories: (1) Areas which do not have sewers or treatment facilities, (2) Areas with existing treatment systems which require upgrades for future growth projections, and (3) Areas with existing treatment systems and have adequate capacity for future growth projections but will require upgrades of some nature.

This report recommended a servicing strategy for the Chatham-Kent. The 2006 Sewage Master Plan Update study assesses each area within the municipality on a case-by-case basis with respect to wastewater servicing.

### *Capital Costs*

The anticipated cost of the recommended water and wastewater works is approximately \$166 million. The majority of the costs are to be incurred during the early part of the 20-year timeframe. Water transmission mains form the major recommendation of this study.

### *Sewage Master Plan Update Study*

This study provided an update to the Wastewater section of the Water and Wastewater Master Plan Study and provides area specific recommendations for each of the identified 31 service areas which are not currently serviced by a communal sewage system. The study considered the use of conventional gravity sewers and low pressure sewers for sewage collection along with on-site treatment, new treatment facility and the use of an existing treatment facility for sewage treatment.

The study recommendations are as follows:

St. Clair Parkway: Use conventional gravity and low pressure sewers for collection and use the Wallaceburg wastewater plant for treatment. 20 year peak flow: 295 m<sup>3</sup>/d.

Dufferin Avenue: Conventional gravity sewers with 5 pumping stations for collection to discharge to the Wallaceburg treatment plant for treatment. 20 year peak flow: 976 m<sup>3</sup>/d.

North River Road: Gravity sewers and potentially low pressure sewers for collection to discharge to the Wallaceburg treatment plant. 20 year peak flow: 118 m<sup>3</sup>/d.

Tupperville: Gravity sewers for collection to discharge by forcemain to Wallaceburg or Dresden treatment facility. A new facility could also be created for treatment. 20 year peak flow: 336 m<sup>3</sup>/d.

Wabash: Gravity sewers to discharge via a forcemain to Thamesville for treatment. A new Wabash facility is also a possibility. 20 year peak flow: 75 m<sup>3</sup>/d.

North Thamesville-Industrial Road: Gravity sewers and two pumping stations for collection, discharge to existing sanitary sewers in Thamesville. Treatment will occur at the Thamesville treatment facility. 20 year peak flow: 155 m<sup>3</sup>/d.

North Thamesville- Jane Street: Gravity sewers and a pumping station near Gordon Street for collection, the pumping station would discharge into the existing sanitary sewer near Jane Street. The treatment would occur at the Thamesville treatment facility. 20 year peak flow: 163 m<sup>3</sup>/d.

High Gate: Gravity sewers with a pumping station and forcemain for collection, discharging to the existing Ridgetown sewage lagoons or to a new wastewater treatment facility in Highgate. 20 year peak flow: 680 m<sup>3</sup>/d.

Kent Bridge: Gravity sewers with a pumping station for collection, discharging to either existing sanitary sewers in Thamesville or to a possible future sewer system in Louisville. Treatment could occur in Thamesville, at a new treatment plant in Kent Bridge or Louisville, or an option of combining the flows from Kent Bridge and Louisville and treating both at the existing treatment facility in Chatham. 20 year peak flow: 243 m<sup>3</sup>/d.

Louisville: Gravity sewers with a forcemain for collection that could discharge to Kent Bridge or Chatham. There is also the option of combining the wastewater flows from Louisville and Kent Bridge and sending both to the Thamesville treatment facility. Treatment could also occur at the Chatham treatment facility or a new facility in either Louisville or Kent Bridge. 20 year peak flow: 163 m<sup>3</sup>/d.

Dover Centre: Collection by gravity sewer and a forcemain to a proposed sewer system in Grande Pointe and the combined wastewater from the two communities would discharge to the Pain Court system. The Pain Court system discharges via a forcemain into the Chatham system for treatment. 20 year peak flow: 143 m<sup>3</sup>/d.

Grande Pointe: The proposed system would utilize gravity sewers and a forcemain to discharge to the Pain Court system. As described above the Dover Centre and Grande Pointe wastewater flows will discharge into the existing Chatham system. 20 year peak flow: 172 m<sup>3</sup>/d.

Jeanette's Creek: Gravity sewers and low pressure sewers are available options to service Jeanette's Creek. The gravity sewer option would require 3 pumping stations and the low pressure sewers would require a single pumping station. Either option would discharge to the Tilbury sewer system. 20 year peak flow: 385 m<sup>3</sup>/d.

Prairie Siding: On site treatment is recommended. 20 year peak flow: 44 m<sup>3</sup>/d.

North Buxton: Gravity sewers with 3 pumping stations discharging to the existing Chatham system at the Bloomfield Pumping station. There is also the possibility of combining the wastewater flows from South Buxton with the flows from North Buxton to have both treated at the Chatham treatment facility. 20 year peak flow: 449 m<sup>3</sup>/d.

South Buxton: Gravity sewers with a pumping station and forcemain discharging into the proposed wastewater system in North Buxton and then to the existing Chatham system. 20 year peak flow: 160 m<sup>3</sup>/d.

Dealtown: Collection would use gravity sewers and a pumping station. There are several options for treatment for Dealtown; the area could utilize the existing systems at either Merlin, Chatham, or Blenheim. Alternatively, Dealtown could be serviced by a new treatment facility in the Erie Beach area. 20 year peak flow: 300 m<sup>3</sup>/d.

Glenwood: Gravity sewers and a forcemain to the existing Merlin system for treatment. 20 year peak flow: 61 m<sup>3</sup>/d.

Port Alma: Gravity sewers and a forcemain discharging to the Glenwood system which in turn would discharge to the existing Merlin system for treatment. 20 year peak flow: 143 m<sup>3</sup>/d.

Campers Cove: Gravity sewers with a pumping station and forcemain discharging to the Wheatley municipal system where it would be treated. 20 year peak flow: 284 m<sup>3</sup>/d.

Cedar Springs: There are two options to service Cedar Springs, the first would require two pumping stations to discharge the wastewater flows to the Blenheim treatment facility. The second option would be to create a new wastewater treatment facility near Bisnett Line to service Cedar Springs, Erie Beach, Dyke Road, Erieau and Shrewsbury, only gravity sewers would be required for this option. 20 year peak flow: 465 m<sup>3</sup>/d.

Erie Beach: There are two options to service Erie Beach; the first requires 3 pumping stations to discharge to a new treatment facility near Bisnett Line. The second option requires a forcemain to pump the wastewater 15m uphill to Cedar Springs and have it discharge to the existing Blenheim system. 20 year peak flow: 591 m<sup>3</sup>/d.

Dyke Road: Wastewater could be collect using gravity sewers and forcemains to discharge to the proposed Erie Beach wastewater treatment plant or to Cedar Springs and on to Blenheim. 20 year peak flow: 672 m<sup>3</sup>/d.

Erieau: Gravity sewers and three pumping stations are required for collection of wastewater and discharged either to the new Erie Beach wastewater treatment plant or to the existing Blenheim system via Dyke Road, Erie Beach and Cedar Springs. 20 year peak flow: 1,662 m<sup>3</sup>/d.

Shrewsbury: Gravity sewers and low pressure sewers were considered for Shrewsbury. The Gravity sewer option requires three pumping stations and the low pressure sewers option would require 1 pumping station. Both options can discharge to either the proposed Erie Beach wastewater treatment plant or the existing Blenheim system. 20 year peak flow: 1,538 m<sup>3</sup>/d.

Rondeau Bay Estates: Gravity sewers and a single pumping station for collection. Treatment can occur at a proposed Rondeau Area wastewater treatment plant or the existing municipal system in Ridgetown. 20 year peak flow: 393 m<sup>3</sup>/d.

Rondeau Provincial Park: The future requirements for the park are uncertain and will be the responsibility of Ontario Parks. 20 year peak flow: 1,148 m<sup>3</sup>/d.

Bates Subdivision: Collection would use gravity sewers and a pumping station to discharge to either the proposed Rondeau Area wastewater treatment facility or the existing Ridgetown sewer system for treatment. 20 year peak flow: 541 m<sup>3</sup>/d.

Rose Beach Line: A gravity sewer with 3 pumping stations could be used for the more densely populated areas of Rose Beach Line, and the more sparse areas would continue to use on-site systems. The gravity system would discharge to either the new Rondeau Area treatment facility or the existing Ridgetown Wastewater treatment facility. 20 year peak flow: 556 m<sup>3</sup>/d.

Wildwood Estates: This area is privately owned and can continue to use on-site systems or utilize a pumping station to either the existing system at Ridgetown or to a new Rondeau Area wastewater treatment facility. 20 year peak flow: 1,884 m<sup>3</sup>/d.

Morpeth: Gravity sewers and pumping stations would be required to discharge the wastewater to the existing Ridgetown treatment facility or by gravity to a new wastewater treatment plant in the Rondeau Area. 20 year peak flow: 469 m<sup>3</sup>/d.

***Existing Wastewater Treatment Facilities Available Capacity***

Blenheim WPCP: 1,991 m<sup>3</sup>/d

Chatham WPCP: 14,600 m<sup>3</sup>/d

Dresden WPCP: 2,926 m<sup>3</sup>/d

Merlin Lagoons: 211 m<sup>3</sup>/d

Mitchell's Bay: 365 m<sup>3</sup>/d

Ridgetown WPCP: 273 m<sup>3</sup>/d

Thamesville WPCP: 541 m<sup>3</sup>/d

Tilbury Lagoons: 2,864 m<sup>3</sup>/d

Wallaceburg WPCP: 3,878 m<sup>3</sup>/d

Wheatley WPCP: 1,346 m<sup>3</sup>/d