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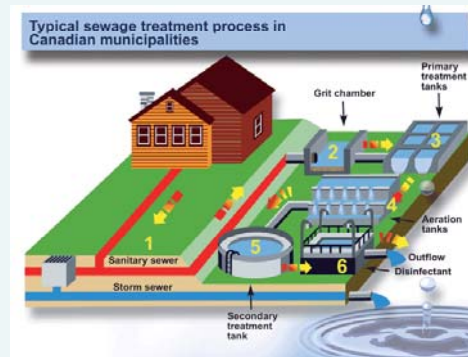
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# Updates to the Municipal Sewage Program

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# Outline

- Partnerships
  - Bypass/overflow Approval Project
  - Grand River Watershed Wastewater Optimization Pilot
  - Critical Infrastructure Assurance Program
- Wastewater Data and Public Reporting





# Partnerships

# Bypass/Overflow Approval Pilot

## Proposal

- Amend sewage treatment plant and collection system approvals in several phases to clarify and set uniform provincial requirements for bypasses and overflows
  - Standard definitions
  - Electronic monitoring and reporting
  - Triggers to implement Pollution Prevention Control Plans (PPCP)
- Initial phase is a pilot involving volunteer municipalities ranging in size and complexity
- Pilot's purpose is to test proposed requirements and allows participants an opportunity to input

## Anticipated Implications

- Fair and consistent application of existing policies (F-5-1 & F-5-5)
- Some additional information and a new reporting approach
- Estimated 60% of municipalities with events have or are developing plans



## Participants

- Thunder Bay
- Region of Halton
- Oakville
- Burlington
- Region of Niagara (2 plants)
- Smiths Falls
- Wellington North (OCWA)
- Espanola (OCWA)
- South Bruce

# Bypass/Overflow Approval Pilot

## Status

- Proposed approvals' terms and conditions drafted
- Electronic submission through the internet ready
- Initial comments received and met with participants

## Concerns Raised

- New definitions & interpretations of the definitions
- When and what type of sampling is required?
- Notifying downstream users of events
- When is disinfection required?

## Ministry Response

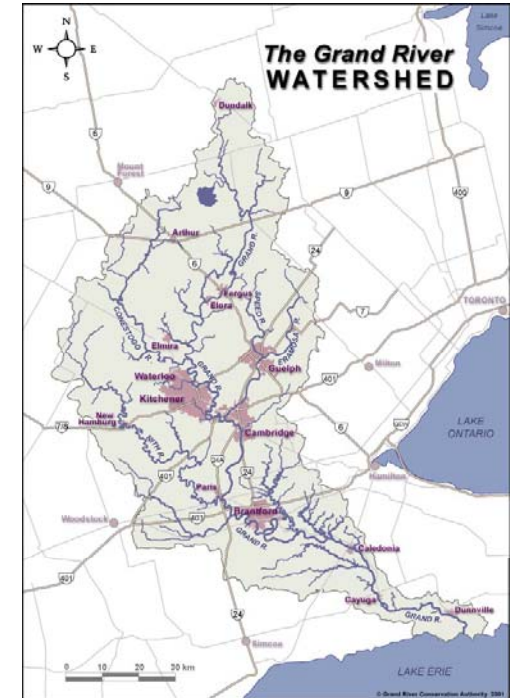
- Definitions in 2008 Design Guidelines - potential decision tree to help interpretations
- Will reconsider sampling levels
- Removing notify downstream users requirement
- Disinfection requirements to be determined by local health unit/medical officer of health

## Next Steps

- Issue notices for approvals to participants (early 2011)
- Participants begin new reporting (early 2011)
- Assess pilot results and determine approach for remaining municipalities (late 2011)

# Grand River Watershed Wastewater Optimization Pilot

- Pilot's objectives
  - Increase awareness and benefits of treatment plant optimization
  - Engage and enable plant managers & operators
  - Identify treatment plant candidates for optimization in watershed
  - Create a watershed community for sharing knowledge and experience to enhance wastewater treatment
- Based on the Composite Correction Program and two recent successful examples at Guelph and Haldimand
- Three consecutive workshops
  1. Introduction to the program, Sept/2010
  2. Major Unit Processes, Nov/2010
  3. Interpretation, Feb/2011
- More information is available at the Grand River Website



## Steering Committee

- Grand River Conservation Authority – lead
- City of Guelph
- City of Hamilton
- Haldimand County
- Ministry of the Environment

# Ontario's Critical Infrastructure Assurance Program

## Emergency Management Ontario Lead

- A province-wide program to:
  - Identify Ontario's critical systems – infrastructure, facilities, technologies, networks, assets, processes, and services
  - Assess the linkages and dependencies between these critical systems
  - Develop strategies to increase the resiliency
- Process
  - Form sector working groups of government/private sector representatives
  - Identify/assess infrastructure
  - Develop sector model to identify dependencies
  - Develop Assurance Document /Best Practices to reduce vulnerabilities and improve recovery

**During an emergency the public expects government to lead and the private sector to work with government to resolve the issues.**



### Nine broad Infrastructure sectors:

- Food and Water
- Health
- Electricity
- Transportation
- Gas and Oil
- Financial Institutions
- Telecommunication Systems
- Public Safety and Security
- Continuity of Government

# Critical Infrastructure – Water Sector

## Ministry of the Environment (Sector Lead)

- **Drinking Water Sector**
  - Working Group established since 2004
  - Sector Map developed and used for broader interdependencies model
  - Assurance Statement written
  - Preliminary vulnerability assessment and potential solutions and best practices
- **Wastewater Sector**
  - Working group established this year
  - Initial sector map and Assurance Statement
- **Best Practices Opportunities**
  - Emergency response planning resources posted on the OWWA website
  - Water/Wastewater Agency Response Network (WARN) in Ontario → a utility-driven model to share staff and equipment during an emergency

### Drinking water participants

- Provincial ministries e.g., Municipal Affairs
- Federal departments e.g., Public Safety
- Ontario Clean Water Agency
- Ontario Water Works Association
- Canadian Council of Independent Laboratories
- Regional Municipalities: Durham, Niagara, Waterloo, Stratford
- Cities of Toronto, London, Ottawa
- Lake Huron & Elgin Area

### Wastewater participants

- Provincial ministries e.g., Municipal Affairs
- Federal departments e.g., Environment
- Ontario Clean Water Agency
- Water Environmental Association of Ontario
- Regional Municipalities: Peel, Durham,
- City of Toronto



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# Wastewater Data Reporting

# Municipal Wastewater Reporting

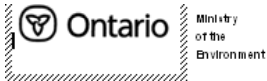
## *Current Process*

- Legislation & Certificates of Approval
  - Forthwith Notification
  - Site-specific requirements e.g., annual reports
- Reporting of Municipal Sewage Treatment Plant Discharge Data Letter, dated March 2000  
(Municipal Utility Monitoring Program)
  - Submission of discharge data on a quarterly basis to the ministry



# Municipal Wastewater Reporting

## Current Process Continued



Municipal Utility Monitoring Program  
Mechanical Plants R1

Municipality:	
Project Name:	Operating Authority:
Address:	Address:

File No.	Works Number	Data Period Month	Year	Discharge Type	Update Code
46		3	1	2	R
1 2	3 4 5 6 7 8 9 10 11	16	19	20 21	22 80

C.P.		Parameter Code	Dec.	Mo	Yr				
0 1	<b>FLOWS</b>								
12 13	Total Flow (10 <sup>6</sup> m <sup>3</sup> )	5 0 0 1 0	3						
	Avg. Day Flow (10 <sup>6</sup> m <sup>3</sup> /d)	5 0 0 1 5	3						
	Max. Day Flow (10 <sup>6</sup> m <sup>3</sup> /d)	5 0 0 2 0	3						
		30 34 35 38 45							
2 6	<b>BYPASS</b>								
12 13	Plant Bypass Vol. (10 <sup>3</sup> m <sup>3</sup> )	5 0 0 2 6	3						No. of Occurrences
	Duration (Hrs.)	8 0 5 6 3	1						
	Secondary Bypass Vol. (10 <sup>6</sup> m <sup>3</sup> )	5 0 0 4 0	3						
	Duration (Hrs.)	8 0 5 6 5	1						48 51
		30 34 35 38 45							
0 3	<b>RAW SEWAGE</b>								
12 13	BOD (mg/L)	0 0 0 0 1	0						No. of Samples
	SS (mg/L)	0 0 0 0 6	0						
	TIN (mg/L)	0 0 0 2 0	2						
	Total P. (mg/L)	0 0 0 3 3	1						
		30 34 35 38 45							48 51
0 4	<b>FINAL EFFLUENT</b>								
12 13	BOD (mg/L)	0 0 0 0 1	1						
	SS (mg/L)	0 0 0 0 6	1						
	Ammonia (mg/L)	0 0 0 1 9	2						
	TIN (mg/L)	0 0 0 2 0	2						
	Total P. (mg/L)	0 0 0 3 3	2						
		30 34 35 38 45							48 51
0 7	<b>DISINFECTION</b>								
12 13	Chlorine Used (kg as Cl <sub>2</sub> )	5 0 1 0 0	1						
	Chlorine Dosage (mg/L as Cl <sub>2</sub> )	8 0 4 1 0	1						
	Chlorine Resid. (mg/L as Cl <sub>2</sub> )	8 0 4 2 0	1						
		30 34 35 38 45							48 51

## Municipal Utility Monitoring Program

- Monitoring data includes flows, bypass, chlorine used, dosage and residual, and influent & effluent parameters for CBOD, SS, TP, Ammonia and TKN
- The ministry uses these forms to publicly report municipal monitoring data



# Municipal Wastewater Reporting

## *Future Process*

- Because of the following initiatives, the ministry is currently assessing its data management needs.
  - The proposed Federal Wastewater Systems Effluent Regulation
  - The Canadian Council of Ministers of Environment (CCME) municipal wastewater strategy
  - The pilot project to amend bypass/overflow requirements in Certificates of Approval at wastewater treatment plants involving a number of volunteer municipalities
- The next step may lead to reporting all municipal wastewater data to the ministry electronically through the internet, including the proposed federal regulation and Certificate of Approval requirements.
- Once an appropriate path forward for improved data management is established you will be contacted by the ministry.

# Public Reporting of Monitoring Data

## DATA DOWNLOADS





**Datasets Available for Direct Download**

- **Climate Model Assessment over Ontario (CMAO) data**
- **Drinking Water Surveillance Program (DWSP) data, 1998-2007**
- **Drinking Water "Where does my water come from?" Map data, 2010**
- **Hazardous Waste data, 2002-2008**
- **Municipal/Industrial Strategy for Abatement (MISA) data, 2007-2008**
- **Ontario Forest Biomonitoring Network (OFBN) data, 1990-2006**
- **Ontario Lake Partner (LPP) program data, 2000-2009**
- **Provincial (Stream) Water Quality Monitoring Network (PWQMN) data, 2003-2008**
- **Well Record data, 1899-2010**

**Datasets Available on Other Sites**

- **Ambient Air Quality Network data**
- **Sport Fish Contaminant Monitoring Program Advisories**

**Formats Available:**  
*Data Downloads are distributed digitally.*

- **Shapefiles (.SHP)** can be downloaded to your computer in ESRI shapefile format, which consists of several related files in one zipped document. Shapefile format requires ArcGIS Explorer, ArcMap or other Geographic Information System (GIS) software to view, but is the best choice if you wish to perform geographic analysis. 
- **Access® (.MDB)** databases can be opened in Access® if you have MS Office, or any of the ArcGIS suite of products. 
- **Excel® (.XLS)** documents can be viewed in Excel® if you have MS Office, Google Documents or OpenOffice.org. 
- **KMZ** documents are stored as zip files. They must be downloaded and unzipped before they can be viewed in **Google Earth**, to allow visualizing spatial data. 

## Monitoring Data

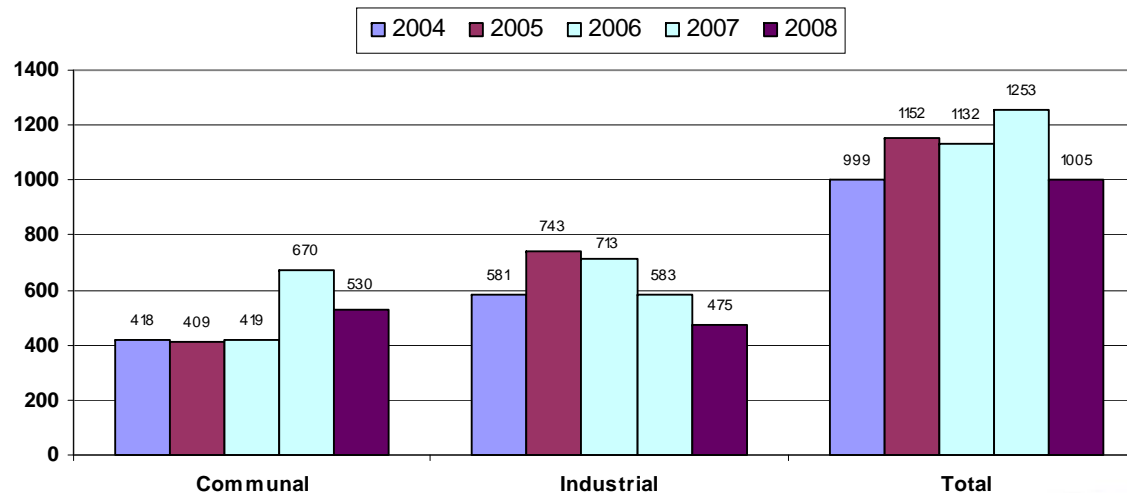
- Industrial Sewage data from large facilities – currently available
- Municipal Monitoring Data – under development
  - Only discharge data submitted as part of the Municipal Utility Monitoring Program
  - Does not include bypass information
- Available at <http://www.ene.gov.on.ca/en/publications/dataproducts/index.php>

# Public Reporting of Discharge Exceedances

## Environmental Compliance Report

- Contaminant discharges to water and emissions to air that exceed limits found in legislation, certificates of approval, orders, and/or guidelines.
  - Shows overall trends for non-compliance across the province
  - Provides details on each incident broken down by region.
  - Available at <http://www.ene.gov.on.ca/envision/compliance/compliance.htm>

**Wastewater Limit Exceedances 2004 - 2008**



# Public Reporting of Discharge Exceedances

Excerpt of details provided in from Environmental Compliance Report

## 2006 Municipal/Private Sewage Monthly Summary - Central Region

**ClubLink Corporation -  
Rattlesnake Point Golf Club**

25 - 5405 Regional Rd  
Milton

Sector: Miscellaneous  
Ministry Office: Halton-Peel

Date	Limit	Unit	Frequency	No. of Exceedances	Min.	Max.	Facility Action	Ministry Action
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### AMMONIA NITROGEN

#### C of A/Permit Non-Compliance

January 1, 2006 - December 31, 2006	2.5	mg/L	annual avg	1 exceedance	4.77	4.77	Action Plan Submitted - Implementing Improvements, Additional Monitoring Underway, Conducting Study, Equipment Modified, Repaired, Replaced or Re- calibrated	Voluntary Abatement Program Underway
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Total C of A/Permit Non-Compliance = 1 exceedance

### ESCHERICHIA COLI

#### C of A/Permit Non-Compliance

July 1, 2006 - July 31, 2006	200	CT/100 mL	mon avg	1 exceedance	1306	1306	Action Plan Submitted - Implementing Improvements, Conducting Study	Voluntary Abatement Program Underway
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Total C of A/Permit Non-Compliance = 1 exceedance