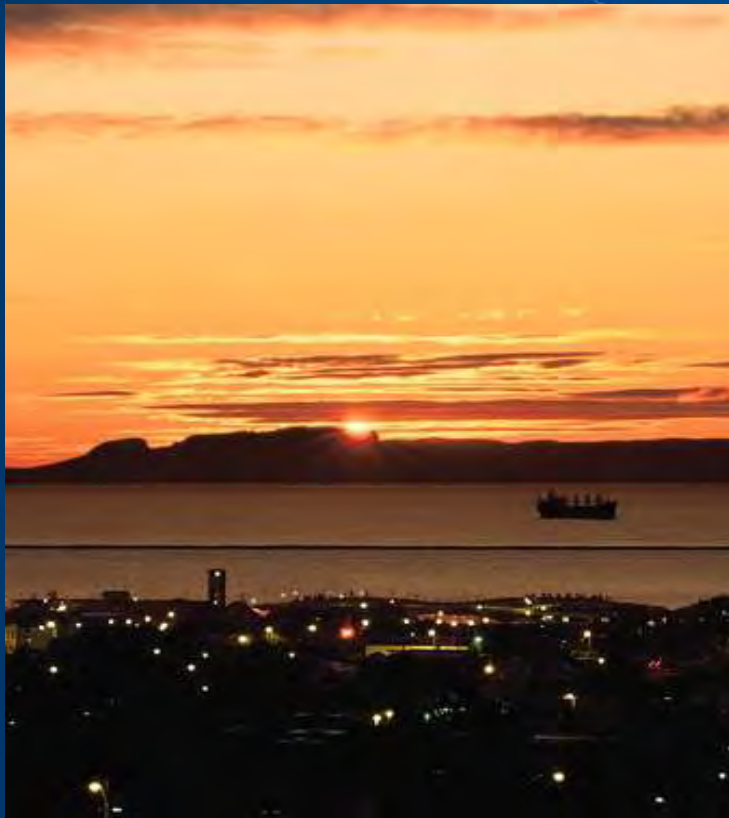


# Enhancing and Protecting Our Environment



**Making a Great Lake Superior  
By Mayor Lynn Peterson  
City of Thunder Bay**

**Oct. 31<sup>st</sup> 2007**

CITY OF  
**Thunder Bay**  
*Superior by Nature*

# Thunder Bay's Environment

What are we doing to protect these resources in a sustainable manner?

Our story starts in 1993 when the Environment Division was created in the City's Transportation & Works Department to bring together all aspects of water treatment and sewage treatment under one Manager... Hence the Lake-to-Lake concept was born.

# Thunder Bay's Environment

Then, in 1998, the City did a study to determine the extent of contamination of the watercourses passing through the City due to direct municipal discharges and to recommend ways to reduce this pollution

Work began on an extensive and multifaceted Pollution Prevention and Control Plan.

A major legacy of this award-winning plan is a new Secondary Sewage Treatment Plant




# Thunder Bay's Environment

## Short Term Elements:

- Collection System Management
- Combined Sewer Overflow (CSO) Controls
- Measures to reduce basement flooding
- Stormwater management
- Other Pollution prevention initiatives
- Enhanced sewage treatment at the Atlantic Avenue Water Pollution Control Plant

# Thunder Bay's Environment

## Long Term Elements:

-  **Collection system management**
-  **Basement flooding**
-  **Catchbasin Cross Connections**

# Thunder Bay's Environment

## Progress Report

- 📄 All PPCP components nearing completion
- 📄 Received \$25 Million grant from CSIF for current projects
- 📄 Done in absence of Regulations
- 📄 Secondary sewage treatment plant completed

# Thunder Bay's Environment Sewage

**New \$61 million secondary  
sewage treatment plant:**






- **Uses state of the art technology including nitrification for ammonia reduction**
- **Plant operations data analyzed in real time**
- **2007 - disinfection process change from chlorination to ultraviolet radiation**
- **Currently cogeneration using sludge gas to reduce energy requirements is being designed**

# Thunder Bay's Secondary Sewage Treatment Plant



# Thunder Bay's Environment (Sewage)

## Sewer Use Control Program

-  Focus is to abate problem at source
-  Best Management Practice (BMP's)
-  Standby staff to respond to a spill
-  Surcharge Agreements
-  By-laws (enforceable)

# Thunder Bay's Environment (Water)

**New \$46 million water  
treatment plant:**

- State of the art, “ZeeWeed” five train membrane ultra-filtration system capable of removing viruses and parasites
- Minimizes the use of chemicals for treatment (Javex 12 only)
- wastewater from treatment process sent to WPCP for cleaning prior to entering Lake
- Water quality meets or goes beyond current provincial drinking water quality standards

# Thunder Bay's Water Treatment Plant – under construction



# **Thunder Bay's Environment (Water)**

**We have a variety of other programs to encourage water conservation in partnership with a community-based organization called EcoSuperior:**

- **Focus is on conservation devices and changing water use habits**
- **Water Audits – to identify potential savings**
- **Water Conservation Education Program to community & Grade 5 Students**
- **Downspout Disconnection Program**
- **Rain Barrels (subsidy provided)**
- **Toilet/Shower Head/Faucet Replacements (subsidy provided)**

# Rain Barrel Catching Water From Downspout



T H U N D E R   B A Y

# WATER SAVER'S GUIDE



**IS YOUR HOUSEHOLD  
A WATER SAVER OR A WATER WASTER?**

**WATER QUALITY**

**IN THE BATHROOM**

**IN THE KITCHEN**

**IN THE GREAT OUTDOORS**

# What do we pay for Water and Sewage ? (2005 survey)

	Residential 360 m3 .095 M USG	Commercial 10,000 m3 2.65 M USG	Industrial 500,000 m3 132.1 M USG
Thunder Bay	\$577	\$7,891	\$393,070
Provincial Avg	\$756	\$17,096	\$801,739
Provincial min	\$351	\$7,215	\$268,288
Provincial Max	\$1,310	\$42,600	\$2,130,000

# Contacts:

[www.thunderbay.ca](http://www.thunderbay.ca)

[www.ecosuperior.com](http://www.ecosuperior.com)

[www.earthwisethunderbay.com](http://www.earthwisethunderbay.com)

# Questions & Discussion

