



Enhancing and Protecting our Environment

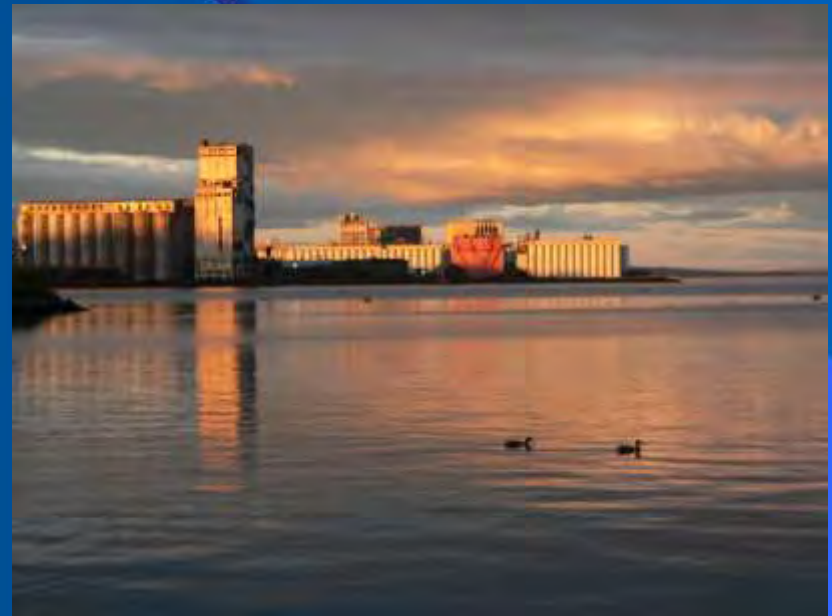
Making a Great Lake Superior Conference

October 30th, 2007



Overview

- 1) Current Strategic Directions
- 2) Climate Change Programs
- 3) EarthWise
- 4) Other Programs
- 5) Where are we going?
- 6) Skill testing questions



New Foundation Strategic Plan

Mission

To provide a balance of services that improves our quality of life and supports our economy in a cost-effective manner

New Foundation Strategic Plan

Principles - Our Future Requires:

- Sustainability & Accountability
- Innovation
- Cost Effectiveness
- Fiscal responsibility
- Informed & Involved citizens
- Cultural diversity
- Economic Growth
- Regional Leadership
- Partnerships
- Environmental Stewardship
- Minimizing competition with the private sector

Climate Change Programs

- Green Power
- Greening of the fleet
- Conservation

Climate Change – Green Power

Corporate Policy on Environment/ Community Sustainability

- reduce consumption of non-renewable resources
- strengthen our green procurement commitments
- recognizes the precautionary principle

Climate Change – Green Power

Components:

Loch Lomond Hydroelectric Project	500 kW
Sewage Treatment Plant Biogas	500 kW
John Street Landfill Gas	3 – 6 MW
Total	4.0 – 7.0 MW

Climate Change – Green Power Landfill Gas

- **Potential Power Generation**
Existing Conditions 3 MW
Predicted by 2020 6 MW
- **Potential Heat Recovery from Power Generation**
3 MW/hr power generation (10.8 gigajoules) (10.2 Million BTU's)
6 MW/hr power generation (21.6 gigajoules) (20.4 Million BTU's)

Climate Change – Green Power Procurement

Goal:

To produce/purchase equivalent green energy to equal corporate demand

Climate Change – Greening of the Fleet

- **Smart cars (2) – pilot testing in building services**
- **Heavy truck (5) Transit (2) - Bio–diesel pilot program**
- **1/2 ton trucks (5) - Ethanol pilot program**
- **Tender for Hybrid/flex fuel transit buses**
- **Right sizing/multi use vehicles in the fleet**
- **Anti Idling policy - Corporation**

Climate Change – Conservation

Capital Asset replacement program for:

- Buildings
- Roof
- HVAC
- Envelope

Energy Audits

- Prioritizing replacement of equipment

LEED's

- Not certified to date
- Using the standards for new construction

Climate Change – Water Conservation

A variety of programs 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
- Toilet/Shower Head/Faucet Replacements

EarthWise

EarthWise Thunder Bay CEAP

- Partnership between City and community (residential, commercial, industrial, and institutional sectors).
- Goal is to develop and then implement a Community Environmental Action Plan Following the PCP Milestone Framework



EarthWise Thunder Bay CEAP

- Comprehensive, integrated plan that focuses on 13 different local issues.
- Public participation through Steering Committee, Community Partnership Program, and Working Groups
- Completion of Emissions Inventory and Forecast (Milestone 1)



Other Programs

Clean Green & Beautiful

- **Clean** – minimize impact on environment by reducing, reusing & recycling waste products & maintaining a healthy built & natural environment for present & future generations
- **Green** – preserves important natural features, restores & enhances ecological function.
- **Beautiful** – celebrates cultural diversity and history through the design of built form (streets, bridges, buildings & neighbourhoods) as well as through the arts (visual, performance & civic spaces)

Pollution Prevention & Control Plan

- **FCM Award Winning Pollution Prevention and Control Plan**
 - **Secondary treatment**
 - **Phosphorus removal**
 - **Nitrification to remove ammonia**

Other Programs

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
- 2008 - disinfection process change from chlorination to ultraviolet radiation
- Currently cogeneration using sludge gas to reduce energy requirements is being designed

Other Programs

New \$46 million water treatment plant:

- State of the art, five train membrane ultra-filtration system capable of removing viruses and parasites
- Source water protection intake zone study underway

Other Programs

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)

Other Programs

PCB Removal Program

- Street Smart
- Lighting
- Capacitors

Other Programs (partnership – EcoSuperior)

Mercury Diversion

- Button Battery Collection
- Fluorescent Tubes (2000)
- Switches
- Mercury Thermometer Reduction (2001)

Other Programs

- Asset management program
- Salt Management Plan
- Watt a Bright Idea
- ESP – next generation

Where are we Going?



Where are we going?

We're Taking Action

- Traffic Signal conversion to LED
- Street Light Conversion – night sky technology – wattage reduction /LED
- Partners for Climate Protection Initiative
- Continued energy-reduction studies and implementation

Where are we going?

- Transition to a more sustainable community
- Continued organizational learning, and growth of adaptive capacity
- Building on success of past strategic plan
- Implementation of CEAP



Outcomes

- Enhanced civic pride
- Enhanced protection of ecological services
- Enhanced health and wellbeing of local citizens
- Reduced operating costs in long-term
- Reduced fossil fuel use and GHG emissions
- Employee satisfaction and pride
- Attraction and retention of outside residents

Skill testing Questions?



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