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
- ½ 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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