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Message from the EarthCare Sudbury Co-Chairs

This year marks the ten year anniversary of the EarthCare Sudbury Community Partnership. 2010 is therefore a fitting time to renew our commitment to sustainability in Greater Sudbury. On behalf of the EarthCare Sudbury Advisory Panel, it is our pleasure to present this updated plan for environmental action in Greater Sudbury.

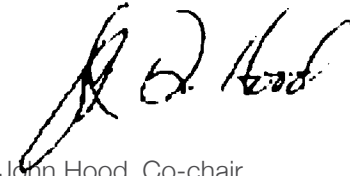
This plan, the 2010 EarthCare Sudbury Action Plan – Becoming a Sustainable Community, builds on the foundation established by Greater Sudbury's former Local Action Plan, and reflects the progress our community has made since its release in 2003.

Revised with recommendations from EarthCare Sudbury Partners, this Plan will guide our way forward in improving natural ecosystem health, reducing greenhouse gas emissions, and enhancing the livability and resiliency of the Greater Sudbury community. But EarthCare Sudbury is still a proponent of innovation, and as new challenges, ideas, and aspirations emerge, this plan will continue to evolve. It is a living document,

adaptable to our changing times and changing environment. The new electronic format will be a big advantage for adaptability, making it easier to keep the Plan current and to track our ongoing progress.

We are also looking forward to encouraging more citizen participation through the 2010 EarthCare Action Plan. Over the past 10 years, EarthCare Sudbury has grown to involve over 100 businesses and organizations that have committed to reduce the environmental impact of their operations. As we move ahead with implementing the EarthCare Action Plan, we hope to expand our reach to encourage the general public to make environmentally responsible choices as well.

Please join the EarthCare Sudbury Advisory Panel and the growing network of EarthCare Sudbury Community Partners in implementing the EarthCare Action Plan. We can all help Greater Sudbury to become a more sustainable community.



John Hood, Co-chair
EarthCare Sudbury Advisory Panel



Linda Meret, Co-chair
EarthCare Sudbury Advisory Panel

EarthCare Sudbury Advisory Panel

John Hood, Co-chair, Renewable Resource Recovery Corp.

Joscelyne Landry-Altmann, Councilor Ward 12, City of Greater Sudbury

Cindi Briscoe, City of Greater Sudbury, Healthy Community Cabinet

Tony Cecutti, AECOM

Bruce Fortin, Sudbury & District Health Unit

Jason Innes, AECOM

Bill Lautenbach, City of Greater Sudbury

Franco Mariotti, Science North

Kameal Mina, Cambrian College

Victoria Morrow, City of Greater Sudbury

Penny Sutcliffe, Sudbury & District Health Unit

Linda Meret, Co-chair, National Research Council – IRAP

Claude Berthiaume, Councilor Ward 3, City of Greater Sudbury

Scott Card, reThink Green

Aaron Dent, Halsall Associates Ltd.

Terry Fortin, FedNor

Lisa Lanteigne, Vale Inco

Les Lisk, Greater Sudbury Hydro

Deb McIntosh, Rainbow Routes Association

Stephen Monet, City of Greater Sudbury

Alain Noël, Conseil scolaire public du Grand Nord de l'Ontario

Arik Theijsmeijer, FedNor

Message from the Mayor

One of the reasons that I'm proud to be a Sudburian is the tradition this community has of banding together to overcome adversity. As we all know, environmental issues are presenting rapidly growing challenges not only for Greater Sudbury, but for communities around the world.

EarthCare Sudbury was formed ten years ago to bring this community together around the key environmental issues facing our city and to chart our course towards sustainability.

With the release of the 2010 EarthCare Action Plan we are beginning a new chapter of this journey, and I am pleased that to see that cooperation and broad-based participation are still top priorities for implementing the Plan.

I commend the actions of those businesses, organizations and individuals in Greater Sudbury who have discovered innovative ways to reduce their environmental impact by working together.

Greater Sudbury's past successes in environmental restoration have demonstrated what is possible when we collaborate. By fostering community partnerships and encouraging citizen participation through the EarthCare Action Plan, we have another winning formula for continued environmental progress in Greater Sudbury.

Best wishes to the EarthCare Sudbury Advisory Panel in guiding the implementation of this EarthCare Sudbury Action Plan and thank you to all of the EarthCare Sudbury Partners for your ongoing commitment to making Greater Sudbury a cleaner, greener, healthier and more sustainable community.



John Rodriguez, Mayor
City of Greater Sudbury

Introduction

Background

Since 2000 EarthCare Sudbury has been forging a course for local environmental action on behalf of the Greater Sudbury community.

With the release of the EarthCare Sudbury Local Action Plan in 2003, Greater Sudbury became one of only a few Canadian communities that had formally committed to becoming more sustainable.

This update to the EarthCare Sudbury Local Action Plan, developed in consultation with the EarthCare Sudbury Partners, represents a renewal of that commitment.

View the EarthCare Sudbury Declaration of Community Partners [here](#). Find out who is an EarthCare Sudbury Partner [here](#).

Purpose

Becoming a cleaner, greener, healthier and more sustainable community is the primary focus of the EarthCare Sudbury Action Plan.

The Action Plan has three overarching goals:

Enhance the environmental health of Greater Sudbury – to improve the quality of our air, land, water and living systems – and in so doing, improve the social and economic well-being of future generations.

Encourage members of the community to take environmental responsibility by carrying out local actions that contribute to community sustainability and reduce emissions of greenhouse gases.

Share the knowledge and experience gained here with other communities and with the citizens of Greater Sudbury.

Imbedded in these goals are four very important principles:

The first of these is that ***we need to act now***. The way we live today – the resources we use (or don't use), the pollutants we emit (or don't emit), the actions we take (or don't take) – can have a profound effect on the planet and therefore, a profound effect on future generations.

The second principle is that ***we need to protect and enhance the natural environment***. When we alter the natural environment – improve it or make it worse – we also affect the economic and social environments. Over the long-term, the economic and social health of Greater Sudbury is tied to its environmental health.

The third principle is that ***we all need to be involved***. Governments alone can't solve today's environmental challenges, nor can industries or institutions. Improving the environmental health of our community requires the involvement of

everyone – residents, workers, business owners, organizations, schools, colleges, universities and others.

The fourth principle is that to achieve a cleaner, greener, healthier and more sustainable Greater Sudbury, ***we need to work together***. Through partnerships we can harness the creativity, experience, resources, energy and problem-solving capabilities that will foster success.

Themes

The development of the EarthCare Sudbury Action Plan was prompted by the ongoing need to take action on ***climate change*** and ***sustainability***, and by understanding the local benefits of taking these actions.

These benefits can be defined through four themes: Community Resilience, Community Livability, Greenhouse Gas Emissions, and Natural Ecosystem Health.

The key environmental issues affecting Greater Sudbury are in relation to one or more of these interconnected themes.

Community Resilience

As a resource community, Greater Sudbury knows first-hand how important it is to be resilient in the face of market fluctuations. In the coming decades however, climate change, resource scarcity and other environmental challenges are likely to require a new brand of community resilience. To achieve sustainability, we must become more efficient in terms of the resources we use (water, energy and materials), and more self-sufficient in producing energy, food and other goods. We must protect our “green capital” – the streams, rivers, lakes, groundwater, forests and wetlands that sustain life on the planet, and we must integrate environmental considerations into economic and social planning.

Community Livability

Community livability refers to the environmental and social quality of an area as perceived by residents, employees, customers and visitors. This includes safety and health (traffic safety, personal security, public health), local environmental conditions (cleanliness, noise, dust, air quality, water quality), the quality of social interactions (neighborliness, fairness, respect, community identity and pride), opportunities for recreation and entertainment, aesthetics, and existence of unique

cultural and environmental resources (e.g., historic structures, traditional architectural styles, walkable neighbourhoods, mature trees, productive farms and gardens, access to nature and green spaces).

Community livability directly benefits people who live in, work in or visit an area, increases property values and business activity, and it can improve public health and safety. Livability is largely affected by conditions in the public realm, places where people naturally interact with each other and their community, including streets, parks, transportation terminals and other public facilities, and so is affected by public policy and planning decisions.

(Taken from the [Online TDM Encyclopedia](#), created by the Victoria Transport Policy Institute in Victoria, British Columbia)

Greenhouse Gas Emissions

Like other Canadian towns and cities, the City of Greater Sudbury became involved in the climate change issue because municipalities generate large amounts of greenhouse gases.

The major reason for these emissions is our demand for usable energy, which often relies on

fossil fuels. Production, transmission and use of fossil fuels for energy produce enormous quantities of greenhouse gases.

Municipalities are capable of reducing greenhouse gas emissions by increasing energy efficiency, using renewable energy sources, and implementing urban design models that are less energy dependent. The EarthCare Sudbury Action Plan coordinates the efforts of the municipality and other sectors to make these changes.

Natural Ecosystem Health

A healthy natural environment provides us with clean air, abundant and clean water, plentiful resources, a stable climate, diverse life forms and food. As well, the natural ecosystems that make up a healthy environment can act as a line of defense against environmental threats. Perhaps one of the most common examples is the role the forest ecosystems play in filtering our water and air. Healthy natural ecosystems are vital for communities to remain resilient in overcoming present and future environmental challenges.

Key Elements

Comprehensive and integrated approach

Issues addressed by the EarthCare Sudbury Action Plan fall under nine priority areas: Air Quality, Energy, Food, Green Buildings, Land Use Planning, Natural Environment, Solid Waste, Transportation, and Water/Wastewater. Many of the actions proposed address multiple issues, and will have broad indirect benefits, such as contributing to local economic development.

Multi-sectoral representation

The network of EarthCare Sudbury Partners represents a cross-section of the community interests including industry, private enterprise, community groups and health and educational institutions. The EarthCare Sudbury Action Plan must therefore apply to all sectors – municipal, industrial, commercial, institutional and residential.

Integrated measurement and monitoring of progress

In updating the Action Plan, one of the improvements suggested by the EarthCare

Sudbury Partners was that it should take a more structured approach to monitoring and measuring progress. Many EarthCare Partners already measure and report on certain indicators of progress identified by this Plan. As an electronic document, the updated Action Plan links to the performance data collected by Partners and other sources through the internet.

Community Engagement

While individual actions are important to address environmental issues, it is the collective actions of a community that usually have the biggest impact. For this reason, partner participation was important in updating the Action Plan. Implementation will also continue to be a collaborative effort of the EarthCare Sudbury Partners.

To sustain Partner and public engagement going forward, EarthCare Sudbury will implement a comprehensive Communication Strategy. The strategy, which is currently being developed, will be separate from this Action Plan, but will revolve around the updated Plan and its key messages.

The EarthCare Sudbury Action Plan and Greater Sudbury's Healthy Community Initiative

We're part of a healthy community!

In 2007, Greater Sudbury was designated as a [Regional Centre of Expertise \(RCE\) on Education for Sustainable Development](#) by the United Nations University. The community received this designation in large part because of its [Healthy Community Initiative](#), which was launched in 2004.

The Healthy Community Initiative is founded on the four strategic priorities of [Greater Sudbury's Healthy Community Strategy](#):

- Active Living/Healthy Lifestyle
- Natural Environment
- Civic Engagement/Social Capital
- Economic Growth

These four pillars of Greater Sudbury's healthy community model are integral to Greater Sudbury's progress towards sustainability and thus must be considered in pursuing the goals and objectives of this Action Plan.

By assessing the impact of a community project or action in these key areas, the Healthy Community Initiative provides a valuable indication of our progress towards becoming a more sustainable community.

EarthCare Sudbury is the lead agency for the Natural Environment pillar.





Air Quality

Clean air is vital to our existence and strongly linked to our quality of life. In Greater Sudbury, air pollution caused by past methods of mineral processing contributed greatly to the area being barren of vegetation cover. But in recent decades, the local mining industry has advanced remarkably, and local air quality trends have improved.

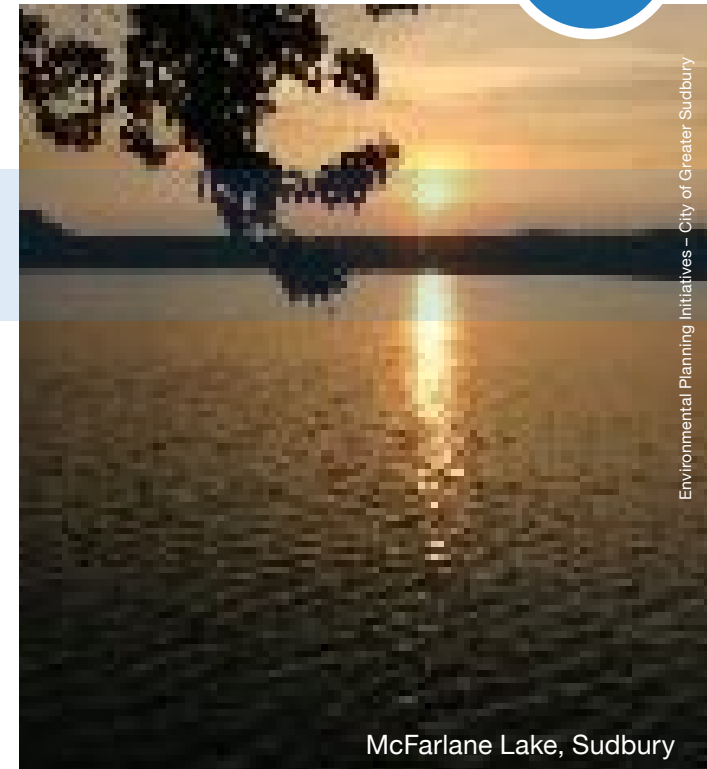
Greater Sudbury now has cleaner air than several Southern Ontario centres and comparable air quality to cities in Northern Ontario. Despite the tremendous improvement, public

perceptions of Greater Sudbury's air quality are still largely influenced by the past. For Greater Sudbury to be considered a more livable community, we need to clear up these misperceptions too.

Of course, continued actions to reduce air pollution are also necessary. We must find ways to tackle continuing air quality threats and to minimize local

Goal: A reputation for excellent air quality in Greater Sudbury.

emissions of air-borne pollutants that could affect air quality elsewhere.



McFarlane Lake, Sudbury

What YOU can do

- Trade in your inefficient woodstove for a low-emission model.
- Use low-VOC solvents, paints and surface coatings.

Threats

Ground-Level Ozone (O₃)

Ground-level ozone – a prime ingredient in smog – is one of the most significant air pollutants of concern in Greater Sudbury. Unfavourable local air quality readings are most often triggered by increased concentrations of ground-level ozone. A significant part of this problem is beyond local control however; more than half of the ground-level ozone measured during widespread smog episodes originates in the United States. In North America, automobile exhaust and energy generation from power plants are major contributors to the formation of ground-level ozone and smog.

Sulphur Dioxide (SO₂)

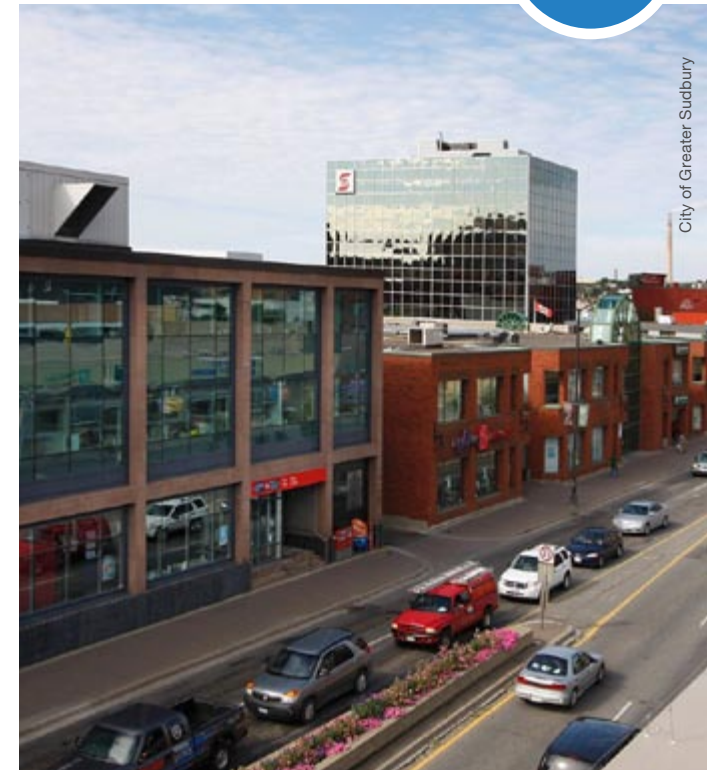
Sulphur dioxide (SO₂) is one of the by-products of metal smelting. It can aggravate existing respiratory health problems, damage trees and crops, and contribute to acid rain. Since 1960 SO₂ emissions from local smelters have declined by 93%, but hundreds of kilotonnes of SO₂ are still emitted every year, and occasionally local weather conditions will cause SO₂ concentrations to exceed the provincial 1-hour criterion.^{AQ1} Transportation and fuel combustion also contribute to increased SO₂ concentrations, however about 99% of SO₂ emissions in Greater Sudbury are due to local smelting operations.^{AQ2}

Particulate Matter (PM)

These tiny particles can travel deep into our lungs, causing irritation and respiratory illnesses. They can be emitted naturally, such as from wind-blown dust, or formed through chemical reactions. Particulate matter is one of the main components of smog and, like ground-level ozone, a significant portion is imported into Greater Sudbury during smog episodes. Residential, transportation and industrial sources contribute almost equally to urban concentrations of PM_{2.5} (particles ≤ 2.5 microns) in Ontario.

Metals

While metals are a natural part of the environment, the mining and smelting of these resources causes small particles containing metals to be released through smokestacks and as wind-blown dust from fugitive sources. Particulate metal emissions from mining and smelting in Greater Sudbury have decreased over time together with SO₂ emissions. However, further reductions in emissions of SO₂ and metals in particulate matter remain one of the top environmental priorities for the mining sector in Greater Sudbury and for the Ministry of the Environment.



City of Greater Sudbury

What YOU can do

- Participate in vehicle emission reduction programs.
- Maintain your oil furnace to keep it burning more efficiently.

Objectives & Actions

OBJECTIVE

Regularly communicate local air quality information to the public.

ACTIONS

EarthCare Sudbury Partners will:

- Summarize and report local air quality information
- Create opportunities for public dialogue about local air quality issues
- Provide information on local air quality to municipal decision makers
- Initiate awareness campaigns on health issues associated with poor air quality
- Ensure Greater Sudbury continues to be included in provincial and national air quality reports

OBJECTIVE

Consistently achieve zero exceedances of Ontario's Ambient Air Quality Criteria by 2015.

ACTIONS

EarthCare Sudbury Partners will:

- Continue to invest in emission reduction technology in their operations
- Participate in Ontario's [Drive Clean Program](#) for heavy duty vehicles
- Collaborate with other Ontario communities to address air quality issues
- Use solvents, paints and surface coatings with low or no volatile organic compounds (VOCs)

[View Ontario's ambient air quality criteria](#)



City of Greater Sudbury

What YOU can do

- Limit use of gas-powered yard maintenance equipment.
- Keep off-road recreational vehicles well maintained.

Objectives & Actions **con't**

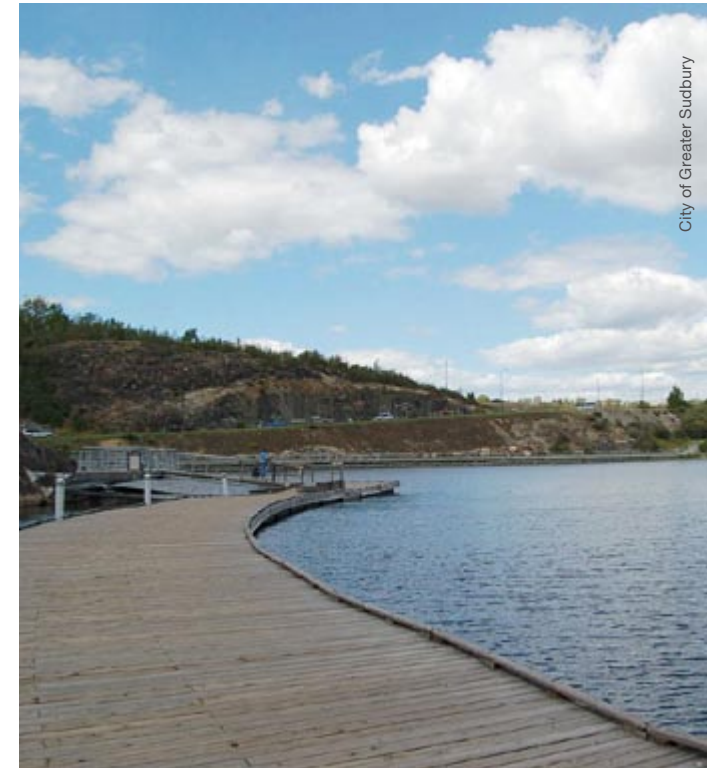
OBJECTIVE

Further reduce concentrations of common air pollutants produced through activities typical to Northern Ontario.

ACTIONS

EarthCare Sudbury Partners will:

- Implement programs that engage individual Sudburians in improving air quality (See [Transportation Section](#) for actions relating to vehicle emissions)



What YOU can do

- Develop fuel efficient boating habits.

References

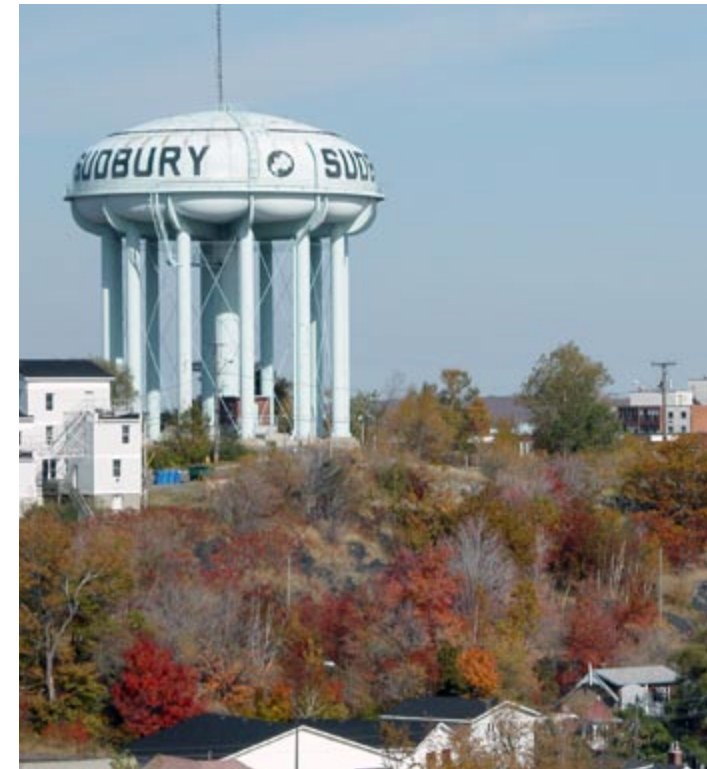
- AQ1 Clean Air Sudbury. (June 2009). [Air Quality Trends in Sudbury 1960-2007](#). p. 2
- AQ2 Clean Air Sudbury. (June 2009). [Air Quality Trends in Sudbury 1960-2007](#). p. 1
- AQ3 Potvin Air Management Consulting. (2009). [Air Quality Trends, City of Greater Sudbury 1998-2007](#). p.3
- AQ4 Ontario Ministry of the Environment. [Smog advisories issued for Ontario by the ministry since 1995](#).
- AQ5 Potvin Air Management Consulting. [Air Quality Trends, City of Greater Sudbury 1998-2007](#). p.19

Monitoring References

[Smog Advisory Statistics](#)

[AQI Readings](#)

[Clean Air Sudbury Air Quality Trends Report](#)



What YOU can do

- Drive less.



Energy

A stable supply of reasonably priced energy is central to our economic well-being, but the production, transmission and use of that energy produces significant environmental impacts. These impacts include alterations in river processes from damming, the generation of air pollution, the creation of wastes (including spent nuclear fuel), the contamination of surface and groundwater, and the emission of enormous quantities of greenhouse gases (GHGs).

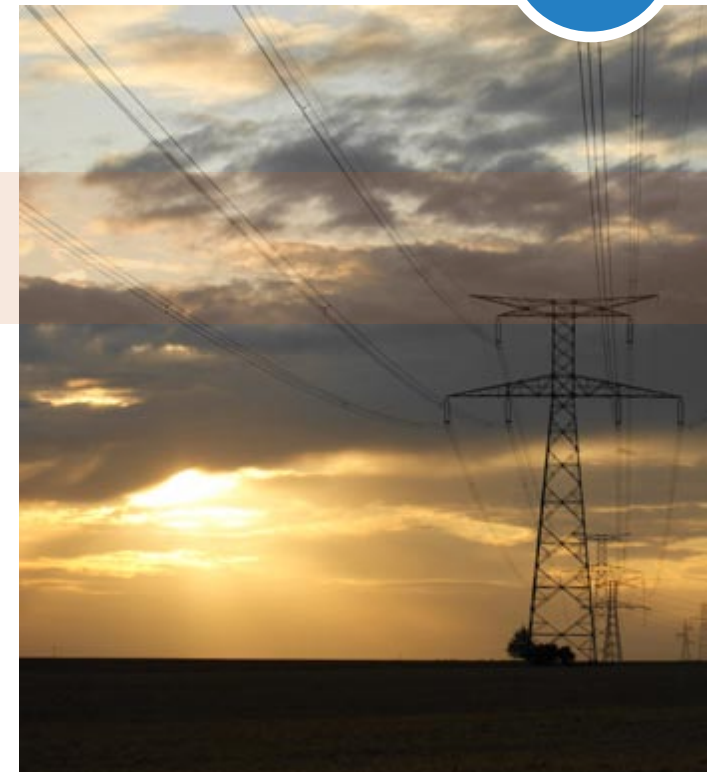
Goal: An 80% reduction in energy consumption by 2050.

The greenhouse gas (GHG) emissions generated by our energy-dependent lifestyles are the foremost human-induced contributor to global climate change. The international community has set progressive targets for reduced GHG emissions, beginning with the [1999 Kyoto Protocol](#).

It set a 6% reduction target below 1990 levels in carbon dioxide emissions (the main GHG responsible for climate change). More recently, G8 leaders have committed to cut their countries' GHG emissions by 80% by 2050.^{EN1}

While generating more energy from renewable sources is one strategy for emission reduction,

in order to meet international GHG reduction targets, and to tackle the other negative impacts our energy demands have on the environment, we must also find ways to curb our overall energy consumption.



What YOU can do

- Have an energy audit conducted for your home and implement the recommendations.
- Participate in provincial energy conservation programs.



Energy

Objectives & Actions

OBJECTIVE

Reach a 15% reduction in community energy consumption from 1990 levels by 2019.

ACTIONS

EarthCare Sudbury Partners will:

- Identify and pursue opportunities to conserve energy within their operations
- Showcase the benefits of energy-efficient operations
- Initiate and support energy efficient building and renovation projects
- Support energy education programs in local schools
- Facilitate, encourage, and reward energy conservation measures by citizens
- Participate in provincial energy conservation programs

(See [Transportation Section](#) for actions specific to transportation related energy consumption.)

The City of Greater Sudbury will:

- Consider inherent energy demands of proposed developments
- Support development locations and neighbourhood design models that are less energy reliant



What YOU can do

- Buy items that have the EnergyStar® label.
- Use low-carbon methods of transportation.



Energy

Objectives & Actions con't

OBJECTIVE

By 2019, reduce municipal energy consumption by 30% from 1990 levels.

ACTIONS

The City of Greater Sudbury will:

- Replace current vehicle fleet with energy-wise vehicles
- Provide training for CGS personnel through the [SmartDriver in the City Program](#)
- Improve tracking of fuel and vehicle use
- Deploy an Energy and Environmental Management System
- Create positions for a Certified Energy Manager and an Energy Clerk
- Implement energy saving measures in municipal facilities and operations



What YOU can do

- As much as possible, use passive techniques for home heating and cooling.



Energy

Objectives & Actions con't

OBJECTIVE

Increase local supply of energy derived from renewable sources.

ACTIONS

EarthCare Sudbury Partners will:

- Develop neighbourhood heating and cooling systems that use renewable energy
- Support innovative approaches to energy production on industrial lands
- Continue efforts to generate renewable energy locally
- Establish a Sustainable Energy Technical Advisory Committee to evaluate emerging energy technologies
- Use renewable energy to power buildings and facilities
- Incorporate renewable energy systems into new building construction and renovation plans (see [Green Buildings](#) for more actions about energy consumption in buildings)
- Attract and retain corporate investment in local renewable energy projects
- Build local labour capacity in renewable energy
- Pursue opportunities for [community-based power generation](#)

The City of Greater Sudbury will:

- Promote and facilitate opportunities for energy generation that are supported by [Ontario's Green Energy Act](#).



Greater Sudbury Utilities

What YOU can do

- Take advantage of incentives to install residential renewable energy systems.
- Purchase renewable energy to power your home.



Energy

Objectives & Actions **con't**

OBJECTIVE

Target communities with messages about energy efficiency and conservation.

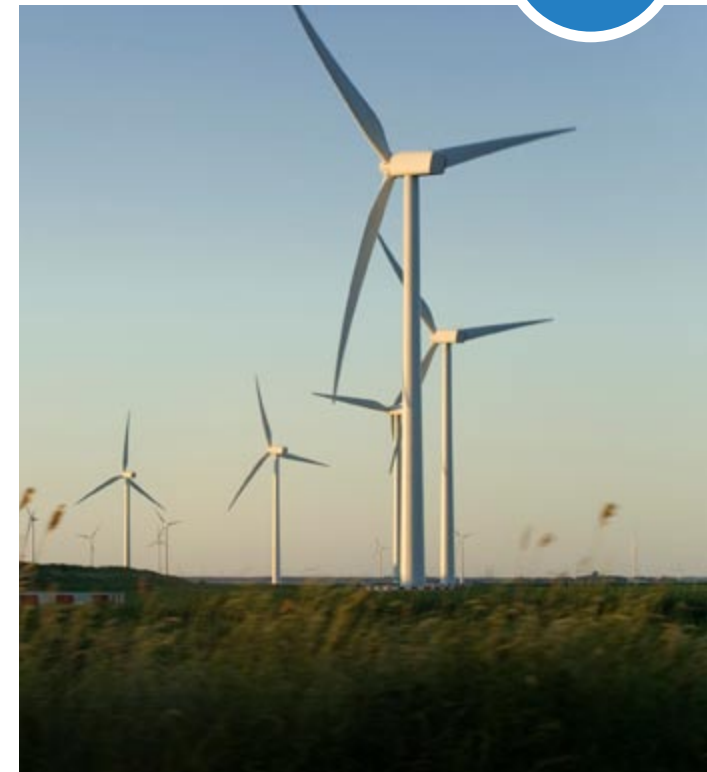
ACTIONS

EarthCare Sudbury Partners will:

- Develop collaborative, multi-faceted strategies to promote efficient energy consumption
- Link community groups to energy conservation programs
- Hold public info sessions relating to energy efficiency and renewable power

The City of Greater Sudbury will:

- Continue to maintain the Efficient Sudbury campaign



What YOU can do

- Use energy-saving settings on home appliances and electronic equipment.



Energy

References

- EN1 G8 L'Aquila Documentation. (July 10, 2009). [G8 Summit Chair's Summary](#).
- EN2 ICLEI Energy Services. (2001). City of Greater Sudbury Energy & GHG Emissions Inventory. p.8
- EN3 Greater Sudbury Hydro. (2008). [Landfill Gas](#).
- EN4 Oracle Poll Research. (September 2009). [EarthCare Survey Report](#). p. 10
- EN5 Ontario Ministry of the Environment. (December 2008). [Ontario's Climate Change Action Plan](#). p. 2

Monitoring References

City of Greater Sudbury Energy & GHG Emissions Inventory
Greater Sudbury Community Energy Plan
[Greater Sudbury's Vital Signs Report](#)
Utility Consumption Reports
Municipal Energy Consumption Data
Landfill Gas Generation Reports



What YOU can do

- Unplug equipment that drains energy even when not in use.



Food

In 2007, households in Greater Sudbury spent an estimated \$6,877 on food on average.^{FD1} Most of this is spent on food that is grown and processed outside the region, and transported long distances to get here.

The more we depend on outside sources for food, the more vulnerable we are to events that could prevent us from receiving adequate food shipments. Furthermore, transporting all that food is very costly and produces significant greenhouse gas emissions.

When we buy local food, we contribute directly to our local economy. Local food production and processing creates jobs, encourages value added-processing, and retains the value of our agricultural land base. Local food systems also encourage community involvement, support equitable food distribution, and connect urban and rural issues.

Goal: An economically viable and ecologically sustainable local food system.



City of Greater Sudbury

What YOU can do

- Buy food that has been locally grown.
- Join a community garden.



Food

Objectives & Actions

OBJECTIVE

Grow and process more food locally.

ACTIONS

EarthCare Sudbury Partners will:

- Support the organization of local food distribution systems in the region
- Investigate and initiate food production methods that could assist with climate change adaptation
- Establish new community gardens and other urban gardens
- Encourage greater producer participation in [Community Shared Agriculture \(CSA\)](#)
- Support small-scale commercial food processing
- Participate in implementing the [City of Greater Sudbury Food Charter](#)

The City of Greater Sudbury will:

- Encourage increased investment in the local food system



What YOU can do

- Plant a backyard vegetable garden.
- Preserve seasonal local produce for year-long enjoyment.



Food

Objectives & Actions con't

OBJECTIVE

Consume more locally grown food as a community.

ACTIONS

EarthCare Sudbury Partners will:

- Raise awareness about local food choices
- Buy food from local producers
- Investigate creating 'farm to institution' partnerships
- Support the featuring of local food items in Greater Sudbury's Good Food Box program

What YOU Can Do:

- Buy food directly from local farmers
- Join a Community Shared Agriculture (CSA) program
- Take the 150 mile diet challenge by eating only local food for a week, a month, or a year!

[LEARN HOW](#)



City of Greater Sudbury

What YOU can do

- Shop at Market Square for local food items.
- Buy food from stores specializing in local and regional foods.



Food

Objectives & Actions con't

OBJECTIVE

Increase local food knowledge.

ACTIONS

EarthCare Sudbury Partners will:

- Develop local food media campaigns and marketing tools
- Hold workshops about preparing local foods
- Promote Market Square
- Promote the City of Greater Sudbury Food Charter
- Create a Food Sustainability Think Tank
- Conduct a Community Food Assessment
- Establish a community food education center

OBJECTIVE

Reduce the environmental impacts of food production, delivery and waste.

ACTIONS

EarthCare Sudbury Partners will:

- Promote the use of less toxic alternatives to using chemical pesticides
- Employ ecological farming methods

The City of Greater Sudbury will:

- Implement a City-wide household organics collection program



The Foodshed Project www.foodshedproject.ca

What YOU can do

- Avoid using pesticides in your vegetable garden.
- Avoid using plastic grocery bags.



Food

Objectives & Actions con't

OBJECTIVE

Preserve the fertility of the agricultural reserve in Greater Sudbury.

ACTIONS

The City of Greater Sudbury will:

- Enforce the new Topsoil Removal and Site Alteration By-Law



What YOU can do

- Grow food on agricultural land.
- Submit a request to the municipality that your agricultural property be added to the agricultural reserve.



Food

References

FD1 FP markets: Canadian Demographics 2007. [Housing and Household Expenditure Statistics](#).

FD2 Statistics Canada. (2006). [Quick Agriculture Profile for Greater Sudbury](#).

Monitoring References

[Statistics Canada Agricultural Community Profile](#)

[Garden Biodiversity Inventory](#)

[Community Food Assessment Template](#)

[Greater Sudbury's Vital Signs Report](#)

[Food Security Indicators Report Card](#).



City of Greater Sudbury

What YOU can do

- Minimize your food miles when grocery shopping.



Green Buildings

The buildings in which we live, work and play impact the environment in many ways.

Buildings account for about 30% of Canada's energy consumption, about 50% its electricity consumption, and roughly 28% of its greenhouse gas (GHG) emissions.^{GB1} 'Green' buildings can operate using much less energy – upwards of 50% less in many cases.

Some even achieve 'net-zero' energy consumption, where the annual energy needs of a building are met using renewable energy generated on site. But reduced energy consumption is not the only characteristic that green buildings share. They are also constructed with sustainability in mind, using materials that are locally available, made of recycled content,

Goal: Only carbon-neutral, contaminant-free homes and buildings constructed by 2030.

harvested from sustainably managed sources, and/or salvaged from other building or demolition projects.

Building 'greener' buildings is also about reducing their impact on us, the occupants. Paint, treated wood, carpeting, and chemical cleaners can all emit volatile organic compounds (VOCs) and

other toxins that affect the air quality of the indoor environments in which we spend time. The good news is that green building is catching on in Greater Sudbury, particularly among local educational institutions. Other sectors now need to follow in their footsteps.



Vale Inco Living with Lakes Centre (graphic representation)

J.L. Richards & Associates in association with Busby Perkins + Will Architects



Valleyview Public School, Val Caron

Rainbow District School Board

What YOU can do

- Incorporate energy efficient features in residential construction and renovation projects.



Green Buildings

Objectives & Actions

OBJECTIVE

By 2015, achieve 70% energy reductions in all major new buildings.

ACTIONS

EarthCare Sudbury Partners will:

- Ensure that all major constructions meet or exceed advanced green building standards
- Consider passive energy prospects when evaluating sites for new buildings
- Develop new resources to assist homeowners, developers, and the ICI sector to 'build green'
- Support and promote local post-secondary green building programs

The City of Greater Sudbury will:

- Implement incentives and policies to encourage adoption of advanced green building standards
- Pursue [LEED building standards](#) with municipal building projects



J.L. Richards & Associates in association with Busby Perkins + Will Architects



City of Greater Sudbury

Solar Wall - Sudbury Wastewater Treatment Plant

What YOU can do

- Voice your support for the construction of high performance buildings in Greater Sudbury.



Objectives & Actions con't

OBJECTIVE

Achieve 50% energy reductions in buildings under renovation.

ACTIONS

EarthCare Sudbury Partners will:

- Track energy consumption of their existing facilities
- Undergo retrofits to improve energy and water efficiencies
- Determine Sudbury-specific retrofit recommendations

OBJECTIVE

Increase use of sustainable building materials and supplies.

ACTIONS

EarthCare Sudbury Partners will:

- Use the [Eco-Industrial Networking Tool](#) for sourcing sustainable building materials and supplies
 - Implement Green Procurement Policies within their organizations
- (See [Energy section](#) for actions pertaining to using renewable energy systems to power buildings)

What YOU Can Do:

- Buy 'second hand' materials for your building project.
- Buy lumber approved by the Forest Stewardship Council (FSC).
- Use materials that have recycled content.

[LEARN HOW](#)



JL Richards & Associates in association with Busby Perkins + Will Architects



James Hodgins Photography

Living Lab, Cambrian College

What YOU can do

- Participate in incentive programs for home energy retrofits and the installation of residential renewable energy systems.



Objectives & Actions con't

OBJECTIVE

Reduce use of contaminants affecting indoor air quality.

ACTIONS

EarthCare Sudbury Partners will:

- Implement purchasing guidelines that consider indoor air quality effects
- Use 'green' cleaning products

What YOU Can Do:

- Lay linoleum with a linseed oil base instead of sheet vinyl.
- Seal fibrous insulation from the air supply.
- Use low-VOC paints.
- Use natural cleaning products.

[LEARN HOW](#)

OBJECTIVE

Expand local knowledge of green building design principles and incentives.

ACTIONS

EarthCare Sudbury Partners will:

- Offer and participate in local green building workshops
- Develop tools that demonstrate how typical barriers to green buildings can be overcome
- Promote the advantages of green buildings
- Support green building demonstration projects



JL Richards & Associates in association with Busby Perkins + Will Architects



James Hodgins Photography

Laurentian University,
Bachelor of Education Building

What YOU can do

- Lay woven carpet without liquid latex or vinyl backing materials. Install without gluing.



References

GB1 Natural Sciences and Engineering Research Council of Canada. (2009). [NSERC Solar Buildings Research Network \(2005-2010\)](#).

GB2 Architecture 2030. [The Architecture 2030 Challenge](#).

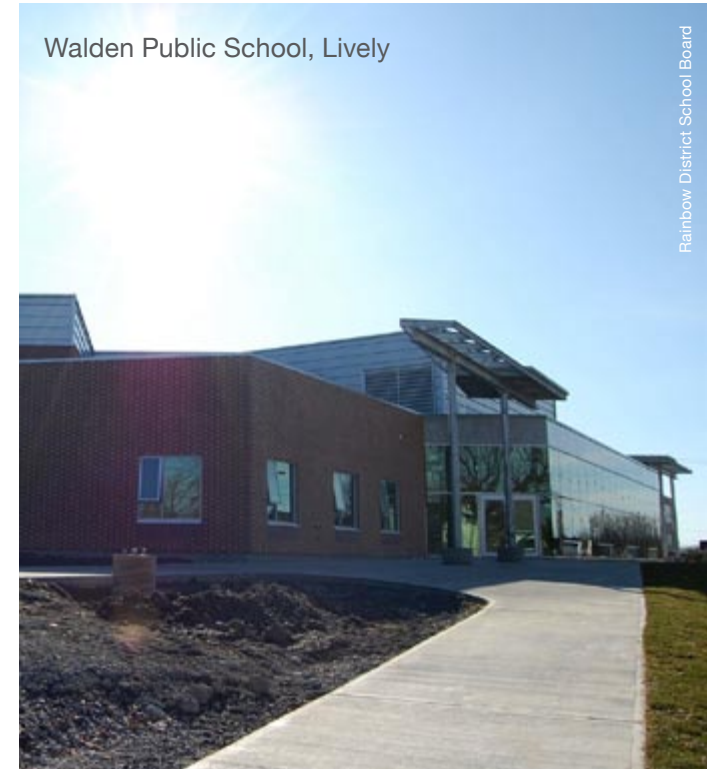
Monitoring References

Building Permit Data
ecoEnergy Home Audit Data
Utility Consumption Reports



J.L. Richards & Associates in association with Busby Perkins + Will Architects

Walden Public School, Lively



Rainbow District School Board

What YOU can do

- Practice the 3Rs when renovating.



Land Use Planning

Municipal land use planning plays a huge role in defining cities. Planning processes help determine what a place looks like, how one gets around, where food is grown, what services and amenities are available, and what ecologically sensitive areas are protected. Planning decisions also affect the carbon footprint of individual citizens and the sustainability of our community as a whole.

In 2006, a new, comprehensive Official Plan for the City of Greater Sudbury was adopted by Council. While the Official Plan is based on a healthy community model supporting balanced economic, environmental and social development that enhances human health, we all have a role to play in ensuring that this approach is upheld in practice.

Goal: A more livable city, with greater aesthetic appeal.



Rainbow Routes Association

What YOU can do

- Learn about the benefits of denser, mixed-use development.



Objectives & Actions

OBJECTIVE

Create more livable neighbourhoods.

ACTIONS

The City of Greater Sudbury will:

- Develop an urban design policy that reflects '[Smart Growth](#)' principles
- Support new developments that feature a range of housing types and are mixed-use

EarthCare Sudbury Partners will:

- Initiate neighbourhood-based community projects
- Support sustainable neighbourhood design and site selection

OBJECTIVE

Achieve a 10% development intensification rate by 2015.

ACTIONS

The City of Greater Sudbury will:

- Complete a [Brownfield Community Improvement Plan](#) by 2010
- Attract developers to appropriate locations in established urban areas to offset sprawl

EarthCare Sudbury Partners will:

- Support the implementation of the [Downtown Community Improvement Plan](#)



What YOU can do

- Express support for development projects that reflect '[Smart Growth](#)' concepts.



Objectives & Actions cont'd

OBJECTIVE

Ensure municipal land use planning tools support sustainability.

ACTIONS

EarthCare Sudbury Partners will:

- Participate in reviewing municipal policies and practices to determine how these tools can best support sustainability

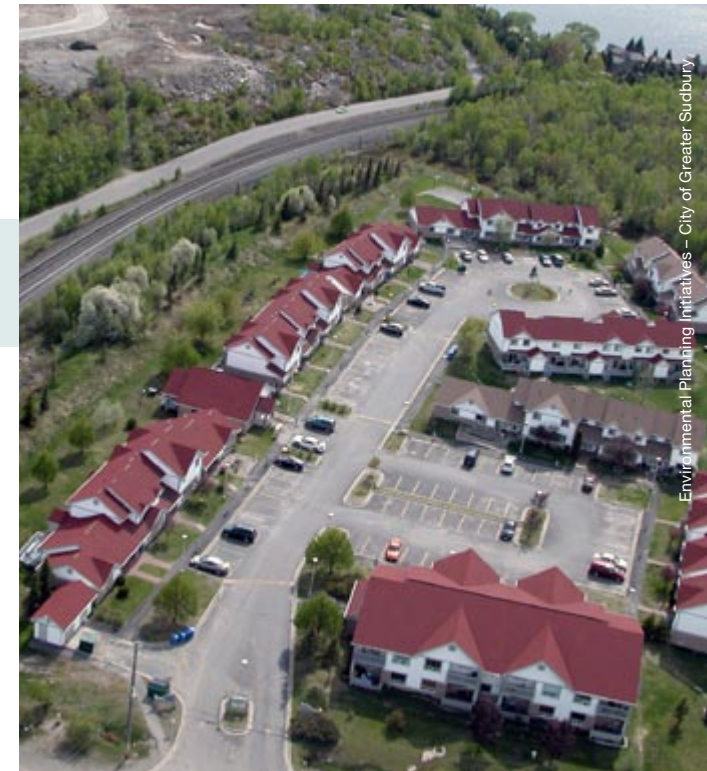
OBJECTIVE

Foster a positive public perception of denser, mixed-use development.

ACTIONS

EarthCare Sudbury Partners will:

- Maintain open communication with existing neighbourhood residents to identify and address development concerns
- Promote the benefits of 'smart' urban design



Environmental Planning Initiatives - City of Greater Sudbury

What YOU can do

- Learn about the benefits of denser, mixed-use development.



Monitoring References

Official Plan Monitoring results

[Coalition for a Livable Sudbury Earth Day Report Card](#)

[Ontario Community Sustainability Report](#)

[Canada's Best Places to Live Ranking – MoneySense Magazine](#)



What YOU can do

- Express support for development projects that reflect 'Smart Growth' concepts.



Natural Environment

Terrestrial ecosystems, the complex mix of vegetation, soil and animal life that covers the land, are a vital part of our life support system.

Plants boost our air quality and help us combat climate change by removing carbon dioxide from the air and replacing it with the oxygen that sustains life on earth. They also retain stormwater, provide shade from the sun and ultraviolet rays, reduce noise and provide habitat for a wide range

of wildlife. Soils filter pollutants, regulate how water moves, and cycle nutrients that sustain plant and animal life.

Efforts to recreate healthy ecosystems on the landscape of Greater Sudbury have been underway for over 30 years. Now that trees are growing on the formerly barren hills, we're setting our sights on creating healthy, self-sustaining forests that will nurture generations to come.

Goal: The restoration and preservation of complete terrestrial ecosystems in Greater Sudbury



What YOU can do

- Plant more native plants and trees in your yard or neighbourhood.



Threats

Poor plant coverage

Although natural recovery is taking place in some areas of Greater Sudbury, there are still thousands of hectares of land without adequate plant cover. In these areas, continued land reclamation and restoration is needed to begin the long-term healing and recovery of the ecosystem.

Low biodiversity

While thousands of hectares have been re-vegetated in Greater Sudbury, much of the reclaimed areas resemble pine forests with only half of the plant species present. This limits the diversity of habitat, which also limits the diversity of animal life present. In addition, low plant diversity means that the entire system may be more susceptible to major disruptions such as pest infestations and climate change.

Falling urban tree cover

In 2001, the City's Regreening Program noted that Greater Sudbury was losing about 500 street trees a year because of age, damage and disease. Healthy residential areas should have at least 25% tree canopy coverage, but the amount of tree canopy coverage in many Greater Sudbury neighbourhoods has fallen below this threshold.^{NE1}

Degradation of surface waters

The loss of vegetation in the Greater Sudbury area has caused soils to erode into watercourses, degrading our streams and rivers. This degradation continues today in areas that still have poor plant coverage.

Metal levels in soil

A comprehensive scientific study of metal levels in Greater Sudbury soils was completed in 2008. Carried out over a seven-year period, the Sudbury Soils Study was conducted to determine whether the levels of metals in the study area environment pose a risk to humans, plants, or animals. While no significant risk to humans or animals was identified, the study did find that terrestrial plant communities in the Greater Sudbury area have been and continue to be impacted by the presence of certain metals in soil.



Environmental Planning Initiatives - City of Greater Sudbury

Minnow Lake shoreline

What YOU can do

- Help implement Greater Sudbury's Biodiversity Action Plan.
- Prune trees that could eventually become a nuisance.



Objectives & Actions

OBJECTIVE

Increase and maintain urban tree and shrub cover.

ACTIONS

EarthCare Sudbury Partners will:

- Support the [Ugliest Schoolyard Contest](#)
- Initiate community and/or employee based tree planting projects
- Plant native shrubs and trees on their properties
- Reduce the loss of existing tree cover during new development

The City of Greater Sudbury will:

- Complete a beautification strategy that encompasses urban greening
- Review current landscaping requirements in developing a comprehensive Zoning By-Law for the municipality
- Update the municipality's urban tree policy
- Plant more trees as part of annual tree maintenance operations



Schoolyard greening

What YOU can do

- Avoid removing trees from your property unless they pose a serious safety hazard.



Objectives & Actions cont'd

OBJECTIVE

Expand Greater Sudbury's ecological recovery efforts.

ACTIONS

EarthCare Sudbury Partners will:

- Support the implementation of the [Biodiversity Action Plan](#) for Greater Sudbury
- Incorporate climate change adaptation strategies in ecological recovery efforts

The City of Greater Sudbury will:

- Develop a completion plan for Regreening efforts in Greater Sudbury that reflects the priorities of the Biodiversity Action Plan
- Hold an annual Biodiversity Forum



OBJECTIVE

Improve the quality of industry-affected soils.

ACTIONS

EarthCare Sudbury Partners will:

- Assist with remediating soils having elevated metal levels
- Support efforts to improve local biodiversity

What YOU Can Do:

- Apply lime to areas where the soil is acidic
- Do not use slag as fill or driveway material

[LEARN HOW](#)



McKim Street Hill 1981



McKim Street Hill 2008

What YOU can do

- Protect natural features on your property.
- Test the pH of soil on your property.



Objectives & Actions cont'd

OBJECTIVE

Protect significant natural heritage areas.

ACTIONS

EarthCare Sudbury Partners will:

- Support the development and implementation of a Greenspace Strategy for Greater Sudbury
- Continue to support the stream restoration efforts for Junction Creek
- Identify other priority creeks for rehabilitation
- Engage with First Nations communities around protecting natural heritage areas

The City of Greater Sudbury will:

- Lead the development of a Greenspace Strategy for Greater Sudbury
- Uphold the municipality's Natural Environment policies as stated in the Official Plan

OBJECTIVE

Improve the community's knowledge of local biodiversity, natural heritage, and native species.

ACTIONS

EarthCare Sudbury Partners will:

- Implement broader reaching education programs that extend to schools, special events and groups such as cottagers associations
- Provide the public with advice on planting trees and shrubs on private property



City of Greater Sudbury

What YOU can do

- Learn more about the natural resources on your property.
- Control non-native invasive plants that can quickly overtake beneficial native species.



References

NE1 City of Greater Sudbury. (2003). [The EarthCare Sudbury Local Action Plan](#). p. 23

NE2 VETAC. (2008). [Regreening Greater Sudbury Annual Report 2008](#). p. 2

Monitoring References

[The Regreening Program Annual Report](#)
[Greater Sudbury Soils Study](#)



What YOU can do

- Volunteer with a community group that is invested in protecting natural features and areas.



Solid Waste

As North Americans, we use significantly more than our share of global resources. We are also one of the world's most wasteful societies; approximately 99% of what we harvest, mine, process, transport, and buy ends up trashed within 6 months.^{SW1}

Every day, the average Canadian produces about 2.2 kilograms of garbage.^{SW2}

That's well over half a tonne per person, per year.

Much of this waste is potentially useful: It contains metals, paper, glass, organic waste and other materials that could be recycled into products.

Our wasteful habits as a nation mean that we throw away the energy equivalent of millions of barrels of oil every year. Our landfills also create significant

Goal: No future need for additional landfill space in Greater Sudbury.

amounts of methane as waste decomposes, which contribute to global climate change.



Environmental Services - City of Greater Sudbury

What YOU can do

- Curb purchasing of disposable items.
- Purchase items that have little or no packaging.



Solid Waste

Objectives & Actions

OBJECTIVE

Reduce the amount of solid waste produced annually by the community.

ACTIONS

EarthCare Sudbury Partners will:

- Advocate for packaging regulations that target waste reductions at the source
- Implement waste reduction programs at their facilities
- Promote alternatives to plastic shopping bags
- Promote the use of reusable food and beverage containers
- Discourage consumption of bottled water
- Raise awareness about garbage – its origins and impacts
- Raise awareness about the alternatives to hazardous products



What YOU can do

- Avoid using plastic shopping bags.
- Drink tap water instead of bottled water.



Solid Waste

Objectives & Actions cont'd

OBJECTIVE

Divert 65% of residential solid waste produced in Greater Sudbury.

ACTIONS

The City of Greater Sudbury will:

- Inform residents about how to divert waste properly
- Offer City-wide collection of household organic materials at curbside
- Assess the need for larger residential blue boxes
- Provide increased recycling options along city streets and in public spaces



Environmental Services - City of Greater Sudbury

What YOU can do

- Properly dispose of hazardous waste.
- Compost household organic waste.



Solid Waste

Objectives & Actions cont'd

OBJECTIVE

Increase recycling and reuse in the Industrial, Commercial and Institutional (ICI) sector.

ACTIONS

The City of Greater Sudbury will:

- Develop and implement a Waste Diversion Strategy for the ICI sector
- Prepare a plan for the reuse and recycling of construction and demolition waste

EarthCare Sudbury Partners will:

- Initiate and maintain recycling programs and other programs to divert waste from landfills
- Form [eco-industrial partnerships](#)
- Capitalize on solid waste reuse opportunities

OBJECTIVE

Educate residents about sustainable solid waste practices.

ACTIONS

The City of Greater Sudbury will:

- Disseminate information about proper waste disposal practices
- Promote reducing and reusing
- Recommend alternatives to hazardous products



What YOU can do

- When renovating, practice the 3Rs – Reduce, Reuse, Recycle.

References

SW1 Leonard, Annie. [The Story of Stuff](#). p.9

SW2 Statscan. (2008). [Disposal and Diversion of Waste 2004-2006](#).

SW3 City of Greater Sudbury. (2008). [Solid Waste Report](#). p.9

SW4 Ontario Municipal CAO's Benchmarking Initiative. (2007) [Performance Benchmarking Report](#). p. 66

Monitoring References

[City of Greater Sudbury Annual Solid Waste Report](#).
[OMBI Performance Benchmarking Report](#).



What YOU can do

- Sell or give away unwanted but usable items.
- Recycle as much as possible.



Transportation

Transportation is vital to society, allowing us to move people, goods and services around. However, our transportation habits also have adverse effects on the environment.

All internal combustion engines that burn fossil fuels emit nitrogen oxides and volatile organic compounds that contribute to smog and local air pollution. They also emit greenhouse gases (nitrogen dioxide and carbon dioxide), and are a major contributor to global climate change. Today, over 50% of GHG emissions produced directly by Canadians are due to passenger road transportation.^{TR1}

The key to reducing the environmental impacts of transportation involves improving fuel

efficiency, using alternate (less-polluting) fuel types, eliminating unnecessary use of vehicles and encouraging the use of options such as public transit, walking and cycling in place of the automobile.

Unfortunately, our reliance on automobiles has also resulted in communities that are designed more for

Goal: A community-wide shift towards low impact and low carbon methods of transport.

cars than for people. This affects the convenience, accessibility and appeal of using methods of transport besides the single-occupant vehicle. Urban development policies, transportation infrastructure, and parking availability and pricing influence our transportation choices and need to better support lower-impact transportation options.



What YOU can do

- Use your vehicle only when no other options are feasible.
- Buy a fuel efficient model when replacing your old vehicle.

Objectives & Actions

OBJECTIVE

By 2019, achieve a reduction in transportation related CO₂ emissions by 1 tonne per capita.

ACTIONS

The City of Greater Sudbury will:

- Enact and enforce an Anti-idling By-law
 - Review taxi licensing requirements for opportunities to encourage the purchase of highly fuel efficient vehicles
 - Discourage the establishment of new drive-thru facilities
 - Support development patterns that complement active transportation and transit use
- (See [Energy Section](#) for actions relating to the municipal vehicle fleet.)

EarthCare Sudbury Partners will:

- Reduce the length and number of vehicle trips
- Purchase fuel efficient vehicles
- Implement measures to reduce idling within their operations
- Investigate the feasibility of a car-sharing service for Greater Sudbury

What YOU Can Do:

- Maintain proper tire pressure
- Employ fuel efficient driving practices

[LEARN HOW](#)



What YOU can do

- Avoid idling your vehicle.
- Perform a monthly maintenance check on your vehicle.

Objectives & Actions cont'd

OBJECTIVE

Increase transit ridership per capita.

ACTIONS

The City of Greater Sudbury will:

- Further enhance the convenience, reliability and appeal of using the transit system

EarthCare Sudbury Partners will:

- Participate in transit ridership promotions

OBJECTIVE

Reduce the percentage of single-occupant vehicles travelling in Greater Sudbury.

ACTIONS

EarthCare Sudbury Partners will:

- Establish carpooling incentives for employees
- Initiate and support alternative transportation projects

The City of Greater Sudbury will:

- Encourage future development in identified activity nodes to discourage urban sprawl



What YOU can do

- Ride the bus instead of relying on your car to get around the city.
- Take advantage of ridership incentives.



Objectives & Actions cont'd

OBJECTIVE

Improve infrastructure supporting active and non-motorized transport.

ACTIONS

The City of Greater Sudbury will:

- Complete a sustainable mobility plan by the end of 2010
- Integrate active transportation into all development plans and into road construction and reconstruction projects
- Consider options for employing a Bicycle Coordinator
- Consult with the [Bicycle Advisory Panel](#) and [Rainbow Routes Association](#) on road and sidewalk projects
- Provide adequate bike racks at municipal buildings and in all public spaces

EarthCare Sudbury Partners will:

- Provide adequate bike parking facilities for their organization
- Support the creation of bike lanes as part of road construction projects
- Facilitate the joining of communities in Greater Sudbury by trail neighbourhood connections



What YOU can do

- Walk and bike to get around – help increase demand for pedestrian and bike-friendly infrastructure!

Objectives & Actions cont'd

OBJECTIVE

Raise awareness about the viability of alternative transportation options in Greater Sudbury.

ACTIONS

EarthCare Sudbury Partners will:

- Identify the bus route(s) serving their locations and encourage employees and visitors to use these routes
- Promote the [Rainbow Routes](#) trail system among employees
- Create and /or promote resources that facilitate carpooling (e.g. greatersudbury.carpoolzone.ca, workplace carpool bulletin board, etc.)

The City of Greater Sudbury will:

- Publicize improvements to the transit system
- Continue to produce and distribute marketing and communication materials relating to transit service



What YOU can do

- Participate in workplace and community-based carpool matching programs.

References

- TR1 Environment Canada. (October 11, 2007). [Envirozine](#). Issue 76
- TR2 Appleton Charitable Foundation. (2008) [SMART Transportation Ranking Report](#). p.30
- TR3 Statistics Canada. (2006). [Employed labour force by mode of transportation to work, by census metropolitan area](#).
- TR4 Earth Tech Canada Inc. (2005) [City of Greater Sudbury Transportation Study Report](#). p. 37
- TR5 Ontario Municipal CAO's Benchmarking Initiative. (2007) [Performance Benchmarking Report](#). p. 77
- TR6 Rainbow Routes. (2009). [About Us – Quick Facts](#)

Monitoring References

[Green Apple SMART Transportation Ranking Report](#)
[Statistics Canada](#)
[City of Greater Sudbury Transportation Study Report](#)
[OMBI Performance Benchmarking Report](#)
[Rainbow Routes](#)



What YOU can do

- Take the bus or use active methods of transportation whenever possible.



Water/Wastewater

ONE out of every FIVE hectares in Greater Sudbury is covered by water or wetlands. That's 330 large lakes, 3 major river systems and many, many wetlands that help keep water clean and provide valuable wildlife habitat.

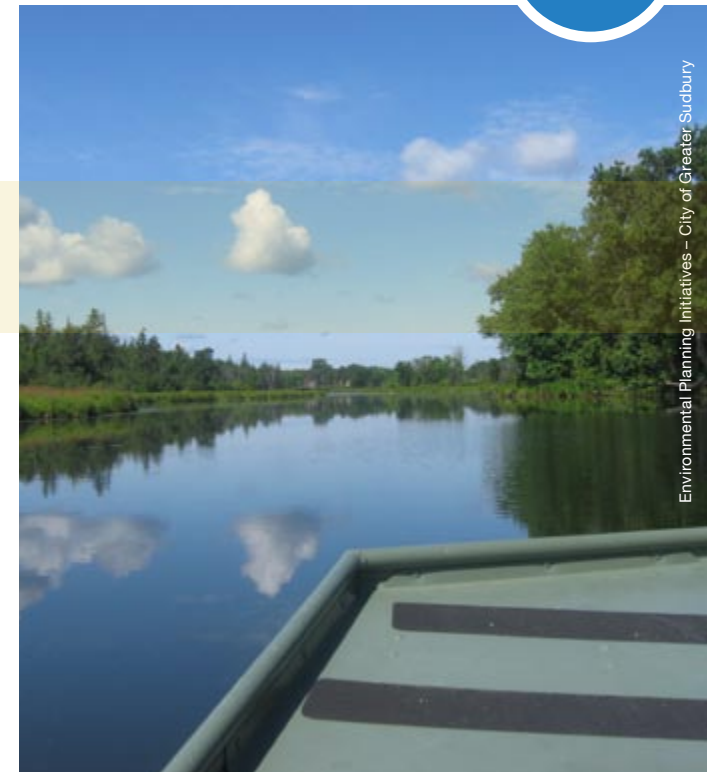
The municipal wastewater system also protects our lakes, streams and rivers from contaminants that could compromise the quality of our water resources. Wastewater treatment is a vital part of the cycle of water use and reuse that allows our continued use and enjoyment of these resources. However, this interconnection also

leaves our waterways vulnerable to weaknesses in the wastewater system.

Human activities pose additional threats to our water resources, even if they occur far from a lake. The watershed approach, which is now part of the City of Greater Sudbury's Official Plan, is central to the upcoming Greater Sudbury Source

Goal: Clean and healthy lakes, rivers and municipal drinking water supplies.

Protection Plan. This plan is a requirement under the provincial [Clean Water Act](#) that was enacted following the Walkerton tragedy.



What YOU can do

- Reduce your lawn area and replace with plants that require little water.

Threats

Nutrients

Many area lakes and groundwater systems are at risk from excess nutrients – particularly nitrogen and phosphorus from septic systems and waste water treatment plants. Legacy nutrient enrichment from untreated sewage disposal still influences some lakes.

Stormwater

Urban stormwater runoff contains a host of pollutants picked up as it flows over streets, parking lots and yards – fertilizers, herbicides, motor oil, road salt, animal feces and other contaminants – all of which end up in our lakes and rivers.

Inflow and infiltration

Groundwater that infiltrates deteriorating wastewater infrastructure and surface water that flows into the sanitary sewer system can cause the capacity of municipal wastewater treatment plants to be exceeded. A particular concern during rainstorms, this excess flow can overwhelm pumping equipment and increases the risk of sewer backups onto private property and into waterways, including drinking water sources.

Alterations in water flows

Various practices, including the elimination of wetlands, deforestation and the careless construction of dams can alter water flows. This can lead to increased risk of flooding in springtime, reductions in levels of groundwater and falling lake levels in summer.

Climate Change

How climate change will impact local lakes and their recovery from past stresses is not yet well understood. However, as precipitation patterns change and temperatures rise, changes in both water quality and quantity are imminent.



What YOU can do

- Install a rain barrel and use for watering garden.
- Install low-flow shower heads, toilets, and faucet aerators.

Threats cont'd

Shoreline development

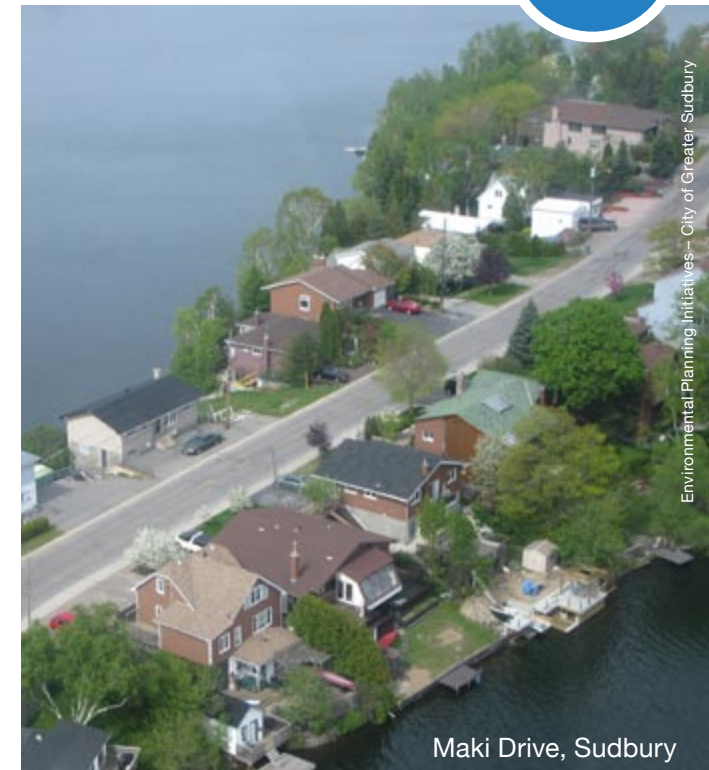
In several lakes, inappropriate shoreline development (such as construction of breakwater walls and docks with solid foundations and the clearing of native vegetation) has led to aquatic habitat loss, soil erosion, and pesticide and fertilizer runoff.

Introduction of invasive species

Invasive aquatic species are already well established in some area lakes. Eurasian water milfoil is a problem in Kelley, Long, McFarlane, Minnow, Mud and Simon Lakes, among others. The spiny waterflea is now found in Lake Panache and the rainbow smelt is now established in Lake Nepahwin. These non-native species can severely destabilize native fish communities.

Historical Pollution

Many of the area's lakes have been adversely affected by historical industrial activities, especially mining and smelting. This has led to erosion, acidification, metal contamination, the deposition of wood waste on lake bottoms (in Minnow Lake), and contamination from a former creosote plant (in Junction Creek and Kelley Lake). Recovery is underway as smelter emissions have been drastically cut, and other practices that led to these impacts have long since ceased. However, contaminated lake sediments could still release heavy metals if disturbed; for example, if water levels were to drop as is predicted by climate change.



Maki Drive, Sudbury

What YOU can do

- Leave or create shoreline buffer strips.
- Create a rain garden on your property.
- Minimize use of lawn fertilizers.

Objectives & Actions

OBJECTIVE

Identify and reduce stresses to municipal drinking water supplies.

ACTIONS

The City of Greater Sudbury will:

- Prepare a Water Efficiency Plan that recommends strategies to reduce water consumption in Greater Sudbury
- Systematically reduce leakage in distribution systems
- Support innovative water conservation options where appropriate

EarthCare Sudbury Partners will:

- Adopt practices aimed at reducing water consumption and increasing efficient use of water

The [Greater Sudbury Source Protection Committee](#) will:

- Prepare an Assessment Report by 2010 that identifies the threats to the quality and quantity of the municipal drinking water supplies
- By 2012, prepare the first Greater Sudbury Source Protection Plan that recommends actions to protect municipal drinking water supplies by addressing significant issues and threats



What YOU can do

- Choose water-saving washing machines and dishwashers.
- Check for leaky toilets and faucets and fix immediately.

Objectives & Actions cont'd

OBJECTIVE

Reduce nutrient and contaminant runoff into lakes, streams and rivers.

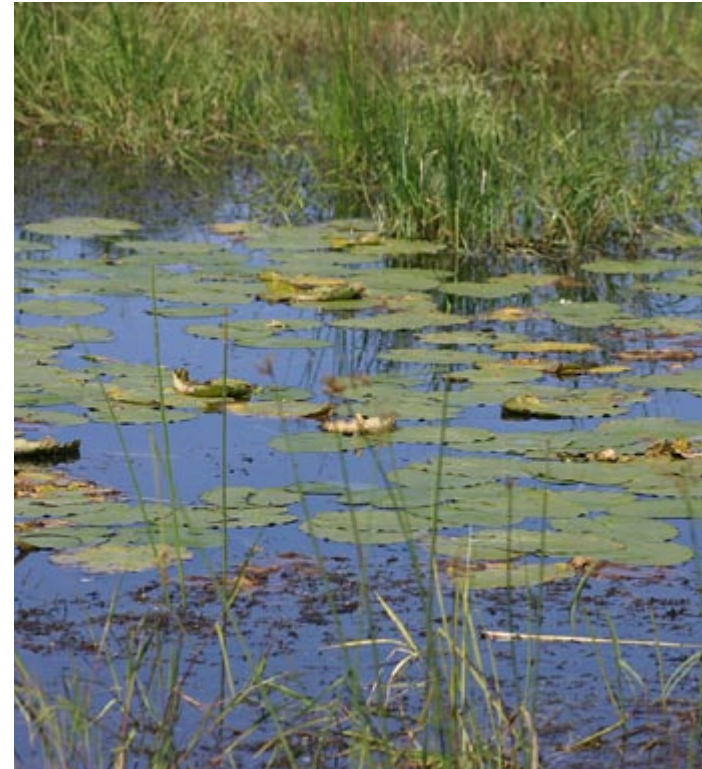
ACTIONS

EarthCare Sudbury Partners will:

- Continue to promote and implement good shoreline and watershed practices
- Promote the protection and preservation of wetlands
- Implement [Low Impact Development \(LID\)](#) solutions for stormwater management
- Decrease use of salt deicers

The City of Greater Sudbury will:

- Use municipal policy tools to minimize the effects of land development on local waterways
- Complete upgrades to the stormwater infrastructure of the Lake Nepawhin watershed by 2010
- Develop drainage plans and upgrades in other urban watersheds, beginning with Lake Ramsey.
- Continue to administer the [Lake Stewardship Assistance Program](#) and facilitate the formation of lake stewardship committees.
- Update the municipal salt management plan



What YOU can do

- Use permeable surfaces for your driveway or walkway.
- Use sand or an alternative deicer, such as Calcium Magnesium Acetate (CMA) on your driveway or walkway.

Objectives & Actions cont'd

OBJECTIVE

Prevent sewage disposal practices from adversely affecting the natural environment and private property.

ACTIONS

The City of Greater Sudbury will:

- Construct a [Biosolids Management Facility](#) capable of producing Class A biosolids by the end of 2010
- Improve current disposal methods for hauled sewage (septage)
- Work with homeowners to disconnect downspouts from the sewer system
- Initiate capital projects to renew infrastructure and upgrade facilities

EarthCare Sudbury Partners will:

- Raise awareness about the impacts of inflow and infiltration from private property
- Support the Sewer Use By-law prohibiting disposal of contaminating agents in the wastewater system

What YOU Can Do:

- Replace faulty septic tank systems
- Use a car wash that recycles water
- Ensure your eavestrough is disconnected from the sewer system

[LEARN HOW](#)



What YOU can do

- Use only phosphate-free detergents.
- Have your septic tank pumped every two years.

Objectives & Actions cont'd

OBJECTIVE

Prevent further spread of invasive species in our lakes and rivers.

ACTIONS

EarthCare Sudbury Partners will:

- Raise awareness on aquatic invasive species and monitor their spread in Greater Sudbury lakes
- Promote practices that reduce the spread of invasive species

What YOU Can Do:

- Inspect and remove aquatic plants and animals from boat, motor, trailer and fishing lines, especially where they meet a swivel, lure or downrigger ball connection
- Drain lake or river water from livewell and bilge before leaving access point
- Rinse boat and equipment with high-pressure hot water (104°F/ 40°C), especially if moored for more than a day, OR dry everything for at least 5 days

[LEARN HOW](#)



What YOU can do

- Learn to identify local invasive species and where they've already invaded.
- Always dispose of aquarium contents or unwanted fish in the trash.

Objectives & Actions cont'd

OBJECTIVE

Enhance fish habitat in local aquatic ecosystems.

ACTIONS

EarthCare Sudbury Partners will:

- Re-establish vegetation where it has been removed along lakes and watercourses
- Avoid the removal of woody debris and vegetation from local aquatic ecosystems
- Initiate projects to create coarse woody habitat for fish
- Assist in determining climate change adaptation strategies for local lakes
- Re-introduce fish to lakes where the water quality is appropriate.



Ontario Ministry of Northern Development, Mines and Forestry

What YOU can do

- Keep most of your shoreline natural.
- Leave aquatic plants in the water.



Objectives & Actions cont'd

OBJECTIVE

Stimulate increased interest in water resource issues among the general public.

ACTIONS

EarthCare Sudbury Partners will:

- Continue to organize and participate in events that aim to educate the public about water issues and water science
- Encourage landowner participation in drinking water protection

The City of Greater Sudbury will:

- Support the Lake Stewardship grant program and encourage the formation of more Lake Stewardship Groups
- Share water conservation strategies with the public



City of Greater Sudbury

What YOU can do

- Avoid disrupting fish habitat during spawning and early rearing periods.

References

^{ww1} Lake Water Quality Program. (2007). [Annual Report](#). p. 3

^{ww2} Ontario Municipal CAO's Benchmarking Initiative. (2007) [Performance Benchmarking Report](#). p. 81

^{ww3} City of Greater Sudbury. (2008). [Municipal Performance Measurement Program Report to Citizens](#). p. 15

^{ww4} City of Greater Sudbury. (2009). [Lake Stewardship Groups in the City of Greater Sudbury](#).

Monitoring References

[OMBI Performance Benchmarking Report](#)

[Ontario Municipal Performance Measurement Program Results](#)

[Lake Water Quality Program Annual Report](#)

[OFAH Invading Species Watch Report](#)

Cooperative Freshwater Ecology Unit Data

Junction Creek Stewardship Committee Data

[Lake Water Quality Program Data](#)



What YOU can do

- Use dock designs that don't obstruct water circulation or disturb the lake or stream bed (e.g. floating docks or docks constructed on stilts).

Youth and the Environment

It's an old adage that the youth of today hold the promise of tomorrow's future. This is never truer than when addressing long-term challenges such as climate change and sustainability, which require significant societal changes.

In recent years, youth at all levels of education have benefitted from increased environmental content in school programs. As a result, local youth have a good general understanding of the environmental issues that have been the focus of action in the Greater Sudbury area.

But, [recent surveys](#) and consultations with local youth confirm that young people in Greater Sudbury are interested in taking further action and have creative ideas for addressing pressing environmental issues.

While there is still much that can be done to improve education on environmental issues and

Goal: More local youth actively contributing to environmental sustainability.

to induce positive behaviour change among local young people, there is also a need to encourage community support for youth initiated projects.



What YOU can do

- Set a good example for environmentalism through everyday actions.

Youth and the Environment

Objectives & Actions

OBJECTIVE

Raise awareness of climate change, sustainability, environmental restoration and local environmental action strategies among local youth.

ACTIONS

EarthCare Sudbury Partners will:

- Support increased environmental content in school curriculums
- Continue to develop hands-on environmental programming for youth
- Use a variety of media tools to reach youth with environmental messages

OBJECTIVE

Directly involve youth in all phases of local environmental actions.

ACTIONS

EarthCare Sudbury Partners will:

- Seek youth input and participation with community projects
- Create green jobs and volunteer opportunities for youth



What YOU can do

- Encourage youth who express interest in helping the environment.

Youth and the Environment

Objectives & Actions cont'd

OBJECTIVE

Support environmental projects instigated by local youth.

ACTIONS

EarthCare Sudbury Partners will:

- Motivate and educate youth to take action on priority issues
- Use a variety of methods to promote youth initiatives
- Provide recognition for outstanding youth and their projects
- Support the establishment of an EarthCare Sudbury youth committee
- Facilitate project collaborations between youth and other EarthCare Sudbury Partners



What YOU can do

- Get informed about opportunities for youth to get involved in local green initiatives.