

# Annual Report

## -2007-



## Our 2007 Partners:

### Land Reclamation Program

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### Ugliest Schoolyard Contest

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Adam & Eve's Garden & Patio  
Centre

Ashley's Landscape Supplies

Botanix Azilda Greenhouses

Canadian Tire, Regent Street

Carniello Contracting

Freskiw Farms

Hollandia Land & Environmental  
Solutions

Holla's Produce and Greenhouses

James St. John, Horticulturalist

RONA Cashway, Val Caron

Saturn of Sudbury

Southview Greenhouse Growers

Sudbury Horticultural Society

Sudbury Master Gardeners

Vale Inco

WD Tree Removal

Whitewater Greenhouses & Yard  
Art Centre

Xstrata Nickel

## 2007 Highlights

### Summary

The 2007 Land Reclamation Program created 24 temporary positions, reclaimed almost 10 hectares of barren land located along the Wanapitei River and planted one hundred and fifty thousand tree seedlings throughout Greater Sudbury. To date, the total number of trees planted within City boundaries exceeds 8.8 million.

A great deal of emphasis was placed on monitoring previous reclamation areas this year, with four individuals dedicated to this task. Over the course of their employment, they sampled over 100 different sites and gathered valuable information on reclamation sites. Overall, trees in reclaimed sites are doing well, un-limed sites display smaller, less vigorous tree growth and lack of organic matter is a limiting factor in some areas for herbaceous forest floor species.

VETAC's Urban Landscape sub-committee continued with the third annual 'Ugliest Schoolyard Contest'. The grand prize winner was Pinecrest Public School on Dominion Drive in Hanmer. In all, 18 local businesses, corporations and special interest groups provided funding, materials and offered services to complete the schoolyard greening project. Corporate funding from Xstrata Nickel enabled the Committee to extend the prize package to four runner-up schools; École St. Augustin in Garson, St. Anne in Hanmer, Pius XII in Sudbury and École Notre Dame de la Merci in Coniston.

Outside funding and material contributions enabled the continuation of the regular operation of the Program, and allow the completion of special projects. Many thanks to our 2007 sponsors (listed to the right). Without the support of these sponsors and those of the past, the Land Reclamation Program would not be the success it is today.

### Accomplishments

| Task:           | 2007:   | To Date:  |
|-----------------|---------|-----------|
| Area Limed      | 9.7 ha  | 3,392 ha  |
| Area Fertilized | 3.5 ha  | 3,194 ha  |
| Area Seeded     | 3.5 ha  | 3,121 ha  |
| Trees Planted   | 152,116 | 8,830,695 |
| Shrubs Planted  | 0       | 43,427    |

### Work Crew

|  |   |
|--|---|
| Ontario Works Participants:                                    | 4 |
| Ministry of Training, Colleges & Universities - JCP Positions: | 4 |
| CGS Temporary Staff:   | 9 |
| CGS Summer Students:   | 7 |

### 2007 Partners

City of Greater Sudbury (CGS)

Vale Inco

Xstrata Nickel

Ontario Works

Ministry of Training, Colleges & Universities -  
Job Creation Partnership (JCP)

YMCA Summer Job Service (SJS)

Nickel District Conservation Authority (NDCA)

Sudbury earthdancers



## Program Operation

### Spring Tree Plant

The spring tree planting activities began May 7th and were completed by June 14th, with 107,956 tree seedlings planted. Site selection focused on available sites from the 5 year plan that were still incomplete. A mixture of red and jack pine seedlings were donated by Vale Inco totaling 38,372 seedlings for the spring plant. NDCA also donated \$4,000 for the purchase of seedlings to be planted within the Ramsey Lake watershed area.

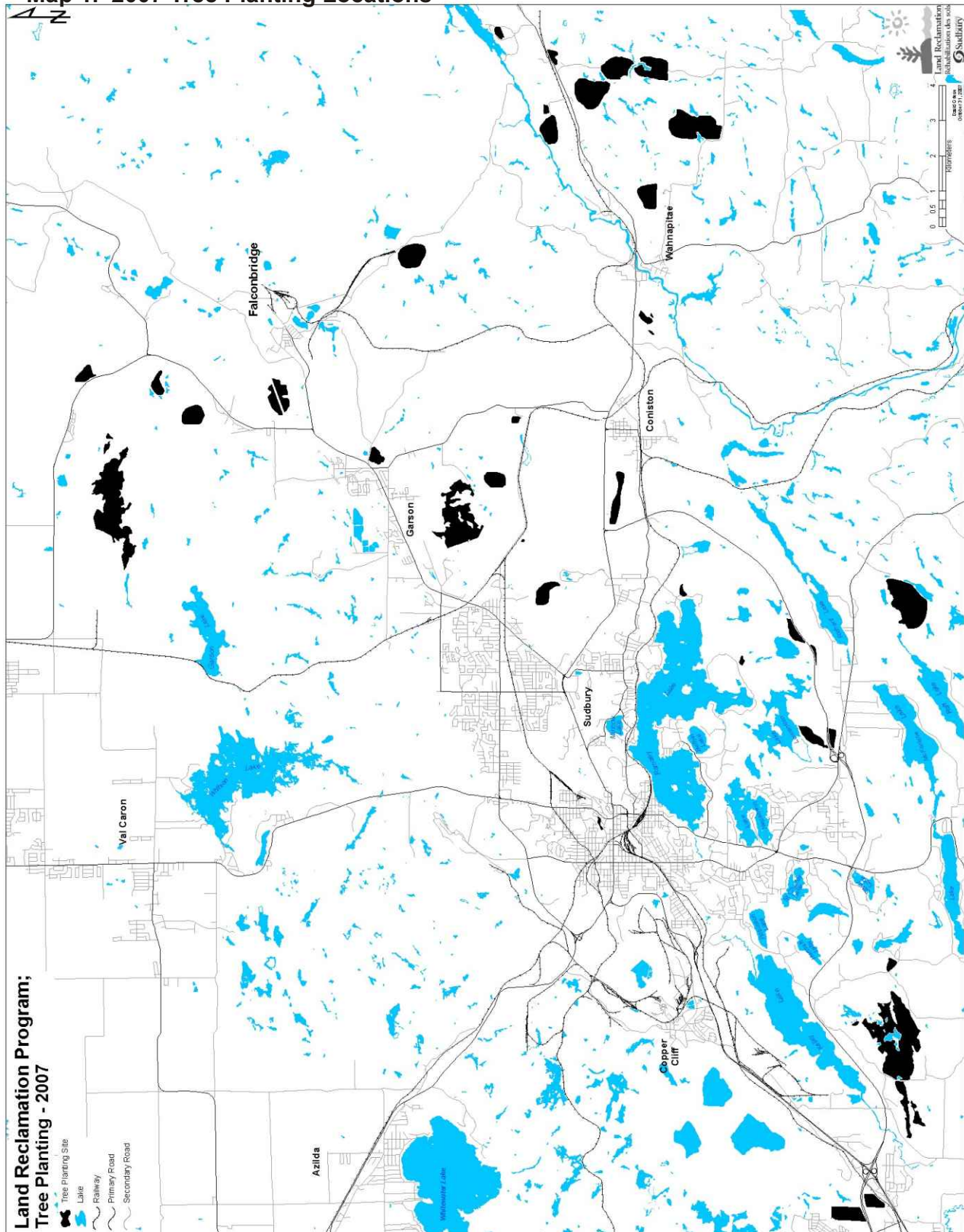
### Fall Tree Plant

The fall plant began on September 17th and was completed by October 11th with 44,160 red and jack pine tree seedlings planted. All the seedlings planted in the fall were donated by Vale Inco.

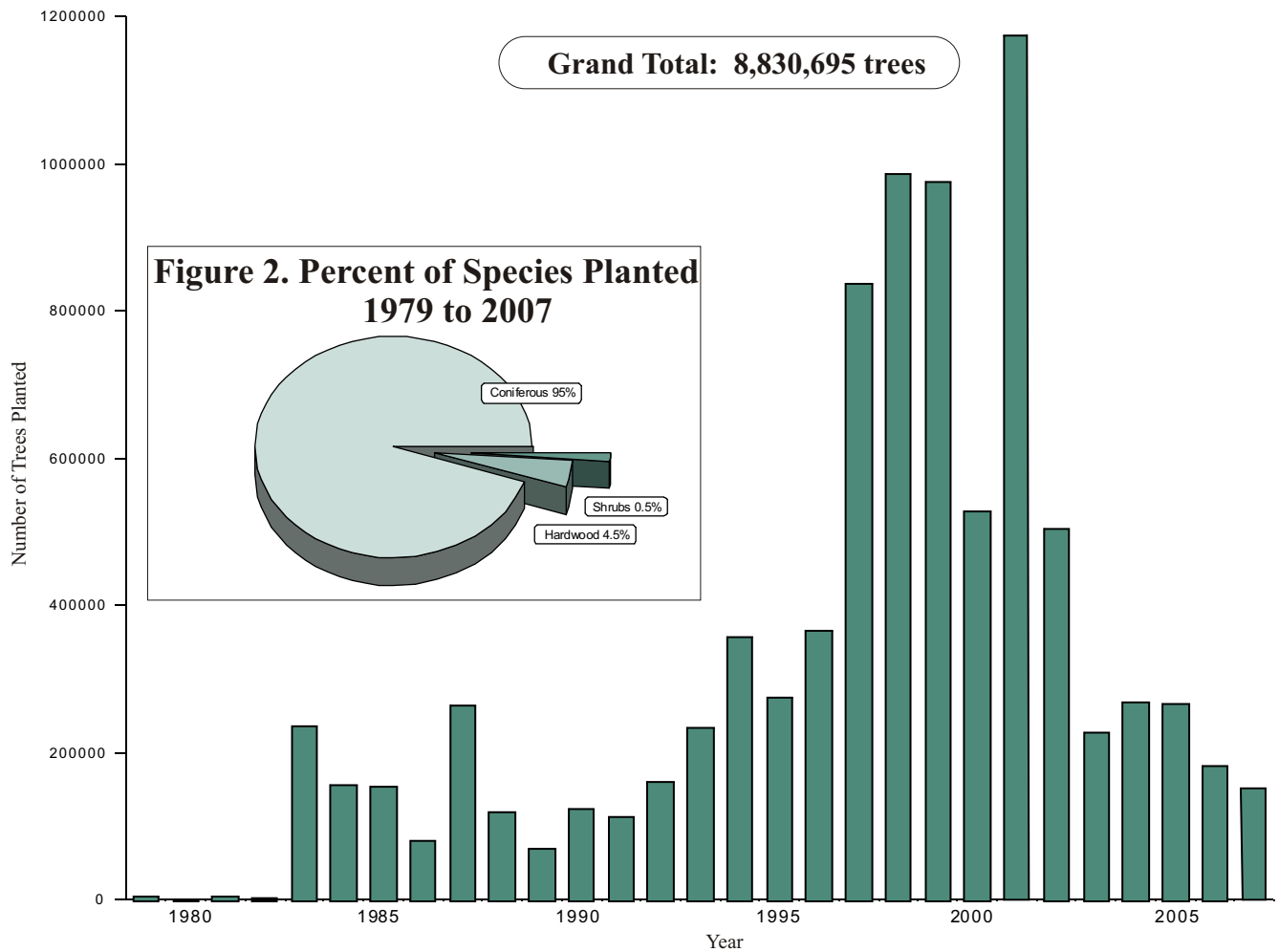
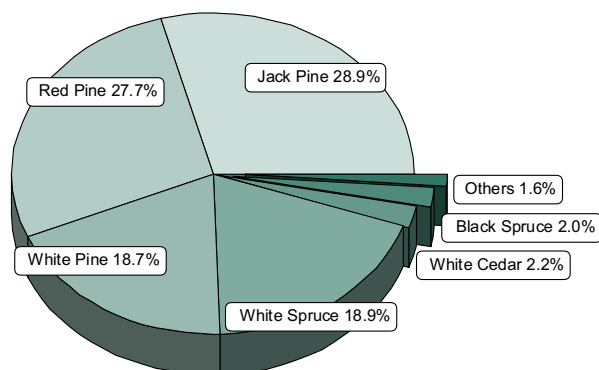
### Tree Planting Summary

This year, 152,116 tree seedlings were planted throughout Greater Sudbury, for a grand total to date of 8,830,695 tree seedlings and 43,427 shrubs planted since 1979. Refer to Map 1 for planting locations and Figure 1 for number of trees planted yearly. To date, 95% of all trees planted have been coniferous species, less than 5% have been hardwoods and less than 1% have been shrubs (Figure 2). Over 75% of coniferous species planted have been pines (jack, red and white), and red oak accounts for over 50% of all the hardwoods planted (Figures 3 and 4) to date. Tree species that are planted by the Program are believed to be the major components of the original forests in the Sudbury area, exclusive of Black Locust, which was formerly used as a nurse tree on more difficult sites.

Map 1. 2007 Tree Planting Locations

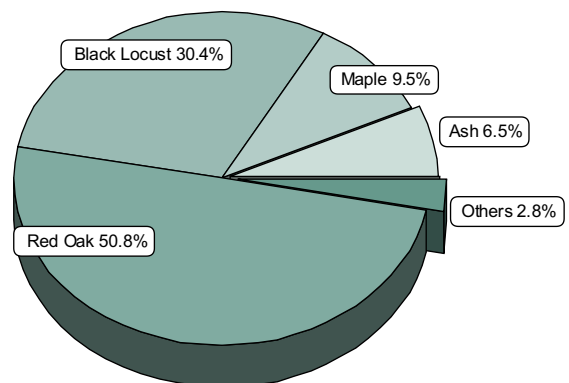




**Figure 1. Number of Trees Planted 1979 to 2007****Figure 3. Percent Coniferous Species Planted 1979 to 2007**

Others Include:

|                    |                     |
|--------------------|---------------------|
| Tamarack 1.2%      | Hemlock <0.1%       |
| Norway Spruce 0.2% | Balsam Fir <0.1%    |
| Larch 0.2%         | Austrian Pine <0.1% |

**Figure 4. Percent Hardwood Species Planted 1979 to 2007**

Others Include:

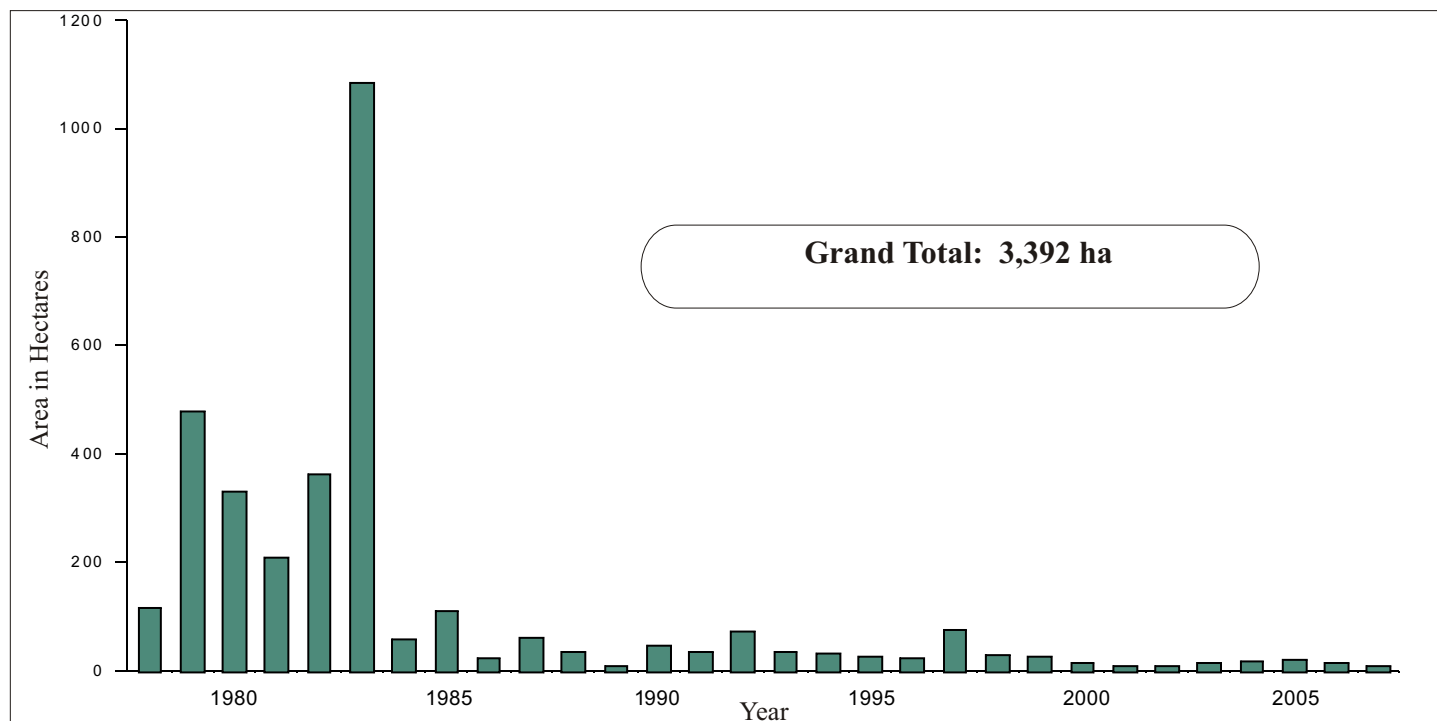
|                    |                      |
|--------------------|----------------------|
| Russian Olive 1.3% | Yellow Birch 0.9%    |
| Bur Oak 0.6%       | American Beech <0.1% |

## Greening Activities

June 18th marked the beginning of the liming activities on barren land located along the Wanapitei River (refer to Map 2 for location). Ontario Power Generation (OPG) agreed to allow access to the site through its' Coniston Generation Station.

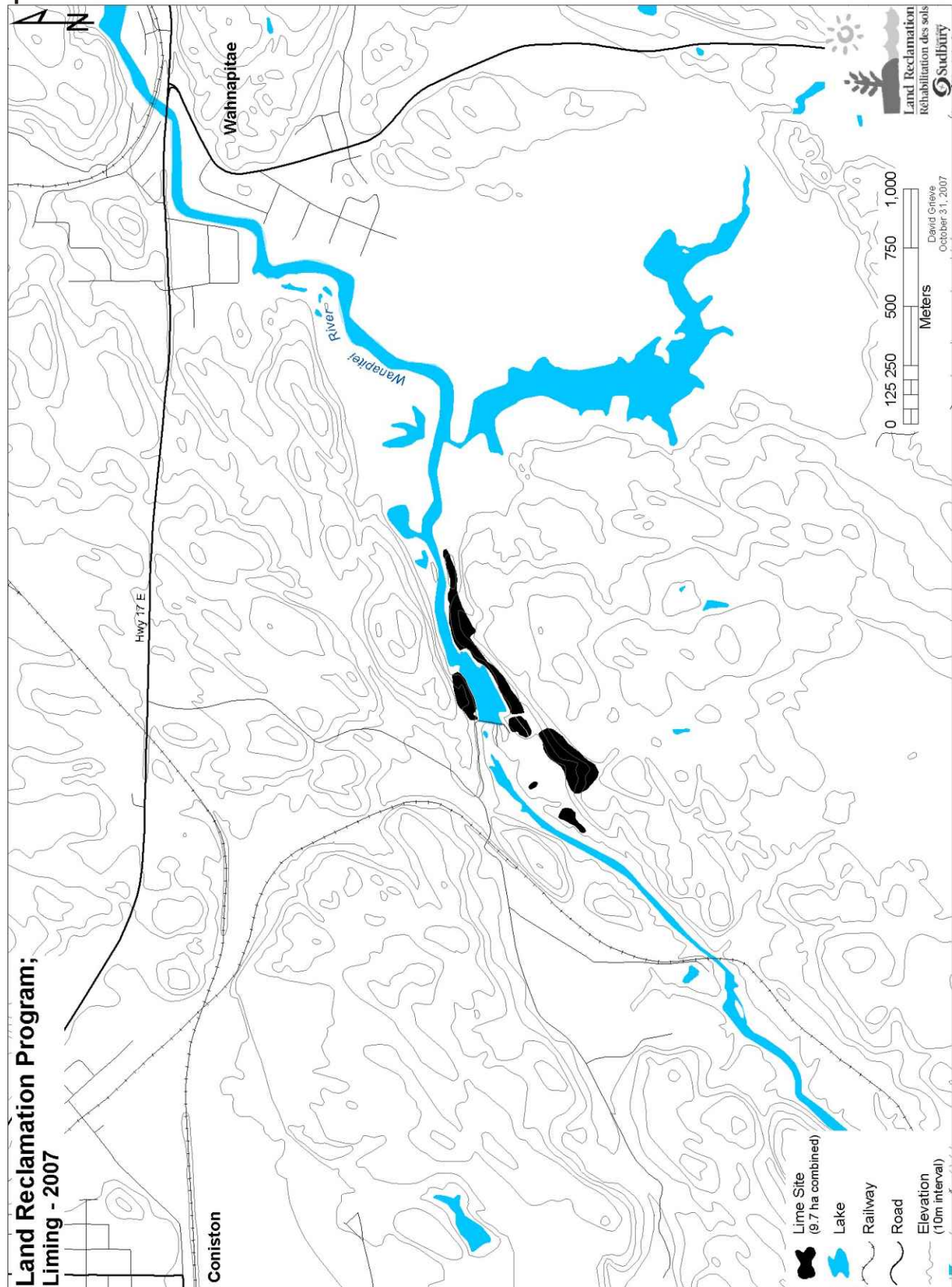
The crew was able to spread lime on 9.7 hectares of barren land, bringing the total to date up to 3,392 hectares (refer to Figure 5 for yearly liming area). During the last week of August, the crew spread fertilizer and a grass/legume seed mixture on 3.5 hectares of treated land, as the remaining land was in too close proximity of a water body. The entire liming process wrapped up on September 13th, by which time the seed mixture had already germinated and a green carpet of growth was visible.



**Figure 5: Liming Area 1978 to 2007**



Map 2. 2007 Lime Site Locations



## Monitoring Efforts

Two field interns, accompanied by two summer students, were engaged in monitoring activities this year. They were tasked with updating information on various ongoing monitoring projects and initiating a large scale inventory of reclamation sites in an effort to gather baseline information for future research into the City's floral reintroduction efforts. Ongoing monitoring activities included: special plantings, compost plots and monitoring the biodiversity/forest floor transplant plots.

The preliminary results show some positive results, however, future monitoring will be necessary to draw any final conclusions in some areas. An outline of the preliminary results are summarized in the following paragraphs.

### Special Plantings

In this exercise, previously planted species not regularly incorporated in the Land Reclamation planting prescription, were relocated and observations were made regarding general health and survival. Tree species selected included balsam fir, bur oak, white cedar, and green ash. A variety of shrubs were also monitored including alternate-leaf dogwood, bearberry, buffalo berry, high bush cranberry, red-berried elder, staghorn sumac and wild raisin. Although results vary by location, good survival was recorded for each species. Actual survival patterns will become more clear over time, warranting future investigation.

### Compost Plots

Eight years after plot establishment, the organic layer is persisting and appears to maintain a buffering capacity on soils. The organic layer is an important soil component lacking in much of the reclamation sites and is a required element for the growth of most understory herbs.

### Biodiversity Plots

In 2004, small pieces of the forest ground layer were translocated from a mining exploration site north of Capreol. These small forest mats were integrated into reclamation areas on formerly barren sites with the hope that the species in these plots would eventually spread.

Compared to initial observations made in 2005, the mean species richness is declining slightly in the plots at the Frood Road Trail but is increasing or being maintained in the plots at the Jane Goodall Reclamation Trail. The percent cover of most species appears to be increasing or staying the same. Mayflower was the species most commonly observed to be spreading away from the original plot, with the longest distance of travel recorded at 35 cm away from the original plot.

Long-term monitoring will be required to track colonization of these understory herbaceous plants from the plots into the reclaimed lands. Species found within these plots include mayflower (wild lily of the valley), low-sweet blueberry, bunchberry, bluebead lily, and starflower.

## Site Surveys

In 2006, eighteen sites were assessed to evaluate the success of the Land Reclamation tree planting operations. Detailed measurements of tree diameter, height, health and density were taken along with understory composition and abundance.

To complement the detailed evaluations undertaken last year, a rapid site assessment was developed this year in an attempt to evaluate the success of as many reclamation sites as possible. A total of 85 sites were assessed from the three barren areas and the semi-barren area. Seven reference sites in mature forest stands situated outside the impacted zone were also assessed to compare with findings from the reclaimed areas.

Tree growth and survival on most reclaimed sites were comparable to those of the reference sites. Limed sites had larger, healthier trees than those on un-limed sites. Conifer regeneration was observed on limed sites but not on unlimed sites. Regeneration of conifers is important to a self-sustaining ecosystem, reinforcing the need to lime disturbed areas in the Sudbury environment.

A floral inventory was undertaken at all the sites to determine plant species richness. Although unlimed and reclaimed sites had greater species richness than the reference sites, many of the species present at the former were non-native plants and early colonizers. The floral inventory also revealed a lack of late colonizing forest species and non vascular plants in the barren and semi-barren sites.

Less than half of sites assessed require further intervention in the form of tree planting and the introduction of forest ground layer plants. However, an organic layer is required for the ground layer species, which is mostly absent from the barren areas regardless of whether or not they were limed. Semi-barren limed areas are showing some organic layer build up. To successfully initiate more desirable conditions for ground layer vegetation development, organic matter may need to be added in some locations.



Mature Forest Reference Site



Typical Untreated Site in the Sudbury Barrens



Typical Reclaimed Site



## Ugliest Schoolyard Contest

The third annual Ugliest Schoolyard Contest was an overwhelming success thanks to the tireless efforts of Mr. Wayne Hugli, Co-chair of the Urban Landscape Subcommittee of VETAC and the generous support from all sponsors. Of the 13 applications received the winning school was Pinecrest Public School in Hanmer.

Thanks to a large financial contribution from Xstrata Nickel in the amount of \$75,000, runner-up prizes went to four area schools:

St. Augustin, Garson  
 St. Anne, Hanmer  
 Pius XII, Sudbury  
 Notre Dame de la Merci, Coniston

Schoolyard re-greening efforts at Pinecrest Public School began in June with discussions on the potential re-greening plans. James St. John developed a tentative plan for the project in August and minor modifications were made prior to the start of the project after further consultation with the Assistant Manager of Plants for the Rainbow District School Board.

The School Board hired a contractor to remove old asphalt, concrete and grass and arrangements were made to create a new concrete walkway that was wheelchair accessible to meet the needs of some of the students at the school. Carniello Contracting donated the labour to build the walkway, which was a substantial contribution to the project.

Special thanks to  
 our corporate  
 sponsors:



Existing planters were insulated and the Sudbury Master Gardeners provided new topsoil, compost and peat moss. Local Garden Centres provided plants to the school's garden club for planting. Vale Inco provided topsoil for the new lawn area and Hollandia Land and Environmental Solutions provided the sod. Eight large linden trees were planted by Botanix Azilda Greenhouses and the Sudbury Horticultural Society provided topsoil and manure for the development of new flowerbeds at the back of the school.

Ashley's Landscaping provided two large Manitoulin Stones for a quiet corner in the new garden and Saturn Sudbury donated two benches, a larger shade tree, shrubs, topsoil and manure to complete a reading corner. Canadian Tire and Vale Inco provided shrubs and perennials for the new flowerbeds and additional plants were purchased from local garden centres at greatly discounted prices. WD Tree Removal provided mulch for all the gardens.

All manual labour at Pinecrest Public School was provided by the very eager parent group, the school's garden club, students and teachers.

The Urban Landscape Sub-committee was impressed to see that many schools have undertaken re-greening efforts on their own. Many of these schools made use of the resources available for loan from the sub-committee as well as the list of website links providing information on other funding organizations that may assist in their projects.



We gratefully acknowledge the support of the following organizations and businesses in the schoolyard make over at **Pinecrest Public School** in Hanmer:

Adam & Eve's Garden & Patio Centre

Ashley's Landscape Supplies

Botanix Azilda Greenhouses

Canadian Tire, Regent Street

Carniello Contracting

Freskiw Farms

Hollandia Land & Environmental Solutions

Holla's Produce and Greenhouses

James St. John, Horticulturalist

RONA Cashway, Val Caron

Saturn of Sudbury

Southview Greenhouse Growers

Sudbury Horticultural Society

Sudbury Master Gardeners

Vale Inco

WD Tree Removal

Whitewater Greenhouses & Yard Art Centre

Xstrata Nickel



## Labour

### Labour

The Program owes much of its success to our many sponsors who donated labour to the Program. Program staff included two field interns, three foreperson positions and four worker positions. There were a total of seven summer students this year, five were involved in regular reclamation activities and two acted as assistants to the field interns. Six of the student positions were partially funded by YMCA Summer Job Service for a period of 17 weeks. Ontario Works provided a total of 4 individuals to work two days per week from May 7th to October 12th. They were engaged in both the spring and fall planting activities as well as the greening activities during the summer months. The Ministry of Training, Colleges and Universities, through a JCP program provided 4 individuals to work four days per week for a period of 15 weeks. These individuals began on July 3rd and participated in the greening activities and the fall tree planting activities.

**Table 1. Labour Summary**

| Program   | Positions | Weeks                        | City Cost | Activity  |
|---|-----------|------------------------------|-----------|---|
| CGS Temporary Employees                             | 10        | 26<br>15.5<br>23<br>30<br>17 | 100%      | Foreperson (2)<br>Crew Foreperson (1)<br>Worker (4)<br>Field Intern (2)<br>Student Intern (1) |
| YMCA - SJS Summer Students                          | 6         | 17                           | 82%       | Tree planting, liming   |
| Ontario Works                                       | 4         | 23                           | Nil       | Tree planting, liming   |
| Ministry of Training, Colleges & Universities - JCP | 4         | 15                           | Nil       | Liming, tree planting   |

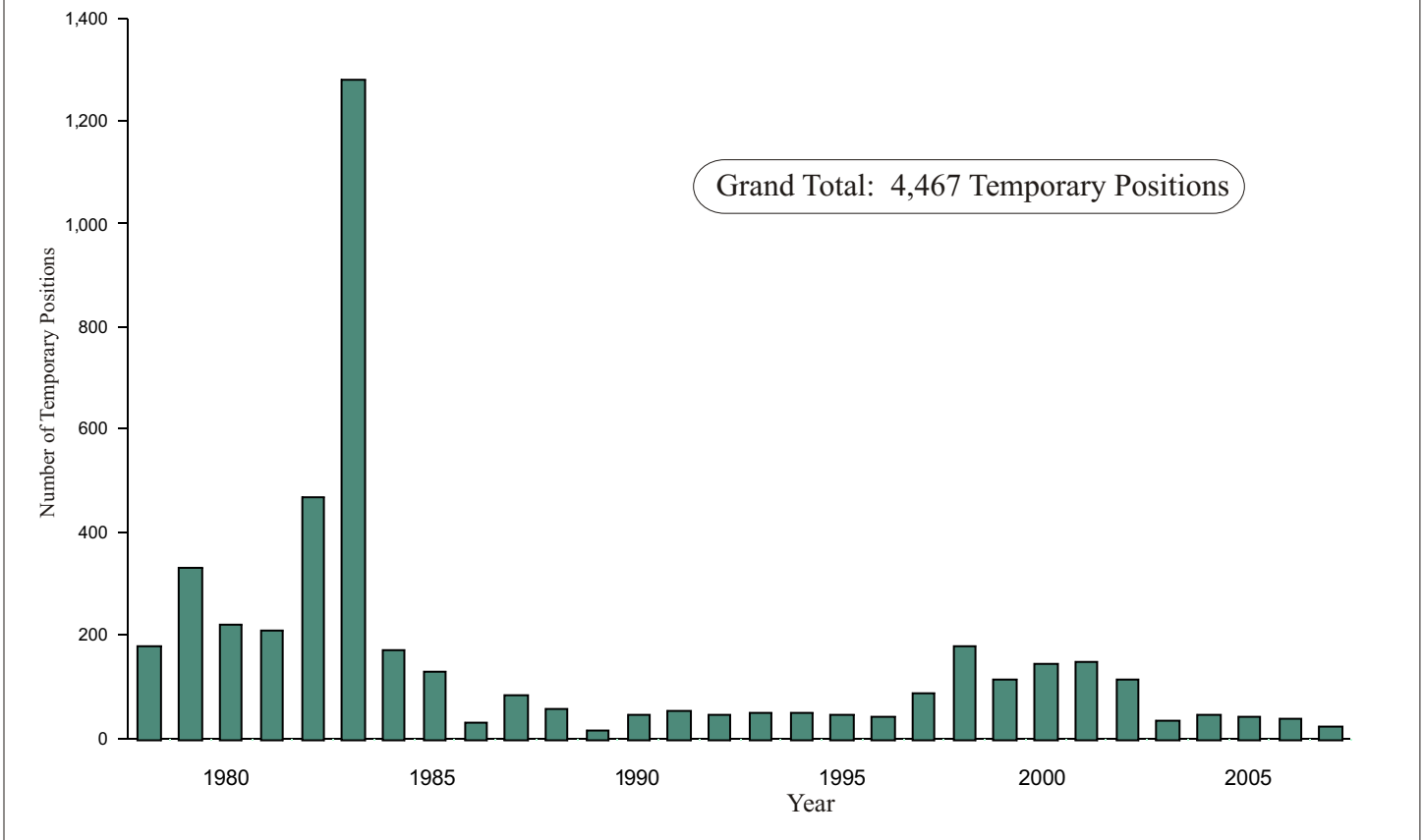
**TOTAL**

**24**

In total 24 temporary position were created (refer to Table 1 above). To date over 4,400 temporary positions have been created (refer to Figure 6 on the following page).





**Figure 6. Temporary Positions 1978 to 2007**

## Volunteers

Volunteers also participated in land reclamation activities by planting trees. This year eleven volunteer groups involving almost 400 individuals planted almost 8,000 tree seedlings throughout Greater Sudbury. The following is a list of the groups that participated in tree planting activities this year:

Sudbury Game and Fish  
 Capreol Ski Club  
 Silver Lake Stewardship Group  
 McFarlane Lake Restoration Committee  
 Canada World Youth  
 Rick MacDonald Park Committee

Ministry of the Environment  
 FedNor  
 St. Paul the Apostle School, Coniston  
 Junction Creek Stewardship Committee  
 Sudbury District Health Unit Sun Awareness Week  
 Participants

The volunteer program provides educational opportunity on environmental issues, information on the City's Land Reclamation Program, tree planting experience as well as a sense of community pride and ownership of the natural environment. Many thanks go out to this year's volunteers. Their efforts affirm the importance of trees in our local environment.

To date, 8,502 volunteers have planted 289,924 seedlings throughout Greater Sudbury as part of the Land Reclamation Program.

## Funding

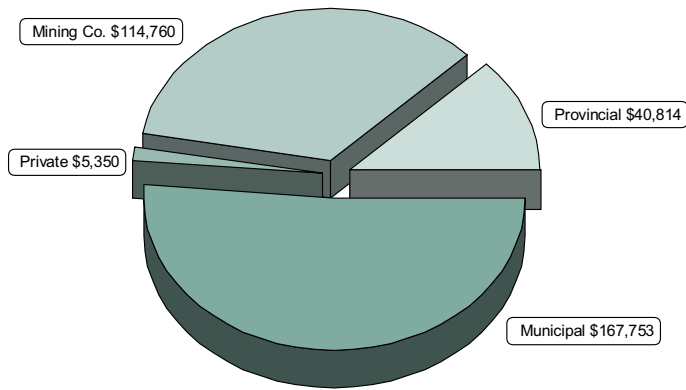
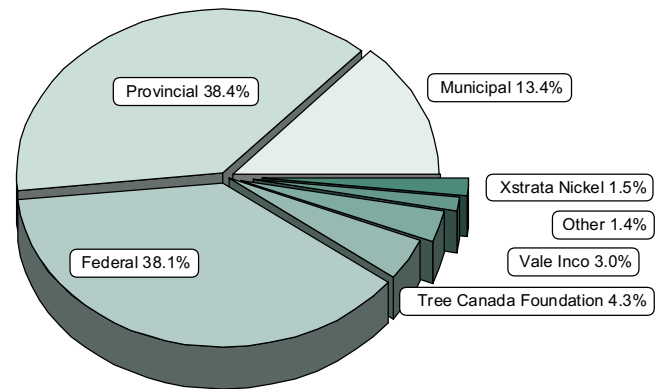
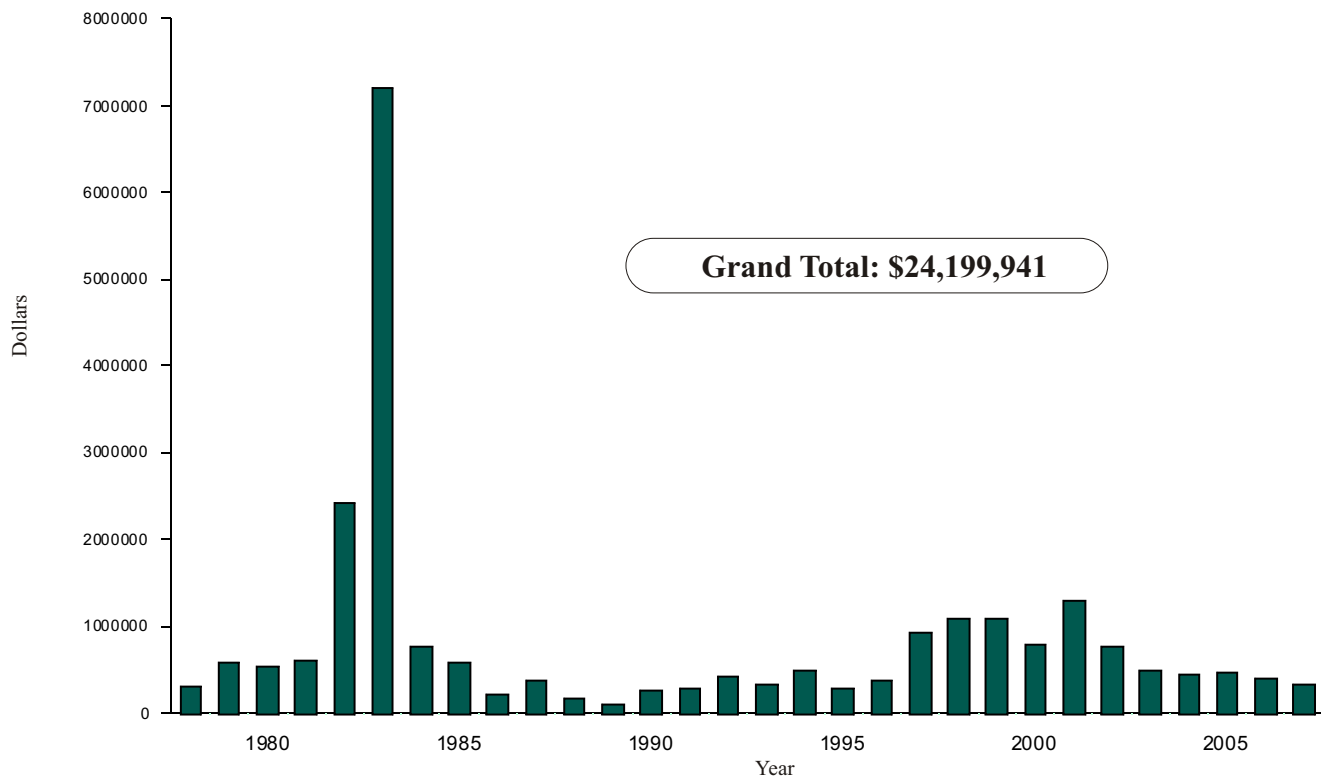
### Funding Summary

The Land Reclamation Program relies on donations to operate the yearly Program. Many successful partnerships have been developed over time and new opportunities are always being investigated. Table 2 below outlines funding sources by type of donation received in 2007. Figure 7 on the following page graphically depicts contributions by source.

**Table 2. Funding Contributions 2007**

| Program Contributors                                | Weeks | Number | Source     | Amount           |
|---|-------|--------|------------|------------------|
| <b>LABOUR</b>                                       |       |        |            |                  |
| Ontario Works Program                               | 23    | 4      | Provincial | \$11,558         |
| YMCA - SJS  | 17    | 6      | Provincial | \$6,551          |
| Ministry of Training, Colleges & Universities - JCP | 15    | 4      | Provincial | \$12,705         |
| <b>CASH</b>   |       |        |            |                  |
| Ontario Works                                       |       |        | Provincial | \$10,000         |
| Vale Inco   |       |        | Mining Co. | \$50,000         |
| Xstrata Nickel                                      |       |        | Mining Co. | \$40,000         |
| Sudbury earthdancers                                |       |        | Private    | \$1,350          |
| NDCA  |       |        | Private    | \$4,000          |
| <b>MATERIALS (trees)</b>                            |       |        |            |                  |
| Vale Inco   |       | 82,532 | Mining Co. | \$24,760         |
| <b>SUB TOTAL</b>                                    |       |        |            | <b>\$149,366</b> |
| City of Greater Sudbury                             |       |        |            | \$167,753        |
| <b>GRAND TOTAL</b>                                  |       |        |            | <b>\$328,677</b> |

Since 1978, the City's contribution to the Program has averaged 13.4% of the total costs with 86.6% coming from outside sources (refer to Figure 8). To date, the Program costs exceed \$24 million (refer to Figure 9 for yearly Program cost summary).

**Figure 7. Funding Contributions 2007****Figure 8. Percent Funding Contributions by Source 1978 to 2007****Figure 9. Yearly Program Costs 1978 to 2007**



## Events

### Earth Day & Tree Giveaway

On April 22nd, an Earth Day event took place at Market Square. This opportunity was used as a venue for the annual tree giveaway. The Land Reclamation Program was on display, along with the “Ugliest Schoolyard Contest” information. Over 3,000 tree seedlings were distributed to the public, including white cedar, white spruce and red pine. To date this Program has offered over 400,000 seedlings to homeowners in an effort to reclaim urban spaces. Various VETAC members and employees staffed the booth for the day and many positive comments were received from the public.

### International Day for Biological Diversity

May 22nd, International Day for Biological Diversity, was celebrated by VETAC along with students from St. Paul the Apostle School in Coniston. The event took place at the Jane Goodall Reclamation Trail, where grade 5 and 6 students were invited for a tour of the trail and along the way planted a variety of species to increase the diversity of plants at the site. Species planted included white cedar, red oak, blue flag iris, marsh marigold and lady fern.



### Plant for the Planet: Billion Tree Campaign

The United Nations Environment Programme (UNEP) launched a major worldwide tree planting campaign. Under the *Plant for the Planet: Billion Tree Campaign*, people, communities, business and industry, civil society organizations and governments were encouraged to enter tree planting pledges online with the objective of planting at least one billion trees worldwide during 2007. VETAC and the Land Reclamation Program entered a pledge of planting 140,000 trees in 2007. At the end of the fall planting season, 152,116 trees were planted and registered with the Billion Tree Campaign. Results of the campaign can be viewed at [www.unep.org/billiontreecampaign/](http://www.unep.org/billiontreecampaign/)

### Plantatree™ World's First Carbon Positive Wine

On Thursday, November 22nd, Lifford Wine Agency launched the first carbon positive wine: plantatree™. The grapes for the wine are farmed using sustainable agricultural practices and to lessen the carbon imprint, the wines are shipped in bulk and packaged using recycled materials that are also recyclable. To further qualify for carbon positive status, for each bottle sold, Tree Canada Foundation will receive \$2.50 to plant one tree in the Sudbury area through the City's Land Reclamation Program. plantatree wine is available at Ontario LCBO stores. Visit [www.plantatreewine.com](http://www.plantatreewine.com) for more details.



## Communications

Communicating the successes of local re-greening efforts continues yearly, to both local audiences as well as groups abroad. Presentations were made by both staff and VETAC members to the Historica Regional Heritage Fair, Canada World Youth (a trail tour and planting activity were also provided), Laurentian University Restoration Ecology Students (liming activity also provided) and the Canadian Association of Geographers.

Dr. Peter Beckett also participated in the Regional Walkability Roadshow on April 19 and 20, presented by Green Communities Canada. This one day workshop and one day community walkabout focused on working to create walkable neighbourhoods and developing strategies and programs to support and promote walking. Some of the reclamation areas were discussed as potential walking trail locations.

The re-greening success story made national headlines on CBC National News with Peter Mansbridge on March 12. Interviews were also provided to Radio Canada-RDI Ottawa on April 20.

At the Sudbury 2007 Mining and Environment Conference, Dr. Peter Beckett delivered a presentation entitled “Ecological Status of the Sudbury Land Reclamation Program” on October 23. Jennifer Braun, a Laurentian University Masters Student and Land Reclamation Field Intern in 2006 and 2007 also had a poster on display during the conference entitled “Improving Reclamation Success by increasing plant diversity.” Tours of the Sudbury Land Reclamation Program were also provided on October 20 and 21. The conference was attended by 600 people representing 26 countries.

The “Ugliest Schoolyard Contest” gained the attention of Canadian Gardening Magazine, which published an article on the contest in the August/September issue on page 18 entitled “Class Act”. Sparked by an Xstrata Nickel press release, the 2007 contest winners were featured on Channel 10 News and CTV News at Six on November 20th. Local newspapers also published articles on the contest. An advertizement thanking all sponsors appeared in The Sudbury Star on Saturday, December 8, and the Northern Life and Le Voyageur on Wednesday, December 12.

Locally, the Sudbury Star published the following articles:

- Friday, February 9; Healthy lakes a bigger concern: report
- Monday, April 23; Greater Sudbury marks Earth Day
- Saturday, June 9; Making things green in Sudbury for the past 30 years
- Tuesday, October 16; Horticultural society selling calendars> A gift that grows
- Wednesday, November 21; Students, Xstrata regreen schools
- Saturday, November 24; Imbibing for a cause

The Northern Life published the following articles:

- Monday, June 4; Adamsdale re-greens schoolyard
- Tuesday, June 12; Ugly schoolyard gets a facelift
- Wednesday, November 28; Drink a bottle of wine, plant a tree in Sudbury

Le Voyageur published the following article:

- Le mercredi 28 novembre; Plus belle, plus amusante

## VETAC



### Members List 2007:

|                   |                   |  |
|-------------------|-------------------|--|
| <b>Chair</b>      | Dr. Peter Beckett | Laurentian University                              |
| <b>Vice-Chair</b> | Bill Lautenbach   | City of Greater Sudbury, Planning Services         |
| <b>Members</b>    | Tony Fasciano     | Private  |
|                   | Enzo Floreani     | Master Gardeners                                   |
|                   | Wayne Hugli       | Horticultural Society                              |
|                   | Jim Ilnitski      | Private  |
|                   | Mark Kuhlberg     | Laurentian University                              |
|                   | Shirley Makela    | Private  |
|                   | Tina McCaffrey    | City of Greater Sudbury, Land Reclamation          |
|                   | Dr. Stephen Monet | City of Greater Sudbury, Env. Planning Initiatives |
|                   | Michelle Murray   | Private  |
|                   | John Negusanti    | Ministry of the Environment                        |
|                   | Mike Peters       | Vale Inco  |
|                   | Tom Peters        | Private  |
|                   | Tobias Roth       | Private  |
|                   | Paul Sajatovic    | NDCA   |
|                   | Graeme Spiers     | MIRARCO  |
|                   | Dr. Mark St. John | Private  |
|                   | Marty Todd        | Xstrata Nickel                                     |
|                   | Ben van Drunen    | Hollandia Land & Environmental Solutions           |

**For further information on VETAC, please visit  
[www.greatersudbury.ca/VETAC](http://www.greatersudbury.ca/VETAC)**



For Further Information Please Contact:

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