

The GREEN ROOF MONITOR

Vol. I, No. 2, Winter 1999

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Welcome to the second issue of the Green Roof Monitor, a quarterly report on current and emerging green roof events and opportunities.

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CONTENTS:

1. GREEN ROOFS FOR HEALTHY CITIES NEWS
 2. LOCAL NEWS
 3. NATIONAL NEWS
 4. INTERNATIONAL NEWS
- =====

COALITION NEWS

ABOUT GREEN ROOFS AND OUR COALITION

Green roof infrastructure provides a wide range of public and private benefits. These extend from improved stormwater management and smog reduction to energy efficiency, cost savings and new amenity space for building occupants. *Green Roofs for Healthy Cities* is a business coalition founded in March 1999 to foster the development of a market for green roof infrastructure. Green roof development involves the creation of 'contained' green space on top of a human-made structure. This green space can be below, at, or above grade, but in all cases the plants are not planted in the 'ground'. A green roof is an extension of the existing roof. It involves a special root repelling membrane, a drainage system, a lightweight growing medium and plants. The Founding Members of the Coalition are **John McManus**, Flynn Canada Ltd.; **William Bean** and **Brian Lambert**, Garland Canada; **Al Duwyn**, IRC Buildings Sciences Group Inc.; **Frank Baxter**, Semple-Gooder Roofing; and **Colin Donaldson**, Soprema Inc. *Green Roofs for Healthy Cities* is pleased to welcome Sheridan Nurseries and De Boer Landscape and Maintenance as Coalition members for 2000.

Please visit our website at www.peck.ca or e-mail **Steven Peck**, Director, *Green Roofs for Healthy*

Cities at speck@peck.ca for membership information. For general information about the Coalition, contact **Stephanie Tencer**, Coalition Coordinator at stencer@peck.ca

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LOCAL NEWS

TORONTO PUBLIC HEALTH IDENTIFIES GREEN ROOF INFRASTRUCTURE AS MEANS FOR REDUCING HEAT STRESS

In July 1999, Toronto Public Health proposed a *Hot Weather Response Plan* to lessen the impact of hot weather on at-risk populations in Toronto. Within their recommendations, they identify the need to analyze the Toronto heat island effect and explore methods, such as the promotion of green roof infrastructure, to mitigate summer heat over the long term. Toronto Public Health is also proposing a major conference in 2000 to facilitate greater understanding of, and ways of adapting to, extreme weather changes. For more information about the *Hot Weather Response Plan*, contact **Kathleen Harte** at (416) 392-1560, extension 87062.

TAF FUNDS ROOF GREENING STUDY FOR TORONTO CITY HALL

The Toronto Atmospheric Fund has granted *Green Roofs for Healthy Cities* funding in support of Phase I of the Green Roof Infrastructure Demonstration and Monitoring Project. The project involves installing and monitoring the membrane, energy and stormwater benefits of green roofs on 2 city-owned buildings. It has received strong support from a number of City departments, many of which are represented on the Phase I Steering Committee. The Steering Committee is co-chaired by **Steven Peck**, Peck & Associates and **Jim Kamstra**, Facilities and Real Estate. Other members include: **Bas Baskaran**, National Research Council; **Brad Bass**, Environment Canada; **Richard Morris**, Office of Energy Efficiency, Works Department; **Monica Kuhn**, Architect; **Pam Georgopolous**, Stormwater Management, Works Department; **Ted Bowering**, Stormwater Management, Works Department; **David Stonehouse**, Urban Planning and Development Services; **Jamie McFadyen**, Facilities and Real Estate; **Arthur Beauregard**, Parks and Recreation; **David O'hara**, Parks & Recreation; **Lisa Salzberg**, Healthy Cities Office; **Sandra Rodriguez**, Strategic & Corporate Policy, Chief Administrator's Office; **Lois Corbett**, Toronto Environmental Alliance; **Monica Tang**, Councillor Layton's Office; **Monica Campbell**, Toronto Public Health and, **Richard Stromberg**, Heritage Toronto.

GREEN ROOFS IDENTIFIED AS UNEXPLORED POTENTIAL IN SUSTAINABLE ENERGY PLAN FOR TORONTO

In the Sustainable Energy Workgroup report for Toronto's Environmental Task Force's *A Sustainable Energy Plan for Toronto*, a number of opportunities for advancing a sustainable energy agenda over the next 5 years in the City of Toronto were identified. Among them is the recognition that, "[t]oronto has huge unexplored potential to achieve reduction in cooling load, improved air quality, reduced noise and improve the City's ambience through plantings of backyard and street trees, rooftop gardens and parking lot trees in neighbourhoods and public spaces". For more information about the Sustainable Energy Workgroup, e-mail etf@city.toronto.on.ca or contact **Fred Hendriks** at (416) 392-3819.

POLICY PROGRESS - CHANGES TO TORONTO'S PROCUREMENT POLICY ACHIEVED

In direct response to *Green Roofs for Healthy Cities*' lobbying efforts, the City of Toronto has revised their Environmentally Responsible Procurement Policy to include the following provisions:

- Given the environmental and economic importance of infrastructure, environmentally responsible procurement principles should be applied to construction design, processes, tendering and materials; and
- Given that many environmentally preferred products and services can produce a variety of tangible benefits, full consideration should be given to the long-term and complete costs and benefits of environmentally responsible procurement.

These changes should help encourage the adoption of products and services, such as green roof infrastructure, which provide a broader range of social, environmental and economic benefits than are traditionally accounted for.

**GREEN ECONOMY WORKGROUP
ADVOCATES FOR GREEN ROOFS**

The Green Economy Workgroup of Toronto's Environmental Task Force submitted *The Green Economy Plan* and presented some key findings at the Environmental Task Force meeting on October 20, 1999. An integral component of the Plan involves supporting green business sectors through community economic development. The Workgroup recommends that "the City should recognize food production as a part of economic and environmental reinvestment, expand community gardening, implement rooftop gardens...". The Workgroup also recommends that the City "...develop an action plan to implement a minimum of 10 rooftop gardens on their public properties within the next three years. This action plan should include incentives for green roof design and construction, strategies for linking organic waste recovery with rooftop food production, and supports for research and demonstrations on rooftop food production". For more information about the Green Economy Workgroup, e-mail etf@city.toronto.on.ca or contact **Fred Hendriks** at (416) 392-3819.

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VIENNA, AUSTRIA
INTENSIVE GREEN ROOF



NATIONAL NEWS

**NRC'S INSTITUTE FOR RESEARCH IN
CONSTRUCTION PLANS GREEN ROOF
RESEARCH**

National Research Council's Institute for Research in Construction held a meeting on November 23rd to invite industry participation in a consortium project to quantify the benefits of green roofs. The project involves the use of two identical buildings in Ottawa, with roof areas of about 1,000 square feet. One building will be fitted with a generic green roof. For more information, please contact **Bas Baskaran**, tel: (613) 990-3616, e-mail: bas.baskaran@nrc.ca

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INTERNATIONAL NEWS

**77 CITIES IN GERMANY INVEST IN
GREEN ROOF INFRASTRUCTURE**

Research conducted by *Green Roofs for Healthy Cities* reveals that in Germany, 10% of all flat roofs have green roofs. This represents over 55 million square metres of green roof infrastructure in place since 1989. Green roof infrastructure is funded through public-private partnerships in Germany. Almost 50% of German cities (77 cities) have programs in place that support the development and growth of a market for green roof infrastructure. 80% of the green roofs are extensive, involving low costs, growing media and plant diversity.

The *German Roof Gardeners Coalition* has been successfully advocating for green roofs since 1984. For information (in German) about this coalition, their research and lobbying efforts, visit: www.dachgaertnerverband.de/stadt.htm

INTERNATIONAL NEWS:

GARLAND AND THE PORTLAND GREENSHIELD PROJECT

Garland has installed a green roof on an 8,500 square foot, 10-story, high rise building owned by the Portland Housing Authority. The building, designed by OTAK Architects, uses Garland's high performance StressPly Plus polymer modified membrane, which incorporates the use of post-consumer recycled tires. The green roof system installed uses various layers of drainage mats to filter membranes and a specialized soil formulation. The plants growing are primarily low, ground cover seedlings. For more information about this high performance green roof system, contact **Brian Lambert** at blambert@garland.com or call 1 (800) 321-9336.



TWO VIEWS OF THE PORTLAND HOUSING AUTHORITY'S GREENSHIELD PROJECT

CHICAGO PREPARES TO GREEN CITY HALL ROOF

The preparations for Chicago's experimental green roof atop City Hall have begun. The 20,000 square foot roof will accommodate 2 oak trees and more than 21,000 plants and shrubs this spring as part of a five-city pilot project assisted by the Environmental Protection Agency and the Department of Energy. In addition to EPA monitoring, infrared satellite photos from the National Aeronautics and Space Administration will be used to measure the program's effectiveness. William F. Abolt, Commissioner of Chicago's Department of the Environment, said he expects the City Hall green roof to result in annual savings of \$3,000 to \$4,000 due to reduced heating and cooling costs.

