

# **Living Green Infrastructure in Ontario: Opportunities & Challenges**

**Greenbelt Conference, March 23, 2011**

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**[www.greenroofs.org](http://www.greenroofs.org)**

**[www.greeninfrastructureontario.org](http://www.greeninfrastructureontario.org)**

# Overview

- ❖ Resources and Introduction to GRHC and GIF
- ❖ Green Infrastructure – What it is – What it is not!
- ❖ Why Green Infrastructure?
- ❖ Challenges & Opportunities
- ❖ Green Infrastructure Ontario Coalition – A Pathway Forward
- ❖ Conclusion

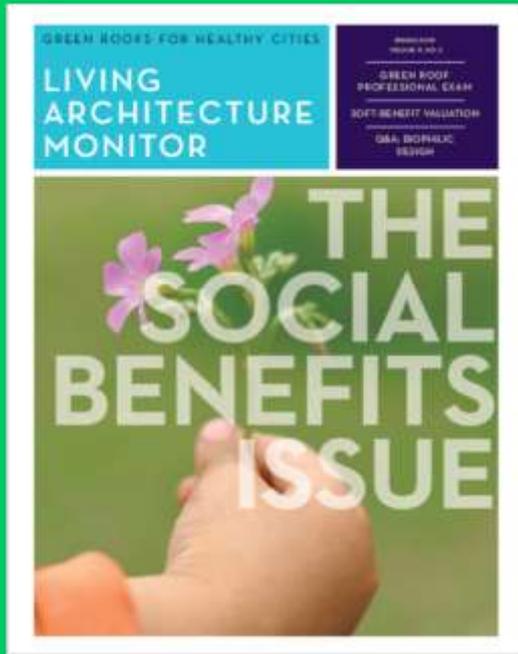


# Green Roofs for Healthy Cities – [www.greenroofs.org](http://www.greenroofs.org)

*Our mission is to increase the awareness of the economic, social and environmental benefits of green roofs and green walls and other forms of living architecture through education, advocacy, professional development and celebrations of excellence.*



# Green Roofs for Healthy Cities – [www.greenroofs.org](http://www.greenroofs.org)



**Bootcamp – Four days of intensive training in support of the GRP**

**Toronto – March 24–27**

**GRP exam – April 27**

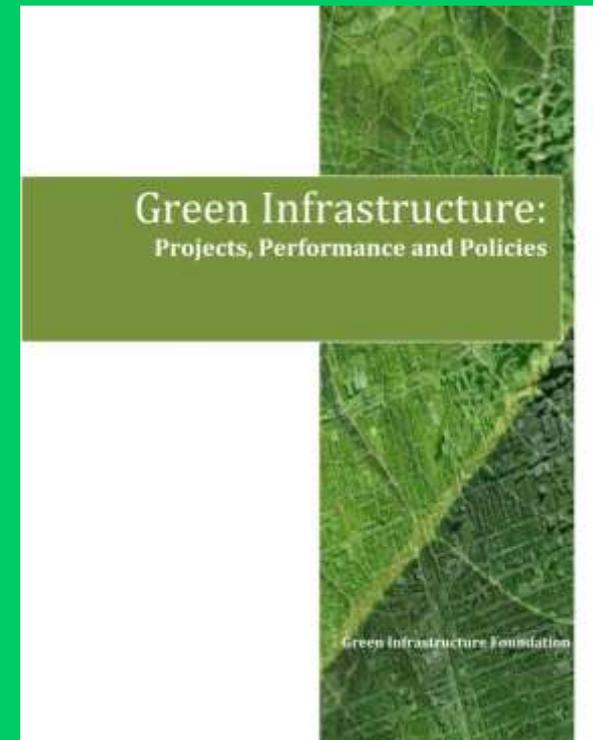
# Green Roofs for Healthy Cities – [www.greenroofs.org](http://www.greenroofs.org)

- ✳ Member Profiles – Online Directory
- ✳ Living Architecture Monitor
- ✳ Member Surveys
- ✳ Slides for Presentations
  
- ✳ Online papers
- ✳ Presentations
- ✳ Proceedings from conferences



# Green Infrastructure Foundation

***Our mission is to provide resources, training, public education and evaluation of public and private green infrastructure investments to help communities, local governments and private developers make the built environment more ecologically, socially and economically sustainable.***



# What is Green Infrastructure?

- Some definitions of GI include any form of infrastructure that exhibits an environmental attribute – i.e., concrete pavers that are long lasting.
- Other definitions include green energy infrastructure, such as wind turbines, solar panels, bike lanes etc.
- Others include coral reefs and boreal forests....
- We are proposing to focus more narrowly....on vegetative technologies – living systems



# What is Green Infrastructure?

- Greenways
- Restored and constructed wetlands & stormwater ponds
- Urban forests
- Raingardens
- Bioswales



# What is Green Infrastructure?

- Green roofs
- Green walls
- Permeable and porous paving systems
- Green spaces, such as turf, meadows and manicured areas
- Community gardens
- Supportive technologies such as structural soils, cisterns



## Why Living Green Infrastructure – It Delivers!

*The increasing urban population, climate change and loss of biodiversity are all strongly connected.*

*With two-thirds of a considerably larger world population predicted to be living in urban areas by 2050, the “Battle for life on Earth” will be lost or won in urban regions.*

*The Erfurt Declaration, Urbio Conference, 2008, Erfurt, Germany*

# Why Living Green Infrastructure – It Delivers!

- *Local and regionally based green jobs creation – in design, manufacturing, installation and maintenance*
- *Recharging our ground water*
- *Cleaning surface water*
- *Reducing stormwater runoff*
- *Reduction of combined sewer overflows*
- *Improving soil quality*
- *Stripping particulates from our air*



# Why Living Green Infrastructure – It Delivers?

- *Cooling our buildings*
- *Reducing the urban heat island effect*
- *Improving in energy efficiency, at the building scale and community wide scale*
- *Storing carbon from the atmosphere to reduce climate change*
- *Providing opportunities for renewable biomass and more efficient solar power*
- *Supporting biodiversity – both flora and fauna*
- *Helping communities adapt to climate change impacts such as severe heat and storm events*



# Why Living Green Infrastructure – It Delivers

- *Improving the productivity of employees*
- *Reducing health care costs, by facilitating active play for children*
- *Allowing children to have an experience of nature, thereby addressing the ‘nature deficit-disorder’.*
- *Improving social cohesion in our communities*
- *Feeding our hungry and disadvantaged*
- *Reducing noise pollution*
- *Improving the marketability of buildings*
- *Increasing tax revenue from improved property values*



# Why Living Green Infrastructure – It Delivers?

- *Energy conservation at a building and community-wide scale*
- *Reducing the capital and operational costs associated with traditional gray infrastructure.*
- *Strengthening the beauty of communities, and their livability*



<i>SCENARIO</i>	<i>SLURRY SEALS</i>	<i>TOTAL COST (\$)</i>	<i>SAVINGS (\$)</i>
Unshaded	6	4,971	
Small trees	5	4,142	829
Large trees	2.5	2,071	2,900

# Why Living Green Infrastructure – It Delivers!

In urban regions and cities – the value of green infrastructure is often the greatest....

- Greater Toronto Area
- Hamilton-Wentworth
- Ottawa
- Guelph
- London
- Peterborough
- Barrie



# Living Green Infrastructure Challenges

*• If we can work together to support green infrastructure development, we can achieve more.....*

- ❖ We are working on complex issues in silos...  
food, energy, water, health, air quality...*
- ❖ We are forced to compete for scarce  
resources amongst each other*
- ❖ Charitable organizations are prevented from  
lobbying*
- ❖ We are localized in our work – missing the  
bigger picture and bigger opportunities*



# Living Green Infrastructure Challenges

- ❖ *Historically – environmental movement has been against things... developments etc. , not for something... haven't articulated what we are for.*
- ❖ *Silo mentality pervades environmental movement !*
- ❖ *Most organizations are working on **symptoms** of unsustainable development ... few are working root causes!*
- ❖ *Analysis paralysis... we are critical thinkers so its hard to come to agreement... .on the scale and scope of what we want... How much tree canopy should we strive for....*



# Living Green Infrastructure Challenges

❖ *We need a shared vision of what we want!*

❖ *Can we develop a common vision for Green Infrastructure in Ontario over the next 20 to 25 years!*

❖ *GI - can provide a rallying point - binding many of these elements together...*



# Living Green Infrastructure Challenges

- ❖ *Living Green Infrastructure does not have a home in government –*
- ❖ *Living Green Infrastructure is not considered “infrastructure” by policy makers.....*
  - ❖ *Not considered for infrastructure funding – stuck in the “AESTHETIC BOX”!*
- ❖ *We do not holistically provide bio-physical or monetary values for green infrastructure investment.*



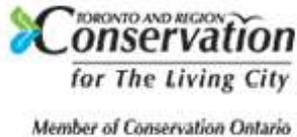
# The Issue

Green infrastructure provides a multitude of economic, social, environmental and health benefits, most of which are **not fully recognized** in current policies and public investment formulas.



# Green Infrastructure ONTARIO COALITION

## STEERING COMMITTEE



**Green Infrastructure Ontario Coalition** envisions a future in which the many contributions made by green infrastructure to quality of life are recognized, protected, maintained and enhanced. The coalition is an alliance of organizations that share a **common vision** of a healthy green Ontario in which the economic, social, environmental and health benefits of green infrastructure are fully **realized, protected, maintained and enhanced.**

## Steering Committee Members

**Janet McKay, LEAF**

**Deborah Martin-Downs, TRCA**

**Steven Peck, Green Roofs for Healthy Cities**

**Tony DiGiovanni, Landscape Ontario**

**Paul Ronan, Ontario Parks Association**

**David Stonehouse/Lois Lindsay, Evergreen**



# The ASK

Specifically, the coalition is advocating for:

- ❖ decision-makers in both the public and private sector to quantify the economic, social, environmental and health benefits of green infrastructure
- ❖ policy improvements at both the municipal and provincial level to facilitate green infrastructure opportunities
- ❖ a shift in both public and private investment, that leads to greater protection and enhancement of green infrastructure

# The Pathway Forward

- Trillium Provided Seed Funding!
- Work on Coalition-building
- Create a Vision - Identify challenges and opportunities - consultative process – survey and workshops
- Review of existing legislation and policy – identify gaps and opportunities
- Cost-benefit evaluation tool/framework
- Green Infrastructure Strategy for Ontario – Summer2011

# Coalition-building

- More members in the coalition, louder voice
- Must have diverse membership
  - Industry, business and professional associations
  - Municipalities
  - Academia
  - Non-profit organizations
  - Agencies and authorities

# Coalition-building

- Six founding/steering committee members
- 20 additional groups have joined as coalition members
- Our goal is 200



## Vision Building and Identifying Challenges and Opportunities

- Survey
- Consultative session at workshops



# Survey

Goal: to identify challenges, barriers and needs

Respondents: 315 to date, goal of 500 by end of April

- 41 per cent employed by municipalities
- 21 per cent identify with parks and landscaped areas, 17 percent with natural areas, and 14 percent with urban forests
- 37 per cent in southcentral Ontario, 21 per cent in southwestern Ontario

# Training and Consultative Workshops

- Grand River Conservation Authority, Cambridge (April 1)
- EcoSuperior, Thunder Bay (April 5)
- City of Windsor (April 14)

# Legislative and Policy Review

- Consultative process at workshops
- Survey results
- Ecojustice to assist in identifying gaps and recommendations



# Application for Review

- **Request for Review under Section 61, Environmental Bill of Rights**
- review their definitions of infrastructure, to ensure that infrastructure development in Ontario happen in a manner that facilitates Ontarian's quality of life and positions the province as a leader in the field. “
- Recommended definition of living green infrastructure
- the need for ministries to work together to incorporate sustainability principles into the definition of infrastructure

# Application for Review

- Submitted to Ministries of:
  - Agriculture, Food and Rural Affairs
  - Infrastructure
  - Environment
  - Municipal Affairs and Housing
  - Natural Resources
  - Transportation

# Application for Review

- Responses anticipated in March 2011
- Ministries required to provide reasons for decision
- Issue can be reported on by Environmental Commissioner

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# Ontario Water Conservation Alliance

- Approximately 50 member groups, including four Green Infrastructure Ontario Coalition steering committee members
- Campaign to ensure water conservation and efficiency measures are included in the Ontario Government's Water Opportunities and Water Conservation Act

[www.conserveourwater.ca](http://www.conserveourwater.ca)

# Cost-Benefit Tool and Evaluation

- Develop a Framework for Evaluating the Costs and Benefits of Different Levels of Green Infrastructure Investment
- If You Invest \$10 million, what are you likely to receive in terms of stormwater, green jobs, air quality etc...
- Build on the work of others – MNR, TRCA, CNT, Suzuki Foundation

## Green Infrastructure Strategy for Ontario

- Protect what we have, develop what we want!
- late summer 2011
- Diverse and extensive coalition membership
- Summary of findings from consultative process
- Highlights of valuation and cost-benefit analyses
- Legislative, policy and investment recommendations aimed at provincial decision-makers

# CONCLUSION

We need to protect what is green, and invest in developing more living green infrastructure in our cities in order to prepare for the many challenges we face this century... !

We invite you to join the GIO coalition and work with us!

**[www.Green Infrastructure Ontario.org](http://www.GreenInfrastructureOntario.org)**

