



Final Report Green Roof Industry Survey 2004 & 2005



Green Roofs For Healthy Cities

April 2006





Introduction – Organizational Background

Green Roofs for Healthy Cities – North America Inc. is a not-for-profit membership-based industry association whose mission is to further the development of the green roof infrastructure industry. The Association is holding its 4th Annual Conference in Boston on May 11-12, 2006, where experts from around the world will gather to network and share information on new policy development, designs, research results and products and services. The conference is being co-hosted by the City of Boston and will be held in the Hynes Convention Center and Sheraton Hotel. Media passes are available and more detailed survey results (see below) will be released at the conference. See www.greenroofs.org for details.

Green Roofs for Healthy Cities has over 2,000 Corporate and Individual Members. The Association is implementing an *Accredited “Green Roof Consultant” Program* for green roof designers and installers and delivers training courses throughout North America. This program will help to ensure higher quality green roof design and construction practices.

Green Roofs for Healthy Cities has a *Local Market Development Program* through which it works with a wide variety of policy makers to develop research, policies and programs in support of widespread green roof implementation. This program has been implemented in over 20 cities to date and has resulted in significant improvements in the level of awareness, technical performance, research, economic valuation research and policy support.

Survey Background

In December 2004, the Corporate Members’ Committee decided that there was a clear need to begin to develop data on the size, composition and geographic distribution of the green roof industry. This information is helpful in measuring our progress each year and communicating the importance of this new industry to a variety of stakeholder/interested parties.

Over the past year and a half, an industry survey was developed and Kendon Light, EA, was hired to administer the results and provide third party validation. The Committee’s goal was to have survey data ready for the 4th Annual Conference, Awards and Trade Show in Boston, MA, May 11-12, 2006. Corporate members felt that it was very important that the information collected be unbiased, accurate and respect the confidentiality of its members.

Cover photos of 2005 Green Roof Awards of Excellence winners. Top to bottom: Terry Guen Design Associates for Millennium Park, Chicago, IL; American Hydrotech, Inc. for Schwab Rehabilitation Hospital, Chicago, IL; Roofscapes, Inc. for Heinz 57 Center, Pittsburgh, PA; The Garland Company, Inc. for Evergreen State College, Olympia, WA; Building Logics, Inc for Yorktown Square Condominiums, Falls Church, VA



Methodology

The survey was developed by Green Roofs for Healthy Cities' staff with direction from its Corporate Members and administered by Kendon Light, EA. The Corporate Members Committee is Chaired by Steve Skinner, American Hydrotech and the Vice Chair is Dick Gillenwater, Carlisle Syntec.

All of the Corporate Members were sent the survey in the form of two different Excel spreadsheets. Each spreadsheet contained a copy of the survey document: one copy for 2004 industry activities and the other for 2005. Survey data was sent by Corporate Members to Kendon Light, who was retained to insure the anonymity of the aggregated data and to provide third party validation of the results. The survey data included the location of green roof projects, the size of the green roof in square feet, and the general type of green roof, as follows:

- Extensive (six inches of growing media or less, light weight, low cost and maintenance)
- Mixed/Semi-intensive (25% of the area, above or below six inches of growing media)
- Intensive (total area more than six inches of growing media, greater weight, cost, maintenance and plant diversity)

In order to prevent projects from being counted more than once, the data was sorted by city and size to identify projects that had identical profiles (i.e. same city, same size, same roof type). When two or more of such projects were identified, only one of them was counted.

Twenty-seven completed surveys were received. Several of our members were unable to complete them because they did not have ability to collect the data requested for various reasons. The results were tabulated and reviewed by Kendon Light.

The actual number of square feet of completed projects in 2004 and 2005 in North America is therefore *higher* than what is reported here, because of two factors: one, not all of our members' projects are reflected in the data and two, our Corporate Members do not currently represent the entire green roof industry.

Despite these limitations, the data provides an excellent figure for the growth of the sector as well as a strong baseline of implemented projects. The data also gives us a fair representation of the cities where most of the green roof activity is currently taking place.



2004 & 2005 Survey Results

Square footage of green roofs submitted for 2004 for North America and USA by General Green Roof Type:

	<i>North America Total</i>	<i>USA</i>
Total:	1,327,462	1,186,738
- Extensive*:	916,776	777,052
- Intensive:	405,762	405,762
- Mixed/Semi-intensive:	4,924	3,924

*Includes 1 project with no assigned category of green roof type.

Square footage of green roofs submitted for 2005 for North America and USA by General Green Roof Type:

	<i>North America Total</i>	<i>USA</i>
Total:	2,471,550	2,149,585
- Extensive*:	1,784,755	1,570,352
- Intensive:	488,109	476,359
- Mixed/Semi-intensive:	198,686	102,874

*Includes 7 projects with no assigned category of green roof type.

Growth in square footage from 2004 to 2005 for North America and USA by General Green Roof Type:

	<i>North America Total</i>	<i>USA</i>
Total**:	72%	81%
- Extensive:	79%	102%
- Intensive:	18%	17%
- Mixed/Semi-intensive***:	3054%	2522%

**Based on respondents who submitted surveys for both 2004 and 2005.

***Please note that the small sample sizes of Mixed/Semi-intensive projects means that the growth rate is disproportionately influenced by three large projects in 2005.

Top ten cities, by square footage planted in 2004.

1.	Chicago	IL	183,214 s.f.
2.	Ottawa	ON	120,000
3.	Washington	DC	90,137
4.	Boston	MA	59,700
5.	New Haven	CT	59,000
6.	Los Angeles	CA	52,000
7.	Baltimore	MD	51,170
8.	New York	NY	51,024
9.	Houston	TX	48,880
10.	Cleveland	OH	38,600



Top ten cities, by square footage planted in 2005:

1. Chicago	IL	295,600	s.f.
2. Washington	DC	206,900	
3. Suitland	MD	205,000	
4. Ashburn	VA	120,000	
5. New York	NY	119,895	
6. Culpepper	VA	100,000	
7. Austin	TX	97,384	
8. Arlington	VA	96,768	
9. Des Moines	IA	94,750	
10. Ottawa	ON	84,600	

A number of these jurisdictions, such as Chicago, Washington and Virginia have policies and programs in place which support green roof implementation, hence their leadership.

Conclusion

The green roof industry is off to a strong start and this data provides an important baseline from which to measure future progress. Green Roofs for Healthy Cities and its member companies will work to improve the rate of participation in the industry association and the annual survey in 2005. We project much greater increases in industry growth and coverage in the years ahead, particularly as more public agencies begin to invest in this important new infrastructure.

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