RAIN CITY STRATEGY
External Engagement Summary Report
July 2018
Rain City Strategy Engagement

In March 2018, the City of Vancouver invited residents, businesses, and industry professionals to participate in the planning process to create a Rain City Strategy, to guide how we manage and use rainwater in the city using a combination of green infrastructure and conventional pipe systems. Green infrastructure uses engineered systems and nature-based solutions to sustainably manage rainwater in an urban environment. The goal is to capture and treat 90% of the rainwater that falls in Vancouver. The Rain City Strategy will be a high-level strategic plan, which could lead to changes in policy or regulations around the management of rainwater on private and public property, to improve water quality, increase resilience, and enhance the livability of our natural and urban ecosystems. The goal of the public and industry engagement for the Rain City strategy is to inform the public on the potential of green infrastructure, and to collect their input on opportunities and barriers that need to be addressed by implementation plans and programs.

Engagement Process

Promotion

Public and industry engagement workshops were promoted through the Rain City Strategy mailing list, the City of Vancouver website, the Greenest City newsletter, and through the newsletters and event calendars of professional associations for the various sectors of the development industry. Staff gave presentations to several key groups, such as the Urban Development Institute, and the Greater Vancouver Homebuilders Association to inform on the project and invite their members to attend the workshops. The community open house and workshop was additionally promoted through environmental not-for-profit mailing lists, social media, Business Improvement Associations, and posters in community centres, libraries, and plant nurseries. The events were further promoted through word of mouth by members of our expert panel and staff.
Events We Held

Three workshops and an open house made up the bulk of the public and industry engagement for the Rain City Strategy. The workshops explored how green infrastructure could be applied to a variety of building typologies and discussed possible opportunities and barriers for implementation. The open house provided opportunities for the public to learn more about green infrastructure and the Rain City Strategy. A promotional video introduced the project, detailed information boards were available, as were staff to answer questions. Sample green roofs, permeable pavers, and reading materials were set up in a small lounge area decorated with plants allowing visitors opportunities for further exploration. Other engagement and education opportunities included a walking tour of the Olympic Village green infrastructure features, lectures at conferences, and pop-up events in collaboration with the Places for People public space initiative.

Community Open House and Workshop

Saturday, March 3, 2018

Large-Site Developments Industry Workshop

Tuesday, March 6, 2018

Small-Site Developments Industry Workshop

Tuesday, March 6, 2018

Who We Met

1,250
Community members visited the open house

55
Industry professionals participated in a workshop

19
Community members participated in a workshop

Industry Sectors Represented

Architecture  Engineering  55 participants from 11 sectors
Planning  Project Management
Landscape Architecture  Development
Horticulture  Student
Construction  Other
Research
Visions You Shared

Workshop participants were asked to imagine what Vancouver could look like if all rainwater is managed where it falls. These images show some of the ideas shared on four different building typologies that are common in Vancouver.

Single-Family with Laneway House

Illustration: Sam Khany

Townhouses

Illustration: Manon Garritsen

Mixed-Use Commercial Building

Illustration: Gavin Schaefer

High-rise Tower with Podium

Illustration: Sam Khany
What We Heard

Overall, there was broad support for the concept of green infrastructure as a rainwater management tool. Several common themes emerged around best practices for execution of green infrastructure.

Common Themes

**Education** about green infrastructure is essential for its success. Green infrastructure is an emerging field, and is new to many professionals, and unfamiliar to most residents. It is therefore especially important to raise public awareness about why rainwater management matters, the many benefits of using green infrastructure tools, what those tools look like, and how people can get involved. Industry education was also identified as important to ensure proper design, construction, and maintenance of green infrastructure practices. Suggested educational methods included signage identifying and explaining tools, workshops on how to build and maintain them, and design and building guides for industry professionals.

**Greenery** used in green infrastructure needs to be carefully selected. Each species of plant has particular needs in terms of soil depth and quality, moisture, and sun exposure, and will be at its most beautiful at different times of the year. It is important to select plants that will thrive and create a beautiful landscape, while also providing the water retention and filtering functionality essential to green infrastructure.

**Connectivity** was a major theme in all discussions. To work with rainwater, a systems-thinking approach is needed, as water will flow from one place to another, with no regard for property lines, or convenience. Each practice should be designed to work within the context of the rest of the property, neighbouring buildings, the local streets, and the entire watershed. From the top of a building to the bottom and beyond, there should be connectivity between green infrastructure practices, allowing water to overflow in a controlled way from one practice to the next and ultimately out into the grey pipe system. Green infrastructure requires many different professionals to work together to design and manage functional systems. To this end, connections should be fostered between sectors, integrating the expertise of all the professionals involved in a development project, early on in the design process.

**Efficient and Multi-Functional Use of Space** is an important goal for green infrastructure. The many co-benefits that come from these tools are a reminder that urban spaces can serve more than one function for society. Green space added to neighbourhoods should provide usable public space, that serves many functions for residents and visitors. Beyond rainwater management, green infrastructure can provide park space, enhance livability through access to nature, improve water quality, and increase resilience by providing emergency supplies of water. Every space on a property can be designed to serve a green infrastructure and livability function, including all horizontal, vertical, and underground space.

**Delivery models and mechanisms** were brought up by participants in both industry workshops. There was no consensus if motivation through positive incentives or regulatory requirements was a better strategy. Suggestions included exemptions from height restrictions for green roofs, incentive programs for retrofitting existing buildings, point systems, regulations and fines for non-compliance, and models to share operational costs between developers, owners, residents or possible third parties.
What We Heard

The workshop groups identified concerns and opportunities that should be addressed in the Rain City Strategy or subsequent policy. Most concerns and opportunities fell into one of the following categories.

Concerns and Barriers

**Cost** was a major concern, with industry professionals worried about increases to building costs, and residents worried costs would be passed on to them, making housing less affordable.

**Lack of knowledge** and understanding on the part of industry professionals and residents is a major potential barrier. There is a need to build capacity to design, build, maintain, and use green infrastructure. Education around health and safety impacts of reusing water is also important.

**The myth of abundance** of water in Vancouver is also a barrier for conservation efforts, as residents often don’t realize the high seasonal variation of our precipitation patterns. Residents are also often unaware of how much water they use or how much it costs to provide.

**Stewardship and maintenance** of green infrastructure tools is an essential consideration, including who bears responsibility, who pays for it, and how it can be designed to allow access by maintenance workers.

**Current regulations** can sometimes be a barrier to innovative new practices, and some industry professionals are concerned about potential over-regulation or requirements they feel they will be unable to meet.

Areas of Opportunity

**Resiliency** is the capacity to recover from difficulty or disaster. For the City of Vancouver, building the ability to recover from the impacts of climate change and disasters like earthquakes is very important. Green infrastructure tools can help provide water in post-disaster scenarios through rainwater harvest and reuse, and can mitigate climate change impacts such as flooding and drought, to help boost the resilience of the city.

**Green jobs** in a wide variety of fields, from engineering, construction, design, and landscaping to tourism and environmental education could develop from an increase in the demand for green infrastructure. Supporting training programs and professional development opportunities could lead to a strong water management industry in Vancouver.

**Efficient use of space** can be encouraged with green infrastructure as each tool provides many functions for the space. Park and green spaces can also provide drainage and water filtration functions. Rainwater harvest features can be integrated into public art pieces, further enhancing the public realm and celebrating the climate and rain of Vancouver.

**Biodiversity** in cities can be improved through the application of green infrastructure. Through the many plants and green spaces that are added to an area, more habitat is provided for wildlife. A key group that could be supported by green infrastructure projects are pollinators, like bees, butterflies, and some birds. Pollination is essential for most food growing plants, and increasing the habitat for pollinators can improve our ability to produce food in the region. A greater variety, or biodiversity, of plants in the city will also help our green spaces adapt and survive in the face of climate change.
Advice from the Experts

The Rain City Strategy Expert Panel is made up of experts from a variety of fields, including academics and researchers; industry professionals in engineering, landscape architecture and ecology; and directors and staff of environmental not-for-profit associations. Their advice and knowledge is consulted on an ongoing basis. To date three panel meetings have been held, providing guidance in the following areas.

Knowledge Shared

**Key players** identified by the Expert Panel formed a starting point from which to build a list of organizations and interested parties to reach out to as a part of the engagement and consultation events.

**Public awareness and education** was emphasized as a key strategy for successful implementation, as water management and infrastructure problems tend to be fairly unseen by the public.

**Discussion of green infrastructure tools** and the land use types where they would be most appropriate provides guidance on how to create guidelines and requirements for the use of green infrastructure.

**Sharing Resources** is an important function of the expert panel, keeping the green infrastructure team up-to-date on recent research, innovations, and new practices.

Identifying Priorities

**High Priority areas** identified by the Expert Panel for green infrastructure implementation programs include:

- Develop signage and onsite education
- Study longterm effectiveness of green infrastructure practices, maintenance, and replacement costs over time
- Implement demonstration projects at various scales
- Explore incentive programs, grants, and cost sharing models to stimulate the application of green infrastructure on private property
- Explore opportunities to implement green infrastructure in public spaces, streets, plazas and parks

**Mid-Priority areas** for green infrastructure implementation programs include:

- Explore the connections between green infrastructure, pre-disaster planning and post-disaster recovery
- Determine performance standards for green infrastructure based on its ecological impacts at the watershed scale in areas, like Vancouver, with few to no natural water waterways
- Explore the barriers to creating green infrastructure systems that cross between public and private lands
- Explore green infrastructure as infill in existing high density neighbourhoods
- Explore how to capture metrics for social benefits and accomplishments
- Identify at what scale targets need to be measured and enforced
- Identify alternative governance models for community green infrastructure
- Synchronize housing and green infrastructure policies
Special Thanks to...

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