RAIN Smart Framework for Municipalities

How one community championed lot-level stormwater management and drove local change

October 2018

Reep Green Solutions

PARTNERS FOR ACTION
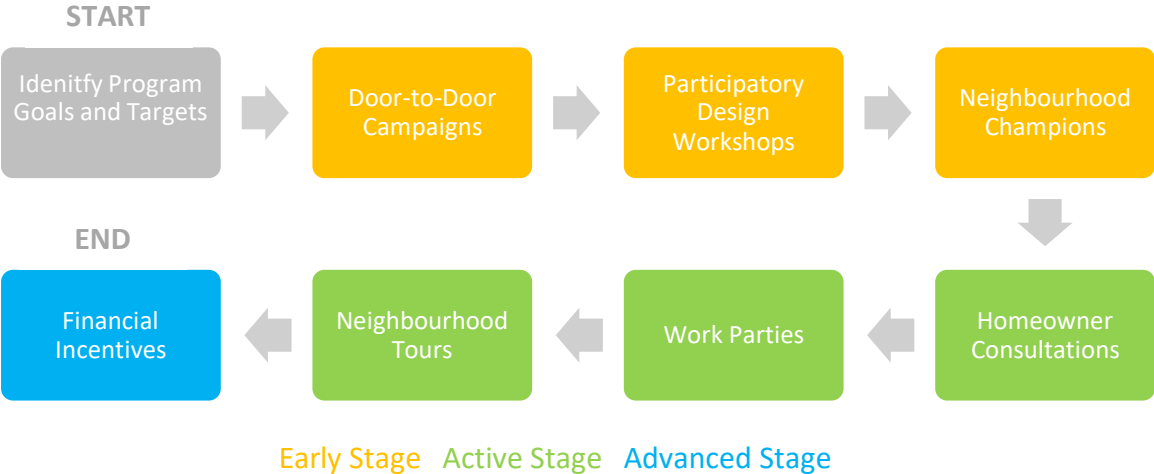
Goals of the Framework

The RAIN Smart Framework for Municipalities is designed as a guide with ready-to-use templates and resources on how to engage the community on lot-level stormwater management issues. More specifically, the framework provides some proven methods to engage homeowners to manage precipitation on their properties to increase the resiliency of stormwater infrastructure on a neighbourhood or community scale.

This framework is intended to provide foundational support to municipalities who are interested in:
1. Increasing public awareness of stormwater management issues and green stormwater infrastructure (GSI)
2. Promoting residential uptake of GSI
3. Fostering collaboration between residential homeowners, citizen groups, and municipal staff

This framework outlines a range of practical community engagement strategies and tools with step-by-step guides, resources and ready-to-use templates. Figure 1 represents a road map to guide users of the RAIN Smart Framework for Municipalities through the milestones associated with community engagement. It is our hope that this document helps build the capacity to promote and facilitate GSI projects at the lot-level in your community! Table 1 outlines the recommended strategies for each stage: early, active and advanced.

Figure 1: Road Map of Community Engagement Strategies for Lot-Level Green Stormwater Infrastructure Programs

Table 1: Recommended Strategies for Three Stages of Stormwater Management

Stage 1: Early Stage	Stage 2: Active Stage	Stage 3: Advanced Stage
• Identify short, medium and long-term, city-wide **GSI targets** identifying the needed capacity at the lot level • Form an **Inter-Departmental Working Group** (with diverse municipal, civic, and non-profit stakeholders) • Conduct **Door-to-Door Campaigns** to begin a dialogue on stormwater management challenges and opportunities • Hold **Participatory Design Workshops** to increase public knowledge of and engagement with GSI options • Identify **Neighbourhood Champions** to facilitate conversations in their own communities about stormwater management • Host **Demonstration Projects** to showcase examples of GSI for inspiration and guidance	• Offer **Homeowner Consultations** to provide knowledge and design suggestions for lot-level stormwater management • Host **Work Parties** to provide education while building community connections • Hold **Neighbourhood Tours** to showcase and celebrate GSI in the community, and drive action through demonstrating success	• Offer **Financial Incentives** to catalyze the installation of lot-level GSI • Implement **long-term monitoring** programs to assess the performance of stormwater BMPs. • Ensure that proper management of stormwater is embedded in all planning and operations

Note: The underlined text links to additional resources in this document that have been developed as part of the RAIN Smart Neighbourhoods project by Reep Green Solutions and partners.

Contents

Important Definitions

Best management practices (BMPs): Approaches or techniques that have been identified as most practical and effective at achieving a specific objective.

Champions: Individuals who support and promote a cause. These individuals can be the leaders and/or participants of events, activities, engagement, and education.

Community engagement: The process of collaborating with the community around particular issues. It often involves active involvement from local residents, government, not-for-profit organizations, and other stakeholder groups.

Demonstration projects: Educational spaces to showcase green stormwater infrastructure applications. In-progress or completed projects can be used to educate observers through the use of signs, information materials, or tours.

Green stormwater infrastructure (GSI): Technologies designed to mimic natural processes that help to manage the volume of stormwater runoff as well as improve water quality. GSI intercepts, absorbs and temporarily stores stormwater which can reduce the volume of runoff entering storm drains during rain or snowmelt events. Some examples of GSI include: rain gardens, permeable pavement, stream naturalization and infiltration galleries (Green Infrastructure Ontario Coalition, 2016).

Infiltration gallery: An underground reservoir, also known as a soakaway pit, filled with clean gravel that collects rain water and allows it to slowly soak back into the ground.

Integrated stormwater management: Contrasted with conventional stormwater management, a holistic and comprehensive approach to stormwater management that incorporates drinking water and wastewater into infrastructure and land-use planning.

Permeable paving: An alternative hard surface feature that allows water to drain through it and collect in a stone reservoir below the surface from where it can percolate into the ground.

Rain garden: A shallow, sunken garden designed to collect and absorb rain water.

RAIN smart: A term to describe a property that has installed some GSI and adopted BMPs to slow down and/or soak up runoff to help prevent flooding, as well as to reduce the volume of stormwater entering municipal storm drains.

Rainwater harvesting: The capture, storage, and reuse of rain water.

Stormwater runoff: Precipitation that does not absorb/infiltrate into the ground. It flows over the ground, or other impervious surfaces, collecting contaminants, and then enters storm drains and bodies of water.

About

The RAIN Smart Framework for Municipalities is a joint initiative of Partners for Action and Reep Green Solutions. The framework was written by Andrea Bale and Sedona Cluett, with contributions from Miranda Bird, Patrick Gilbride, Sharmalene Mendis-Millard, Rebecca Robinson, Sarah Sinasac, and Scott Wilson of Reep Green Solutions.

Reep Green Solutions (Reep) is an environmental charity based in Kitchener, Ontario that helps people live sustainably. Reep currently focuses on addressing climate change through energy efficiency, green infrastructure, water conservation, and waste reduction. *Webpage: www.reepgreen.ca*

Partners and Funders

Partners for Action (P4A) is an applied research network focused on advancing flood resiliency in Canada. P4A's collaborative approach brings together diverse stakeholders to create and share knowledge, address information needs, and drive action. P4A is based out of the Faculty of Environment at the University of Waterloo. *Webpage: www.uwaterloo.ca/partners-for-action/*

Green Communities Canada (GCC) is a national association of green community organizations, with over two dozen member organizations across the country. GCC works to promote healthier communities, reduce pollution, and conserve resources. We thank them for their support and in sharing their resources for this framework. *Webpage: www.greencommunitiescanada.org*

This publication was made possible with support from the Ontario Trillium Foundation, the City of Kitchener, and Partners for Action.

Feedback for this Framework

The framework was developed based on the experiences of the RAIN Smart Neighbourhoods (RSN) project in Kitchener, Ontario. As such, the guidelines, recommendations, resources, and lessons learned should be taken in that context and may need to be adapted to be applied in other municipalities based on their own unique situations. We invite feedback from municipal staff from across Canada to ensure it is relevant to a broad audience of professionals whose roles are touched by stormwater management, including staff in planning, development, engineering, and communications. We would greatly appreciate feedback on the utility and adaptability of the toolkit in other contexts, as well as any suggestions for improvement. Please contact Partners for Action:

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Introduction

Background Context

Communities across Canada face the risk of increased precipitation and higher intensity storms as a result of our changing climate. Many of these communities lack the proper infrastructure to handle the anticipated surges in stormwater runoff. As a result, climate change is predicted to increase flood-related risks that will impact human life, property and assets, natural ecosystems and economies. More information is available in the Intergovernmental Panel on Climate Change (IPCC) Climate Change 2014 Synthesis Report (IPCC, 2014).

The most severe risks are concentrated in urban areas. Increased urbanization has created an intensification of impermeable surfaces throughout municipalities (e.g. buildings, paved roads, and parking lots) that prevents water from infiltrating into the ground, contributing to surface (overland) flooding, polluting nearby water systems and resulting in poor water quality and decreased biodiversity. Examples include:

— *Green roofs as a tool for solving the rainwater runoff problem in the urbanized 21st century?* (Mentens et al., 2006) and;
— *Key issues for sustainable urban stormwater management* (Barbosa et al., 2014).

To adapt to these risks, it is necessary to build resilient and integrated stormwater management infrastructure. Some municipal governments within Canada and the United States already encourage the installation of green stormwater infrastructure (GSI) – such as rain gardens or permeable pavement – as a more cost-effective solution than increasing stormwater storage capacity (Revi et al., 2014). During a RAIN Coach Consultation (see Chapter 4, Section 4 for details), homeowners were asked to complete a brief survey. Results reveal that stormwater management opportunities are not without their challenges and barriers (Figure 2).

Figure 2. Major and Minor Residential Barriers to Installing Green Stormwater Infrastructure (N=64)
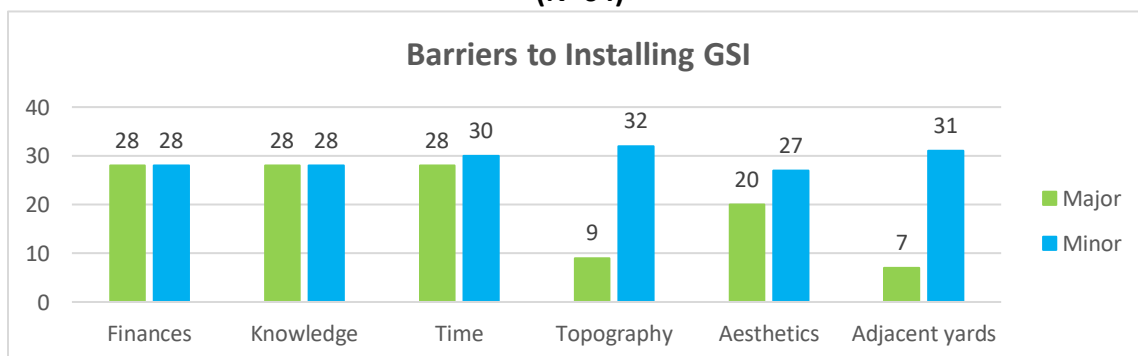

Updated August 31, 2018

The major barriers to adopting lot level green infrastructure are commonly understood as time, money and lack of knowledge. The minor barriers around aesthetics and adjacent yards speak to the influence of improving 'curb appeal' and peer pressure when undertaking landscape projects.

The City of Kitchener (Ontario, Canada) recognized the opportunity that green stormwater infrastructure presented and sought to be a leader in stormwater management initiatives as a means to adapt to climate change. For examples from other leading jurisdictions, please refer to the Soak it Up! Toolkit by Green Communities Canada (RAIN Community Solutions, n.d.).

Guide to Using this Framework

This framework guides municipalities through the important steps in developing a community engagement program around stormwater management. To begin, chapter 1 will provide background information on the City of Kitchener (Ontario, Canada) and the development of the RAIN Smart Neighbourhoods (RSN) project. Then, chapter 2 will present a self-assessment activity to determine your current stormwater management progress and provide suggestions for appropriate next steps. Following this, chapter 3 discusses preliminary program design considerations related to selecting a target neighbourhood. Finally, chapter 4 presents case studies of the community engagement strategies used in the RSN project, with ready-to-use templates and resources attached as appendices.

1	• Developing the RAIN Smart Neighbourhoods Project
2	• Self-Assessment Activity
3	• Selecting a Target Neighbourhood
4	• Community Engagement Strategy Selection
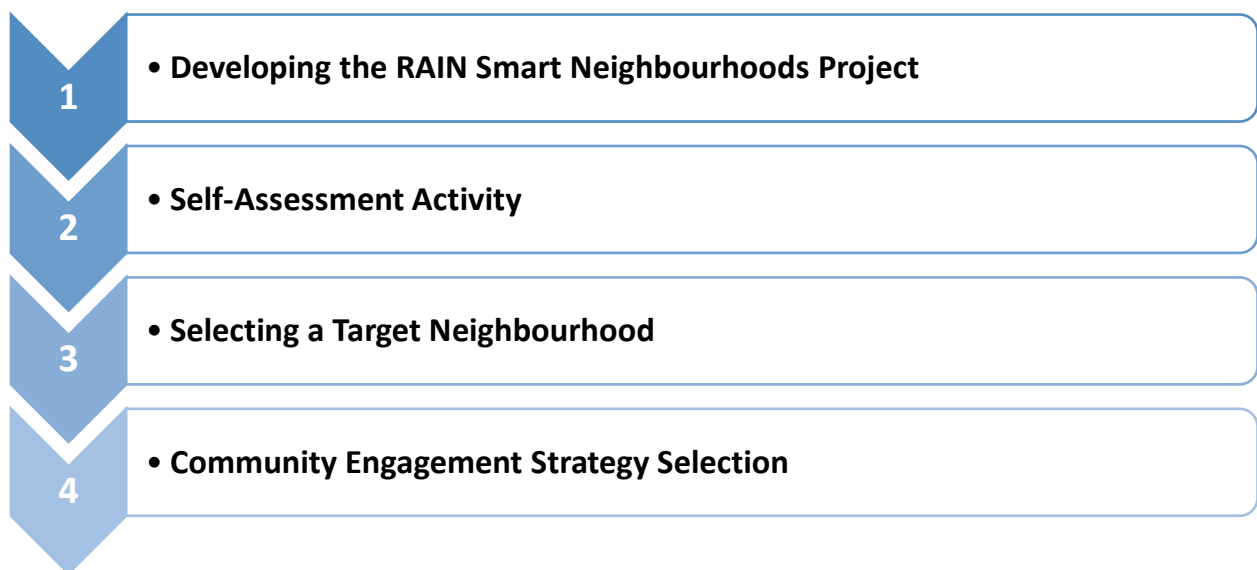
Chapter 1 - Developing the RAIN Smart Neighbourhoods (RSN) Project

1.1 Municipal Context – Kitchener, Ontario

This chapter presents background information on some of the municipal policy frameworks and community engagement initiatives in Kitchener, Ontario that set the stage for the RSN project. Please note that this information is intended to provide context about the municipality, but these are not necessarily prerequisites to implement a similar program in your community.

1.1.1 Stormwater Utility Fee

A stormwater utility fee was introduced in the City of Kitchener in 2011 to provide a reliable and dedicated revenue source to address the identified deficit for stormwater infrastructure. The utility fee appears on ratepayers' monthly utility bills and is determined based on the property type and the size of impervious areas (Kitchener Utilities, 2011)

1.1.2 Stormwater Credit Policy

In March 2012, the City of Kitchener introduced a stormwater credit policy, whereby property owners are provided incentives for green stormwater infrastructure (GSI) on their properties that reduces stormwater runoff to the municipal stormwater system. Property owners are eligible to receive up to a 45 percent reduction in the stormwater utility fee for specific stormwater management practices (City of Kitchener, n.d-a)

1.1.3 Development of the Integrated Stormwater Management Policy

In 2001, the City of Kitchener developed a stormwater management policy to streamline existing stormwater management approaches (City of Kitchener, n.d.-b). In 2016, the Integrated Stormwater Management Master Plan (ISWM-MP) was developed to help with decision making and project prioritization. More specifically, the Integrated Master Plan looks at ways to think about stormwater in the context of drinking water, wastewater, and other municipal projects (e.g. road reconstruction). It is also important because it has set a higher standard than the provincial requirements for capturing rainfall.

1.1.4 RAIN Home Visits

As part of the Showcasing Water Innovation Grant from the Ontario Ministry of the Environment, Green Communities Canada worked with Reep Green Solutions, as well as the City of Kitchener and the City of Waterloo, to pilot a RAIN Home Visit program in 2013. This program is a third party, professional advice service provided by certified RAIN Guides, trained

in best practices to protect homes from water damage and techniques to manage stormwater at the lot-level. Based on the results of the pilot, Reep continues to deliver RAIN Home Visits to all homeowners in Waterloo Region (Reep Green Solutions, n.d.-b). The service is now delivered in other communities across Canada, such as Barrie, Hamilton and Newmarket. The RAIN Home Visit program was reviewed and evaluated by Lauren Smith in a 2017 Master's Thesis, *Best practices for household stormwater management programs: A community-based social marketing case study*, for the University of Waterloo. Analysis of the research determined the need for longer term and deeper support for homeowners to enact recommendations from their RAIN Home Visits, which provided the underlying rationale behind implementing the 'coach' program and a greater focus on neighbourhood level action in the project design for RAIN Smart Neighbourhoods.

1.1.5 Community Engagement Strategy

In 2012, these same partners (City of Kitchener, City of Waterloo, Green Communities Canada (GCC) and Reep Green Solutions) worked together to carry out a community engagement strategy with both residential and non-residential property owners. Residential outreach included a summer door-to-door campaign, community presentations, attending community events, and running hands-on workshops. Non-residential outreach involved leading presentations, attending events, running workshops, coordinating best practice tours, and completing six demonstration projects with community partners.

1.1.6 Reep Green Solutions

As a non-profit organization in Kitchener since 1999, Reep Green Solutions has an established presence in the community with connections to local homeowners, businesses, and government organizations. Reep was in an advantageous position to leverage existing relationships, along with providing expertise in community engagement strategies.

1.2 The RAIN Smart Neighbourhoods Project

Working with municipalities in Waterloo Region and Green Communities Canada (GCC), Reep Green Solutions is currently delivering a stormwater management program across all sectors in the Waterloo Region, called RAIN Community Solutions or RAIN for short. The program is a joint venture between GCC and member organizations such as Reep. The program is offered nationally, and other groups work in a similar capacity to deliver RAIN's key messages across Canada (Figure 3). This program received the 2016 Minister's Award for Environmental Excellence from the Ontario Ministry of the Environment (Reep Green Solutions, n.d.-a).

Figure 3. RAIN Community Solutions Key Messages

The Rain Smart Neighbourhoods (RSN) project was modelled after successful programs such as the Sustainable Neighbourhood Retrofit Action Plan (SNAP) delivered by the Toronto Region Conservation Authority (TRCA) (TRCA, n.d.-b) and informed by the Soak it Up! Toolkit (2017), which documents best practices around stormwater management in leading jurisdictions.

The RSN project focused on community engagement through outreach and education activities, with the goal of increasing awareness of the importance of stormwater management and encouraging the installation of green stormwater infrastructure (GSI) on residential properties.

Two neighbourhoods in Kitchener received financial and technical support to implement GSI at the lot-level, including rain gardens, infiltration galleries, permeable paving, rain barrels and cisterns, through various community engagement initiatives. This framework uses the experience gained during the RSN project as a vehicle to contextualize the strategies, tools and recommendations, however, please note that the resources provided in the appendices were developed for the RSN project and should be adapted based on the specific needs of your project.

Chapter 2 - Completing a Self-Assessment

An important first step in designing a stormwater management community engagement program is to complete your Stormwater Scorecard developed by Green Communities Canada (GCC). The Stormwater Scorecard is an assessment tool that will help you determine the current state of green stormwater infrastructure programs, policies and plans in your community. Based on your results, you can determine priority areas and develop a plan that incorporates community engagement strategies that are best suited to your experience and resources. The Stormwater Scorecard can be found in the Soak It Up! Toolkit (RAIN Community Solutions, 2017).

Chapter 3 - Choosing a Target Neighbourhood

3.1 Introduction

Based on the availability of resources, it may be practical and more efficient to pilot your program in a few target neighbourhoods to determine the feasibility of scaling up and delivering your program to a wider audience (i.e. community-, neighbourhood-, or municipality-wide). This chapter describes some important considerations for choosing target neighbourhood(s). Before completing this component, it is important to have an understanding of the specific goals, deliverables, and resources available to your project. In the RAIN Smart Neighbourhoods (RSN) project, a total of five Kitchener neighbourhoods were narrowed down for consideration to participate in the project, of which two were chosen to participate.

Note: In the RSN project, neighbourhoods were defined primarily (though not exclusively) from Neighbourhood Association maps provided by the City of Kitchener. Additionally, preference was given to neighbourhoods with a predominance of homes built before 1990 that would have been developed before stormwater ponds were commonly employed.

3.2 Developing Criteria to Evaluate the Neighbourhood(s)

It is important to establish goals, priorities and key deliverables at the outset of the project. If you are receiving funding from external sources, some of the goals and deliverables of your project may already be pre-determined.

In the RSN project, the funding application for the Ontario Trillium Foundation required that goals, targets and key deliverables be established to track major milestones and to measure the overall 'success' of the project. As a pilot project, it was critical to maximize the resources

available and to demonstrate the potential impact of the project on a larger scale. For these reasons, the three main components of selecting a target neighbourhood in the RSN project included the level of engagement demonstrated by neighbourhood homeowners, the demographics and environmental features of the neighbourhood, and the practicality of the neighbourhood to meet the goals of the project. These are described in more detail below.

> **Civic Engagement:** Some key considerations to observe civic engagement may include the presence of neighbourhood associations, active involvement in municipal public consultations and demonstrated support from city councillors. In the RSN project, the presence of active neighbourhood-led associations and community champions were important criteria within this category, since they demonstrated interest in neighbourhood enhancement and provided a good starting point for community engagement initiatives.

> **Demographic/Environmental:** This evaluation component considers the demographic composition and environmental features of a neighbourhood. Some key considerations may include the proportion of home ownership to rental properties, the presence or absence of conspicuous water features, and planned or existing infrastructure projects in public areas. In the RSN project, a high percentage of detached 'family' homes and home ownership were important criteria within this category, since these homes generally have the autonomy and finances to install lot-level green stormwater infrastructure (GSI), compared to rental or shared properties. The specific goals of your project may place greater emphasis on other demographic or environmental variables.

> **Practical:** This evaluation component considers the practicality of a neighbourhood from a logistical perspective. Some key considerations may include the accessibility of the neighbourhood by public transportation or the number of homes in the neighbourhood. In the RSN project, neighbourhood proximity and public transportation accessibility were important considerations for a number of reasons. Firstly, many of the door-to-door campaign canvassers were students, thus accessibility by public transportation was essential for volunteers and staff. Secondly, a large number of educational workshops and events were planned to occur on homeowners' properties in the target neighbourhoods, thus accessibility and proximity to other neighbourhoods were seen as key enablers for homeowner participation.

3.3 The Neighbourhood Selection Matrix

To develop questions to measure the evaluation components described above, a Neighbourhood Selection Matrix was created which incorporates the criteria used in the RSN project neighbourhood selection process. The Neighbourhood Selection Matrix provides a template to easily compare and contrast potential neighbourhoods by assigning a numeric value to each criterion and tallying the total points awarded (See *Appendix A*).

3.4 Neighbourhood Screening Questions

Meeting and conducting interviews with homeowners in the potential neighbourhoods is a useful exercise for understanding important variables that may be otherwise difficult to assess, such as the presence of neighbourhood champions, informal neighbourhood groups, and the level of general interest and/or concern about stormwater from homeowners in the neighbourhood. The interviews may also be an opportunity to uncover other assessment criteria. In the RSN project, a list of standard interview questions was developed and asked to a representative from each potential neighbourhood. The interview responses were then incorporated in the Neighbourhood Selection Matrix.

3.5 After Choosing Your Target Neighbourhood(s)

Compile a list of email addresses from as many homeowners as possible to create a mailing list for each of your municipality's target neighbourhoods. Partnering with a non-governmental organization (NGO), who may have connections and an established reputation in your target neighbourhood(s), is an efficient starting point to consider for this step. Additionally, create a spreadsheet with all of the addresses within each of your target neighbourhoods to have as a reference.

3.6 Lessons Learned

1. **Time**. Allow for sufficient time to do a comprehensive assessment of each neighbourhood. Reep was unable to engage with the city councillors in advance due to time constraints.
2. **Transparency.** Ensure that the selection process is transparent. When singling out particular neighbourhoods, it is important to demonstrate a fair selection process.

3.7 Resources and Templates

- [A.1 Neighbourhood Selection Matrix Template and Sample Screening Questions](#)

Chapter 4 - Selecting Community Engagement Strategies and Tools

Once you have completed the self-assessment and identified your municipality's current stage of engagement around stormwater management, you can begin to start planning your project! This chapter describes a number of different community engagement strategies and tools that were used in Kitchener leading up to, and as part of, the RAIN Smart Neighbourhoods (RSN) project.

Create a Communications Strategy. Determine your audience and the channels you will use to communicate with said audience, select your community engagement strategies (as outlined in this chapter) and setup a tool to track and evaluate the performance of these strategies.

Note: The community engagement strategies and tools are described as they were used in the RSN project. Each strategy and tool can be adapted based on the specific goals, priorities and resources available to your project. It should be stated that the strategies and tools are most effective when employed in combination with each other as part of a well-planned and coordinated engagement strategy. Cost ranges refer to the experiences in the City of Kitchener working within residential neighbourhoods of 800-1,500 homes as outlined below in Table 2.

Table 2. Cost Range for Implementing Community Engagement Strategies

| Budget	Cost Range
$	0-$2,000
$$	$2,001-$15,000
$$$	$15,001 and up

4.1 Door-to-Door Campaign

4.1.1 Summary

A door-to-door campaign involves representatives from your municipality, such as non-governmental organizations (NGOs), municipal staff, volunteers, partner organizations, and/or others, canvassing neighbourhoods to provide targeted information to homeowners. In the RSN project, the door-to-door campaign was a highly interactive, face-to-face engagement carried out by Reep Green Solutions in two Kitchener neighbourhoods.
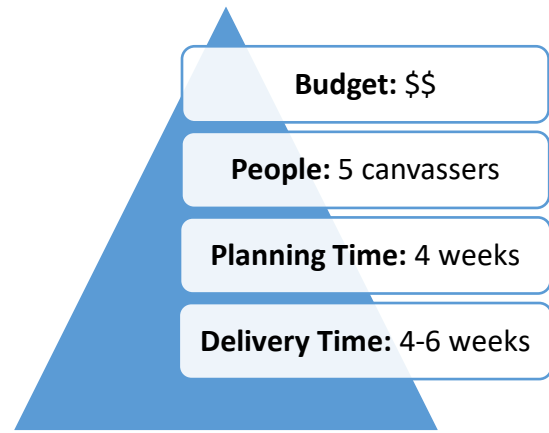
Budget: $$

People: 5 canvassers

Planning Time: 4 weeks

Delivery Time: 4-6 weeks

4.1.2 Step-by-Step Guide

Step 1: Prepare for the Campaign (Weeks 1 and 2)

> **Set Campaign Goals and Targets.** Set clear and realistic campaign goals that can be achieved in your desired timeframe. Then, determine the number of homes you want to canvas based on your project's goals, ensuring the target is realistic for the available resources. Be sure to allow time for conversations that come up naturally. The goals of the RSN campaign were to create awareness of the importance of stormwater management at the lot-level, to educate homeowners on green stormwater infrastructure (GSI), and to raise awareness about the City of Kitchener's stormwater credit program. Reep targeted just over 1,000 homes for the campaign.

> **Establish Canvassing Methodology.** Determine a standard protocol and script to ensure that all canvassers are following the same procedures. In the RSN project, canvassers knocked on every door and left an information sheet for homeowners that did not answer. It is a good idea to keep track of which homeowners did not answer and return at another time.

> **Prepare Brochures and Handout Materials.** Develop brochures and handout materials for canvassers to give out during the campaign, ensuring sufficient budget and time for design and printing. Involve municipal communications staff and allow time for approvals as necessary. See *Appendix B* for a copy of Reep's materials.

> **Promote the Campaign.** Send out a letter in advance to inform homeowners of the upcoming campaign ahead of time to increase engagement and participation. Reep sent out a pre-campaign letter on City of Kitchener letterhead to inform homeowners about when canvassing would be taking place. Canvassers observed a greater openness to

conversation from homeowners that had received the letter. See *Appendix B* for a sample of Reep's pre-campaign letter.

Step 2: Hire Staff (Weeks 2 and 3)

> **Hire Canvassers.** Determine the number of staff, including the total number of staff hours, required to reach your target number of homes. If the target exceeds current staff time, more short-term canvassers may need to be hired. Volunteers may also be a suitable option to reduce the financial burden, while providing them an opportunity to gain community outreach experience. During the interview process, it is encouraged to incorporate hypothetical scenarios that may arise in the field to gauge how potential candidates would respond. Reep had two teams of canvassers

Canvassing Supplies Checklist

✓ Branded polo shirts
✓ Backpack/bag
✓ Pens
✓ Highlighters
✓ Clipboard
✓ Sticky notes
✓ Accordion binder
✓ Neighbourhood Overview Map
✓ Door-to-door script
✓ Survey/questionnaire
✓ Information materials
✓ Contact list
✓ First aid kit
✓ Cellphone
✓ Drinks and snacks (if desired)

composed of three summer students and three volunteers who were supervised by a coordinator. Each team was assigned a team lead who had the added responsibility of route planning, health and safety, and aggregating data collection. Based on the RSN project, a single canvasser can visit approximately 30 homes per hour, and have approximately 35 conversations (of varying length) over the course of a 4-hour shift.

> **Train Canvassers.** Hold an orientation to introduce the operations and logistics of the campaign, to assign team leads and to practice the door-to-door script. Training should include role playing to help canvassers prepare for in-field scenarios, as well as frequently asked questions for canvassers to practice answering. Practicing on friendly neighbours identified in the neighbourhood screening process is also encouraged during training.

Step 3: Campaign (Weeks 3 to 5)

> **Plan Routes and Times.** Prior to each shift, each team lead should create a Neighbourhood Overview Map to be used as a guide and as a tracking sheet to record the total number of homes canvassed per shift. Choose times of day that most homeowners are likely to be home, such as evening shifts and weekend afternoons. Ensure canvassers wear an appropriate uniform that is both professional and comfortable. For the RSN project, Reep canvassers donned branded polo shirts with comfortable pants and footwear. As a general rule, long weekends or other holidays

should be avoided. Have canvassers work in teams to ensure safety and efficiency; canvassers can approach homes individually based on their comfort level. In the RSN project, canvassers went out between 4:30 – 8:30 pm on weekdays and 1:00 – 5:00pm on Saturdays.

> **Canvass.** A door-to-door campaign provides a good opportunity to start conversations, listen to concerns, provide education and identify neighbourhood champions. Ask homeowners if they would be willing to have a discussion about your municipality's project and answer some standard questions. Have your brochures and handout materials readily available. See *Appendix B* for more information on data collection procedures.

4.1.3 Lessons Learned

1. **Campaign Planning.** Allow for 1-2 weeks for training and expect to visit approximately 30 homes per canvasser per hour and multiply accordingly while allowing time for data collection, compilation, and analysis. As well, buy in bulk to save on costs when possible (paper, printing, and other supplies).

2. **Homeowner Responsiveness.** Individuals occupying rental properties were less interested in speaking with canvassers. This can be avoided by targeting owner-occupied, detached 'family' home neighbourhoods. Further, some homeowners were busy or away, as canvassing was done during meal hours and summer vacation. Be sure to account for these factors when setting targets.

3. **Data Collection.** Ensure that data collection procedures are standardized and well understood by all canvassers.
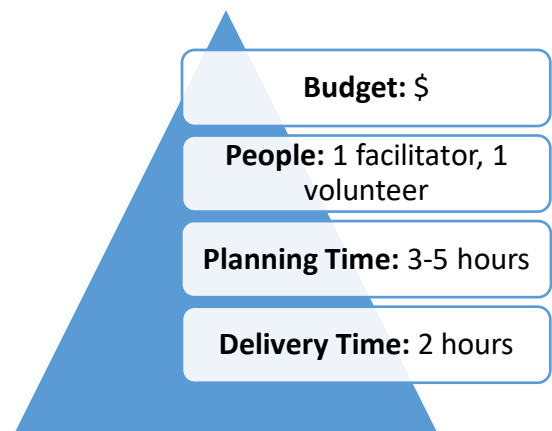
4.1.4 Resources and Templates

- B.1 Sample Pre-Campaign Letter
- B.2 Sample Canvasser Job Posting
- B.3 Sample Canvasser Orientation Training Schedule
- B.4 Sample Scenario Questions for Canvassers
- B.5 Sample Team Lead Overview Document

- B.6 Sample Door-to-Door Script
- B.7 Neighbourhood Overview Map Instructions
- B.8 Sample Survey Sheet
- B.9 Data Collection and Analysis Procedures
- B.10 Sample Data Analysis Sheet

4.2 Participatory Design Workshops

4.2.1 Summary

Participatory design workshops are hands-on sessions that guide participants through design considerations for locating GSI on their property. During these workshops, participants play an active role in learning and apply that knowledge with the help of a facilitator. The participatory design workshops in the RSN project were intended to explore the specific design considerations of six features – rain gardens, infiltration galleries, permeable paving, rain barrels, cisterns and naturalized landscaping – and provide advice on site-specific applications based on a map or diagram of the participant's property. Reep's participatory design workshops had space for up to 15-20 individuals, and were two hours in length.

Budget: $

People: 1 facilitator, 1 volunteer

Planning Time: 3-5 hours

Delivery Time: 2 hours

4.2.2 Preparation

> **Hire a Facilitator.** Municipal staff or industry experts with expertise in GSI would be suitable workshop facilitators. It is also recommended to have related partner organization presence to provide diverse knowledge and attract participants through different avenues. In the RSN project, the RAIN Coach hosted the workshops. The RAIN Coach was hired to host workshops, conduct consultations with homeowners on their property, and provide support and resources to facilitate lot-level GSI installations. More information on the RAIN Coach is found in Chapter 4, Section 4: Homeowner Consultations.

> **Choose a Location.** The workshops should be hosted as close to the target neighbourhood(s) as possible, such as community centres or other community gathering spots. In the RSN project, the workshops were held at the Reep House for Sustainable Living, Reep Green Solutions' green demonstration home.

  Note: Reep's demonstration home showcases a range of GSI, including permeable paving, rain barrels, cisterns, a rain garden and an infiltration gallery. Participants enjoyed being able to walk outside to see these features before and after the presentation.

> **Plan Workshop Offerings.** Offer a number of time slots and days of the week to accommodate participants. In the RSN project, workshops were held on Tuesday

evenings, Saturday mornings and Saturday afternoons. If you are offering financial incentives for GSI projects, plan the workshops as a 'launch' event so that participants are equipped with ideas and ready to take action.

> **Determine the Audience.** Depending on your community engagement objectives and resources, the workshops can be offered to any homeowners in your municipality, or limited to those in your target neighbourhoods. Workshops were promoted on Reep's website and email subscription lists. Participants were required to register and pay a modest fee ($10-25 per ticket). However, participants within the RSN were sent targeted emails including a code to allow complimentary access to the workshop. Email confirmations for the workshops remind participants to bring a map/drawing of their property

4.2.3 Step-by-Step Guide

Step 1: Prepare for the Workshop(s)

> **Create a Presentation.** Create a presentation that emphasizes homeowner goals for their outdoor space. Use that framework to outline stormwater management issues and make the case for installing GSI. Be sure to introduce various GSI and the design considerations for each. Include diagrams and pictures to explain key concepts. Use a case study to illustrate 'before' and 'after' examples and to walk through the activity. See *Appendix C* for a copy of the presentation used in the RSN project.

> **Promote the Workshop.** Be sure to instruct participants to bring a map or diagram of their property (with dimensions and location of downspouts indicated). Notify and remind through event confirmation emails. Alternatively, ensure their address is captured in the registration for the workshop and print the map or diagram prior to the event.

> **Set Up Event Space.** Provide enough space for multiple sheets of paper in front of each participant. Provide trace paper and markers/pencil crayons in the middle of each table. Leave any supplementary or take-home materials at each spot.

Step 2: Run the Workshop(s)

> **Introduction (10 minutes).** Introduce the facilitator and purpose of the workshop. If it is a small group, have participants introduce themselves and what they are most interested in learning at the workshop.

> **Presentation (30 minutes).** Walk through a step-by-step example of the process for developing a basic landscape plan using a sample property. Outline various GSI (such as rain gardens, rain barrels, cisterns, permeable paving, and infiltration galleries) and the design considerations for each. In the RSN project, rain gardens were emphasized because they can store large volumes of stormwater, can often be completed without the help of a contractor, and are visually appealing.

> **Activity (30 minutes).** Have participants tape trace paper over the property map/diagram in front of them. Begin with a site inventory by having participants mark the location of downspouts and existing features (e.g. large trees, areas with poor drainage, or impervious surfaces such as patios and driveways) on their trace paper. Use coloured pencil crayons to indicate areas of sun and shade. Then, use arrows to indicate topographical features (e.g. steep slopes) and problem areas. Finally, walk homeowners through the application of various GSI (e.g. rain gardens) based on their property's features. By keeping workshops to a reasonable size, it permits the facilitator to walk around the room to give tips and advice as participants are working through the activity.

> **Questions (20 minutes).** Be sure to save time for questions, whether these are as a group or one-on-one.

4.2.4 Take-Home Materials

Provide take-home materials to overcome barriers to GSI installation after the workshop. Some examples of suitable take-home materials include:

> **'Greening Your Grounds' Workbook**. If possible, create or purchase a workbook that provides a step-by-step guide for the installation of GSI. The workbook used in the RSN project was 'Greening Your Grounds: A Homeowners Guide to Stormwater Management Landscaping Projects', created by the Toronto Region Conservation Authority (TRCA, n.d.-a). Some other good examples are the Canada Mortgage and Housing Corporation's 'Rain Gardens: Improve Stormwater Management in Your Yard' (Canada Mortgage and Housing Corporation, 2011) and Wisconsin Department of Natural Resources' 'Rain gardens: a how-to manual' (Wisconsin Department of Natural Resources, 2013).

> **Design Workshop Presentation.** Provide the presentation material for participants to review as desired. This will ensure that participants are actively engaged during the workshop rather than worrying about taking notes.

> **Plant List.** Provide a list of more popular local native plant species that are suitable for a rain garden or a naturalized landscape. Be sure to outline the appropriate location (i.e. side or base of a rain garden) and the sun/shade conditions for each. Credit Valley Conservation has a number of native plant lists available on their [website](#) (Credit Valley Conservation, n.d.)

> **Service Providers List.** Compile a list of qualified service providers and material suppliers in your area that specialize in a range of services and products. For an example, see Reep's list [here](#) (Reep Green Solutions, n.d.-c).

> **Incentive Information.** If applicable, provide information on the availability of incentives and application process. If incentives are only available to target neighbourhoods, ensure that only those participants receive this information.

> **Contact information for additional questions/clarifications and next steps:** Participants should register for the workshop and provide an email for follow-up information. Develop a subscription list of participants. Provide a general email for participants to ask additional questions.

4.2.5 Lessons Learned

1. **Workshop Preparation.** Some homeowners did not bring a map/diagram of their property, which limited the usefulness of the workshop. Be sure to clearly state the importance of a map/diagram and offer to print out copies for those who are unable to print it themselves.
2. **Topics.** Be prepared to talk about subjects that fall outside of the GSI presented during the workshops. Participants may choose to combine various projects and seek out advice that may not pertain to green infrastructure.
3. **Providing Solutions.** Be careful not to provide solutions for complex drainage issues. The guidance should likely be sought from a different type of professional.
4. **One-on-one Conversation.** Allow sufficient time for on-on-one conversations. People tended to linger after the workshops to ask questions so be sure and allow time for that.
5. **Track Registration.** Those who register for workshops are people who will help you to spread the word and become your future neighbourhood champions. Add them to the mailing list to continue to engage them in communications around your project.

4.2.6 Resources and Templates

- [C.1 Sample Workshop Schedule](#)
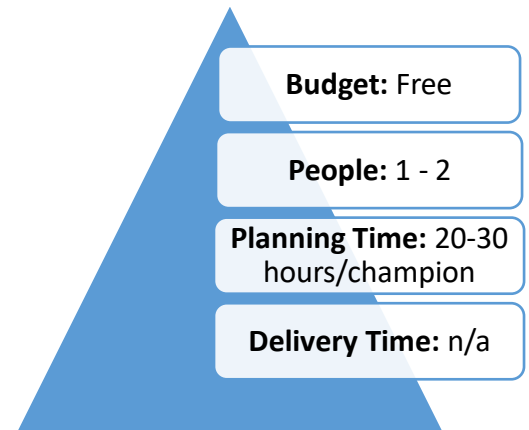- [C.2 Sample Presentation](#)
- [C.3 Sample Property Printout](#)

4.3 Neighbourhood Champions

4.3.1 Summary

Neighbourhood champions are typically individuals who have a strong interest or passion in stormwater management – or sustainability more generally – and are able to inspire action in their neighbourhood. Neighbourhood champions can provide localized knowledge, experience, and connections. Identifying and supporting neighbourhood champions is an important starting point for larger community engagement activities. Partnering with non-profits is an efficient way to identify neighbourhood champions, since these organizations have existing relationships and connections with local community members.

Budget: Free

People: 1 - 2

Planning Time: 20-30 hours/champion

Delivery Time: n/a

4.3.2 Identifying Neighbourhood Champions

To find neighbourhood champions for your municipality's project, start with individuals that you know, such as those who are part of your networks or are subscribed to your mailing list. Individuals that are already interested and involved in stormwater management and/or sustainability in their neighbourhood are good candidates. Often, these individuals are highly engaged in neighbourhood events, express strong interest in municipal projects, and/or are well-connected through employment or volunteer experiences. Other activities that may be suitable for identifying neighbourhood champions include neighbourhood associations/meetings, community groups, fairs, workshops, festivals, work parties, and demonstration projects. NGOs are also valuable sources of information, as they have trusted relationships and an established presence in the community; building on their existing connections may help to identify champions.

4.3.3 Lessons Learned

1. **Time:** Do not underestimate the time necessary to invest in finding neighbourhood champions and continuing to foster those relationships.

4.4 Homeowner Consultations

4.4.1 Summary

Consultations give homeowners the opportunity to speak one-on-one with, and to learn from, an experienced professional. These consultations provide homeowners with suggestions on the types of GSI (e.g. rain gardens, infiltration galleries) that are best suited for their properties. These suggestions take into consideration the property's unique features and characteristics within the broader context of the homeowners' own goals and priorities. Homeowner consultations can help to overcome knowledge, financial, time and other barriers to installing GSI. Beyond this, the consultations aim to show homeowners how beauty and function can complement one another to influence the way that homeowners think about the movement of rainwater through their properties and its impact on local water systems. In the RSN project, homeowner consultations were offered by Reep who provided a 'RAIN Coach' free of charge to homeowners in the two target neighbourhoods – the full cost for consultations was absorbed by funders.

Budget: $$-$$$*

People: 1-2 coaches

Planning Time: 50 hours

Delivery Time: 1-6 hours (prep, initial meeting, follow up communication)

*Based on $300-400 per consultation.

4.4.2 Step-by-Step Guide

Step 1: Hiring a 'Coach'

> **Job Description.** Hire a coach that has education and/or work experience in landscape design, urban stormwater management and GSI. The coach should have strong interpersonal and customer service skills, organization, and an ability to work independently. The coach will be responsible for a number of tasks, including conducting on-site visits on residential properties, providing specific suggestions based on the property, answering homeowner questions and providing additional resources. The job description used in the RSN project is attached in *Appendix D* for reference.

Note: In the RSN project, rain gardens were the primary focus of the RAIN Coach's suggestions. This is because they aligned with the project's goals of yard beautification, were easy to market, contributed to capturing large volumes of stormwater, and could be installed by homeowners themselves.

Optional: If there is an incentive component, the coach may have additional responsibilities for the pre-approval of projects and inspecting them once they have been completed.

> **Set Goals and Targets.** Determine the number of visits that you would like to conduct and the time frame in which to complete them. This will determine the number of hours each week to set aside for consultations. In the RSN project, the goal was to complete 100 consultations over two seasons and to convert those consultations into 35 medium-to-large GSI projects across the two target neighbourhoods over the course of two years.

> **Promote the Consultations.** Create a promotional brochure with information about the coach service and how eligible homeowners can book an appointment. If possible, mail the brochure to each home in your target neighbourhood(s). Other ways to promote the consultations include community events, such as barbeques, potlucks, food truck events, festivals, plant/seedling sales, and neighbourhood meetings in your target neighbourhood(s).

Step 2: Providing Customer Service

> **Booking Appointments.** Depending on the number of consultations to be conducted, the coach or a customer service representative can handle scheduling appointments. Create a shared calendar to indicate the coach's availability, ensuring weekday, weeknight, and weekend availability. Make sure that the coach's availability aligns with the needs of homeowners and is responsive to changing needs. When booking appointments, make sure to track the name, address, contact information and note any problem areas/issues and priorities the homeowner indicates.

> **Confirmation and Reminder Emails.** Draft a confirmation email template to send to homeowners once their consultation has been booked. The email can also contain additional information about the project and pre-consultation resources to review. Be sure to send a reminder email 48 hours before the consultation to minimize cancellations or no-shows.

Step 3: Conducting the Consultation

> **Note:** For the RSN Project, the RAIN Coach conducted consultations all-year round, however, the most optimal time to visit homeowners would be in April-June as the weather begins to warm and allows sufficient time for homeowners to move ahead with a project before planting season ends.

> **Introduction (10 minutes).** Introduce the homeowner consultation process and have any administrative paperwork signed. In the RSN project, a waiver was used to clearly identify the role of the coach and address liability issues. Then, discuss any concerns and

priorities with homeowners, as appropriate. The coach sets out expectations about the visit and follow-up interactions which typically involve: a 45 minute consultation; a follow-up email; ongoing email support if their project moves forward; and verification and maintenance tips once it has been installed.

> **Property Orientation (10 minutes).** Ask the homeowner to walk you around their property to locate all of the downspouts and any areas where water issues may exist.

> **Project Brainstorming (20 minutes).** Based on the homeowners' goals, priorities and the walk-around, brainstorm potential GSI projects the homeowner could implement. Be sure to outline the pros and cons of each option. Provide a range of low and high cost options, if appropriate. It is also important to provide some brief instructions on how to complete the installation of the project, and whether a contractor is likely to be needed for part or all of the work. At the homeowner's request, the coach should also be prepared to help map out the size of a proposed feature using stakes and flag tape during the initial visit.

> **Wrap up (10 minutes).** Ask the homeowner if they have any last questions or concerns about a GSI project. This may also be a good time to ask permission to install a garden sign to help promote your program. Bringing signs with you allows you to install them during the consultation rather than returning at a later time.

Incorporating Incentives

If you decide to provide incentives for completed projects, develop an application form which outlines the proposed project, estimated volume of water captured, estimated incentive value, and relevant terms and conditions.
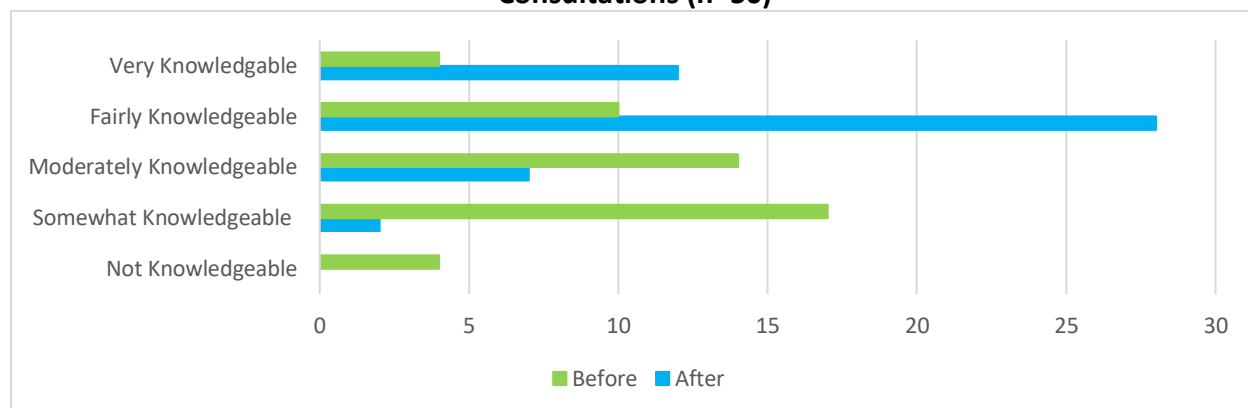
As this can be a time consuming process, it is a good idea to designate a customer service representative to handle all administrative duties, such as tracking applications and corresponding with homeowners.

Step 4: Following Up After the Consultation

> **Coach.** Within two business days, the coach should follow up with an application package which outlines the various design suggestions discussed during the consultation, and to provide resources as appropriate. These resources allow the homeowner to complete their application including project information, design information, water capture solutions, pre-existing stormwater features and the terms and conditions (e.g. dated receipts, photographs, check-in requirements, etc.) for completing the application. If necessary, homeowners are welcome to book a second 'follow-up' appointment.

Recommended: Create a consultation feedback survey to collect feedback from homeowners shortly after the consultation. As suggested in Figure 4, the homeowner consultations improved the participants' level of stormwater management knowledge. Feedback collected before and after the consultation provided insight into the impact of providing such services.

Figure 4. Level of stormwater management Knowledge Before and After Homeowner Consultations (n=50)

4.4.3 Lessons Learned

1. **Barriers.** Some homeowners had consultations but did not start projects due to financial and time constraints, contractor availability, topographical restrictions and other reasons.
2. **Scope of Work.** Some properties were not suited to larger GSI due to grading and/or proximity to building foundations. Others required considerable professional intervention, outside the scope of advice the RAIN Coach was able to provide. In those cases, homeowners were referred to Reep's Service Providers List.
3. **Managing Expectations.** Consultations were received positively almost universally. If there was a fee charged for this service the expectations around it would increase which may result in a higher number of dissatisfied clients.
4. **Importance of Workshops.** The consultations conducted with homeowners who had already attended a Participatory Design Workshop typically were more detailed and productive. This was because the participants were already generally aware of the design considerations for various GSI projects, they had already thought through various possibilities for their own yard and were ready to delve into more site-specific details with the RAIN Coach.

4.4.4 Resources and Templates

- D.1 RAIN Coach Job Description
- D.2 Sample Consultation Confirmation Email
- D.3 Sample Consultation Reminder Email
- D.4 Sample Feedback Survey Email

- D.5 Sample Project Approval Confirmation Email
- D.6 Sample Project Check-in Email
- D.7 Sample Project Final Email
- D.8 Sample Schedule for a Consultation
- D.9 RAIN Smart Neighbourhoods Project Agreement

4.5 Work Parties

4.5.1 Summary

The term 'Work Party' comes from the concept of Tupperware parties. A Work Party involves a 'host' (the homeowner) inviting over friends and family to take part in an 'activity', such as building a rain garden. During Work Parties, homeowners and participants are led by an experienced guide. Participants gain hands-on experience and step-by-step instructions on how to install a particular GSI project. In the RSN project, Work Parties to install rain gardens were held at several properties in each of the target neighbourhoods.

Budget: $$

People: 1 facilitator, 5-10 workers*

Planning Time: 15 hours

Delivery Time: 8 hours
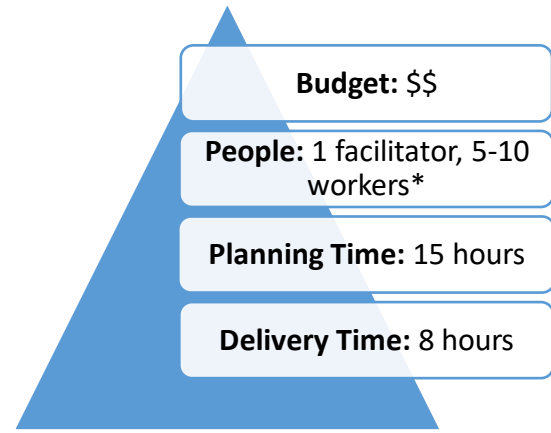
*Workers can be volunteer or paid positions.

4.5.2 Step-by-Step Guide

Step 1: Finding a Suitable Project

> **Work Scope.** Ideally, a suitable project is one that could be completed, from start to finish, in a full day of work. The project should also be able to accommodate a range of opportunities for volunteer help – from digging and heavy lifting to planting and watering – to ensure that as many people as possible are able to participate. Rain gardens were chosen as Work Party projects for the RSN project because they aligned with the considerations listed above, as well as larger project goals of neighbourhood beautification and capturing large volumes of stormwater.

> **Work Force.** Work Party hosts should be expected to recruit friends and family to volunteer that will encourage strong participation rates in the event. Therefore, it is ideal to select hosts that are connectors in their neighbourhoods. Prior to starting the work, make sure that all volunteers fill out a Volunteer Waiver Form for liability purposes (a sample can be found in *Appendix E*).

Step 2: Preparing the Site

> **Site Design.** After an initial consultation, the coach can offer a design sketch. After feedback from the homeowners, a final design can be created and provided to the homeowner(s) along with materials (types and quantities, e.g. 2 cubic yards of mulch) and general construction instructions. This process takes about 10-15 hours per work party to finalize a design through in-person meetings and email correspondence.

> **Site Preparation.** A number of tasks need to be completed prior to the Work Party. The first step involves a site evaluation to determine if it is suitable for a rain garden, with emphasis on locations that are in the front yard, on streets with pedestrian traffic, and otherwise visible in the neighbourhood. Before starting any work you must have the appropriate authority locate utilities. In Ontario it can be done by calling Ontario One Call. Other site preparation tasks include: rerouting eavestroughs and downspouts (if necessary), mapping out a rain garden footprint with flag tape and stakes, completing an infiltration test, relocating large trees/shrubs and removing the sod. More detailed information on each of these tasks is found in *Appendix E*.

> **Facilities.** Arrange for a portable toilet rental if the homeowner cannot provide a washroom. If necessary, rent a tent for shade and cover, so people can take intermittent breaks. Schedule a lunch break for participants on-site and provide water and snacks throughout the day.

> **Promotion.** Post a sign and/or a large copy of the design (including an explanation of the project) at the site before the date of the Work Party.

Step 3: Securing Equipment, Tools and Materials

> **Equipment/Tools.** To minimize costs, consider borrowing equipment and tools from partner organizations or homeowners/volunteers participating in the Work Party.

> **Materials.** Standard materials for a rain garden installation include mulch (shredded bark or cedar mulch, no dyes - composted pine mulch is recommended because it has extra organic nutrients for the new plants and a lower pH than other types of wood chips), soil (organic triple mix garden soil), sand (medium grained), compost (organic manure/compost), large rocks (field stones), small rocks/gravel (such as 3-5" river rock and pea gravel), landscape fabric, and plants (native and a mix of shrubs and perennials are recommended).

Work Party Equipment/ Tools Checklist

✓ Shovels
✓ Metal/soft rakes
✓ Hand trowels
✓ Pitchforks
✓ Wheelbarrows
✓ Pruners
✓ Scissors
✓ Gloves
✓ Tarp(s)
✓ Buckets

Step 4: Preparing a Work Party Schedule and Tasks

Dividing participants into groups will help to ensure that work is done efficiently. The duties and responsibilities for a rain garden installation fall into five broad categories, described below. These roles can be performed by one person or shared amongst many, and can be assigned to volunteers at the Work Party, or filled by members of your organization or partner organizations.

Once you have established the roles and responsibilities, create a schedule for event day so that all participants are aware of the timeline. A sample timeline for a rain garden work party can be found in *Appendix E*.

> **Orientation/Check in.** The responsibilities of this role are to register participants, provide a brief orientation of the work space, and to assign roles.

> **First Aid.** The responsibilities of the first aider are to ensure all participants are following the health and safety guidelines set out and to perform any minor first aid treatment as required (must have First Aid certification). The first aider must also work with other team members to ensure the site is safe at all times.

> **Landscaping/Gardening.** The responsibilities of the landscapers/gardeners may include sod removal, digging, installing landscape fabric, lifting and moving boulders, gravel, soil and mulch, planting plugs, spreading mulch, and looking after all of the equipment. These tasks can be split between volunteers, as appropriate.

> **Clean-Up.** The responsibilities of the clean-up crew are to clean any equipment/tools at the end of the day, and to ensure the work space is left tidy and free of excess leftover materials. Create signage for leftover material to be picked up or post the materials on a local buy and sell website.

> **Educational** (Optional). If desired, the educator can help with organizing posters or other presentation materials to incorporate an educational component into the event. Once work has been completed, install an interpretative sign that details the project, including the specifications of the stormwater feature and recognizing any applicable funders and contributors.

4.5.3 Lessons Learned

1. **Leftover Materials.** After one of the RSN Work Parties, there was a lot of extra soil and sod remaining once the installation was complete. It is important to create a plan to use the material elsewhere on the property, give it away or failing that to rent a large disposal bin for someone to take away the materials in the days following.

2. **Work Shifts.** Schedule volunteers in 3-4 hour shifts to ensure there is a sufficient number of people staggered throughout the day, especially for the final cleanup.

3. **Partnerships.** Local nurseries and other landscape suppliers may be interested in partnering on the project by providing materials and/or services at a discounted cost. Private landscapers may view this as an encroachment on their business so ensure that the project goals are clearly communicated to avoid backlash from industry professionals.

4.5.4 Resources and Templates

- E.1 RAIN Smart Neighbourhoods Project Work Party Agreement
- E.2 Guide to Running a Successful Work Party
- E.3 Sample Work Party Schedule
- E.4 Sample Sign-in Sheet
- E.5 Sample Work Party Participant Waiver

4.6 Neighbourhood Tours

4.6.1 Summary

Neighbourhood tours involve walking through a neighbourhood to showcase the beauty and celebrate the accomplishments of homeowners. The Kitchener Horticultural Society organizes garden tours similar to Reep's neighbourhood tours (Kitchener Horticultural Society, n.d.). Your municipality can partner with neighbourhood champions to organize a collaborative walking tour to visit these homes. These tours not only help you build connections with community members, but also demonstrate to homeowners that GSI projects are within their means and can enhance the beauty in their neighbourhoods.

Budget: $

People: 1-2 facilitators

Planning Time: 15-20 hours

Delivery Time: 3 hours
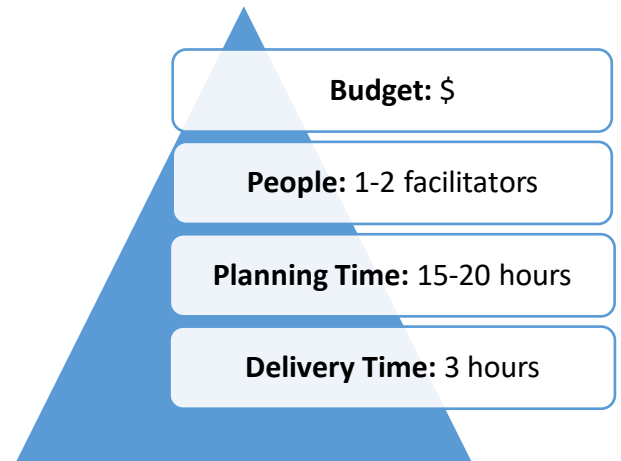
4.6.2 Step-by-Step Guide

Step 1: Choosing Your Neighbourhood

> **Location.** Try to organize the walking tour in a centrally located and accessible neighbourhood to increase participation rates. Ideally, this neighbourhood will be the same as other outreach activities to provide recognition for recent work by residents in the neighbourhood. If possible, choose a neighbourhood that has GSI projects visible from the front yard; otherwise, you will need to get advance permission to bring tour participants to the backyard.

> **Neighbourhood Champions.** Identify neighbourhood champions and property owners that would be interested in participating in the tour. Make sure that the neighbourhood you choose has a good number of champions and community members willing to showcase their property.

> **Diverse GSI.** Choose a neighbourhood with diverse GSI projects to showcase a range of options. Homeowners will be more likely to find applicable ideas and turn inspiration into action when they are presented with a number of different examples.

Step 2: Planning the Tour

> **Notify Homeowners.** Notify the homeowners you would like to showcase on the tour. Identify if they are comfortable with whatever promotional material you choose (maps with their name and address) and if desired, inquire if they are available and/or willing to speak or comment during the tour.

> **Signage.** Put up information signs on the front lawns of tour stops to increase visibility of the project and to give participants information to read on their own.

> **Timing.** Determine the date and time that your tour will take place – early summer to early fall are good times, as the gardens are more likely to be in bloom. Be sure to plan an alternate date in case of inclement weather. It is recommended to have someone walk the tour ahead of time to get a sense of how long the walk will take, and to avoid any areas of high traffic, construction, or other accessibility challenges.

> **Meeting Place.** Choose a centrally located, well-known location for the meeting place.

> **Promotion.** Invite all homeowners that live along the route of the neighbourhood tour to attend. Have volunteers deliver flyers to every home in the neighbourhood or send to your neighbourhood mailing list and/or neighbourhood association newsletter, if applicable. You should also promote the event via social media, general mailing lists or other newsletters to attract participants from all around your municipality and engage with gardeners.

> **Map.** Provide an electronic map of the tour route – including timing for anticipated stops – so that participants can follow along and/or join along the way.

Step 3: Leading the Tour

> **Introduction (10 minutes).** Provide a short summary of the tour agenda and the types of projects you will be visiting. If appropriate, provide some context on the larger related initiatives in your municipality. This could also be a good opportunity to visit any municipal projects such as a stream restoration.

> **Walking Tour (1.5 hours).** Lead the tour at a comfortable pace. Make stops along the way to explain various projects. Be sure to give participants a chance to ask questions at each stop. When possible, invite the property owners to speak about their project, providing details such as the motivation for installing the project and the time and budget required.

> **Debrief (20 minutes).** Leave some time at the end for questions from the group and to thank participants for coming. If desired, leave participants with take-home materials, such as a rain garden plant list or a list of local service and product suppliers.

> **Wrap-Up Activity.** Following the tour, consider hosting an activity (e.g. picnic) to wrap-up the tour and thank participants for coming. Tour leaders should remain present to answer any questions. This would also be a good time to have partner organizations set up booths/tables to promote events or provide information, if desired.

4.6.3 Lessons Learned

1. **Cross Promotion.** Try to tie your tour in with another high traffic event as this will increase participation.
2. **Print Off Extras.** Provide extra maps for participants to share with neighbours unable to attend.
3. **Less is More.** Keep your audience engaged and facilitate meaningful dialogue by selecting a few interesting spots oppose to attempting to cover the entire neighbourhood. Give preference to locations where the homeowner has made a commitment to participate in the tour and answer questions.

4.6.2 Resources and Templates

- F.1 Sample Neighbourhood Tour Map

4.7 Financial Incentives

4.7.1 Summary

Financial incentives are an effective catalyst for homeowner stormwater management projects. To encourage the installation of GSI at the lot level, the RSN project offered incentives for projects based on the volume of water captured for each project.

Budget: $$$*

People: n/a

Delivery Time: n/a
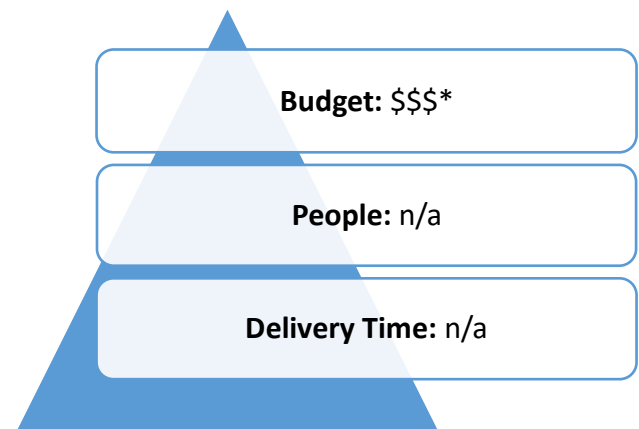
*Most effective when covering at least 50% of project costs, ranging from $500-$1,500.

4.7.2 Step-by-Step Guide

Step 1: Secure Funding

> **Funding Sources**. For the RSN project, funding was obtained from grants, as well as from the stormwater department budget at the City of Kitchener. The RSN project utilized the City of Kitchener's stormwater utility fee and credit system as a promotional tool and incentive for homeowners to participate. Figure 5 shows the proportion of stormwater credits completed in the RSNs, suggesting an increase over the duration of the project (2016-2018). In the City of Kitchener the total number of new applications is declining, however, since the start of the RAIN Smart Neighbourhoods project in 2016, the number of stormwater applications from the RAIN Smart Neighbourhoods has held steady or increased as shown in Figure 5.

Figure 5. Stormwater Credit Applications, Kitchener vs. Target Neighbourhoods
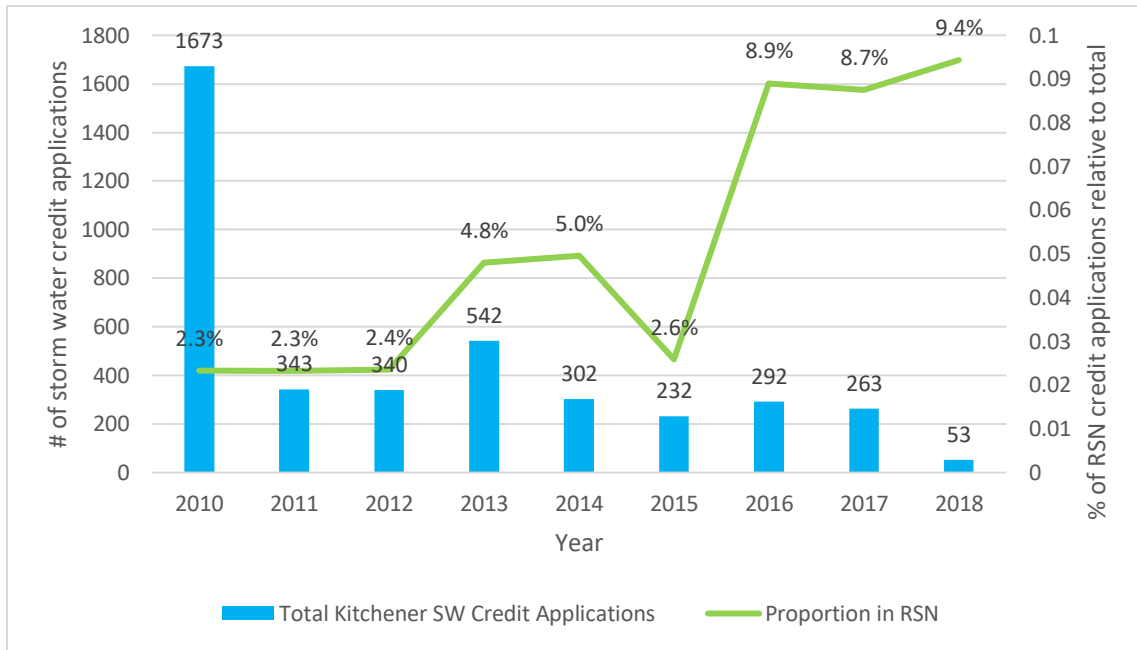
Updated August 31, 2018

> **Fundraising**. Consider hosting a rain barrel sale (e.g. through rainbarrel.ca) or another related sale to raise money for an incentive fund.

Step 2: Determine Incentive Categories

> **Determine Incentive Amounts for Each Project.** Determine the number and type of projects that are eligible for incentives. Incentives could be tiered based on storage volume, or specific projects (e.g. rain gardens) could be preferentially subsidized. For an example of the latter, see Thunder Bay's rain garden incentive program (EcoSuperior, n.d.). Be sure to establish the maximum incentive amount available if multiple projects are completed. For example, in the RSN project, Reep provided incentives for four different project types: rain gardens, infiltration galleries, permeable paving and rain barrels/cisterns. Each project type had tiered incentive levels based on the volume of water captured, with a cap of $1,500 for one household (see the Incentives Tracking Sheet in *Appendix G* for more details). The volume targets for each project were chosen based on tiers outlined in the City of Kitchener's stormwater credit program.

> **Determine Incentive Timeframe.** Determine the length of time during which incentives will be reserved. In the RSN project, incentives were reserved for a period of 60 days after an application was approved. Homeowners received a check-in email at the 30-day interval to ensure they were on track to meet their deadline; some homeowners dropped out at this point for various reasons.

Step 3: Determine Application Process

> **Application Form.** Prepare an application form to collect important information on the proposed project type, including the proposed dimensions and the volume of water captured. Be sure to clearly state all of the rules and regulations pertinent to accessing the incentive. In addition, include a disclaimer that if the completed project differs from the proposed project, there is the possibility that the incentive value may change (though this will be dependent on your incentive structure). If the homeowner intends to hire a professional for some or all of the project work, advise them to get at least three quotes and check contractors' proof of liability insurance and experience. Other conditions for incentive payout include a final site inspection, soil samples, receipts and photographs of the site before and after. A copy of the application form used in the RSN project is included in *Appendix G.*

Step 4: Track the Incentives

> **Private.** Maintain an internal Incentives Tracking sheet to reflect approved (planned) and completed projects.
> **Public.** If possible, provide a visual representation of available incentives on your website and social media (e.g. a thermometer) to display the incentive money remaining and deadlines for application.

4.7.3 Lessons Learned

1. **Timeframe.** Some homeowners found the 60-day time-frame too short. In a number of cases, homeowners explicitly stated that they were waiting to submit an application until they knew they could meet the 60-day deadline.
2. **Amount.** The incentives available for medium and large projects seemed to be a positive catalyst for getting projects in the ground. However, the modest incentive for rain barrel installations ($25) was not significant enough to motivate homeowners to fill out an application form and apply for the incentive. Depending on your project goals, offering higher incentives for small projects (e.g. rain barrels) may be desired.
3. **Align and Promote with Stormwater Credits.** If available, try to align the incentive brackets with any available stormwater credits offered by the municipality. For example, the higher the credit homeowners are eligible for, the higher the incentive. If stormwater credits are offered in perpetuity, inform homeowners of this as a motivator to undergo larger projects that may require a longer payback period. Provide the homeowners with relevant information for the stormwater credit applications after installation to encourage submission of the documentation.

4. **Provide and Promote Other Resources.** Based on the data collected via a final survey sent to homeowners (Figure 6), financial incentives were one of important factors to installing GSI. The provision of workbooks, workshops and consultations are nessecary to encourage installation of GSI.

Figure 6. Final Survey Results – Importance of Resources for Installing GSI (N=18)

Legend: ■ Not at all important ■ Somewhat unimportant ■ Neither important nor unimportant ■ Somewhat important ■ Very important
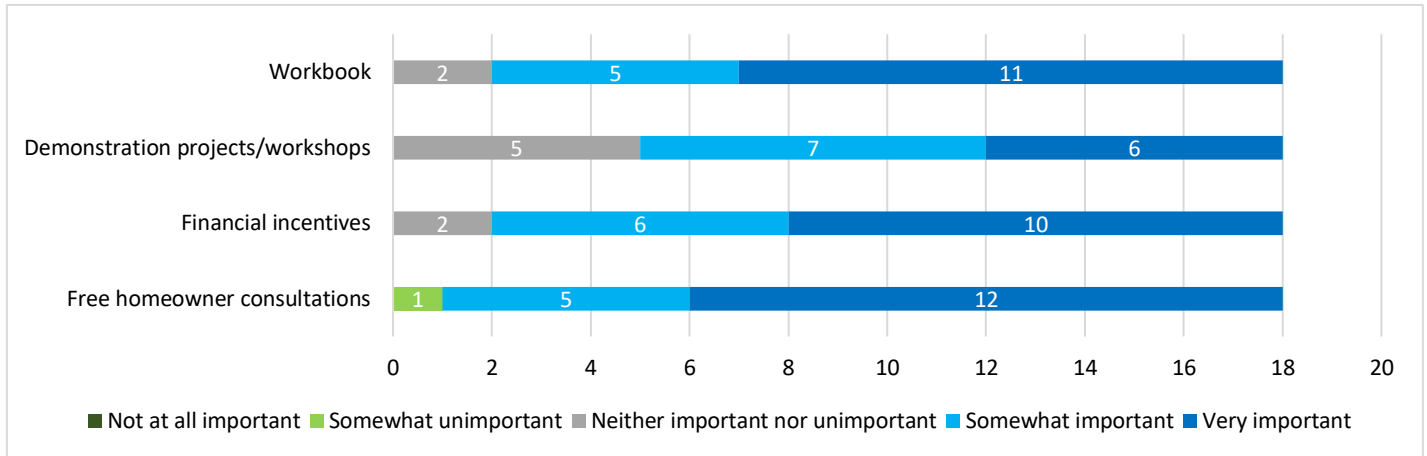
Updated August 31, 2018

4.7.4 Resources and Templates

- G.1 Sample Incentives Flyer
- G.2 Incentives Tracking Template
- G.3 RAIN Smart Neighbourhoods Project Agreement
- G.4 RAIN Smart Neighbourhoods Project Approval
- G.5 RAIN Smart Neighbourhoods Incentive Approval

Summary

This framework was designed to assist municipalities that are interested in increasing awareness of stormwater management issues and green stormwater infrastructure (GSI), promoting the uptake of GSI in residential settings, and fostering collaboration between residents, citizen groups, and municipal staff.

This framework uses experience gained during the RAIN Smart Neighbourhoods project in Kitchener, Ontario to inform the development of stormwater management programs in other municipalities. The framework begins with a self-assessment activity to determine the current state of stormwater management, then outlines and explores the considerations for choosing a target neighbourhood. Seven community engagement strategies are described in detail, including a step-by-step guide, resources and templates, and lessons learned from the RSN project. These strategies include door-to-door campaigns, participatory design workshops, neighbourhood champions, homeowner consultations, work parties, neighbourhood tours, and financial incentives.

Please remember that the strategies and recommendations in this framework are detailed as they were implemented in the RAIN Smart Neighbourhoods project and may need to be adapted to be used in other municipalities based on their unique circumstances. It is our hope that this framework provides an informative and useful starting point to develop your own stormwater management program!

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Appendices

Appendix A