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Today's presentation

- Where it all began... Ottawa's Retrofit Plans
- The Challenge of Residential Retrofitting
- Initial Vision for Ottawa's Program and Jurisdiction review
- Rain Ready Ottawa Program Development
 - Fusion Landscape Professional Training
 - Home Assessment Program
 - Rebates
 - Community Engagement
- How it was all supposed to go... & How it went...
- Addressing Issues
- Questions!











Where it all began...

Ottawa River Action Plan (ORAP)

 Foundational planning document

- Goals:
 - Zero CSOs
 - Minimize stormwater impacts
- 17 Actions





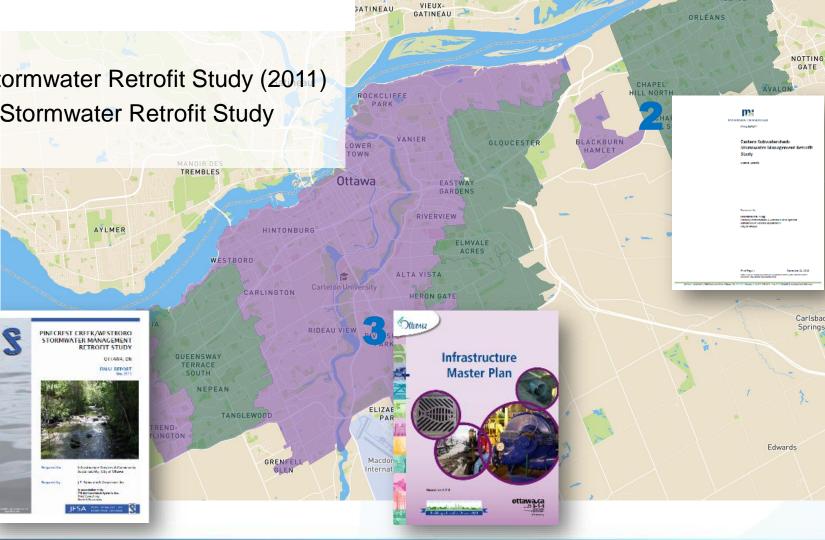
Ottawa's Retrofit Plans

Goals 12 & 13 of ORAP

Pinecrest / Westboro Stormwater Retrofit Study (2011)

Eastern Subwatershed Stormwater Retrofit Study

(2019)





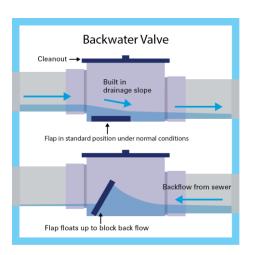
Retrofit Plan Goals

Residential SWM Practice	50-year target
Downspout redirections	2,639 (7% of homes)
Rain barrels	9,425 (two barrels at 25% of homes)
Rain gardens	1,885 (10% of homes)
Permeable paving	16.16 ha (15% household driveways)
Infiltration trenches	942 (5% of homes)

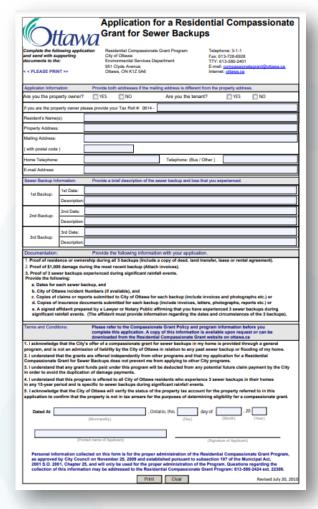


The Challenge of Residential Retrofitting

- Low uptake
 - Ottawa has other 'retrofitting programs'
 - Backwater valve program (~\$1 million/year)
 - Lead pipe replacement program (~1 million/year)







Example:
Compassionate
grants for
flooded
basements,
a.k.a.:

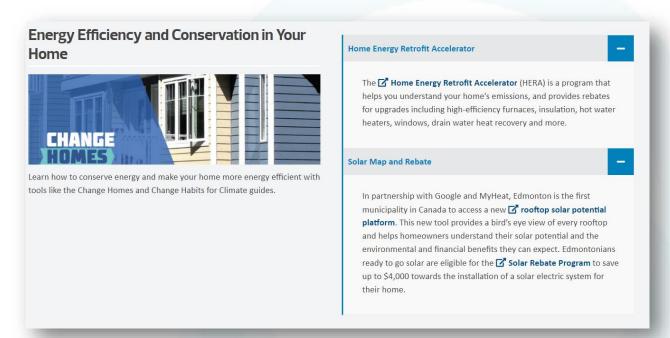




Initial Vision for Ottawa's Program

- Fully branded standalone program with an identity of its own
 - Marketing, branding and communications all important!
- Financial rebates for multiple practices





Example: Edmonton's climate programming



Jurisdiction review

- Purpose:
 - Review outside programs including:
 - practices, incentive levels, program structures, successes and failures
 - Glean best practices
 - Gather expert opinions
- Method:
 - Desktop search of top 50 Canadian and top 25 US jurisdictions by population (also recommended programs)
 - Interviewed 26 municipal staff, ENGO staff, consultants, landscapers, and community members



















Jurisdiction review

- Focus on 'integrated' programs
 - Multiple incentives
 - Promoting stormwater concepts
 - Standalone program identity

Chicago:



Philadelphia:



- Takeaways:
 - (Some) strong stormwater management program examples:
 - 1. The Seattle area's 12k Rain Gardens program
 - 2. Philadelphia's Rain Check program
 - 3. TRCA's Sustainable Neighbourhood Action Program
 - 4. Fusion Landscape Professional Most programs struggle to engage residents
 - Ottawa will have to go well-beyond what any other jurisdiction has done in order to achieve its goals or even have a sizeable impact on stormwater conditions



Jurisdiction review

- Takeaways continued (the bad news)
 - 1. Programs have relied too heavily on motivated residents to implement SW practices (this is a small demographic)
 - 2. Programs have not adequately taken advantage of motivating factors beyond intrinsic (different messaging) and financial factors (incentives)
 - 3. Programs (except Fusion) have not adequately motivated private industry









Rain Ready Ottawa

Industry Training



Home Assessments



Community Engagement



Design and Installation Incentives





A Note on Resident Eligibility

- Incentives are available in:
 - Pinecrest Creek / Westboro Priority
 Stormwater Retrofit Area (~18,000 households)
 - Eastern Subwatershed Priority Stormwater
 Retrofit Area (~73,000 households)
- Eligibility checking tool available at ottawa.ca/rain

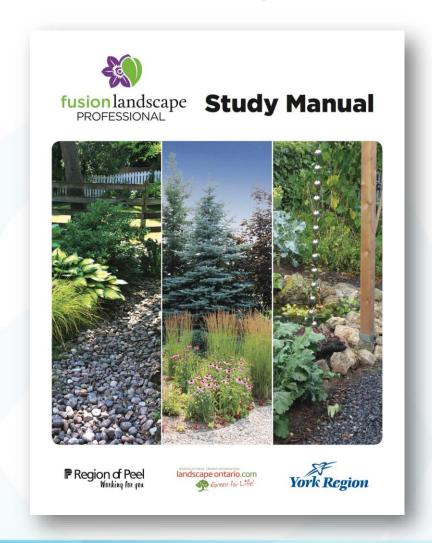




Fusion Landscape Professional Training

 Annual training and certification for Landscape Professionals on holistic stormwater management







Home Assessment Program

- Free ~1hr home visit with custom advice
- Delivered in partnership with EnviroCentre
- 115 Home Assessments delivered in 2021
- 150 planned for 2022
- Detailed report provided to residents







Overall Property Recommendations





The following recommendations are based on our observations on 7/8/21

Please note that as with all home/property upgrades, proper permits, soil assessments and professional assistance may be required. These recommendations are intended as guidelines only to inform your decisions regarding your lot level storm water management.





Design and Installation Incentives

- 1. Downspout redirection (max \$1,000)
- 2. Rain gardens and soakaway pits (max \$2,500)
- 3. Permeable pavements (max \$5,000)
- 4. Certified landscape designs (Max \$500)

Max \$5,000 per household







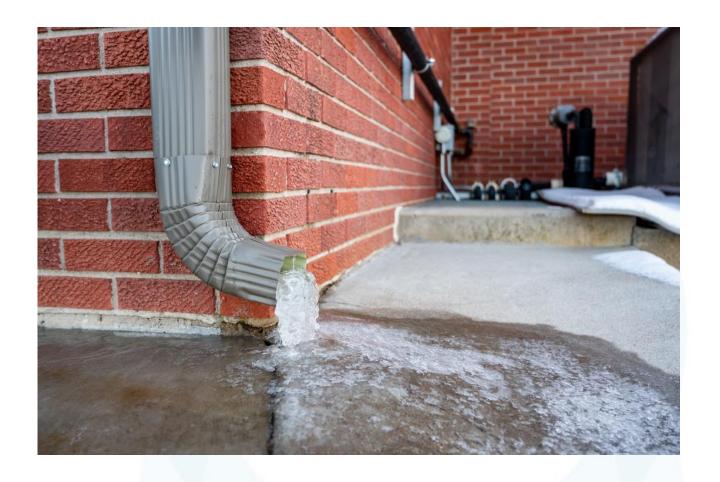


Requirement: Home assessment and/or Contracting a Fusion Landscape Professional



Downspout redirections

- Benefits:
 - Reduced wet basement issues
 - Reduce tripping hazards and icy surfaces
 - Improve property level permeability
- Drawbacks:
 - None if done correctly





Rain gardens



Benefits:

- Curb appeal
- Habitat for pollinator
- Learning opportunities for kids and community
- Low maintenance



Drawbacks:

Upkeep required (less than a typical garden once established)



Soakaways

- Engineered rain gardens
- Benefits:
 - Turf on top
 - Invisible
- Drawbacks:
 - No pollinator/biodiversity benefits
 - Not aesthetic benefits





How it was all supposed to go...

Resident referred to the program by a Fusion Landscape Professional Resident hears about the program via City or contractor resources

Residents in target neighbourhoods identified by the City

Fusion Landscape Professional (FLP) Program

- Specialized rainwater management training
- Certification list
- Design incentive

Incentive program application by eligible residents

Installation of practices by FLP

Home Rainwater Assessment Program

- · Specialized home assessments
- · Report with eligible incentives
- Simple downspout redirection package

Incentive program application by eligible residents

Installation of practices by residents

Community Engagement Initiatives

Examples:

- Community outreach and events
- Rain barrel promotion campaign
- · Demonstration rain gardens
- Rain garden blitz
- Community competitions

Financial Incentives

- · Downspout redirection
- · Rain gardens
- · Soakaway pits

- · Permeable paving
- · Certified landscape design

Incentive payments to eligible residents in priority stormwater retrofit areas



How it went....

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Year 1 – Home assessment program

- Home assessment program was co-developed with, and delivered by EnviroCentre
- EnviroCentre hired a really great assessor who did a great job
- 75% of assessment were in priority areas, 25% in secondary areas
- Supply chain issues...

116 completed home assessments

submitted applications

200 native perennials given away

residents on the waitlist for a home assessment



Year 1 – Fusion Landscape Professional

- Ottawa partnered with Landscape Ontario to deliver Fusion Landscape Professional training and certification in Ottawa
- Training allows clients of certified FLP's to submit RRO rebate applications

16 Certified
Fusion
Landscape
Professionals

PurePave applications

3 active FLPs

2 submitted applications

\$66,593 in approved rebates



Year 1 – RRO rebates

- Rebates came from both streams (home assessments and FLP clients), but most were PurePave projects
- Application approval process and claims process is workable, but not overly efficient





Year 1 – Community engagement

- 121,568 impressions on social media
- 14,420 visits to the Rain Ready Ottawa website
- Two main campaigns:
 - 1. Rainbarrel.ca collaboration
 - 2. Downspout redirection campaign









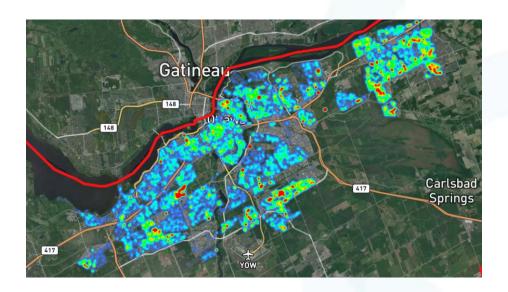
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Year 1 project – Downspout Redirection Identification Project (DRIP)

- Processed 209,011 addresses on Google Streetview
 - Used a machine learning (Artificial intelligence) algorithm to analyse the imagery
 - Identified 31,625 addresses where downspouts drain to driveways





Year 1 project – Downspout Redirection Identification Project (DRIP)



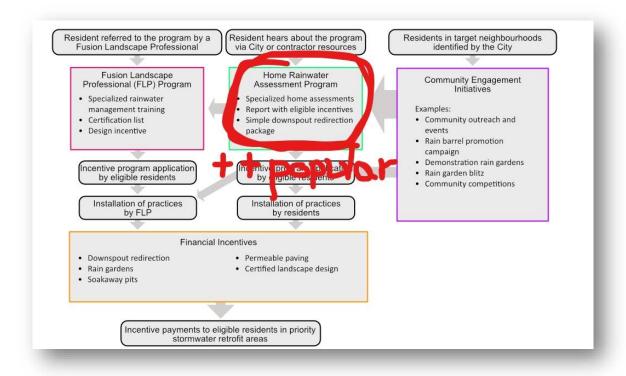


DRIP Stormwater Path Videos





Addressing the backlog





- 750 residents on waiting list
- No capacity to deliver the assessments



Solution:

- eLearning program
- Scalable capacity to train residents and 'get them eligible'

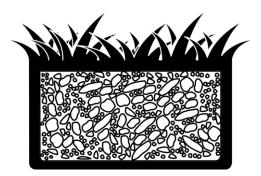


eLearning Program

- In development
- Four courses planned
- About 1 hour each
- Free to take for residents



1. Intro and Overview



2. Soakaways



3. Rain gardens



4. Downspout redirection



Benefits of eLearning

- Cost-effective education and outreach:
 - Big 'carrot' justifies deep communication
- Scalable:
 - Cost of an additional learner is almost negligible
 - Upfront costs are manageable
- Maintains contact with learners:
 - If someone gets stalled, an automated email can prompt them to continue
 - Records are kept on learner activity which will provide good insights into which programs are popular



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