RainWise Rebate Program Applicant Guide

PROVIDING MORE EPCOR

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Program overview

Stormwater is water from rain, melting snow and hail. Stormwater runoff is the portion of this water that is not absorbed into the ground. Urban areas contain hard surfaces, such as roads, sidewalks, driveways, and rooftops, that don't absorb stormwater like soil, plants and trees do. When rain falls on these hard surfaces, it quickly flows into the collection system through catch basins, which drain into stormwater ponds, creeks, streams, and the North Saskatchewan River.

As stormwater travels to storm sewers, it picks up pollutants harmful to plants and wildlife, such as motor oil, fertilizers, pet waste and other contaminants, which go directly into nearby waterbodies. Slowing the entry of stormwater into the collection system by holding water where it lands can help improve the quality and reduce the quantity of stormwater entering the collection system.

One way to slow the entry of stormwater into the collection system is through green infrastructure, which includes low impact development (LID). LID is a type of stormwater management facility that incorporates plants, engineered soils, and natural processes to capture and retain stormwater runoff close to its source for slower release. LIDs can improve property drainage and help prevent sewer backups.

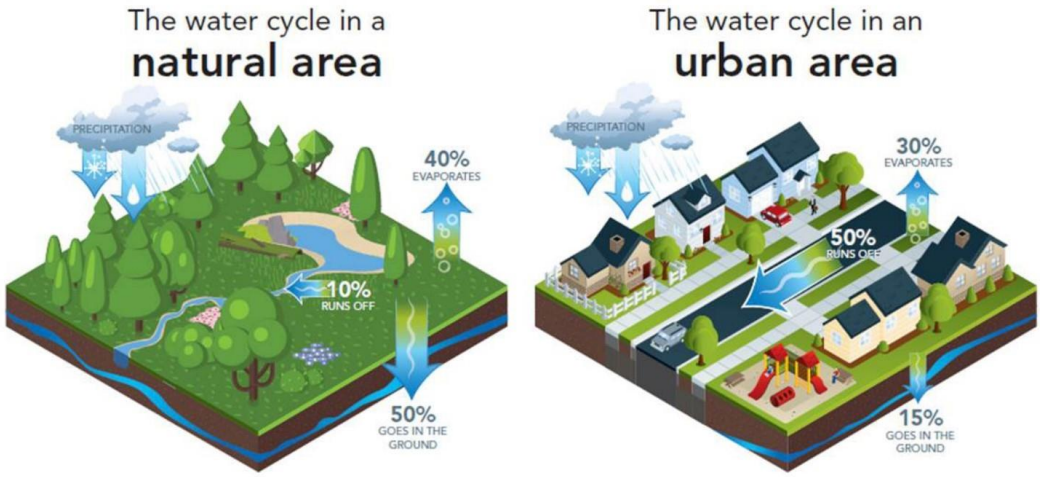


Figure 1: The water cycle in both natural and urban areas [Online image]. Metro Vancouver. https://metrovancouver.org/services/liquid-waste/Documents/homeowners-guide-stormwater-management.pdf

EPCOR's RainWise Rebate Program aims to support Edmonton property owners to manage stormwater on their property through rebates for eligible RainWise projects, such as LID, to:

- reduce the quantity of stormwater entering the collection system,
- improve the quality of stormwater released into the collection system, and
- prevent overland runoff and sewage from entering homes and businesses.

All properties located within the city of Edmonton are eligible to participate in the RainWise Rebate Program if program requirements outlined in this application guide are met.

Stormwater management installations that are required as part of the development of a property **do not** qualify for the RainWise Rebate Program.

RainWise project types and maximum rebate amounts vary between single-family, multi-family, and industrial, commercial and institutional (ICI) customers.

What type of customer am I?

Properties are assigned a customer type based on the City of Edmonton's property zoning. If you are unsure what your zoning is, follow these steps:

1. Open SLIM maps and select zoning in the "I'm looking for" dropdown.
2. Enter your house number and street or avenue name into the respective boxes.
3. Click Find Address.
4. Your property information results will show on the bottom of you screen, including your property's current zone.

Once you know your zoning, refer to Table 1 to find out what type of customer you are. Knowing what customer type you are ensures the appropriate options are available to you for your application.

Table 1: Customer types by zoning

Single-family	Multi-family	ICI
Small Scale Residential (RS) Small Scale Flex Residential (RSF) Rural Residential (RR)	Small-Medium Scale Transition Residential (RSM) Medium Scale Residential (RM) Large Scale Residential (RL)	Neighbourhood Mixed Use (MUN) Mixed Use (MU) Neighbourhood Commercial (CN) General Commercial (CG) Business Commercial (CB) Business Employment (BE) Medium Industrial (IM) Heavy Industrial (IH)

EPCOR will assess Direct Control (DC) zones on a case-by-case base to determine the appropriate customer category. Contact EPCOR at rainwise@epcor.com if your property is a DC zone.

RainWise project types

EPCOR provides rebates for the following project types (RainWise projects denoted with a * are available to multi-family and ICI customers only):

- Downspout disconnection
- Rain barrels/storage tanks
- Rain gardens/box planters
- Soakaway pits
- Permeable pavement
- Absorbent landscaping*
- Soil cells*

See the RainWise project requirements section below for more information regarding each project type.

Rebate amount

Rebates are issued to property owners once a RainWise project is completed and approved. With the exception of rain barrels and downspout disconnections, total rebate amounts are calculated based on the area treated, which is defined as the amount of hard surface (impervious) area directly connected to the RainWise project. This area may include rooftops, driveways, concrete patios, or other hard surface areas.

Rebate amounts for all RainWise projects, except rain barrels and downspout disconnections, are calculated using the following parameter:

$11/m^2 of directly connected impervious area (DCIA) managed

Rain barrel rebate amounts will be calculated using the following parameter:

$0.25/litre of stormwater storage

Downspout disconnection rebate amounts will based on receipts for eligible expenses to a maximum of:

$100/downspout disconnected

Lifetime maximum rebate amounts will vary depending on customer type and are as follows:

- Single-family residential: $2,000 per property
- Multi-family residential: $5,000 per property
- ICI: $10,000 per property

Property owners can complete multiple RainWise projects on their property to a combined lifetime maximum across all options.

Please note EPCOR's existing Backwater Valve Subsidy is available to single-family residential customers only and is excluded from the $2,000 rebate maximum.

Directly connected impervious area (DCIA)

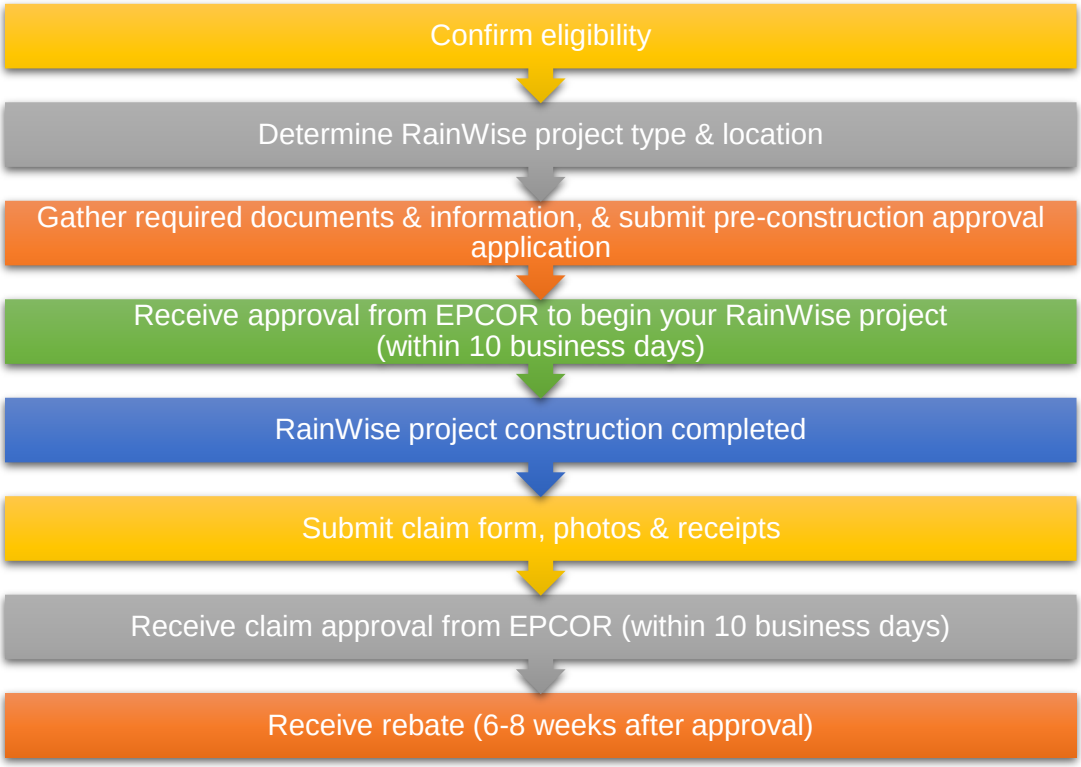
In order to complete your application for a rain garden, box planter, soakaway pit, permeable pavement, absorbent landscaping or soil cells, you will need to know the DCIA for your property. So what are directly connected impervious areas (DCIAs) and what do they do?

Impervious surfaces are hard surfaces that do not allow water to penetrate the ground, such as asphalt, concrete, brick, and stone. For most RainWise projects, the rebate amount you are eligible for is dependent on the directly connected impervious area (DCIA), which is the impervious (hard) surface area directed into your RainWise project.

For most single-family properties, roofs and driveways make up most of the impervious area on the lot. For larger multi-family and ICI properties, parking lots also contribute significantly to the impervious area. These areas are more often than not directly connected to the stormwater or combined sewer system and add to the amount of water that goes into the collection systems during a major rain event.

Rebate process & installation

Here are the steps required to obtain project pre-construction approval and receive a rebate. **RainWise projects must be completed within one (1) year of the pre-construction approval date to remain eligible for the rebate outlined in your pre-construction approval. Approvals are awarded on a first-come, first-serve basis each year, as there is limited program funding**.



Before construction begins

1. Confirm your property is located in Edmonton.
2. Determine RainWise project type and location.
    a. For downspout disconnections, ensure you are located within the eligibility area in order to receive a rebate.
    b. View the RainWise project requirements section for more information on each of the project offerings.
3. If you are interested, schedule a complimentary EPCOR Flood Prevention Inspection for more information.
4. Gather required information and documents for your pre-construction approval application.
5. Submit your pre-construction approval application form (available Spring 2025).
6. Receive approval from EPCOR to begin construction of your RainWise project.
    a. You should receive your application response within 10 business days.

Installation requirements

Project installation may be performed by yourself or by a hired contractor, unless otherwise specified in the RainWise project's requirements. Contact Utility Safety Partners prior to any excavating, and ensure all work adheres to the appropriate bylaws and regulations. **Applicants are responsible for ensuring their RainWise project meets all legal requirements.**

After construction is complete

1. Submit a claim form (available spring 2025), along with any required photos and receipts (if applicable).
    a. Review the claim requirements section for project-specific claim requirements.
2. Your claim will be processed within 10 business days. Rebates will be received 6-8 weeks after a claim is approved.

Pre-construction approval application requirements

Gather all necessary information and documents for pre-construction approval to streamline the application process and prevent delays or rejections due to incomplete submissions.

Table 2 summarizes the necessary information for a pre-construction approval application based on RainWise project type.

Table 2: Pre-construction approval application requirements by project type

	Downspout Disconnection	Rain Barrel/ Storage Tank	Rain Garden/ Box Planter	Soakaway Pit	Permeable Pavement	Absorbent Landscaping	Soil Cells
Project type(s)	✓	✓	✓	✓	✓	✓	✓
Project description • *See below for guidance*			✓	✓	✓	✓	✓
Before photos • *See below photo guidelines*	✓	✓	✓	✓	✓	✓	✓
Storm servicing plans, if available			☑	☑	☑	☑	☑
Lot grading plans, if available			☑	☑	☑	☑	☑
Project design sketch • *See below for sketch requirements*			✓	✓	✓	✓	✓
Directly connected impervious area *(DCIA) managed (m^2)* • *See below for how to determine your project DCIA*			✓	✓	✓	✓	✓
Planned project size			✓	✓	✓	✓	✓
Requested rebate • *See below rebate calculation examples*	✓	✓	✓	✓	✓	✓	✓

✓ Requirement for single-family, multi-family, and ICI properties
☑ Requirement for multi-family and ICI properties only

Claim requirements

Ensuring you have all necessary photos and documentation for your rebate claim is key to process your claim efficiently and accurately. Table 3 summarizes what information is required for each of the RainWise project types.

Table 3: Claim requirements by RainWise project type

	Downspout Disconnection	Rain Barrel/ Storage Tank	Rain Garden/ Box Planter	Soakaway Pit	Permeable Pavement	Absorbent Landscaping	Soil Cells
Completed claim form	✓	✓	✓	✓	✓	✓	✓
Photo(s): Completed work	✓	✓	✓	✓	✓	✓	✓
Photo(s): After excavation			✓*	✓	✓	✓	✓
Photo(s): Before surface restoration⁺			✓	✓			✓
Receipt(s) for eligible expenses	✓	✓†					

*Above ground box planters do not require an after excavation photo

⁺Photos must show installed underground components (e.g. soil cells modules, soakaway pit rock fill, rock layers in box planters and permeable pavement) before they are covered with soil, plants, or other surface materials

†Storage volume must be clearly indicated on receipt

EPCOR reserves the right to request project-related receipts for all RainWise project types to verify project completion and ensure program compliance.

RainWise project requirements

Downspout disconnection

☑ *Single-family residential* ☑ *Multi-family residential* ☑ *ICI*	*Funding:* *Up to $100/disconnected downspout*

What is it?

Downspouts are pipes that convey water down from your roof. Downspouts are either connected to or disconnected from EPCOR's drainage system.

Downspout disconnection involves detaching the downspout from the standpipe that directs stormwater to EPCOR's drainage system. Once disconnected, the old connection pipe is capped and stormwater is redirected through a downspout extension onto a permeable surface such as a lawn or garden, or into a rain garden, rain barrel, soakaway pit, etc.

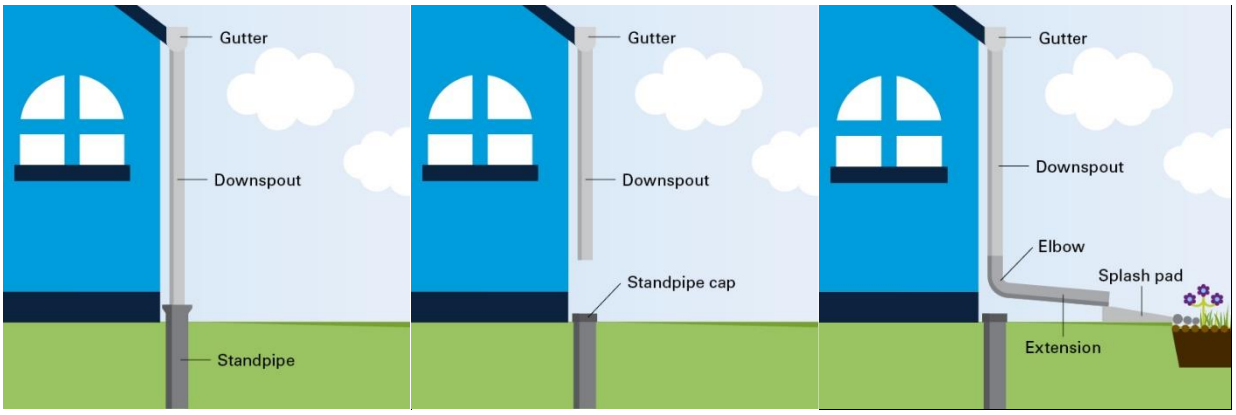


Figure 2: Downspout disconnection illustration

What are the benefits?

Downspout disconnection:

- Allows you to collect stormwater in a rain barrel/storage tank for watering your plants and garden, washing your car, and taking care of your lawn, which saves money on your water bill.
- Helps prevent sewer backups and flooding during heavy rain by slowing down and reducing the amount of stormwater entering the drainage system.
- Reduces sewer overflows into the North Saskatchewan River.

Eligibility area

At this time, only properties located within the combined sewer network area are eligible to receive a rebate for downspout disconnection. Refer to Figure 3 to see if your property falls within the downspout disconnection eligibility area.

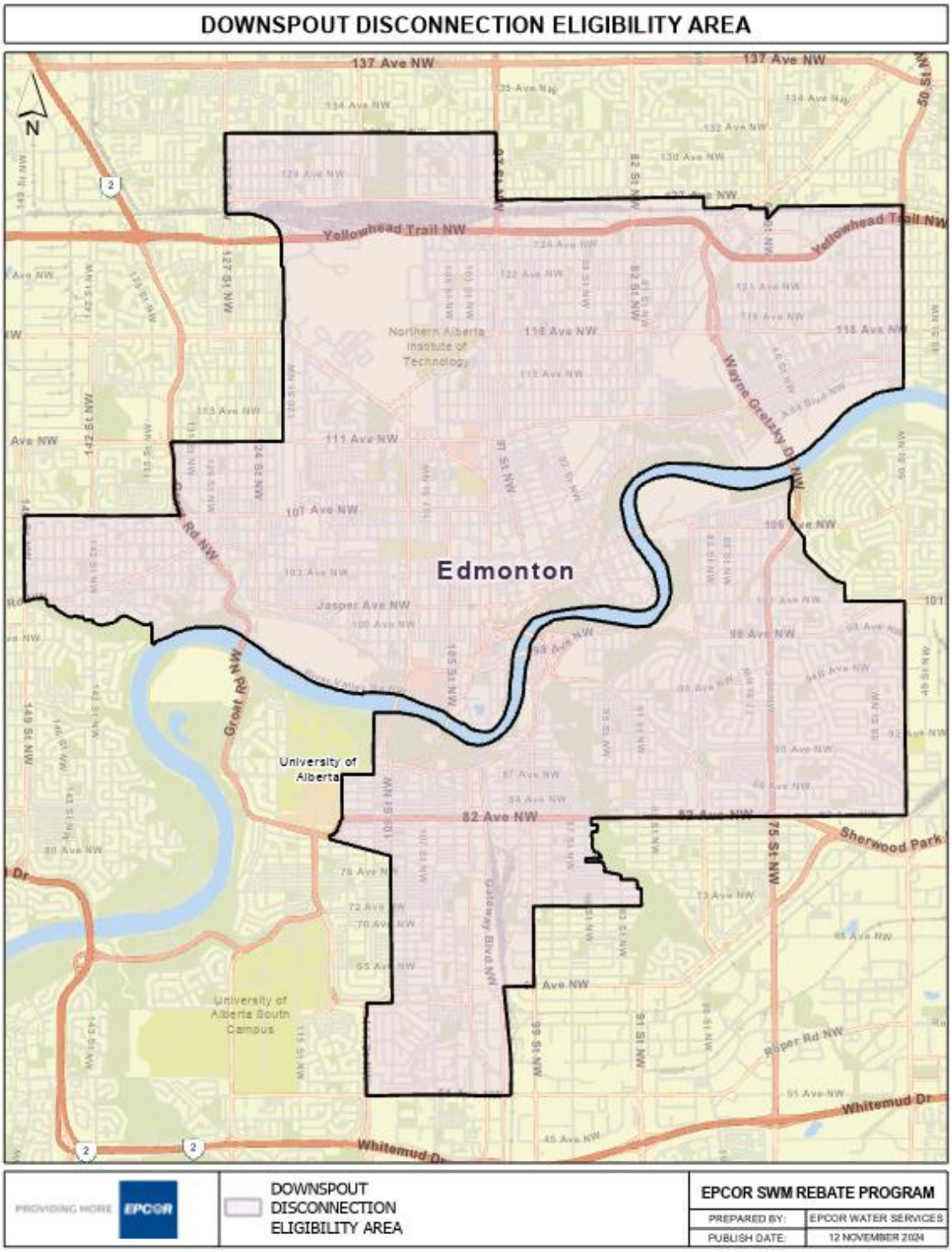


Figure 3: Downspout disconnection rebate eligibility area

The following neighbourhoods are included within the downspout disconnection rebate eligibility area:

- Alberta Avenue
- Allendale
- Bellevue
- Blatchford Area
- Bonnie Doon
- Boyle Street
- Calder
- Calgary Trail North
- Central McDougall
- Cloverdale
- CPR Irvine
- Cromdale
- Delton
- Downtown
- Eastwood
- Edmonton Northlands
- Elmwood Park
- Forest Heights
- Garneau
- Glenora
- Grovenor
- Highlands
- Holyrood
- Idylwylde
- Industrial Heights
- Kenilworth
- Lauderdale
- McCauley
- Montrose
- Oliver
- Ottewell
- Parkdale
- Pleasantview
- Prince Rupert
- Queen Alexandra
- Queen Mary Park
- Ritchie
- River Valley Riverside
- River Valley Walterdale
- Riverdale
- Rossdale
- Spruce Avenue
- Strathcona
- Strathcona Junction
- Strathearn
- Terrace Heights
- Virginia Park
- Westmount
- Westwood
- Yellowhead Corridor East
- Yellowhead Corridor West

Project requirements

To receive a downspout disconnection rebate, the following conditions need to be met:

- The property must be in the downspout disconnection eligibility area.
- Re-routed downspouts must have been connected to a storm or sanitary service prior to disconnection.
- Re-routed downspouts must drain to an area that is permeable (e.g. lawn or garden) or into stormwater storage (e.g. rain barrel/storage tank).
- Re-routed downspouts must not contradict the City of Edmonton Drainage Bylaw. Here is some relevant information from the bylaw related to the release of water:

  Roof and foundation drainage from a property is not permitted to be discharged:

  - *onto a pervious ground surface within one (1) meter of the building;*
  - *within 150 mm of an adjacent lot;*
  - *within 150 mm of a City of Edmonton right-of-way (ROW);*
  - *to a location where the water has the potential to adversely impact slope stability, unstable ground, a ravine; or*
  - *to a location or in a manner that causes or could cause nuisance, hazard or damage.*

Here is some guidance on what are considered eligible expenses:

Eligible material expenses	Ineligible material expenses
☑ downspout redirection materials (extenders, elbows and hardware)	☒ new eaves
☑ erosion prevention materials for end of a downspout (splash pad, rocks)	☒ purely decorative materials
☑ standpipe capping materials	

Remember to keep all project-related receipts, as you will need to include copies when submitting your claim form.

Resources

- Downspout Disconnection Guide & Instructional Video: https://www.mmsd.com/what-you-can-do/managing-water-on-your-property/gutters-and-downspouts/downspout-disconnection
- City of Vaughan Downspout Disconnection How-to: https://www.vaughan.ca/residential/water-wastewater-and-stormwater/wastewater-services/how-disconnect-downspout
- Kirkland DIY Downspout Disconnection Guide: https://www.kirklandwa.gov/files/sharedassets/public/v/1/public-works/surface-water/kirkland-diy-downspout-disconnection-guide.pdf

Rain barrel/storage tank

☑ *Single-family residential* ☑ *Multi-family residential* ☑ *ICI*	*Funding:* *$0.25/litre of storage*

What is it?

A rain barrel/storage tank is a container often connected to a downspout, that collects and stores stormwater runoff from a roof, which reduces the amount of stormwater flowing onto your property. When properly installed and maintained, a rain barrel/storage tank is a great way to conserve water for outdoor use, like maintaining outdoor plants.

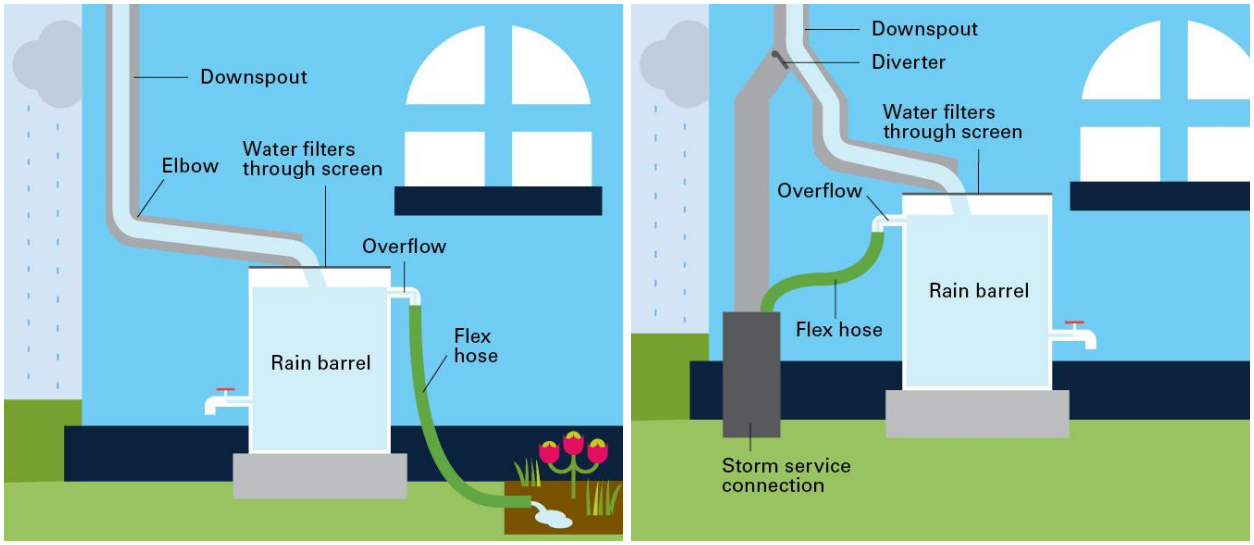


Figure 4: Rain barrel illustration

Note that you should never use collected stormwater for drinking or food preparation.

What are the benefits?

Rain barrels/storage tanks:

- Collect stormwater for outdoor use like watering plants and gardens, washing your car, and taking care of your lawn, which saves money on your water bill.
- Help prevent sewer backups and flooding during heavy rain by slowing down and reducing the amount of stormwater entering the drainage system.

Project requirements

To receive a rain barrel/storage tank rebate, the following conditions need to be met:

- Must be a minimum of 200 liters.
- Must receive runoff from an impervious (hard) surface (e.g. roof).
- Must have a screen to keep mosquitos from breeding and keep debris out.
- Must overflow to a permeable area (e.g. lawn or rain garden) or back to your storm service (if available).
- Must not contradict the City of Edmonton Drainage Bylaw. Here is some relevant information from the bylaw related to the release of water:

  Roof and foundation drainage from a property is not permitted to be discharged:

  - *onto a pervious ground surface within one (1) meter of the building;*
  - *within 150 mm of an adjacent lot;*
  - *within 150 mm of a City of Edmonton right-of-way (ROW);*
  - *to a location where the water has the potential to adversely impact slope stability, unstable ground, a ravine; or*
  - *to a location or in a manner that causes or could cause nuisance, hazard or damage.*

Use the Alberta Clean Runoff Action Guide: Rainwater Harvesting to help determine how many rain barrels/storage tanks you need to store the runoff generated from your directly connected impervious area (DCIA). We recommend you try to capture 100% of the runoff generated.

Remember to keep all project-related receipts, as you will need to include copies when submitting your claim form.

Resources

- Rain Barrel Information and Installation Steps: https://www.epcor.com/ca/en/ab/edmonton/safety/home/flood-prevention-at-home/rain-barrels.html
- Rainwater Harvesting Guide: https://resilientlandscaping.ca/wp-content/uploads/2023/06/CRAG-2023-rainwater-harvesting.pdf

Rain garden/box planter

☑ *Single-family residential* ☑ *Multi-family residential* ☑ *ICI*	*Funding:* *$11/m^2 of DCIA*

What is it?

A rain garden is a shallow, depressed garden with specially blended soils designed to collect stormwater runoff from rooftops, driveways, and hard surfaces. Rain gardens can include any combination of native shrubs, grasses and flowers. Rain gardens can also contain pipes that collect and send excess stormwater to the drainage system. The most important part of a rain garden is the loose, deep soil underneath that absorbs and filters stormwater.

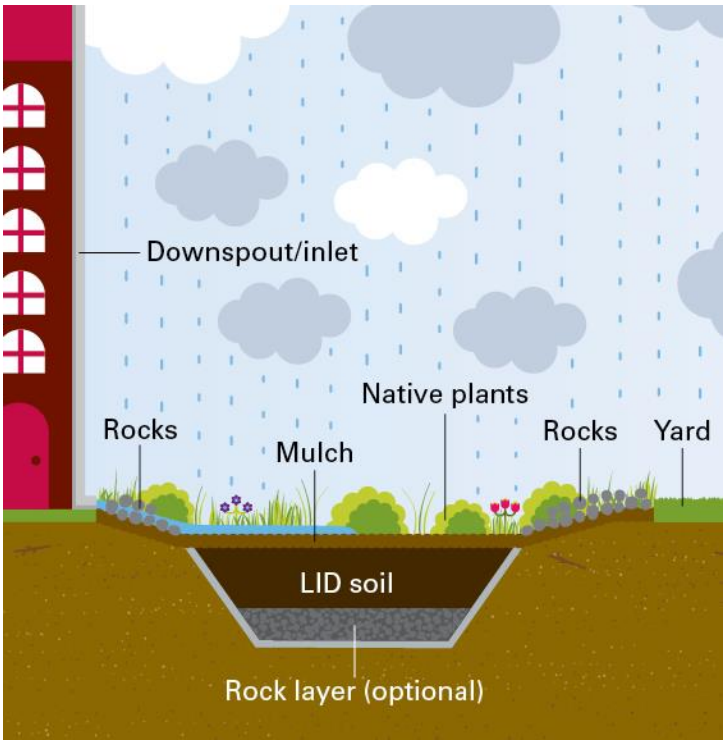


Figure 5: Rain garden illustration

Box planters are essentially rain gardens contained to box-like structures and can be above or in ground. These planters often consist of a concrete (or other durable material) box filled with soil and plants. If the box planter is built from wood, an impermeable liner is recommended to prevent moisture damage. Box planters can look very different, depending on where they are installed, but are typically used in urban areas.

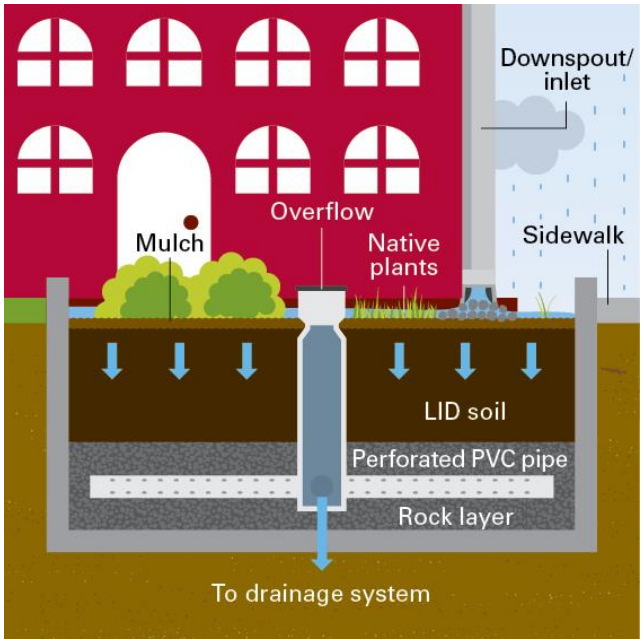


Figure 6: In-ground box planter illustration

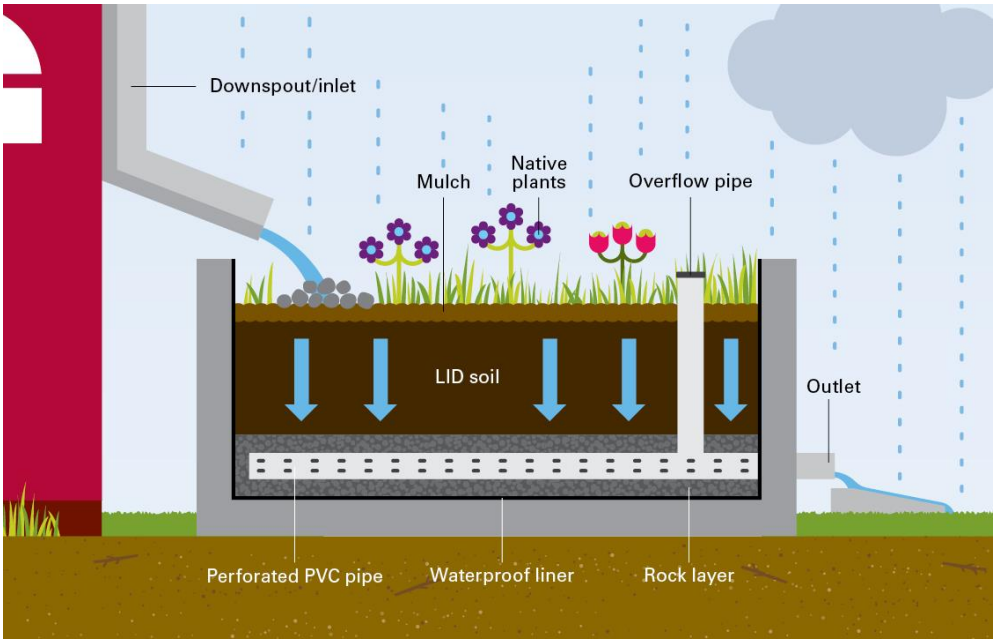


Figure 7: Above-ground box planter illustration

Stormwater enters the rain garden or box planter through an inlet, like a downspout, and flows into soil and rock layers that capture and filter it. Special plants absorb the water, or it evaporates. During heavy storms, rain gardens and box planters can become full. For planters without pipes, an overflow area is needed on the downhill side. For planters with pipes, water will flow into an overflow pipe when it gets too high and then drain out to a grassy area or drainage system.

What are the benefits?

Rain gardens/box planters:

- Enhance the look of your property, boosting its value and curb appeal.
- Encourage biodiversity by attracting birds, bees, butterflies, dragonflies and other species.
- Help remove pollutants from stormwater.
- Are low maintenance features that only require watering during extreme drought, saving money on your water bill.
- Help prevent sewer backups and flooding during heavy rain by slowing down and reducing the amount of stormwater entering the drainage system.

If space is limited, box planters are ideal!

Project requirements

To receive a rain garden/box planter rebate, the following conditions need to be met:

- Must receive runoff from an impervious surface (e.g. roof).
- Must be constructed in such a way as to prevent erosion.
- Must be constructed a minimum of three (3) meters away from building foundations.
- Must be slightly sunken, contain a deep soil layer, be planted with native shrubs, grasses and/or flowers, and be covered in shredded non-floatable mulch.
    - Refer to the Alberta Clean Runoff Action Guide: Rain Gardens for more information and guidance related to rain garden components and recommendations.
- Must overflow to a permeable area (e.g. lawn).
- Must not contradict the City of Edmonton Drainage Bylaw. Here is some relevant information from the bylaw related to the release of water:

    Roof and foundation drainage from a property is not permitted to be discharged:

    - *onto a pervious ground surface within one (1) meter of the building;*
    - *within 150 mm of an adjacent lot;*
    - *within 150 mm of a City of Edmonton right-of-way (ROW);*
    - *to a location where the water has the potential to adversely impact slope stability, unstable ground, a ravine; or*
    - *to a location or in a manner that causes or could cause nuisance, hazard or damage.*

Use the Alberta Clean Runoff Action Guide: Rain Gardens to help calculate how big your rain garden/box planter should be to store the runoff generated from your directly connected impervious area (DCIA). We recommend you try to capture 100% of the runoff generated.

Resources

- Rain Garden Information Guide: https://resilientlandscaping.ca/wp-content/uploads/2023/06/CRAG-2023-rain-gardens.pdf

- Rain Garden Installation Steps: https://www.epcor.com/ca/en/ab/edmonton/conservation/home/rain-garden.html
- Rain Garden Fact Sheet: https://www.edmonton.ca/public-files/assets/document?path=LID_Rain_Gardens_Factsheet.pdf
- Above Ground Box Planter Installation Steps: https://www.monaghantownship.com/stormwater-management/pages/downspout-planters
- Above Ground Box Planter Guide: https://www.10kraingardens.scot/build-your-own/

Soakaway pit

☑ *Single-family residential* ☑ *Multi-family residential* ☑ *ICI*	*Funding:* *$11/m^2 of DCIA*

What is it?

Soakaway pits are holes typically filled with rocks or gravel that let water gradually seep into the ground. They may also be filled with modular chamber units (e.g. plastic crates). Soakaway pits can be covered by stones, gardens, regular sod, or even hard surfaces.

Stormwater enters soakaway pits through an inlet (e.g. downspout) and fills the empty spaces within the pit. Over time, the stormwater will soak into the surrounding soil. During heavy storms, soakaway pits can become full. When this happens, overflow pipes are used so it can drain out to a grassy area or drainage system.

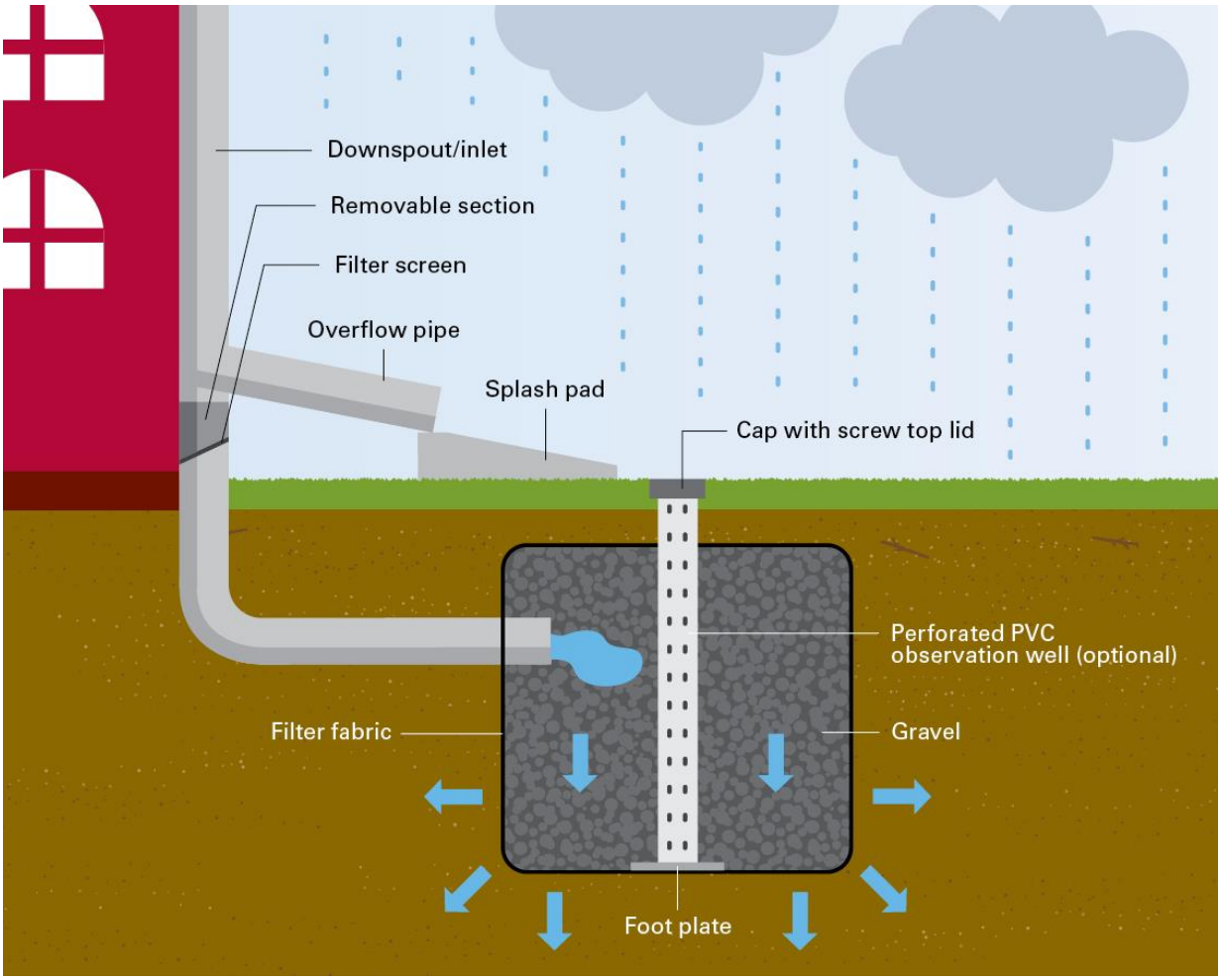


Figure 8: Soakaway pit illustration

What are the benefits?

Soakaway pits:

- Are ideal in locations where space is limited, as they can be constructed in various sizes and shapes.
- Are low maintenance and cost-effective stormwater management systems.
- Help prevent sewer backups and flooding during heavy rain by slowing down and reducing the amount of stormwater entering the drainage system.

Project requirements

To receive a rebate for a soakaway pit, the following requirements need to be met:

- Must receive runoff from an impervious surface (e.g. roof, patio, or driveway).
- Must be filled with clean coarse fill material, such as clean, angular (crushed) gravel, or modular chamber units.
- Must include some form of pre-treatment to prevent sediment and/or leaves from entering and clogging the soakaway pit (e.g. downspout filter screens or a vegetated buffer).
- Must wrap all sides with filter fabric to prevent sediment from entering the pit. A non-woven filter fabric is recommended.
- Must be constructed a minimum of three (3) meters away from building foundations.
- Must overflow to a permeable area (e.g. lawn).
- Must not contradict the City of Edmonton Drainage Bylaw. Here is some relevant information from the bylaw related to the release of water:

  Roof and foundation drainage from a property is not permitted to be discharged:

  - *onto a pervious ground surface within one (1) meter of the building;*
  - *within 150 mm of an adjacent lot;*
  - *within 150 mm of a City of Edmonton right-of-way (ROW);*
  - *to a location where the water has the potential to adversely impact slope stability, unstable ground, a ravine; or*
  - *to a location or in a manner that causes or could cause nuisance, hazard or damage.*

Use the Alberta Clean Runoff Action Guide: Trenches and Soakaways to help calculate how big your soakaway pit needs to be to store the runoff generated from your directly connected impervious area (DCIA). We recommend trying to capture 100% of the runoff generated.

Resources

- Soakaway Pit Information Guide: https://resilientlandscaping.ca/wp-content/uploads/2023/06/CRAG-2023-trenches-and-soakaways.pdf

Permeable pavement

☑ *Single-family residential* ☑ *Multi-family residential* ☑ *ICI*	*Funding:* *$11/m^2 of DCIA*

What is it?

Permeable pavement/pavers are specially designed hard surfaces that allow water to soak into the ground. There are a wide variety of permeable surface options, including porous asphalt, pervious concrete, permeable interlocking concrete pavers and more. These surfaces can be driveways, parking lots, patios, walkways, and other hardscaped surfaces. Some permeable pavement systems have a rock reservoir layer, and others do not.

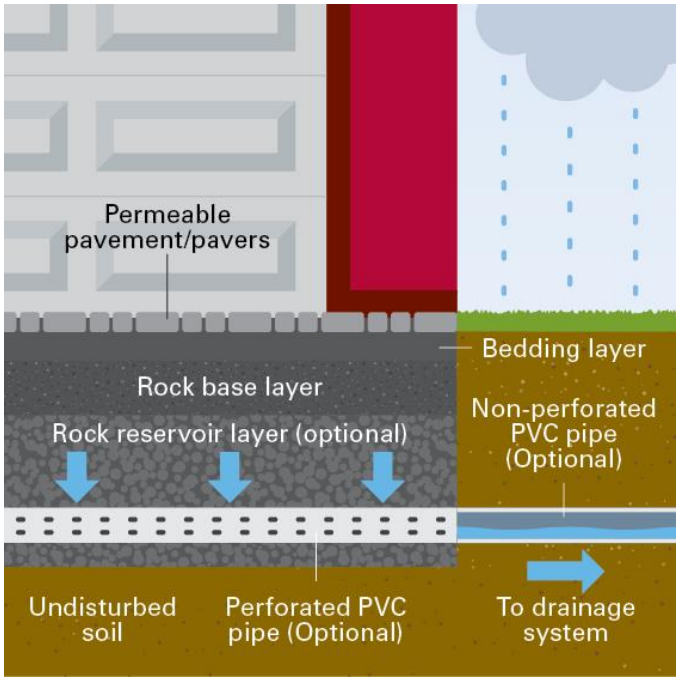


Figure 9: Permeable pavement illustration

What are the benefits?

Permeable pavement:

- Reduces winter maintenance. Permeable surfaces are less prone to icing, reducing the need for sand and salt. When temperatures warm up, water melts and soaks into the ground.
- Gives off less heat compared to regular concrete and asphalt, which lowers surface and surrounding area temperatures.
- Improves property drainage because it holds more water than a typical lawn.
- Directs stormwater into garden beds and trees, helping save money on your water bill.
- Helps prevent sewer backups and flooding during heavy rain by slowing down and reducing the amount of stormwater entering the drainage system.

Project requirements

To receive a rebate for permeable pavement, the following requirements need to be met:

- Must replace an area that was previously hardscaped (e.g. concrete or asphalt).
- Installation must be completed in accordance with the manufacturer's specifications.
- Must not contradict the City of Edmonton Drainage Bylaw. Here is some relevant information from the bylaw related to the release of water:

  Roof and foundation drainage from a property is not permitted to be discharged:

  - *onto a pervious ground surface within one (1) meter of the building;*
  - *within 150 mm of an adjacent lot;*
  - *within 150 mm of a City of Edmonton right-of-way (ROW);*
  - *to a location where the water has the potential to adversely impact slope stability, unstable ground, a ravine; or*
  - *to a location or in a manner that causes or could cause nuisance, hazard or damage.*

Use the Alberta Clean Runoff Action Guide: Permeable Pavement to help calculate how big your permeable pavement area needs to be to store the runoff generated from your directly connected impervious area (DCIA). We recommend you try to capture 100% of the runoff generated. If your permeable pavement project contains a rock reservoir layer, you may direct additional runoff to the area (e.g. from your roof through a downspout). If your permeable pavement project does not contain a rock reservoir layer, no additional runoff may be directed to the area.

Resources

- Permeable Pavement Information Guide: https://resilientlandscaping.ca/wp-content/uploads/2023/06/CRAG-2023-permeable-pavement.pdf
- Permeable Pavement Fact Sheet: https://www.edmonton.ca/public-files/assets/document?path=LID_Permeable_Pavements_Factsheet.pdf
- Permeable Pavement Information Sheet: https://www.epa.gov/system/files/documents/2021-11/bmp-permeable-pavements.pdf

Examples of permeable pavement

- Romex Hardscapes: https://romexhardscapes.com/
- PaveDrain: https://www.pavedrain.com/
- Alliance Nitro: https://alliancegator.com/gator-jointing-material/gator-nitro-joint-sand/
- Belgard: https://www.belgard.com/products/permeable-pavers/

Absorbent landscaping

☒ *Single-family residential* ☑ *Multi-family residential* ☑ *ICI*	*Funding:* *$11/m^2 of DCIA*

What is it?

Absorbent landscaping looks similar to grassed areas and can include other plants and trees. The landscaped area may contain a slightly sunken area and is built with specially blended soils designed to help hold water during and after a rainfall.

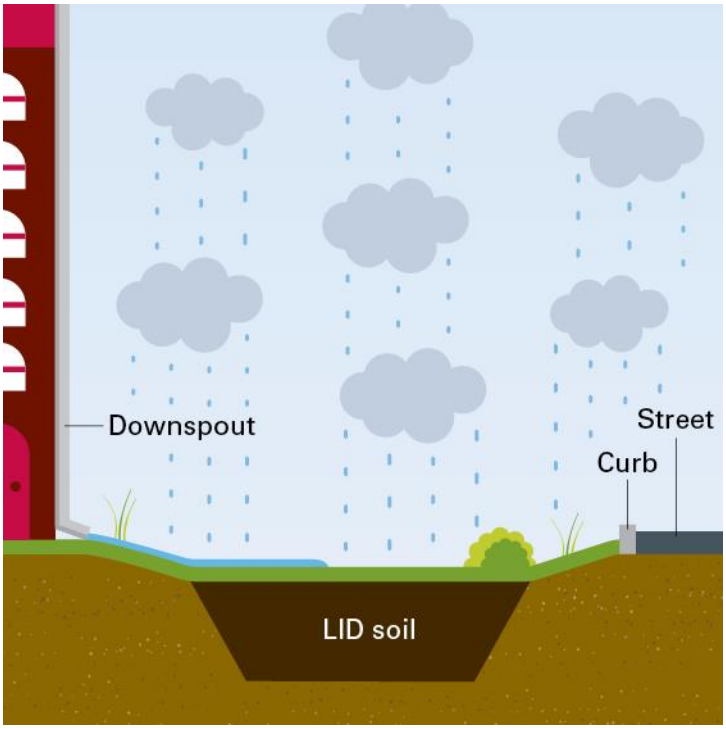


Figure 10: Absorbent landscaping illustration

What are the benefits?

Absorbent landscaping:

- Gives plant roots space to grow, leading to faster growth and resulting in lush, healthier lawns and gardens.
- Requires less maintenance with reduced watering and fertilizer needs, saving you time and money.
- Enhances your property drainage, as absorbent landscaping can hold more water than regular sod lawns.
- Helps prevent sewer backups and flooding during heavy rain by slowing down and reducing the amount of stormwater entering the drainage system.

Project requirements

To receive a rebate for absorbent landscaping, the following requirements need to be met:

- Must receive runoff from an impervious surface (e.g. roof, patio, or driveway).
- Must have a minimum depth of 30 cm.
- Must be constructed a minimum of three (3) meters away from building foundations.
- Must not contradict the City of Edmonton Drainage Bylaw. Here is some relevant information from the bylaw related to the release of water:

  Roof and foundation drainage from a property is not permitted to be discharged:

  - *onto a pervious ground surface within one (1) meter of the building;*
  - *within 150 mm of an adjacent lot;*
  - *within 150 mm of a City of Edmonton right-of-way (ROW);*
  - *to a location where the water has the potential to adversely impact slope stability, unstable ground, a ravine; or*
  - *to a location or in a manner that causes or could cause nuisance, hazard or damage.*

We recommend you try to capture 100% of the runoff generated.

Resources

- City of Edmonton Design and Construction Standards Volume 3-02: https://www.epcor.com/content/dam/epcor/documents/supporting-documents/2023_drainage_design-standards_addendum-1_volume-3-02.pdf
- Homeowner's Guide to Stormwater Management: https://metrovancouver.org/services/liquid-waste/Documents/homeowners-guide-stormwater-management.pdf

Soil cells

☒ *Single-family residential* ☑ *Multi-family residential* ☑ *ICI*	*Funding:* *$11/m^2 of DCIA*

What is it?

Soil cells are plastic milk crate-like structures, which are filled with loose, specially blended soil, designed to be installed beneath hardscape surfaces. Soil cells collect stormwater through an inlet and distribute the stormwater through a perforated pipe into the loose soil, encouraging plant root growth and holding water during and after a rainfall. Stormwater not absorbed by the plants is filtered by the soil before going to the drainage system.

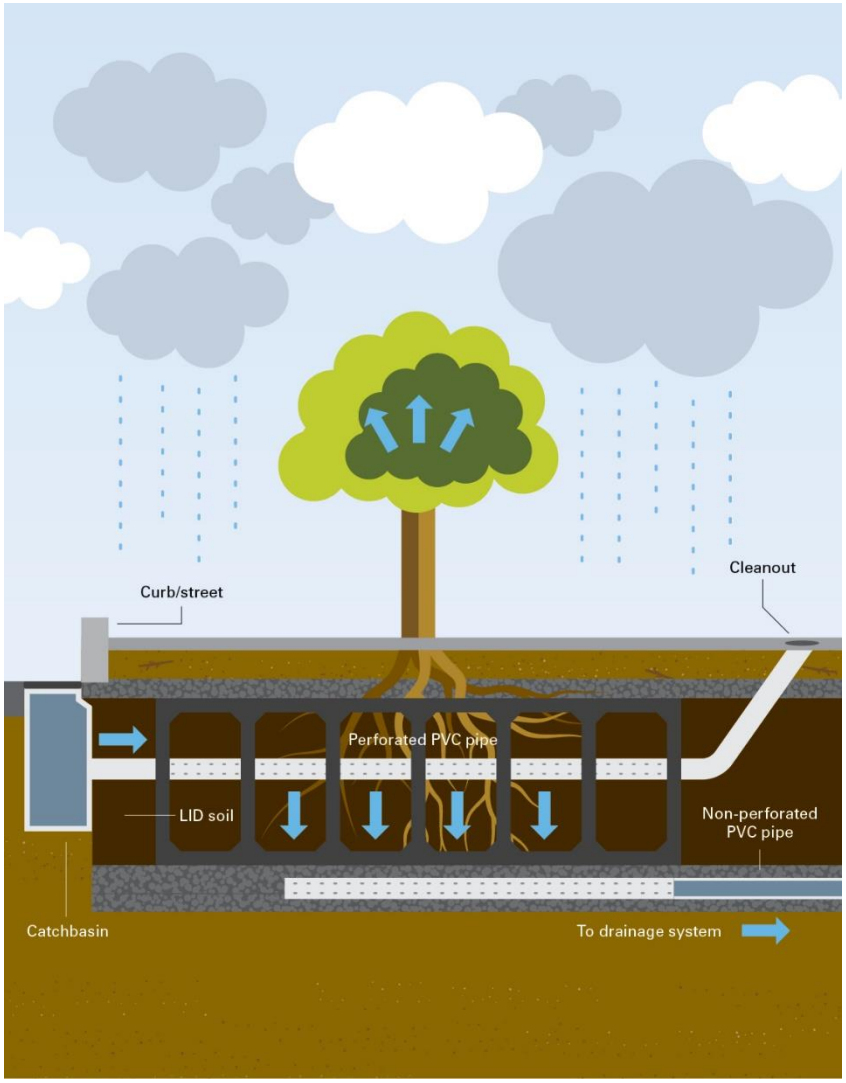


Figure 11: Soil cells illustration

What are the benefits?

Soil cells:

- Provide additional soil volume for tree roots to grow, resulting in flourishing trees with mature, expansive canopies that provide shade, cleaner air, and improved aesthetics.
- Improve property drainage, as soil cells hold more water than regular sod lawns.
- Help prevent sewer backups and flooding during heavy rain by slowing down and reducing the amount of stormwater entering the drainage system.

Project requirements

To receive a rebate for soil cells, the following requirements need to be met:

- Must receive runoff from an impervious surface (e.g. roof or parking lot).
- Must be installed by a certified contractor and according to the manufacturer's specifications.
- Must include some form of pre-treatment to prevent sediment and/or leaves from entering and clogging the soil cells (e.g. sump or catch basin).
- Must be constructed a minimum of three (3) meters away from building foundations.
- Must not contradict the City of Edmonton Drainage Bylaw. Here is some relevant information from the bylaw related to the release of water:

  Roof and foundation drainage from a property is not permitted to be discharged:

  - *onto a pervious ground surface within one (1) meter of the building;*
  - *within 150 mm of an adjacent lot;*
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  - *to a location or in a manner that causes or could cause nuisance, hazard or damage.*

We recommend you try to capture 100% of the runoff generated.

Resources

- City of Edmonton Design and Construction Standards Volume 3-02: https://www.epcor.com/content/dam/epcor/documents/supporting-documents/2023_drainage_design-standards_addendum-1_volume-3-02.pdf

Examples of soil cells

- Deeproot Silva Cells: https://www.deeproot.com/products/silva-cell/?gad_source=1&gclid=Cj0KCQiAu8W6BhC-ARIsACEQoDCs3gt58RYaepE1vPEnSLtUfg3CpsdhvV8CVjEzycCSq73gxACyzHcaAmSfEALw_wcB
- CityGreen Stratavault Systems: https://citygreen.com/product_info/stratavault/

Additional application guidance

Project description

Project descriptions should be clear, concise and no more than 250 words. They should include the following information:

- What RainWise project type(s) you are applying for;
- Key distances from building foundations, utilities, and property lines;
- Who will be completing the work (yourself or a contractor); and
- What type and amount of impervious (hard, non-absorbent surface) area will drain into the feature (if applicable)

Sample project description:

This project will include one downspout disconnection and construction of one rain garden. I intend to complete the work myself. The disconnected downspout will redirect flows from half of my roof area (50 m^2 of directly connected impervious area*; area A on sketch) into the rain garden, which will be in my front yard. The rain garden will be 5 m from my foundation and a minimum 1 m from my property lines. There are no utilities located near my rain garden. I plan to use rocks at the inlet and outlet for erosion control, plant native shrubs and grasses, and cover the rain garden with shredded mulch.*

Photo guidelines

EPCOR needs clear and accurate photos to assess project sites and determine program eligibility. The number of photos required depends on the RainWise project(s) selected. Please refer to the pre-construction approval application and claim requirements sections to ensure you have the required photo(s) for your RainWise project type.

To ensure your rebate application is processed smoothly, please follow these photo submission guidelines:

- Submit photos as separate files, saved using the following naming convention:
    - PropertyOwnerLastName _DescriptionPhotoX _YYYYMMDD
        - Example 1: Smith_BeforePhotoA_20250601
        - Example 2: Smith_AfterExcavationPhotoA_20250717
- Capture photos from the same angle, distance and orientation for easy comparison and to clearly show the transformation of the space
- Capture photos from a distance that includes the RainWise project feature within the full view of the yard/space to show project scale.
- Ensure photos are not blurry or crooked and the lighting does not diminish the quality (e.g. avoid over-exposure or heavy shadows).

Project design sketch requirements

The project design sketch can be hand drawn or computer generated, but it must illustrate all project-specific requirements:

- Property address
- Project dimensions
- Location of your house, garage, and other key buildings
- Location of utilities
- Location of projects and their distance from your house, other buildings, utilities, and property lines
- Directly connected impervious area (DCIA) to be managed by the project (in m^2)
- Location of any inlets, outlets or overflows
- Overall slope (and direction) of property
- Location descriptors/labels (e.g. front yard, back yard, house, fence, tree, etc.)

Refer to Figure 12 and Figure 13 for sample project sketches.

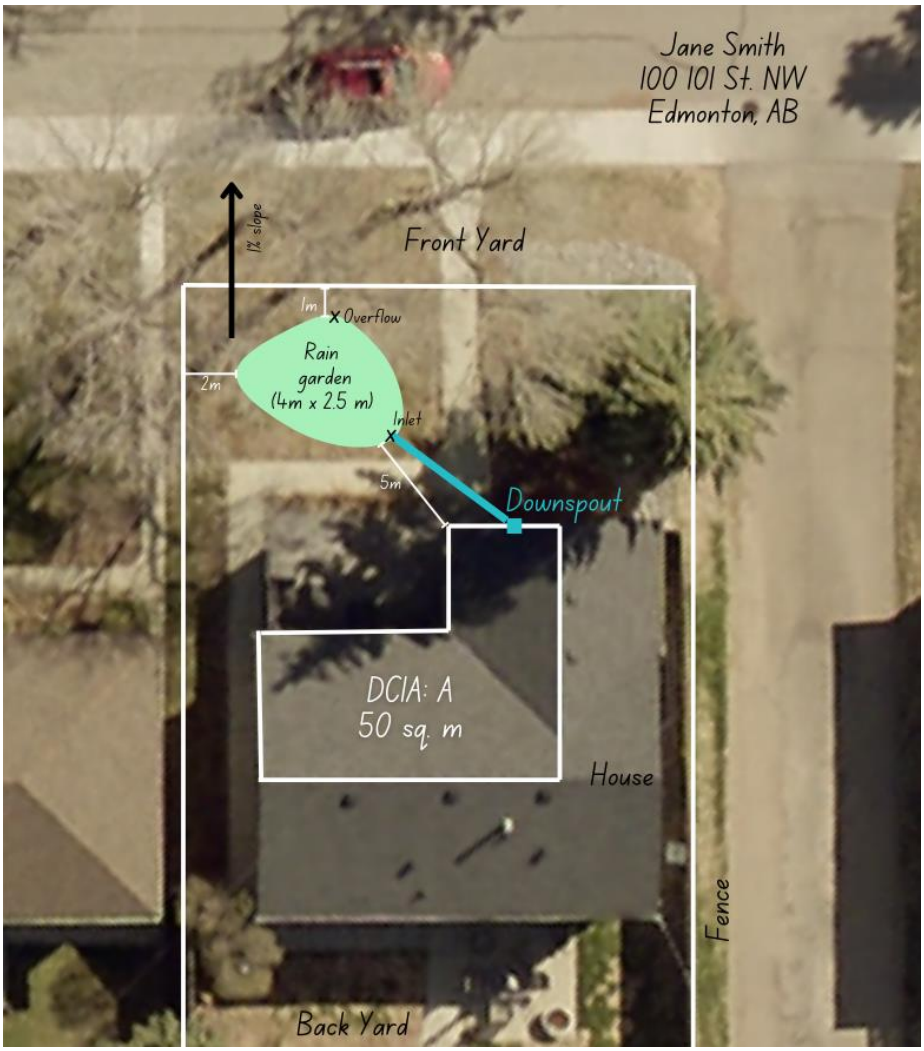


Figure 12: Sample computer generated project sketch

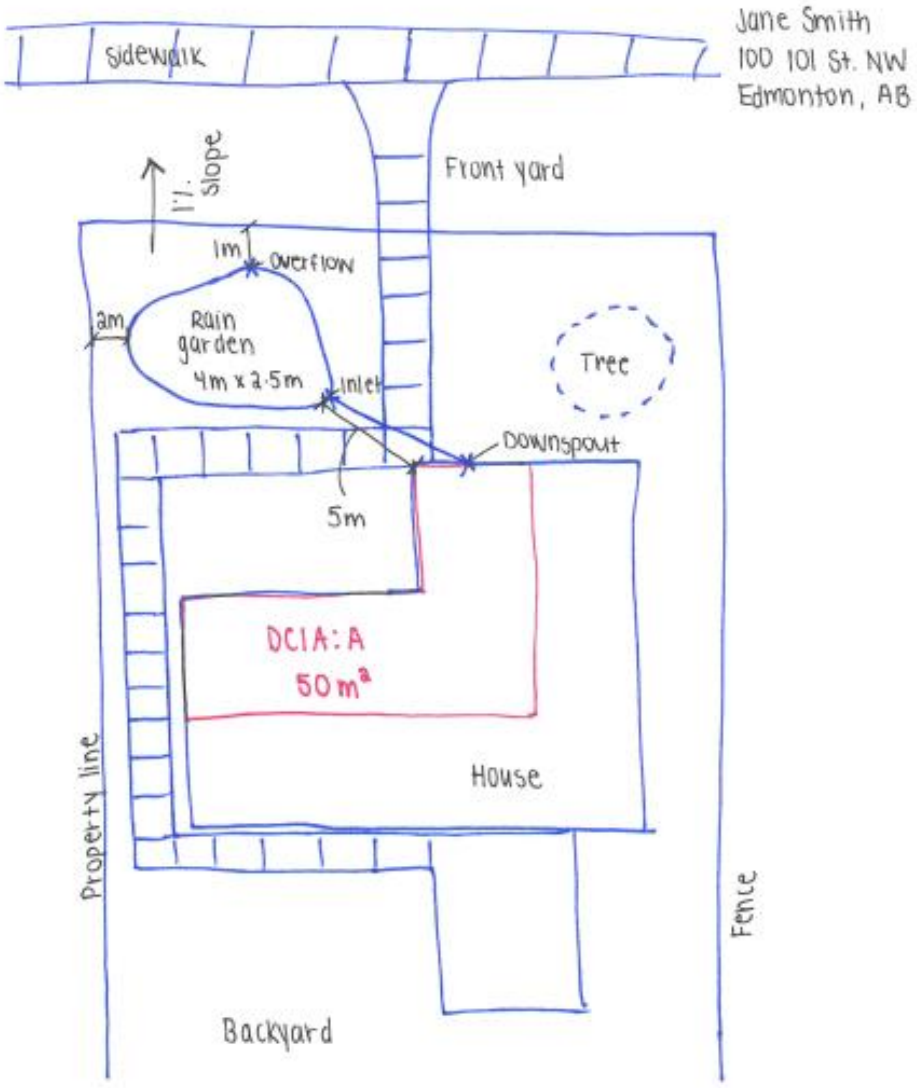


Figure 13: Sample hand drawn project sketch

Directly connected impervious area (DCIA) determination

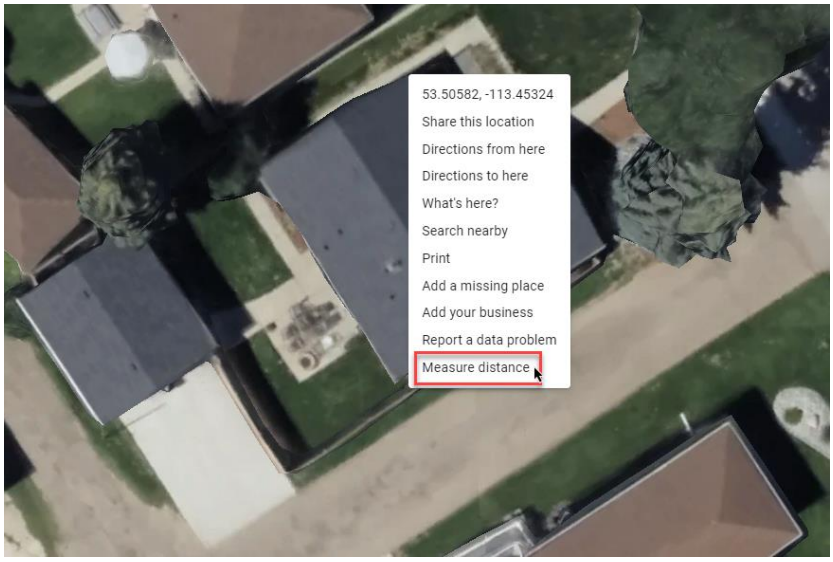
Regardless of your roof type, stormwater flows from the rooftop into your eavestroughs and then down through the downspouts. Different sections of your roof will drain to different downspouts and this should be considered when measuring DCIA.

Consider the example shown in Figure 14. The house shown in Figure 14 has three (3) downspouts, each represented by a blue dot. Each roof area (A, B and C) drains to one of these downspouts, based on how the roof is sloped. By directing a downspout into a RainWise project, the corresponding roof area would be the DCIA to note on your pre-construction approval application form.

Figure 14: Example of DCIA

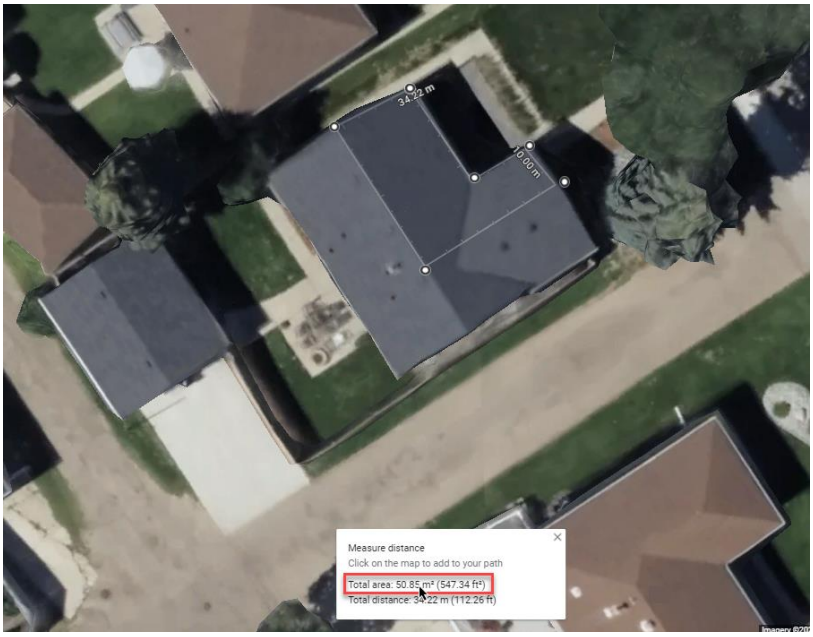
The simplest way to measure impervious area (whether it be your roof, driveway, or parking lot) is through Google Maps. Here is how you measure your DCIA using Google Maps:

1. Open Google Maps and search for your property in the upper left-hand side search bar.
2. Zoom in on your property until it fills the extents of your screen.
3. Right-click on the corner of the directly connected impervious area (DCIA) you wish to measure (e.g. corner of roof top or driveway) and select “Measure Distance”.



4. Click on the next corner of the DCIA you are measuring (a total distance of the line should show at the bottom of your screen).

5. Continue clicking around the DCIA you are measuring until you reach your starting point (the total distance of the line will update with each click).
6. Double click on your first point to close the shape. The total area of your shape will now show at the bottom of your screen. Use this area measurement as your DCIA value.



Rebate calculation

Here are a few examples of rebate calculations to help you estimate the potential rebate amount for your RainWise project.

Downspout disconnection:

A property located within the downspout disconnection eligibility area is planning to disconnect two (2) downspouts from their standpipes and redirect the stormwater flows to the surface. In this case, the property owner would receive a maximum amount of $200 (maximum of $100 per disconnected downspout).

Rain barrel:

A property is planning to install one (1) rain barrel. The rain barrel has a storage capacity of 55 gallons (208 litres). In this case, the property owner would receive a $52 rebate ($0.25 per litre of rain barrel storage).

Rain garden, box planter, soakaway pit, permeable pavement, absorbent landscaping or soil cells:

A property is planning to replace their concrete driveway with permeable pavers that have a rock reservoir layer. Their driveway area is 50 m^2. Runoff from the entire 50 m^2 garage roof area is being redirected through a downspout onto the installed permeable pavement. The total directly connected impervious area (DCIA) *for the project is 100 m^2 (50 m^2 roof area + 50 m^2 driveway area). In this example the driveway area is included in the DCIA determination because the area being replaced with permeable pavers was previously impermeable. In this case, the property owner would receive a $1,100 rebate ($11 per m^2 of DCIA).*

Combination of RainWise projects:

A property located within the downspout disconnection eligibility area is planning to disconnect one (1) downspout from its standpipe and redirect the flows from that downspout into a rain garden located in the front lawn. The total roof area is 270 m^2, but only half of this area (135 m^2) is directed to the downspout being disconnected. The planned rain garden area is 15 m^2. The total DCIA for the project is only 135 m^2 because in this example the rain garden area is excluded from the DCIA since the area being replaced with the rain garden was previously pervious (grass). In this case, the property owner would receive a maximum rebate of up to $1,585 (up to $100 for the one (1) disconnected downspout + $11 per m^2 of 135 m^2).

Soil selection

Choosing the right soil for your RainWise project is key for its success, especially when it rains. Hard clay soils, like those typically found beneath topsoil in Edmonton, aren't the best choice because they lack nutrients and don't allow water to soak in well. On the other hand, native loam is much more suitable, as it is great at absorbing and holding water, which helps plants thrive and promotes absorption of water into the ground.

Finding native loam can be challenging, but don't worry! Other soil mixes that include topsoil, sand, and compost can work just as well. Most local landscape suppliers offer suitable soil mixes that will meet your needs. Here are some tips for selecting soil for your RainWise project:

Soils you should avoid:	Soils you should use:
• Clay soils • Silty soils • Rocky/gravelly soils • Potting soil mixes	• Native loam • Soils mixes containing topsoil or loam, sand, and peat moss or compost • Screened loam topsoil

Refer to Alberta Clean Runoff Action Guide: Rain Gardens for more additional guidance on soil selection.

Resources

Glossary

- **Absorption** – process by which water soaks into soil
- **Combined sewer** – a type of sewer that transports sewage (from homes and buildings) and stormwater (from rain, and melting snow and hail) in the same pipes
- **Directly connected impervious area (DCIA)** – hard, non-absorbent surface area directed into a RainWise project (e.g. rain garden, box planter, etc.)
- **Impervious surface** – a surface that does not allow water to pass through it, such as concrete, asphalt, brick and stone
- **Low Impact Development (LID)** – a type of stormwater management facility that incorporates plants, engineered soils and natural processes to capture runoff close to its source.
- **Permeability** – the ability of a material to allow water to move through it
- **Runoff** – the portion of stormwater that flows over ground surface and is not absorbed into the ground
- **Stormwater** – water from rain, melting snow and hail

Bylaws, standards & guidelines

- Water and Drainage Guides, Checklists, and Forms: https://www.epcor.com/ca/en/ab/edmonton/operations/service-connections/guides-checklists-forms.html
- Drainage Bylaw: https://www.edmonton.ca/public-files/assets/document?path=Bylaws/C18093.pdf
- Zoning Bylaw – Landscaping: https://zoningbylaw.edmonton.ca/part-5-general-development-regulations/560-landscaping
- Residential Lot Grading: https://www.edmonton.ca/residential_neighbourhoods/residential-lot-grading
- Commercial and Multi-Family Lot Grading: https://www.edmonton.ca/business_economy/lot-grading-commercial
- Alberta Clean Runoff Action Guide: https://resilientlandscaping.ca/crag/

Get in touch

Please do not hesitate to reach out with any additional questions, comments, or concerns. You may direct any inquiries to rainwise@epcor.com.