

LID Techniques for Residential Property

Rain Barrels

Rain barrels can be set up at the base of the downspout leading from your roof in order to collect rainwater and decrease the amount of stormwater flowing across your property. Elevate your rain barrel on concrete blocks to help improve flow from the tap. Choose rain barrels that have a sturdy tap outlet, an overflow hose and an inlet screen to prevent mosquitoes breeding in the standing water. This screen will also keep debris out of the water. Water that is harvested from rain barrels can be used to water your garden and lawns, helping you conserve water and save money!

Rain barrel checklist:

- Remember to use your rainwater when you garden. It's good for your plants and for your house.
- Ensure that overflow from your rain barrel is directed to a safe area two metres away from your foundation.
- Choose rain barrels that have a sturdy tap outlet, an overflow hose and an inlet screen to prevent mosquitoes from breeding in standing water.
- Empty your rain barrel when it is full to prevent overflows near the foundation of your home.
- Also, be sure to empty and remove all rain barrels in the winter to prevent them from freezing and breaking. During the winter months it is best to store your rain barrel upside down and re-attach a downspout extension that directs rainwater and snow melt away from the foundation of your home.

Rain barrels are available for purchase from the Region of Peel or at local hardware stores and garden supply centres.

Soakaway Pits (Dry Wells)

Another technique to use your rainwater is to dig a soak-away pit. After you call for underground service locates ([call Ontario One Call](#)) you can dig your pit. A soak-away pit is a 61-91cm deep hole dug into your property **at least 3.5 metres away from any foundations or underground services**. The place where you install a soak-away pit must have a safe overflow route away from buildings should there be more rain than the pit can hold.

Soak-away Pit Construction

Once the hole is dug, the pit needs to be lined with landscaping fabric to prevent fine soil from filling up the pit after construction. The spaces between the stones will

provide room to store water until it can soak into the soils surrounding the pit. The hole then has to be filled with medium to large sized stones and the landscape fabric is wrapped over the stones to completely cover the top of the pit.

Finally, the top can be re-covered with about 15 cm of topsoil and sod or grass seed or even a garden. You can direct roof downspouts to this pit to absorb runoff from your roof. You can also locate soak-away pits on other areas of your property to absorb runoff.

How big should it be?

Calculate the area of your roof that will drain to your pit. Use this handy formula:

Runoff = Total Length of roof in metres X total width of roof in metres X (25 mm or 0.025m of rain)

Divide by the number of roof downspouts you have (typically a roof is divided in quarters ie. 4 downspouts for a typical roof) to get the total volume of runoff (V)

Soakaway pit checklist:

- Dig a 61-91 centimetre deep hole on your property **at least 3.5 metres away from any foundations or underground services.**
- Line the pit with landscaping fabric to prevent soil from filling up the hole
- Fill the pit with medium to large stones and wrap landscape fabric over the stones to completely cover the top of the pit. The space between the stones will offer room to store water until it can soak into the surrounding soil.
- Re-cover your pit with about 15 cm of topsoil and sod or grass seed or even a garden.
- Direct roof downspouts to this pit to absorb runoff. You can also locate soakaway pits on other areas of your property to absorb runoff.
- If the ground on your property has a lot of clay in the soil, a soakaway pit is not the best option for you. An abundance of clay in the ground can make it difficult for water collected in the pit to escape and could result in overflow onto your property.
- Maintain a pipe or small trench-like depression leading from the soakaway pit away from your property to account for potential overflow during events of heavy rain.
- For any project involving digging around your property, use the [Ontario One Call](#) system for utility locates before your dig.

Rain Gardens

Rain gardens are specially built gardens used to filter and hold excess rainwater as it absorbs back into the earth. These gardens should be built at least 10 feet away from your home's foundation with a pipe or trench directing the water to the garden.

A rain garden is best for flat areas or gentle slopes and should not be located under mature trees. Placing stones where the downspout enters the rain garden is a good idea to help slow the flow of stormwater entering your garden, eliminating potential erosion. Also, be sure to gently slope the garden away from the house and remember to incorporate a safe overflow path for more intense storms.

- Dig 4-12 inches deep in the designated rain garden area and re-fill the bed with a loose, pervious soil mix that allows water to filter through it, but also provides enough nutrients for flood tolerant plant life to grow.
- It is common for rain gardens to be topped with coarse wood chips to help cut down on weeds while also creating voids for stormwater to seep through.
- Start planting! Your rain garden will retain water for many hours after a rain event so choose plants that will tolerate extended periods of flooding. Be sure to visit the CVC's Rain Garden Plant List, located on our Low Impact Developments page.

Rain Garden notes:

- If your yard is small and the soil on your property contains a lot of clay then a rain garden may not be best for you. Clay soils are not easily penetrated by water and your rain garden could end up overflowing more often than not. Clay soil drainage can be somewhat improved by the addition of compost.
- When choosing plants, look for native species that are tolerant to both dry and wet conditions, but most importantly they need to be tolerant of occasional flood-like conditions.
- Choose a type of mulch like large, coarse wood chips or smooth medium sized stones that won't blow away in the wind or be washed away during periods of heavy rain.
- For any project involving digging around your property, use the [Ontario One Call](#) system for utility locates before your dig.