

What is a retention pond and why is maintenance important?

A retention pond, while it may appear to be just another water feature, serves a much more important role. Excess stormwater runoff puts growing towns at greater danger of flooding and erosion. Retention ponds, like dams, are permanent constructions meant to hold water flow for a limited duration. The pond's water level changes in reaction to a storm, lowering risk and protecting the town from flood damage and costly repairs.

Retention ponds are largely used to improve the quality of urban runoff, as well as to lower peak stormwater runoff rates by storing water temporarily during heavy storms. They must be kept in good working order and retention pond maintenance is the key to making sure they function properly.

Retention Pond Before Maintenance



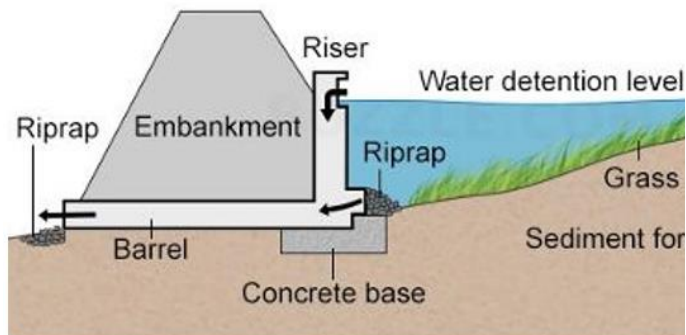
Retention Pond After Maintenance



Retention ponds will act as a pollutant treatment basin as well as a collection location for heavier flows, reducing peak runoff rates downstream. Retention ponds, if not properly maintained, can increase pollutant discharge downstream, increase the instability of downstream channels, raise the risk of downstream flooding.

What Is the Difference Between Retention and Detention?

Retention ponds are water-filled pools that change in reaction to rainfall and runoff. They gather water and release it slowly and steadily, preventing flooding and erosion.



Unless there is a lot of rain, detention ponds are normally dry. They're made to temporarily store water before slowly draining it to another site.

but they also aid in the slowing of runoff, the containment of silt, the collection of rubbish, and the removal of contaminants.

Furthermore, as a piece of property gets developed out, they provide an opportunity to add and/or keep a small bit of natural environment present, useful and enjoyable. Ponds are extremely successful at transferring stormwater runoff at the speed and direction. These ponds are designed to give the property a more natural feel.

Erosion Prevention

Because of how these systems work, the embankments of retention and detention ponds will gradually erode. They're made to catch water that flows into the basin from the surface.

Over time, water movement takes its toll on the land. Mowing in the same pattern also helps, which is important because we always make horizontal passes with mowers on slopes for safety. When erosion happens, soil and debris can flow into the basin, jeopardizing the embankment's structure and affecting water quality.

Reseeding balding embankments, which is best done in the spring or fall, may be necessary. You may need to add rock to locations where erosion is a serious issue. The goal is to retain soil in place, whether by vegetation or the installation of rock beds that restrict surface water movement.

Blocked Inlets & Outlets must be unblocked

Invasive vegetation thrives in the damp environment surrounding retention and detention ponds. Invasive grasses and weeds grow quicker than many native plants, and they can clog inlets and outlets that must be kept clear to enable proper water flow into basins. Plants have the ability to trap debris, which naturally collects around inflow/outflow locations.

It not only looks bad, but it also hinders your pond from functioning correctly. If it becomes clogged, water will not drain properly, backing up and causing a mess.

Regular maintenance, such as removing weeds and tall grasses that clog pipes, will ensure inlets and outlets function properly. Debris should be cleared away.

Regular Mowing

The grass and plants that surround a retention or detention pond assist to filter pollutants from storm water.

When it comes to mowing, if you mow your pond's banks in the same pattern every time, water will flow in the same location, which might lead to erosion.

As part of routine retention pond maintenance, our mowing workers mow in a different direction each time.



Control the Weeds

Phragmite is an invasive water-loving weed that can grow quickly, and it's crucial to keep in mind when maintaining retention and detention ponds. The difficulty is that these invasive species can push out other vegetation, particularly erosion-controlling grass.

When it comes to cattails and phragmites, timing is important. They'll grow back quickly and aggressively if you trim them down during their growing season, which is spring through summer. This vegetation control should ideally be done in the winter.

Invasive plants such as weeds, cattails, and other invasive species can obstruct water movement and crowd out good vegetation. Weeding is an important aspect of maintaining retention and detention ponds. Keep them at bay.



Keep Ponds and Basins Clean

On the retention pond stone, mucky pond sediment can accumulate. Then, in this muck, grass and plants take root, and the growth can frequently totally hide the stone.

What do expert inspectors check for?

- Trash, dirt, or excessive sediment clogging or obstructing outlets.
- Erosion on the slopes or at the top of the head wall.
- Excessive vegetation around and surrounding the pond.
- Pilot channels should be clear and open.
- Mechanical device functionality (pumps, flood gates, etc.).
- Pipes in the inlet and outlet are in good shape.
- Identify anything that is interfering with the pond's intended functioning.

What kind of maintenance is required to keep a detention pond in good working order?

- Grass mowing, pruning, and vegetation control
- Keeping trash and garbage out of the pond.
- Keeping mechanical elements in and around the pond in good working order.
- Slopes that have been stabilized.
- Outflow and inflow pipelines are used to remove excess sediment from the basin.

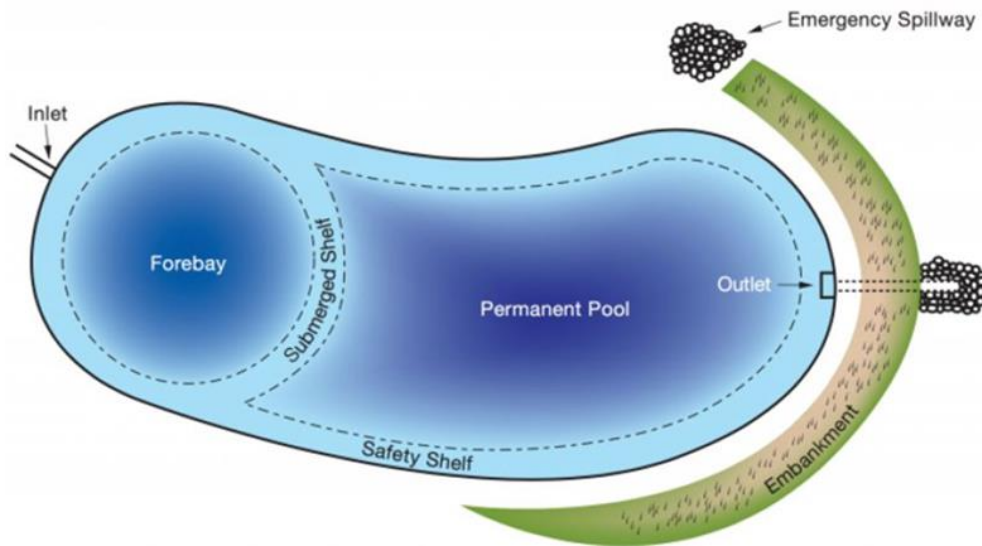
It is not difficult to maintain a detention pond; all that is required is that it be done on a regular basis and correctly. The advantage of maintenance is that it is a low-cost, often attractive stormwater management component that will serve you and the local community for many years.

Maintaining and being accountable

Proper pond care is essential for preventing a variety of issues that can develop from a badly kept stormwater pond. Due to a lack of care, wildlife habitat loss, flooding, and erosion may occur. In many situations, damage is irreversible, especially if nearby bodies of water are damaged.

Some maintenance tasks, such as silt removal or evaluating the soundness of the outlet pipe, stress the importance of pond maintenance on a regular basis.

Sediment accumulates in a pond over time and must be removed. This allows for the pond to have enough storage capacity for rainwater and to reduce the quantity of sediment resuspension. A pond's outlet construction is designed to suit specific discharge requirements. To allow the pond to release water at the required pace, erosion around the exit or a collapse of the pipe construction must be addressed immediately.



An inlet delivers runoff from streets and other areas, and the outlet structure allows the pond to fill and gradually drain. Accumulated sediment and associated pollutants are stored in the bottom of the pond for periodic removal and disposal.

Maintain the retention and detention basins on a regular basis.

Retention Pond Maintenance

A poorly maintained retention pond is doomed to fail. If the pond is not owned by the local government, it is the obligation of the association to keep it in functioning order, as well as any costs incurred.

This includes regular inspections to identify and repair areas of erosion, gullies, and other damage, especially after severe storms or heavy rain; removing sediment and debris from the pond before it reaches the outlets; and beautifying the surrounding banks with grass, shrubs, and other vegetation.

When the pond is out of sight and/or there is no plan in place to consistently maintain it, simple maintenance such as mowing, garbage and litter cleanup, modest landscaping, sediment removal, and slope stability are typically overlooked. Bringing a neglected pond up to code can be a significant, unexpected cost as well as a disaster for the environment.

Failures within the pond and property damage downstream might cost hundreds of thousands of dollars. Don't forget about the attention from local government agencies, as well as the possible fines that come with a failed pond.