





EQUIPMENT OVERVIEW

- [Pump Chambers](#) allow for servicing of the pump, protect the pump from being smashed, and prevent the pump from running dry. 
- [Eco-Blox](#) are used to fill in the Pond-Less Waterfall Reservoir. 
- Direct drive [Waterfall Pumps](#) are used in high head installations and [Magnetic Drive Pumps](#) are used in low head installations.
- [Waterfall Spillways](#) (Box) are used to make waterfalls look natural.
- [Under-liner](#) protects Pond Liner
- [EPDM Pond Liners](#) are used to line everything
- [Hose & Plumbing](#) are used to connect everything.
- [Stone](#) to build the feature. Almost any stone is acceptable. Avoid using brittle stones. 
- [Waterfall Foam Sealant](#) is used to seal waterfall stones together so water travels over the stones instead of underneath.

ACCESSORIES

- [Pond Lights](#), submersible and open air, add a unique dynamic to any feature. 
- [Auto-fill Valves](#) take away the need to replace lost water due to evaporation.



More helpful info:

- www.PondMarketPhotos.com
- www.YouTube.com/pondmarket
- [How to Build Waterfalls & Streams Brochure](#)
- [Pond Formulas Brochure](#)
- [Pond Pumps Brochure](#)
- www.PondMarket.com info pages

Toll Free :1-800-577-5605

Local: 314-894-2894

www.pondmarket.com

**500 South County Center Parkway
St. Louis MO 63129**



Pond-Less Waterfalls



Pond-Less Waterfall in construction at PondMarket

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THE BASIN

Pond-less waterfall basins, or pits, are much easier to excavate than a garden pond. The general shape of the pit does not matter. Round pits, square pits, elliptical pits, triangular pits, and rectangular pits all work great. Care must be taken to make the pit large enough to be a valid water source.

The basin must hold three times the amount of water that the waterfall, stream, and/or cascade can hold. For example: If the waterfall and stream will hold 100 gallons of water, then the basin must hold 300 gallons to ensure the pump(s) do not run without water.

Calculating Water Volume

- 1) Gallons in Waterfall/Stream/Cascade:
= Length (ft) • Width (ft) • Depth (ft) • 7.5

In most cases, the depth will be less than a 1 foot. Use '0.09' times the # of inches deep that the feature is for the depth measurement. See our formulas brochure for detailed information.

- 2) Gallons in the Basin
= Length (ft) • Width (ft) • Depth (ft) • 7.5

Basins that are filled with rock and stone will consist of 60% stone and 40% water if the proper stone is used. For example: a basing measuring 2' x 4' x 2' deep will hold 48 gallons of water when filled with stone. Using [Eco-Blox](#) increases the holding power of the basin. The same basin using [Eco-Blox](#) can hold up to 120 gallons of water.



THE FEATURE

Whether building a waterfall that empties into a basin, a waterfall into a stream, or a waterfall and stream with a few [cascades](#), the same materials will be used.

Excavating the water feature is not complicated.



If a hill is present, dig steps into the hillside to form up the waterfalls. In flat areas, use the dirt from the basin to form a hillside that can be used.

Streambeds are dug into the earth in a similar manner than a ditch. The difference is that the bottom of the "ditch" needs to be flat, and the sides gradually sloped. Incorporate a "step" where a fall or cascade is desired.

THE WATERFALL SPILLWAY

Kink Free or Flexible PVC Pond Hose is used to bring the water from the basin to the starting point of the water feature. It is very difficult to spread water out 12" or greater when the water is coming out of a 1" or 2" hose. [Waterfall spillways](#) solve this problem. They spread the water out to the desired width, giving the water feature a very natural appearance.



STONE WORK

Waterfalls/streams are constructed with flat stones and other unique stones. Flat stones are used for waterfalls and cascades. Stones like cobbles and pebbles are used to fill in other areas. Sealing the stones together using [Waterfall Foam](#) Sealant keeps water over rocks instead of underneath where you can see it.



PUTTING IT TOGETHER

Once the basin and the water feature are excavated, line both areas with protective [Under-liner](#) and then [Pond Liner](#).

[Under-liner](#) is a thick fabric, typically 4oz, and protects pond liner from punctures, root penetrations, foot traffic, etc. It's laid down first. Fabric pins can be used to secure the under-liner

[EPDM Pond Liner](#), 40-45 mil, is industry standard for ponds and pond-less water features. It's durable, UV resistant, Plant and animal safe, and guaranteed for 20 years.

For smaller installations, or installations where



the waterfall will be adjacent to the basin, use on piece of liner for the whole project to prevent seaming and leaks. Pond

liners will never fit basins and water features perfectly, so it's necessary to "tuck and fold" in areas that have excess liner. They will not be seen when finished.

At this time, it's best to install the [Waterfall Spillway](#), [Pump Chamber](#), and [Eco-Blox](#) in accordance with manufacturer directions. Once these key pieces are installed, install the [hose\(s\)](#) and [pump\(s\)](#) in accordance with manufacturer instructions.



Stone work can begin once all equipment is set followed by covering up the [Eco-Blox](#). Any decorative gravel will do, provided it's larger than the holes in the [Eco-Blox](#).