

Preparing Your Pond and/or Water Feature for Winter

If you have cold winters (as we do here in Virginia), you may want to remove pumps, filtration and UV clarifiers / sterilizers as some pond owners do.

Remove at first frost, thoroughly clean and store them indoors OR according to manufacturers' instructions. **According to manufacturer** is always **best**, because there are some pumps that should be kept in a pail of water (to keep from drying out seals, etc.).

Some of our customers keep their pumps running. Just be sure your pump is deep enough in the water so it does not freeze in the ice.

During the winter months the pond is active even when the water is frozen. Dead leaves, algae, insects, and fish waste slowly break down. Fish, frogs and other aquatic life are especially sensitive to poor water quality in winter.

Use a net to remove dead leaves and then remove excess sludge.

Vacuum out leaves and debris when you close your pond for the season.

Some water gardeners net out the fish, completely drain the water, scrub the pond and refill it with fresh water.

Cover your pond with netting to prevent leaves and debris from getting into your pond.

You can do a 15-25% water change, your pond is going to sit idle for many months.

Give your fish a good footing by changing out some of that dirty, recycled water.

Make sure to use a de-chlorinator to detoxify chlorine from the water.

Koi & Goldfish are very hardy; they can survive water temperatures as low as 0°C, which means they can survive in the pond over the winter as long as it doesn't freeze solid.

The most common reason for fish die off in the winter months is due to poisoning or pH. When the pond freezes over, if you have leaves and debris trapped under the ice, the decomposition of this debris causes noxious gases to form poisoning the water and killing your fish.

The metabolism of Koi and Goldfish is controlled primarily by water temperature.

As the water cools, pond fish require less protein in their diet.

When Koi and Goldfish are fed high protein food in cool water, the excess protein is excreted as ammonia from the gills.

The microscopic organisms that make up the biological filter also slows down in cooler water.

Improper seasonal feeding can lead to a build-up of toxic ammonia, which stresses fish and reduces their survivability in winter.

STOP FEEDING your fish when **water temperature** drops to around **43 degrees F**. In harsh winter climates pond owners **DO NOT FEED** their **FISH AT ALL DURING THE WINTER MONTHS**.

Pond fish will seek the deepest part of the pond and over-winter there because the warmest part of the pond is near the base.

If your pond is too shallow, the fish may freeze during a harsh winter.

Pond owners with shallow ponds can keep their koi and goldfish in aquariums set up in a cool basement or garage.

Pond life needs oxygen even during hibernation.

If ice covers the surface of the pond, it prevents oxygen from getting in and toxic gases from getting out.

DO NOT break the ice, shock waves can stun or kill fish.

De-Icer Kits are available to keep a small area free of ice. They DO NOT heat a pond, they maintain a hole in the pond ice. If you have a really large pond, you may need more than one heater.

You may also choose to install an aeration system, this will keep a hole in the ice and provide an area for noxious gases to be released.

Pond Winterization Overview

- 15-25% Water Change and add dechlorinator
- Skim/vacuum debris from bottom of pond
- Remove and clean skimmer filter pad, vacuum skimmer if present
- Remove and clean waterfall filter pads, vacuum filter if present
- Backwash and clean bead filter/pressurized filter if present
- Cut down any hardy pond plants and remove all floating plants if present
- Uninstall pumps, filters and UV for winter storage..
- Install Winter Pond Net
- Install Aeration System
- Cool Season Beneficial bacteria

Vase Fountains: If there's a chance the water could freeze in your area it is best to drain the vase and remove it from the basin. Be sure the vase is completely drained and

place in a garage or shed for the winter. Or you may leave the vase in place and cover it. Next, remove the pump and place it in a bucket of water somewhere where it will not freeze. The water remaining in the basin should stay there over the winter and be allowed to freeze.

Boulder and Basalt Fountains: These are even easier as you can leave the boulder in place on the basin for the entire winter regardless of whether it will freeze or not. Just remove the pump from the basin and place it in a bucket of water where it will not freeze.

Cascading/Pondless Waterfalls: Everything should be left in place to freeze except the pump. Simply disconnect the pump from the plumbing and place in a bucket of water where it won't freeze.

Many people run their cascading waterfalls year-round or as long as possible. Just watch for ice dams creating areas where the water exits the liner.

Trimming Your Plants (winter prep)

Wait too long and the leaves will fall off and rot in the water. Trim bog and marsh plants (such as papyrus, taro and cattails), before frost hits. Trim off ALL the leaves of your water lilies.

Put all the potted plants (that are hardy) into the deepest area of the pond to prevent freeze damage.

Winterizing Pond Plants

1. **HARDY WATER LILIES:** Hardy Water Lilies are easily wintered, just cut back the yellowing leaves and submerge the lilies to a depth where they will not freeze, usually 2 feet is sufficient. Lotus can be wintered in the same manner as water lilies. Lotus will survive the winter as long as the tubers do not freeze solid.
2. **HARDY MARGINAL PLANTS:** Hardy Marginal Plants can survive even if they freeze solid, as long as they stay in the pond. These plants include irises, sweet flag, rushes, reeds and horsetails. They can be submerged to deeper depths, but they will also do well if left near the surface.
3. Some marginal plants can survive the winter cold, but will die if their crown becomes frozen. These plants include: pickerel plant, hardy water canna, parrot feather, water

clover, water parsley and cardinal flower. To winter these plants submerge them below the ice line.

4. **TROPICAL PLANTS:** Tropical Plants will not survive the winter outdoors. But many of these plants will grow easily indoors if brought inside before the first frost, placed in a container of water and given plenty of light. Plants such as Umbrella palm, papyrus, cannas, taro, bog lily, etc. can be brought inside and make great house plants.