Seasonal Pond Care: How to Prepare Your Pond for Fall and Winter

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Getting your pond ready for winter really begins in the fall. Water temperature, rather than air temperature, is the important indicator of when it is best to make changes to your pond. To prepare your fish and pond for a healthy spring, the first tool you will need is a thermometer. Tie a string to one end of the thermometer, then tie the other end of the string to a rock on the side of the pond for easy retrieval.

Small ponds

While they are probably the most straightforward, winterizing smaller ponds can also benefit from pre-planning. Many smaller ponds are completely taken down, especially in areas with more severe winters.

Check your water quality: Before you begin to winterize, it is a good idea to do a water test, including oxygen level, to determine what current conditions exist, and to help you analyze the factors that contribute to them. This will allow you to reach the highest water quality possible before you stress the fish by moving them.

Set up winter housing: First, you must establish a home for the fish to live in while the pond is empty. Remember, this is for an extended period of time. The size of the temporary home is very important. Typically, for smaller ponds, a large aquarium will suffice as a temporary dwelling. For those of you who need a larger holding facility, you can use plastic stock tanks or build a temporary indoor pond using cinder blocks and a liner.

Getting the tank and filter set-up, running, and cycling several weeks before you move the fish in will help reduce the amount of stress placed upon them. Simply fill your holding tank with water from the pond. Use a submersible pump and a long line of flexible hose to move the water from the pond to your new holding tank. Using pond water is preferred, as it will make for an easier transition for your fish. If you are unable to use the water from your pond, use tap water of the same temperature making sure to use a conditioner to remove chlorine or chloramines.

Add some of your plants or rocks from the pond to the new storage facility to get some beneficial bacteria growing in order to break down fish waste and other pollutants. If you do not have rocks or plants to use, try to incorporate some of the bio-media from the pond filter into the aquarium filter.

Once filled, start your filters. Most pond filters will not fit in an aquarium and a separate filtration device will be needed. Some external filters may be modified to use on an aquarium, but may be far too cumbersome and aesthetically unpleasing in the home. However, if you do want to use your external pond filter on an aquarium, make sure to put it on a sturdy location above the water level so it has a place to drain back into the aquarium. You must be careful to note how much water may drain from your filter back to the aquarium during a power outage and make the necessary adjustment to the water level in the aquarium.

Transfer your fish: Once you have your winter retreat setup, it is time to catch your fish. Drain the pond to a level at which the fish can still swim but they are easy to spot. Next, try to "scoop out" the fish using buckets or square plastic waste baskets. Nets can be used, but they will remove some of the protective body slime that is essential for the health of your fish, so buckets are highly recommended. Your fish should be acclimated from your pond to the water conditions of their indoor holding facility.

Perform routine maintenance: Retest the water every several days and make any necessary adjustments. Watch the ammonia and nitrite levels, especially, since the bio-filtration may not be optimum at this point. After several weeks, regular water quality checks, water changes, and routine maintenance will be all that is required.

Care for the plants: Fall is a great time to divide and repot plants. In northern climates when temperatures drop below 60°F, tropical plants should be brought inside or disposed, while hardy plants can be cut down and the pots submerged to a deep area in the pond, when they start to brown.

Clean the empty pond: As for your empty pond, you have two choices: totally clean it out now and cover until spring, or wait until spring to clean it before refilling with water. Either choice will work fine. However, cleaning the pond in fall will minimize the time needed to prepare your pond next spring.

Large ponds

Test the water and O_2 levels: How well has your pond done over the summer? Is the bio-load too great? Are phosphate levels too high? Is the oxygen level adequate? Before you begin to winterize, it is a good idea to do a water test, including oxygen level, to determine what current conditions exist, and to help you analyze the factors that contribute to them. You will also be able to better generate your plan of attack against any conditions that are awry.

Install netting: When the first leaf falls, it's time to cover the entire pond with a mesh net. It will prevent the majority of leaves and twigs from getting into the water. The net is barely visible and is stretched and anchored on the sides of the pond. It is very important to make sure the netting is above the surface of the water. As leaves gather, just remove the anchors on one side and flip them off. Then re-anchor. If you have a skimmer it is not as dangerous to go "without a net" but the skimmer's

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debris net/basket should be checked and emptied out daily.

Clean the pond bottom: Even with a mesh net, some falling leaves from nearby trees and bushes, as well as leaves from your pond plants, can quickly build up on the bottom of your pond. Settling there, the decaying vegetation can increase levels of dissolved organic compounds and rob water of oxygen, stressing your fish, which are already struggling with fall temperature swings. During the fall it is important to remove as much material from the bottom of your pond as possible. First, prune your marginal pond plants, and remove floating plants before they decay. Your skimming, vacuuming, and/or dip netting efforts will take care of the rest.

If necessary, use a fall/winter additive to help accelerate the decomposition of leaves, scum, and sediment during the fall and winter months, reducing the build-up of both organic and inorganic particles. It also jump-starts your pond to a healthier environment in the spring.

Clean skimmers, filters and pumps: A dirty filtration system is inefficient. It works harder and accomplishes less. Eventually, it may clog and not work at all. Take this opportunity now to clean everything, replace media if needed, and make sure it is in top condition. In a few weeks, you will be looking to minimize the amount of time you spend dipping into frigid waters.

Once temperatures drop below 40°F, the main pump, filters, and UV sterilizers can be drained, cleaned, and moved into storage. Do not leave the pump running on the bottom of the pond. It can cause the temperature of the entire pond to become too low for the fish to survive and can force them to use up all their stored fat from trying to stay still.

Do a partial water change: All this moving about may stir things up, so it is a good time for a water change. A 50% water change can be done anytime in the fall, but will create less discomfort for you if it is done before the water temperature goes below 60°F. If a 50% water change still leaves the water murky the next day, try doing another water change. Remember to use a water conditioner if your tap water contains chlorine or chloramines.

Re-test: To avoid false readings, allow your pond to settle for a couple of days after you follow the steps above. Then, re-test the water and O_2 level to make sure everything is in good balance.

Aerate: Once you have cleaned your pond bottom, filtration system, and the water…keep it all healthy. An aerator will maintain a healthy oxygen level. It will also help keep the pond surface open when freezing temperatures arrive. If you intend to use your aerator throughout the winter months, you will need to set it up correctly so that it does not hyper-cool the water and cause harm to your inhabitants. To avoid forcing cold air into the water, the aerator must be positioned indoors, or draw warm air from an indoor source. If the aerator is in the bottom of the pond, it will be helpful to the fish if it is elevated at least one foot when water temperature gets into the low 40's (F). If you live in a northern climate, you will need to install a de-icer once the daily temperatures drop below freezing.

Switch fish foods and gradually reduce feeding: As temperatures drop below 70°F, you should slowly start to reduce the amount of protein fed, as well as begin mixing in a high-quality, low-protein food with a wheat germ base that is more easily digested. As the temperatures cool, it is harder for fish to digest food properly. Even though your fish need to bulk up for winter, be careful not to overfeed. You can feed 2-3 times a day what they'll eat in 5 minutes or less, then remove any excess food.

At 50°F, you should feed wheat-germ-based food exclusively, and since bacterial processes will gradually slow, the amount fed should be decreased. Below 50°F, the bacteria in a fish's digestive system are no longer able to process food and you should stop feeding altogether. This process is important in reducing the amount of organic waste in the water. Also, because uneaten food rots quickly, it too can become a major contaminant.

Anytime you are feeding when it is below 60°F, keep in mind the bacteria in your filter are also slowing their activity. They no longer reproduce as quickly, and they will die off or go dormant when extreme water temperatures are experienced. It is a good idea to test the water regularly to make sure ammonia and nitrite are not building up.

Move plants before the first freeze: Fall is a great time to divide and repot plants. The mild temperatures will give the plant time to heal its root system before cold temperatures arrive, and will most likely provide more blooms the following summer if properly fertilized. When the average daily temperature is below 60°F, move tropical plants inside. As temperatures go below 50°F, and before the first hard freeze, temporarily remove the netting, trim and position hardy lilies low in your pond. In northern regions, you should also trim and move bog plants to the deepest level. However, if your pond is shallow, bring them indoors with your tropicals, and repot in new baskets if needed.

With a little planning and work in the fall, your pond and all of its inhabitants will remain healthy all winter and be ready for the first signs of spring.

Add a de-icer if necessary: In cooler climates, leave the netting on until the pond surface starts to freeze over. Then, when you remove the net, you can set in the de-icer. A pond de-icer does not actually heat the pond but instead keeps its immediate area from freezing. This allows for toxic gasses to be released and oxygen to enter the pond. In warmer climates where ponds do not freeze over, the pumps and aerators need to continue

Water temperature guide for winterizing	
70°F	• Divide and repot plants • 50% water change

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running year round. If the water temperature gets into the low 40's (F) it will be helpful to the fish if these are lifted at least one foot from the bottom of the pond.

Fish that are kept over-winter in a deep, clean, and not too over-crowded pond should be OK, even if the pond surface freezes. If the surface should become completely frozen, remember to NOT break up the ice by pounding on it. Shock waves can seriously injure your fish. Set a pot of hot water on the ice to melt a hole in it. Do not dump the hot water on the ice, this will only allow more ice to form.

70°F	• 50% water change • Add wheat germ to diet
60°F	• Gradually change food to wheat germ • Move tropical plants inside • Place net over pond when leaves start to fall
50°F	• Stop feeding fish
45°F	• Trim remaining plants and place on bottom of pond
40°F	• Move or remove pump and filters • Add pond heater

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