

on weather conditions, pond filling can take several weeks or months. Cloudy water will often settle out if the weather is calm, but some contractors prefer to amend the water with substances that will cause faster clearing. Insects and other wildlife tend to enter the pond almost immediately and will start a procession of biological growth and activity in the pond. It is a good idea to wait a full season before adding fish, so the water chemistry can stabilize and ecological components can establish themselves.

### **Steps to Take Before and After Pond Construction**

Before groundbreaking:

1. Ask for assistance from an engineer, your county cooperative extension office, your county soil and water conservation district, and the Natural Resources Conservation Service.
2. Determine your planned uses of the pond and any special features you desire (e.g., beach, dock, or fishing bank).
3. Call the underground facilities locator service in your area to mark the locations of cables, pipelines, and other hidden underground utilities.
4. Work with soil technicians to analyze the performance of test pits.
5. Require the pond designer to develop adequate and durable spillways, both principal and auxiliary.
6. Obtain permits (dam permits and wetland disturbance permits): check with your town code enforcement officer, the state department of environmental conservation or protection, and your county soil and water conservation district about what is required.
7. Obtain a written estimate from a contractor.
8. Stake the location of the pond and related features.

After groundbreaking:

1. Monitor pond construction and ask questions.
2. Take dated photographs of the construction sequence and pond filling to have a record of

water sources and the pond basin profile.

3. Request an inspection of the construction and stability of spillways by an impartial technician or engineer.
4. Replace and grade topsoil; stabilize it with seed and hay mulch tracked in for good soil contact.
5. Maintain erosion and sediment control until vegetation grows and stabilizes the soil.
6. Retain pond construction plans and contact information in a safe place.
7. Measure the pond to determine the final area and volume.

### **Pond Maintenance**

One compelling reason to use professional guidance when constructing a pond is to make annual maintenance less of a chore. Ponds that are built correctly from the start will be less prone to leaks and more likely to function well. However, all ponds require regular maintenance. Ponds will eventually degrade if left untended or ignored. Even if a pond's main purpose is simply to enhance the appearance of rural property, it should be monitored for problems. Ponds constructed for fishing, swimming, irrigation, wildlife, or fire suppression require regular inspection for emerging trouble.

The following sections provide an overview of normal pond maintenance activities, plus guidelines for making decisions about larger challenges such as fixing leaks, dealing with cloudy water, or handling wildlife damage.

### **Water Discoloration and Cloudiness**

Many pond owners strive to have relatively clear water no matter how the pond is used. Suspended particles are always present in ponds, however, so it is reasonable to expect aquatic haziness rather than crystal-clear water. Depending on the location of the pond, the color of the water will be green, olive, or brown. If you are concerned about cloudy or murky water, it is important to determine the cause of the cloudiness before taking action.

Pond water cloudiness can come from shore erosion, pond dredging, silty runoff, turnover, or living organisms like algae or plankton. To determine whether the cloudiness is mineral silt or living organisms, fill a tall jar with your pond water and let it sit undisturbed