

# Building the Perfect Pond

By Jim Burroughs, northeast region fisheries supervisor

If your idea of a well designed fishing pond is one with a fishing dock built over last year's Christmas tree, you might want to think again. Although a fishing dock and brushpiles constructed from recycled Christmas trees are good ideas there are many other habitat enhancement techniques and design options that can be considered.

The most important aspect of building a pond designed for quality fishing is planning. There are many things that can be done to enhance pond design before pond construction begins. The first step is to get a basic concept, on paper, of what you want the pond to be. Things to include in this concept are the location of the pond, size, depths, overall shape, slopes, areas for artificial enhancement structures, docks, fishing berms, location of the dam and drawdown structures, and the overflow spillway. Planning ahead will help you to better foresee the final product, helping you not to overlook any important components.

Most importantly a quality fishing pond requires quality water. Never build a fishing pond near an area heavily used by cattle or other agricultural purposes. Locate your pond away from these areas as well as areas prone to high erosion. Excessive nutrients and sedimentation create additional problems that can be avoided with proper location. A fishing pond should be at least a half-surface acre and at least 10 feet deep in a quarter of its area to ensure adequate water during dry years. A good fishing pond is usually irregular in shape. Bass and sunfish are both shoreline oriented species. A pond with irregular shape offers increased amounts of shoreline and the opportunity to create varying types of shoreline habitat. Most banks should be steep about a 3:1 slope, (three feet of width for every one foot of height) to a depth of three or four feet. This will help to control unwanted vegetation providing increased shoreline fishing access. One portion of shoreline built with less slope will allow additional shallow water habitat to place gravel spawning structures and to allow for a limited amount of vegetation which forage fish and young predator fish will use for escaping larger predators such as bass, fish-eating birds, etc. Automobile tires filled with gravel and placed along shallower shorelines will serve as spawning habitat for bluegill sunfish and bass. The tires hold the gravel together and prevent the gravel from settling into the substrate.

Brushpiles are another good habitat enhancement technique. Both hardwoods and cedars can be used. Techniques vary but an easy method is to drag two to three



trees to one location in the pond bottom, tie them together with polypropylene rope or cable, and attach them to one or two cinder blocks depending on the size of the trees. One important thing to note is the trees have to be anchored or weighted. If not, they will eventually float up and into the shore. If adding trees to an existing pond, green trees are much easier to sink than dry ones by requiring less weight for anchoring.

Habitat for catfish is different than for most other species. Catfish are cavity spawners and most ponds don't have a lot of holes for catfish to swim back into to spawn. Enhancing habitat for catfish allows for creativity. A capped off piece of PVC pipe weighted with inner tubes filled with sand works well. Concrete sewer tiles, tin horns or large pieces of pipe also will work. It's a good idea to mark these areas so you'll know where to fish once the pond is filled. Don't place any fish attracting structures in water deeper than 6 feet because there may be no oxygen below that depth during the summer. Obviously, you don't want to place any of these type of structures in a pond that you intend to harvest by seining.

During the construction phase, another way to make your pond a great place to fish is by the placement of fishing jetties. Have the dozer operator build an earthen jetty with the extra dirt removed when steepening the banks. This will increase the amount of shoreline and will likely become one of the most popular fishing spots on the whole pond, especially if you locate a couple of brushpiles within casting distance. If the dirt removed from deepening the shoreline has to be used elsewhere such as along the dam then you might want to consider building a fishing or boat dock.

Docks are also very popular fishing areas, and offer the same opportunities as the jetty but without adding the additional shoreline. Again, keep in mind the

placement of brushpiles. Construct brushpiles nearby and if depths allow even under the fishing dock. Docks can be constructed near the area of the pond with vegetation. However, your gangway (walkway) should be long enough to extend out from the bank and past any problem vegetation growing near the shoreline. A properly located dock allows anglers to cast their baits back toward the shore without getting caught up in nuisance vegetation. The "edge" area where the vegetation stops and open water begins is an excellent place to throw a nightcrawler for bluegill or plastic worm for largemouth!

After construction, the pond basin should be seeded with a fast growing crop such as rye or wheat to control erosion during filling. Excluding cattle from the pond area is also a good idea to minimize erosion around the pond edges. If you want to use your pond as a water source for cattle, plan on installing a freeze proof water trough into the backside of the dam fed through a bottom drain.

Most ponds need an overflow spillway so design yours to be as wide and flat as possible to prevent fish from escaping during a heavy rain. You can also install a one-inch square mesh across your spillway to prevent loss of fish, however these screens have to be regularly cleaned or they will clog and restrict the water flow, backing water over the dam. In addition to the spillway, it is a good idea to install a gated drawdown structure so the pond level can be lowered for vegetation control and other fish and waterfowl management activities.

Advanced planning and design, and some creative thinking should help you to develop the type of pond you're seeking. There are many ideas not discussed here that could be applied to further develop your pond into a quality fishery. You should stick to the basics of minimum size, depth and slope but don't be afraid of using your imagination when designing your pond.

Consult the Oklahoma Department of Wildlife Conservation's (ODWC) handbook entitled, "Managing Pond Fisheries in Oklahoma," or call your local ODWC office for more information on pond design and fisheries management.