

# TIPS FOR POND MANAGEMENT

Pond management is more difficult than most people realize. Many enthusiastic beginners believe they can put up a dam, wait for it to fill, throw in some fish, wait a couple of years and then fish happily ever after. As the “veteran” pond owner knows, this is not the case. Proper pond management takes diligence, work, expertise and money. In this paper, I will briefly give some general pond management tips that may come in handy.

## POND CONSTRUCTION

1. Make sure the pond site lends itself to the proper maintenance of a pond. Do not dam up a gully that has a square mile of run-off running through it. We recommend that the watershed acreage be between 10-20 acres for every surface acre of pond. Example: A three acre pond would have a watershed of 30-60 acres.
2. Contact the local Natural Resource Conservation Service in your county. They are an invaluable source of information regarding pond construction.
3. Plant grass waterways and edge around the pond. SOIL EROSION WILL CAUSE A POND TO GO BAD QUICKER THAN ANY ONE FACTOR.
4. Put a core trench (key) in the dam.
5. If the pond is larger than 1.5 acres, it would be to your benefit to put a drain in it. Four inches (4") is large enough. This will allow you to draw water out of the pond and will come in handy in future management projects, i.e. rehabilitation.
6. Keep trees from growing on the dam.
7. A sediment retention basin or silt trap in the upper end of the pond would be beneficial in keeping soil from filling in your pond.

## POND STOCKING

1. One of the most important points in producing a viable sportfish population is to stock the pond correctly initially.
2. Do not go to another lake or river, catch some fish and stock them into your pond.
3. Also, if possible, do not allow anyone to put fish into your pond at anytime.
4. In central Illinois, pond should be stocked with 500-700 bluegill per surface acre, 0-300 redear sunfish per acre, 100 largemouth bass and 100 channel catfish per acre. These fish should be fingerlings. Do not stock adult fish (see 2 and 3).
5. Every other year, thereafter, stock 15-30 8-10" channel catfish per acre.
6. There is no need to stock any other fish, assuming you are properly managing your pond.

7. Do not stock carp, bullheads, crappie, hybrid sunfish, green sunfish, trout, walleye, extra bass, fathead minnows, etc. in your pond. You are trying to establish a balanced predator-prey population between bass and bluegill. Any other species introduced could negatively affect this balance.
8. The state, through my office, will stock any new or completely rehabilitated pond. We charge \$25.00 plus \$1.00 per surface acre. This is the best deal around. You will receive the proper number of bass, bluegill, redear (not hybrid) sunfish, and channel catfish for your pond. You do not have to allow public fishing in your pond if the state stocks it. You control fishing rights. The bluegill, redear and channel catfish come in October and the bass come the following July.

### **FISH POPULATION MANAGEMENT**

1. Put a 15" length limit on largemouth bass, especially for the first three years. Any caught smaller than that should be released.
2. This limit may be lifted after the initial phase, depending on the bass/sunfish population structure.
3. Bluegill/redear (sunfish) should be harvested at the rate of 50-70 lbs/acre/year after the second year, depending on the productivity of the lake.
4. Bass should be harvested at the rate of 20-30 lbs/acre/year after the third year. That same figure could be used for channel catfish as well.
5. If bluegill are stunted in your pond, they need to be drastically "thinned" out. Harvesting by hook and line generally will not reduce their numbers significantly. You will need to consult the fisheries biologist who can recommend possible solutions.

### **AQUATIC VEGETATION CONTROL**

1. Sterile grass carp are legal in Illinois and may provide a solution to your weed problem. As with anything, there are pros and cons to grass carp. I will briefly describe both.

#### **PROS**

- a. Grass carp are inexpensive. Generally between 4 and 10 per acre should be stocked depending on the species and abundance of the vegetation. They are \$8.00/fish and will live approximately 10 years.
- b. They can be effective, given the right circumstances, i.e. weed type and size and depth of pond.
- c. They are a more "natural" control. You will not be adding chemicals to the pond ecosystem.

#### **CONS**

- a. They get very big. Fish four feet long are not uncommon.

- b. If overstocked, they may destroy all aquatic vegetation in the pond. This may have negative effects on the bass/sunfish balance.
  - c. They have food preferences. Filamentous algae (pond scum) is to grass carp what brussel sprouts are to us. Do not plan to control filamentous algae with grass carp. It probably will not work. They will have to eat all the other vegetation before they will begin feeding on the scum. This could hurt your fishery (see "b" above).
  - d. Once they are in your pond, there is little control over them. Do not plan on taking them out if you see that they are causing a problem. There is almost no way of catching them. They are there to stay.
  - e. Depending on the productivity of your pond, you may see an increase in one kind of vegetation as you see a decrease in another. Example: The underwater vegetation may begin to decrease due to grass carp feeding, however, there may be an increase in filamentous or plankton algae.
  - f. Finally, you will see little, if any, control for the first couple of years. In the third year, you should be able to tell if it is working. If you do not see the desired results, add another 50% of your original stocking. About every 8-10 years, you will need to add about 50% of your original stocking as well. Example: You have a 2 acre pond that is approximately 50% covered with underwater vegetation. You should stock 6-7 grass carp/acre, or 12-14 fish. If, after two years, you see no results, add another 6-7 fish. About 8-10 years from the original stocking, you may add another 6-7 .
2. Other forms of vegetation control include chemical treatments.
- a. For underwater vegetation you will need to gather some, put it in a ziploc bag and mail it to the district fisheries biologist. Send an accompanying letter with your name, address, telephone number and map of the pond showing where the vegetation is. The biologist will contact you and tell you what the weed is, and how to treat it etc.
  - b. For filamentous algae control, use 2.5-5.0 lbs. Of copper sulfate (fine powder) per surface acre. Mix a small amount at a time in a plastic 5 gallon bucket. Slowly motor around your pond pouring the mixture into the propeller wash. This will give you a good dispersal. Or, 1 gallon of a liquid copper sulfate/acre such as Cutrine, Pond Master or Cleargate mixed with 30 gallons of water and sprayed on the algae. You will probably have to treat the pond 4-5 times per summer, depending on the pond's fertility. The only time you should not treat is during the spawn, usually the last two weeks of May and the first week of June. It is important to get ahead of the problem and stay ahead of it.

## REHABILITATION

1. In general, fish populations in ponds will eventually go bad. The predator/prey balance will shift and become out-of-balance. A complete rehabilitation will be required.

2. If you have carp, bullheads, or crappie, your fish population is in bad shape or is on the way to becoming bad.
3. Size is a buffer. A population in a small pond (<1.0 acre) will go bad more quickly than a large pond.
4. Expect a small pond to go bad in approximately 10 years. A larger pond may last 15-20 years.
5. Killing the pond out will be necessary. A chemical called rotenone is used. It is a controlled chemical and a permit to purchase is must be obtained from your fisheries biologist. If you believe you need to rehabilitate your pond, contact your biologist in May-July. A permit will be issued. The kill should be completed in late August or early September. Your fish will arrive from the state hatchery in October.
6. For stocking, see Pond Stocking in the first part of this article (#8).

You may help manage your pond by keeping track of the number, size, and species caught, chemicals added, any present weed problems, soil erosion problems, size of pond and depth. When you call me, I will ask those questions initially and we'll proceed from there. Most problems can be handled over the phone. I simply will not be able to come out to every pond that has a problem. I have over 3000 ponds in my district. There are 90,000 ponds in the state and only 19 district biologists. As you can see, we have to handle as many problems as possible over the phone. If a problem does arise that cannot be handled via phone, I will take your name and number and put you on a list. It may, however, be one to two years before I make it out. Also, I should point out, that in many cases, I will recommend a complete rehabilitation. This is the most radical fisheries management strategy, but in most cases it is the quickest, cheapest and most effective remedy. Be prepared to receive this suggestion.

As you can see, there is a great deal to know and do in managing a pond. I will help as much as possible, but you will have to do most of the work. If you have any questions, please call. Good Fishing!

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