



Pond Home Study Course

Lesson 4 Fisheries

Frequently Asked Questions

What kinds of fish are best for Pennsylvania ponds?

A combination of largemouth bass and bluegill has the greatest success in Pennsylvania ponds. Other fish species may work under certain conditions but often produce unsatisfactory results.

Can I stock trout in my pond?

Most Pennsylvania ponds cannot support trout during the entire year. Most ponds get too warm to support trout during the summer. Trout may be stocked during spring or fall and fished out of the pond. Year-round trout ponds require a deep pond or a pond with a cold source of water. Trout prefer water temperatures less than 70 degrees.

Should I regulate the number and kinds of fish that are harvested from my pond?

YES! Most ponds are poorly managed for fisheries. Often, too many large bass are removed from the pond. Encourage release of bass or only occasional harvesting of bass. Also encourage harvesting of bluegill.

Where can I find information about aquaculture?

Visit the Penn State Ag Alternatives publication on aquaculture at <http://pubs.cas.psu.edu/FreePubs/pdfs/ua297.pdf>.

What can be done to increase the amount of dissolved oxygen in a pond after the problem has occurred?

After a fish kill from depleted oxygen, the methods of increasing pond dissolved oxygen would be the same. Proper construction of the pond and maintaining depths of 6 to 8 feet over one fourth of the total area will help. Adding aeration devices to the pond and protecting the pond from pesticide and nutrient runoff with a proper riparian buffer are also beneficial ideas.

Dissolved Oxygen increases pretty quickly after the plant material decays. It would speed up the re-aeration to remove the plant material as soon as possible. They could also install aeration to improve conditions quickly or they could apply chemicals to aerate the water. The makers of GreenClean, for example, have several chemical products that can be applied to a pond to quickly provide oxygen. GreenClean itself, which is used to kill algae, will also add lots of oxygen to the water as it works because it is a peroxide product that breaks down into oxygen.

Here are just a couple of the oxygen products. If the pond is small and they envision a potential oxygen problem, they may want to have something like this on hand to increase oxygen.

http://www.biosafesystems.com/product_pond02.asp

IN NO WAY are we recommending these companies or any of these products!

In the future, the pond owner may want to try to reduce or control aquatic plant and algae growth early in the growing season before it reaches a nuisance level. Smaller amounts of plant growth will make a dissolved oxygen problem less likely later in the summer.

Is there a time during the year when it is better to do a proportional stock density count?

The more fish that are caught and the longer the fishing period, the more accurate your data will be. The PA Fish and Boat Commission will use an electro-shock method. They apply a small electrical current to the water and the fish are stunned and float to the service and can be weighed and measured.

It is true that just calculating the PSD during one season could cause inaccurate results. Long term is the best way, but they should at least make an effort to fish during all seasons to get the most accurate values.

Are catfish and other types of bottom feeding fish desirable and/or beneficial to the pond ecosystem?

Channel catfish are bottom feeders and do not compete with the bass, so they can supplement fish production in a pond with bass and bluegill. Channel catfish seldom reproduce in ponds, so they have to be re-stocked every few years. Channel catfish spawn in cavities so you would need to provide pipes or other open containers to promote spawning (if you want to avoid restocking.) Channel catfish will also stir up bottom sediments while they are feeding producing murky water quality conditions. Catfish are more likely to be detrimental to the pond by stirring up bottom sediments and overpopulating. They should ONLY be stocked if the pond owner really

desires to fish for, catch, and eat catfish. Channel catfish should be stocked instead of bullheads.

If Northern Pike are accidentally introduced into the pond through flooding or other fisherman, what amount of pike population can be tolerated before there is a detrimental effect on the bass and bluegill population? Can this problem be overcome?

Large predatory fish like Northern Pike are not generally suitable for ponds. They fail to grow very large, or fail to survive, in small ponds. No population of pike is acceptable in a pond. They require a very large forage base of fish that cannot be provided by a pond (< 5 acres in size). They will have a rapid effect on other fish species. They should be removed as quickly as possible. Two things might happen - the pike will consume most of the forage fish and then die or the pike will die quickly and never be seen again.

What is the guidance of eating fish that were in a pond during herbicide applications? What have studies shown about fish uptake of these chemicals?

The guidance for eating fish in a pond treated with herbicides goes back to the chemical used and the label restrictions. The wild card in this process is the applicator. The label recommendations are based on an application that is made based on the label recommendations. Was the product measured out correctly and were the pond area measurements calculated correctly and was the application made correctly. This is a big wild card. If all these requirements were followed correctly, then the fish are safe to eat if the label on the product used says it is safe to eat.

Fish uptake has been extensively studied for all of the aquatic herbicides and data is available on the label and MSDS. Where it has been found to be problem, the herbicide will include a fish consumption water use restriction. For example, aquathol and hydrothol 191 have 3-day fish consumption restrictions after use.

Is feeding pond fish with commercial fish food a good idea?

This is NOT a good idea. The food adds nutrients to your pond which will lead to algae blooms and problems. There should be enough plant life and small fish to adequately feed the pond fish. We do not recommend the commercial fish food.

I have several spring fed 500 gallon cement water troughs. I have a problem with moss buildup. Would carp help to control this?

This is most likely not moss, but a type of algae. You want to be careful as some blue green algae are toxic to livestock. We need to clean these troughs with a chlorine solution periodically, but even a small amount of chlorine in a

pond or stream can be devastating to the aquatic life. Can you by-pass the water past the troughs while you clean them? Rinse them thoroughly before you put them back on line.

Where can I get information to identify fish species?

The web sites from the PA Fish Commission with good pictures of fish are:

http://sites.state.pa.us/PA_Exec/Fish_Boat/pafish/fishhtmls/chapindx.htm

http://sites.state.pa.us/PA_Exec/Fish_Boat/education/catalog/popularsportfishes.pdf

Will pond species balance themselves in the absence of regular harvesting?

Probably not. The most unbalanced ponds are where there is no harvesting at all.

Is predation by herons and osprey a problem for small ponds?

Predation by herons is a possibility and more likely than osprey. Ospreys are on the endangered list at the state level. Due to this though, they are being reintroduced to many areas of Pennsylvania and harassment and lethal methods of control of osprey are not legal in PA. Lots of people with backyard ornamental ponds with very expensive fish have been devastated or wiped out by herons. Generally herons are not a problem on rural ponds that are larger than ½ acre.

The following species of heron are found in PA:

The yellow-crowned heron is a state threatened species. They nest in only 6 small colonies on the Susquehanna River and on Conestoga Creek in Lancaster and Dauphin Counties.

The great blue herons are widely distributed across the state.

The green heron is Pennsylvania's most abundant and widespread wader. It prefers forested margins of streams, ponds, and lakes.

The black-crowned night heron is most often found in nesting colonies in the lower Susquehanna Valley. Their population is on the decline.

What is a reasonable time to fish on a small pond to get an accurate PSD?

There is no good answer for this. The more data you collect, the more knowledge you will have about the true condition of your pond.

Why do the largemouth bass get in such a feeding frenzy that they actually ground themselves in the grass around the pond?

We have seen the activity around the edge of the pond from time to time. The heavy water frenzy you see is probably bass chasing minnows into shallow water and the frenzy is caused by the minnows trying to get away. The other possibility is by you feeding the bass at the shoreline. This activity by bass is not common, but has been seen before.

What is the best way to eliminate a pickerel crowded pond or lake?

Pickerel are a top predator, much like northern pike, walleye, or musky. They can have a major impact on all other fish in the pond or lake. Your best bet is to start harvesting pickerel. Depending on the situation, a fisheries assessment may be your first step.

How do I rid my pond of koi?

Getting rid of koi is a difficult proposition. Koi like deep, cool water so, they are hard to even locate. They are very long lived. One at the PSU pond is now 17 years old. You can try feeding them for awhile and lure them into an area where they can be netted out. Contact a koi dealer to come and take them out. Seining is an option as is electrofishing by a consultant. If the pond is small enough some water lilies planted in containers may prevent their spread.

How do unauthorized koi introduced into a pond affect pond balance?

Koi introduction into the pond will not have a lot of effect on the pond balance. Just a couple will hang out at the bottom and eat plants and not be a problem. They also will not interfere with the bass and bluegill populations. More than a few will tend to produce a lot of waste products leading to a possible algae bloom problem. Because they hang out at the bottom of the pond, they generally are very hard to catch.

Are grass carp a good solution for plant overpopulation?

Grass carp can be a great solution for plant overpopulation depending on the type of plant. They do not like all aquatic plants. You need a permit for grass carp and you will not need many. Grass carp can destroy all fish habitat if you put too many in. Carp will not eat algae unless there is nothing else to eat.

Will the PSD method work for perch and bluegill since they are the two species we have in our pond?

The PSD method is applicable to ponds dominated by a largemouth bass and bluegill combination. The method is less accurate for other combination bass and/or sunfish.

How do I determine if there are fish in the pond?

Electrofishing is where a small current is put into the water to momentarily stun the fish and they will rise to the surface. Electrofishing is heavily regulated by the PA Fish and Boat Commission. You can contract with a pond/lake consultant to electrofish the pond. You could try using a large seine net, if the pond is not too large and deep. You can fish the pond for a few hours during the summer. The other idea is to try spreading a small amount of fish food on the surface and wait and watch. We do not recommend feeding fish because it adds to the nutrient levels of the pond, but a onetime application might help you answer your question.

I thought the PA Fish Commission limit for keeping a bass was 12 inches. In some of these management techniques it references harvesting smaller bass. Is this in conflict with fish commission rules?

Farm fish ponds are exempt from state fish regulations. Farm fish ponds are “artificial ponds on a farm holding water – the source of which is wholly within the limits of the farm”. On farm fish ponds, the owner and anyone living there can fish without a license and without regard to normal fishing regulations. Other pond types should contact their local PFBC Waterways Patrolman and explain why they want to deviate from the state creel limits. It has been our experience that waterways patrolmen have been fine with it as long as it is coming from PSU recommendations.

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Source: Penn State Cooperative Extension Pond Management Website and PA Fish and Boat Commission Pond Website

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