

Pond Management: Fish Stocking

Stocking Considerations

Most Virginia ponds only support warmwater fish species like largemouth bass, bluegill, redear sunfish and channel catfish year round. Trout require cold water temperatures (less than 70° F) and high oxygen levels. Many warmwater pond owners across the Commonwealth are enjoying seasonal trout fishing by stocking catchables in October and harvesting them out before the onset of hot weather. Unless trout can find a cool refuge in a pond during the summertime, they are likely to die.

Except for supplemental stocking of channel catfish, a pond that already contains fish generally does not need to be stocked. Only stock additional largemouth bass or sunfish after evaluating the size and numbers of fish you are catching from the pond and some seining in the pond (see [Managing Fish Populations](#)). The following information is for new ponds without an existing fish population.

Moving fish from your neighbor's pond or a local lake to your pond is not recommended. Many sunfish species are similar in appearance. You could mistakenly stock sunfish that are not desirable in small ponds. Also, there is a good possibility of transmitting fish diseases from pond to pond. To reduce the risk of stocking undesirable fish species or diseased fish, purchase your fish from a reputable hatchery. See this list of [commercial hatcheries](#) (PDF).

Fish to Stock

Largemouth Bass

This fish is best recognized by its large mouth and dark stripe or blotches along its sides. Young bass feed on zooplankton (microscopic animals) and insects until they are 2 to 3 inches long, when they switch to a fish diet. Adult bass usually eat fish, but they will also eat insects, frogs, and crayfish. In Virginia, bass should be 12 inches long in 2 to 3 years. Bass spawn once each spring when water temperatures reach 60-65° F.

Bluegill

fed. They thrive when water temperatures remain below 70°F. Rainbows are generally the preferred trout to use in a pond because of their ability to handle warmer water temperatures than brook trout, their willingness to take lures or bait, their spectacular fighting ability, and their availability from local rearing facilities. Golden rainbow trout can be purchased for pond purposes. However, they are extremely attractive to birds of prey and poachers.

Generally, trout do not spawn in ponds and must be restocked periodically.

Stocking Options for New Ponds

The typical stocking plan for establishing a largemouth bass, sunfish, and channel catfish pond uses fingerling fish for economy ([Table 1](#)). The sunfish should be stocked in late summer or early fall (following pond construction and filling) so they can grow large enough to spawn the following spring, providing young bluegill for the bass to eat when they are stocked. You may begin harvesting sunfish 1 year after stocking, but largemouth bass harvest must be restricted for 2 years after stocking. If channel catfish catches decline 4 to 5 years after the first stocking, stock 50 (6 to 8 inches in length) catfish per acre every other year.

Another option is to stock adult fish, but this costs more than stocking fingerlings ([Table 2](#)). This option allows sunfish and largemouth bass harvest from the pond during the first fall. Fathead minnows can be added to provide food for the bass before the sunfish spawn. Under this option, channel catfish (6 to 8 inches in length) can be added to ponds stocked during the fall of every other year at 50 per acre.

Because largemouth bass are easily overharvested in ponds less than one acre in size, a good option for small ponds is to stock only channel catfish ([Table 3](#)).

Suggested trout stocking rates are 100 adult (greater than 8 inches) per acre or 200 sub-adult (less than 8 inches) trout per acre ([Table 4](#)). Smaller fish are cheaper, easier to transport, and can be fed with commercial trout food until they reach catchable size. If sub-adult trout are stocked into a pond with a healthy population of adult predators (largemouth bass, channel catfish, large trout), these predators may eat the young trout. A trout pond should be stocked every two to three years depending on harvest rates.

Fish to Avoid

Crappie, bullheads, yellow perch, pumpkinseed, and green sunfish should not be stocked because they tend to become overpopulated and stunted. Carp, including Israeli carp, and suckers are not recommended because they stir up the bottom, keeping the pond water muddy. Flathead and blue catfish are not recommended because they can consume the sunfish population in a small pond, resulting in unbalanced fish populations. Threadfin shad and gizzard shad are not recommended because they will become overpopulated.

Fish Suppliers and Stocking Techniques

Many commercial hatcheries produce fish for sale to pond owners. It is best to consult several suppliers to see who has the best prices and delivery schedules (see enclosed insert). In most cases, the chemistry of the water your fish are shipped in is different from the water in your pond. When your fish arrive, adjust them to your pond water before releasing them or they may die! This is done by gradually mixing pond water into the shipping container over the course of at least 30 minutes. Then, lower the container into the water and let the fish freely swim out when they are ready. Do not pour the fish out!

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Table 1: Largemouth Bass, Sunfish, and Channel Catfish Fingerlings

Species	Number per Acre	Minimum Size (inches)	Time of Year to Stock
Bluegill ¹	350	1	August or September
Redear ²	150	1	August or September
Channel Catfish	50	2	August or September
Largemouth Bass	50	2	The following June (after the sunfish are stocked)
Largemouth Bass	50	2	1 year after bass are first stocked

1. Bluegill can be stocked alone at 500 per acre if redear are not wanted for diversity.
2. Be sure you are being sold redear, not pumpkinseed (sometimes called redgill sunfish)

Table 2: Largemouth Bass and Sunfish Adults

Bluegill ³	70	3	April
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Additional Information

Department of Game and Inland Fisheries Offices

Headquarters

4010 West Broad Street
P. O. Box 11104
Richmond, VA 23230-1104
(804) 367-1000 / VTDD

Regional Offices

Region 1

3801 John Tyler Memorial Hwy
Charles City, VA 23030
(804) 829-6580

Region 2

1132 Thomas Jefferson Road
Forest, VA 24551-9223
(434) 525-7522

Region 3

1796 Highway Sixteen
Marion, VA 24354
(276) 783-4860

Region 4 - East

1320 Belman Road
Fredericksburg, VA 22401
(540) 899-4169

Region 4 - West

517 Lee Highway
P. O. Box 996
Verona, VA 24482
(540) 248-9360

District / Field Offices

Blacksburg

Draper Aden Building
2206 S. Main St., Suite C
Blacksburg, VA 24060
(540) 961-8304

Chesapeake

3909 Airline Boulevard
Chesapeake, VA 23321
(757) 464-6811

Farmville

107 Foxwood Drive
Farmville, VA 23901
(434) 392-4369

US Army Corps of Engineers

Norfolk District Office

803 Front Street
Norfolk, VA 23510-1096
(757) 201-7657

Northern VA Field Office

(757) 201-7418

Southern VA Field Office

(757) 201-7727

Eastern VA Field Office

(757) 201-7684

Western VA Field Office

(757) 201-7182

Dept of Conservation and Rec

Governor Street
Richmond, VA 23219-2010
(804) 786-1712

COMMERCIAL FISH HATCHERIES*

Arkansas Pond Stockers
 P. O. Box 357
 Harrisburg, AR 72432
 (800) 843-4748
 Bass, bluegill, catfish, sunfish, and crappie

Ashton Mills Farm
 229 Shadow Brook Lane
 Winchester, VA 22603
 (540) 888-3259
 Yellow perch, bluegill, bass, and catfish

Brackens Trout Hatchery
 238 Berea Road
 Wytheville, VA 24382
 (276) 228-7836
 Rainbow trout

Castal Line Trout Farm
 Bryan Plemmons
 97 Golden Brook Lane
 Goshen, VA 24439
 (540) 997-5461
 Rainbow, brook, brown, and golden trout

Carolina Fish Hatchery
 2424 Thompson Ave.
 Turkey, N. C. 28393
 (910) 533-2152
 Bluegill, shell-cracker, black crappie, bass catfish, koi and minnows

Fish Wagon
 6940 Dawson Lane
 Harrisburg, AR 72432
 (870) 578-9501
 (800) 643-8439
 Catfish, bass, bluegill, crappie, grass carp, and hybrid striped bass

Indian Lake
 108 Indian Lake Drive
 Elkview, WV 25071
 (304) 965-5661
 Rainbow trout and catfish

Ingleside Trout Farms
 2479 Blue Grass Trail
 Lexington, VA 24450
 (540) 463-9760
 Rainbow trout

Mid-Atlantic Stocking, LLC
 P. O. Box 183
 Owego, NY 13827
 (607) 592-1376
 Black crappie, bluegill, channel catfish, fathead minnows, koi, largemouth bass, rainbow trout, triploid grass carp, walleye, yellow perch

Greer Trout Hatchery
 16335 Mill Creek Road
 Chilhowie, VA 24319
 (276) 646-3644

Fry Fish Ponds
 Mark Fry
 820 Pine Hill Road
 Gulph Mills, PA 19406
 (888) 740-2700
 Bass, bluegill, sunfish, catfish, yellow perch, straight & hybrid striped bass, blk crappie, brown, rainbow & brook trout

Flamingo Springs Trout Farm
 515 Chestnut Ridge Road
 Marion, VA 24354
 (276) 646-3014
 Rainbow trout

Mountain State Trout Hatchery
Wendy Putz
HC 60 Box 47
Franklin, WV 26807
(304) 358-2293
Rainbow, brook and golden trout

Novak Trout Farms
39975 Double Tree Drive
Chilhowie, VA 24319
(276) 646-2900

Orndorff's Rainbow Trout
5140 Zepp Rd.
Mauretown, VA 22644
(540) 436-3384
Rainbow, brook and golden trout

Perry Minnow Farm
13510 Windsor Boulevard
Windsor, VA 23487
(757) 539-1709
Bass, bluegill, catfish, sunfish, Israeli carp
and grass carp

Ted's Trout Farm
Lee Highway
Glade Springs, VA 24340
(276) 621-4238
Rainbow Trout

Virginia Trout Company
David Johnston
P.O. Box 128
5480 Potomac River Road
Monterey, VA 24465
(540) 468-2280
Rainbow trout

Zetts Fish Hatchery
878 Hatchery Road
Inwood, WV 24528
(304) 229-3654
Bass, sunfish, crappie, yellow perch,
walleye, catfish, minnows, and koi

*The compilation of this list by the Department of
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endorsement of the services of these companies.

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Table 2: Largemouth Bass and Sunfish Adults

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Redear	30	3	April
Largemouth Bass	20	12	April
Fathead Minnows	500	1	April

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Table 3: Channel Catfish Fingerlings

Species	Number per Acre	Minimum Size (inches)	Time of Year to Stock
Channel Catfish	100	2	Summer

Table 4: Trout

Species	Number per Acre	Minimum Size (inches)	Time of Year to Stock
Rainbow Trout	100	greater than 8	when water temperature is below 70°F
Rainbow Trout	200	less than 8	when water temperature is below 70°F

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Table 5. Evaluation of Pond Balance Using Angler Catch Data

Type of Fish Caught	Population Condition	Recommendations
Bass and bluegills of all size	Balanced fish populations	No additional management necessary
Bluegills small (3 to 5 inches); few bass caught, bass average 2 pounds and larger	Unbalanced populations with bluegill overcrowded	Allow no bass harvest; stock 20-30 adult bass (greater than 12 inches) per acre

Numerous bass less than 1 pound average; few bluegill, bluegill average 1/3 pounds or more	Unbalanced populations with bass overcrowded	Increase harvest of bass less than 12 inches; stock 200 bluegill 3 to 5 inch per acre
Few adult bluegill; numerous crappie, bullhead, green sunfish, carp, suckers, etc.	Unbalanced populations; unwanted species competing with bluegill	Rotenone and start over

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Table 6. Evaluation of Pond Balance Using Seine Data

Type of Fish Caught	Population Condition	Recommendations
Small and medium-sized bluegill and young-of-year (YOY) bass	Balanced fish populations	No additional management necessary
Numerous 3 to 5 inch bluegill and few or no YOY bass	Unbalanced populations with bluegill overcrowded	Allow no bass harvest; stock 20-30 adult bass (greater than 12 inches) per acre
Few 3 to 5 inch bluegill; many recently hatched bluegill; YOY bass present	Balanced, but bass crowded	Increase harvest of bass less than 12 inches; stock 200 bluegill three to five inches per acre
No recent bluegill hatch; few medium-sized bluegill; numerous crappie, bullhead, green sunfish, carp, suckers, etc.	Unbalanced populations; unwanted species competing with bluegill	Rotenone and start over

Pond Management: Managing Fish Populations

The purpose of fish management is to provide good fishing. Pond owners must decide what they want from their pond and tailor their management to meet their goal(s). Ponds less than 1 acre in size are difficult to manage for bass and sunfish. For ponds larger than 1 acre, a largemouth bass/bluegill fishery is the most popular option for Virginia ponds. Other options for ponds larger than 1 acre may include managing for trophy bass, trophy bluegill or trout. Consult your local fisheries biologist to discuss them.

Harvesting

All ponds have a maximum weight of fish the pond can support. In unfertilized ponds, you should be able to harvest up to 40 pounds of adult bluegill (about 120 fish) and 10 pounds of adult bass (about 8 to 10 fish) per acre per year. In fertilized ponds, you can harvest 160 pounds of bluegill (600 to 700 fish) and 35 to 40 pounds of bass (30 to 35 fish) per acre per year.

In new or reclaimed ponds, do not allow bass harvest for at least 2 years after stocking to let the bass mature and reproduce. Bass are easy to catch, and in small ponds it is possible to harvest 70-80% of the bass in 1 weekend of fishing. Harvest 5 to 10 pounds of bass per acre per year. Restricting bass harvest will help keep the fish population balanced (the proper ratio of predator and prey fish). In a balanced pond, 40-60% of the bass should be 12 inches or longer, while 20-40% of the bluegill should be 6 inches or longer. A good rule of thumb for maintaining balanced bass/bluegill populations is to remove at least 4 to 5 pounds of bluegill for each pound of bass removed. Keep all bluegill caught. Most over-population problems are caused by small bluegill, and returning them only adds to the problem.

Removing too many bass usually causes bluegills to become overpopulated and stunted. Overpopulated ponds are full of 3 to 5 inch bluegills that are thin and slow growing. Management options to correct this problem include:

1. winter water level drawdowns to increase bass predation on bluegills;
2. stocking additional predators;
3. draining the pond and re-stocking;
4. applying rotenone (fish toxicant) to kill a portion of the population;
5. seining to remove excess stunted bluegills.

Catfish and trout can be harvested without limits in ponds because their populations are maintained by stocking, not reproduction.

Record Keeping

Keep accurate records of numbers and sizes of fish caught; see this [example form](#) for keeping catch records. These records will help you evaluate the status of your fish populations (see [Table 5](#)). Fish population balance can also be checked using a 15 foot long minnow seine 4 to 6 feet deep with ¼-inch mesh. Seine 3 to 4 shallow areas of the pond in June or July. The areas seined must be clear of brush and weeds. [Table 6](#) will help you evaluate fish population balance using seine data.

TRIP REPORT, WINCHESTER CHAPTER OF THE IWLA

- 1. On March 2, 2016 the following members of the Fredericksburg-Rappahannock Chapter of the IWLA visited the Winchester Chapter, IWLA: Joe Webb, Jimmy Miles, Herbert Pritchett, and Jamie Branham.**
- 2. We arrived at 10:00 and were met by the Winchester President, Jim Sherry. We visited the Chapterhouse and had a period of informal conversation, comparing problem areas and potential solutions to our common and unique concerns. The meeting was arranged by the Winchester Chapter Secretary, Patty Nunn.**
- 3. Patty recognized our involvement and interests in pond management, and asked us to look at the Winchester pond.**
- 4. It was a cold, windy morning, and dampened our ability to do any type of comprehensive analysis. We did not bring a boat or any testing gear.**
- 5. OBSERVATIONS**
 - a. The pond was long and somewhat narrow, and appeared to be approximately four surface acres. The water at the inlet end of the pond was clear, appeared to be relatively shallow, and somewhat separated from the major part of the pond by a rock barrier. Water was flowing over the rocks today.**
 - b. There was a small concrete ramp that appeared capable of being used to launch small watercraft (canoe, kayak, jonboat). These are the only boats allowed in the pond.**
 - c. A concern for safety was evidenced by the strategic placement of throwable floatation rings (with ropes) in at least five locations. All appeared to be serviceable and easily visible. In addition there were several benches (on concrete slabs), and signs showing the daily catch limits for trout. Several speed limit signs reflected a 10 mph maximum.**
 - d. The dam was impressive. It appeared to be very well designed and safely sloped on both sides. A large overflow pipe was draining the pond today. The emergency spillway was large, with a concrete-asphalt base, and drained into the creek, away from the dam drainpipe, but into what appeared to be the same creek. No soft spots or leaks in the dam were evident. One of the more common failures of this type of dam is erosion parallel to the drainpipe through the dam. This is difficult to diagnosis, but is sometimes most visible on the exit (downstream) side of the pipe. Nothing of concern was observed today.**
 - e. The far side of the pond (away from the gravel road) was steeply sloped, with mature trees, but very sparse undergrowth. Remnants of barrier tape was visible,**