



Yellow Perch Management and Fishing in Pennsylvania

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2006 (stocking numbers updated after 2006)

Goal: Maintain or create robust sport fisheries through preservation and enhancement of essential habitats, judicious stocking, and through harvest management. Manage border-water yellow perch populations through cooperative interjurisdictional harvest management.

Yellow perch occur throughout Pennsylvania and are indigenous to the Ohio River, Susquehanna River, Delaware River, Potomac River and Lake Erie Drainages. The Ohio drainage includes the Ohio River, Allegheny River, and Monongahela River drainages. Yellow perch typically occupy reservoirs and lakes and slow moving rivers and streams within these drainages. Many man-made reservoirs in Pennsylvania contain self-sustaining yellow perch populations. These populations often originated from Pennsylvania Fish and Boat Commission stocking programs. In Pennsylvania yellow perch generally occur at lower densities in rivers and streams compared to lakes and reservoirs.

Yellow perch populations are managed for sport fishing through harvest management, habitat management, and through stocking. Stocking typically occurs in conjunction with establishing a self-sustaining yellow perch population in newly filled or newly acquired reservoirs that contain appropriate habitat and forage elements, but do not contain yellow perch or contain low density yellow perch populations. Stocking is typically carried out from one to several years to establish self-sustaining populations in these waters. Anglers should not move yellow perch they catch from one water to another since appropriate habitat and forage elements must be present to yield quality size yellow perch. Yellow perch populations in Pennsylvania waterways are not sustained through annual maintenance stocking. Although no annual maintenance stocking of yellow perch takes place they are so prolific and abundant that they yield some of the highest angler catch rates of any species in the state. Since 1974, to establish and bolster self-sustaining populations the Pennsylvania Fish and Boat Commission has stocked yellow perch fry and fingerling into Pennsylvania waterways (Table 1).

Table 1.	Yellow perch stocking by the Pennsylvania Fish and Boat Commission.

<i>Year</i>	<i>Adult</i>	<i>Fingerling</i>	<i>Fry</i>
1974	0	2,130	1,319,100
1975	0	0	0
1976	0	7,500	0
1977	94	257	0
1978	1,290	0	0
1979	645	0	0
1980	2,600	0	0
1981	1,588	4,000	0
1982	0	0	0
1983	0	11,702	6,240,000
1984	0	5,000	0
1985	900	0	1,000,000
1986	0	0	0
1987	0	0	0
1988	0	0	0
1989	0	0	0
1990	0	0	0
1991	5,066	9,079	0
1992	650	619	0
1993	4,692	12,910	0
1994	845	10,600	0
1995	225	0	0
1996	300	0	0
1997	100	0	0
1998	0	0	0
1999	0	0	700,000
2000	4	46,800	0
2001	438	0	1,120,000
2002	484	0	1,120,000
2003	100	0	1,411,000
2004	0	0	1,000,000
2005	0	0	947,598
2006	0	106	944,600

With respect to harvest management, Lake Erie's yellow perch harvest regulations are currently more restrictive than inland regulations. Pennsylvania is one of 5 jurisdictions involved in managing a robust yellow perch fishery on Lake Erie. A healthy yellow perch population is sustained by cooperative annual sampling and stock assessments that allocate a total allowable catch to each of 5 jurisdictions (Michigan, New York, Ohio, Ontario, and Pennsylvania). Each jurisdiction is responsible for regulating harvest such that they do not exceed their catch allocation. Currently Pennsylvania maintains catch compliance with a 7 inch size limit from December through the following March, with no minimum size limit at other times of year. The daily creel limit is 30 throughout the year. Strict limits also apply to commercial harvest. It

requires about 3 years for a yellow perch to attain a length of 7 inches or 4 years to reach 8 inches in Pennsylvania (Table 2).

Table 2. Average weight and average age of yellow perch at a given length (March - June).		
<i>Inches</i>	<i>Pounds</i>	<i>Years</i>
4	0.1	1.1
4.5	0.1	1.3
5	0.1	1.7
5.5	0.1	2.0
6	0.1	2.3
6.5	0.1	2.7
7	0.1	3.1
7.5	0.2	3.5
8	0.2	4.0
8.5	0.2	4.5
9	0.3	5.0
9.5	0.4	5.6
10	0.4	6.3
10.5	0.5	7.0
11	0.6	7.9
11.5	0.7	8.8
12	0.8	10.0
12.5	0.9	11.6
13	1.0	13.6
13.5	1.1	16.7
14	1.3	> 16.7
14.5	1.4	> 16.7
15	1.6	> 16.7
15.5	1.8	> 16.7
16	2.0	> 16.7
16.5	2.2	> 16.7
17	2.4	> 16.7
17.5	2.7	> 16.7

With respect to harvest management in inland waters, regulations accommodate harvest of 50 panfish, combined species, which includes yellow perch. No minimum size limit or seasonal restrictions apply. Yellow perch are generally considered a prolific species, which has led to liberal harvest rules. In some cases yellow perch can become too dense and grow slowly which results in few individuals attaining desirable size. Liberal harvest is desired in these circumstances. Despite liberal harvest rules the average creel size of anglers completing their fishing trip in Pennsylvania who have kept at least one yellow perch is 3 yellow perch. Of course angler creels range from no yellow perch kept to 50 kept. Low average harvest, in some cases, reflects a growing catch and release ethic, or indicates that few yellow perch of desirable size are in the

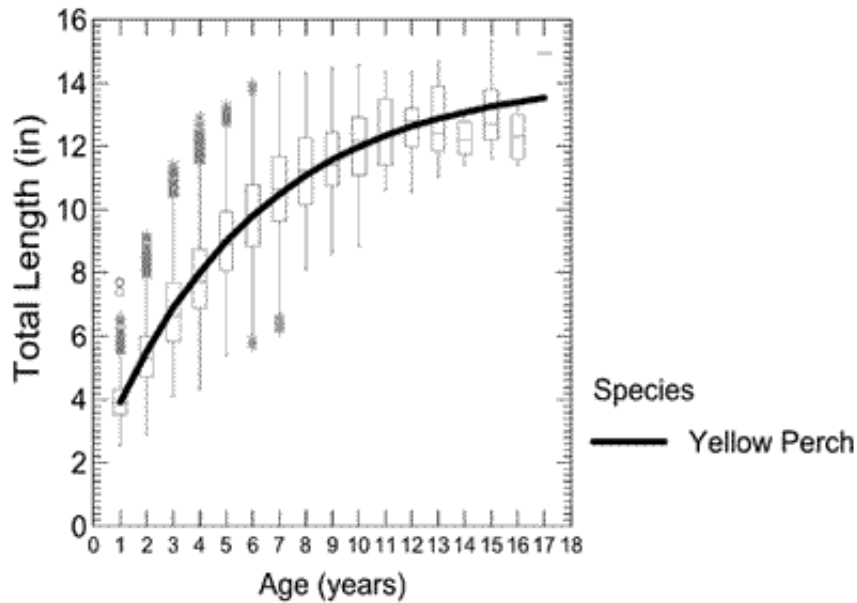
population. In some instances, many small yellow perch are not a result of slow growth, but rather, a result of angler removal of desirable size yellow perch such that small size specimens are left.

Fishery biologists faced with many slow growing yellow perch in reservoirs may elect to reduce refuge habitat through vegetation control, bolster predator densities or a combination of both. Here, planned over winter partial draw-down will freeze and desiccate near shore vegetation and serve to concentrate predators and prey during winter, with the intent to thin yellow perch numbers to enhance their growth and size. In addition, predator density might be enhanced through maintenance stocking of walleye or addition of an esocid predator. What determines the specific course of action on a particular water body relates to features as diverse as the species of aquatic plants susceptibility to control through water level management, to the ability of the resource to sustain an increased density of predators.

If the biologist is faced with angler harvest reducing density of desirable size yellow perch, harvest restrictions may be applied though selective application of Panfish Enhancement regulations. In this program, for example, yellow perch, harvest is limited to specimens 9 inches or greater with a maximum daily harvest of 20. The effectiveness of this size enhancement program in Pennsylvania is under evaluation. A variety of more specialized approaches to address these and other specific issues exist. Biologists regularly sample fish populations and measure their density and size structure, they measure water productivity, and measure habitat features, particularly aquatic vegetation density. Following such evaluations management plans are prescribed to enhance density and size structure of yellow perch where feasible.

In conjunction with these evaluations, growth of yellow perch is also examined by measuring length, weight, and taking a scale sample to determine age. In Pennsylvania, a 9 inch yellow perch is approximately 5 years old (Fig. 1) and weighs approximately 0.3 pounds. When yellow perch are 10 inches in length they are approximately 6.3 years old and weigh approximately 0.4 pounds. We have tabulated average ages and weights for a variety of lengths of yellow perch in Pennsylvania (Table 2). Anglers find these tables useful in approximating the weight and age of their catch. In standard biological collections, the decrease in relative or absolute number of yellow perch at each age can be used to describe the total annual mortality rate of yellow perch. On average the total annual mortality rate is 61%, which includes annual losses due to fishing and loss due to natural circumstances such as predation and disease. In addition to measuring losses biologists index production of yellow perch by measuring catch of juveniles. Growth of yellow perch, recruitment of young yellow perch to the population and loss of older yellow perch are important considerations in developing harvest regulations that produce desirable size yellow perch for harvest.

Figure 1. Average length of yellow perch collected by Fisheries Biologists in assessment gear in Pennsylvania (March-June).



Tabulating catch and harvest by anglers from various waterways is also essential in developing harvest regulations. Information derived from these creel surveys yields information of interest to anglers since seasonal peaks in catch occur for most species. Creel surveys conducted by biologists throughout Pennsylvania show on average when most yellow perch are caught by month for various resource categories (medium reservoirs, large reservoirs, and rivers). Monthly measures of catch per angler hour for a particular resource category offers best perspective on seasonal fishing success. Yellow perch can be caught most any time of year, generally though, the highest catch per hour occurs on medium and large size reservoirs in fall and winter (Fig. 2 and 3). The highest catch per hour on rivers in Pennsylvania is in summer (Fig 3). Since yellow perch are concentrated at near shore areas in association with spawning, at that time adults can be quite vulnerable to anglers. With fishing destinations identified from our GIS maps and information describing the best seasons to catch yellow perch, anglers need only select an effective bait or lure. Many anglers were introduced to ice fishing by catching yellow perch with a grub on a tear drop jig. In spring and summer jigs, minnows, or worms fished deep or drifted are effective presentations. The abundance of yellow perch in many larger reservoirs across the state and Lake Erie; and the ability to catch them in summer, fall and through the ice in winter makes them an especially popular panfish.

Figure 2. Average catch per angler hour of yellow perch from medium size Pennsylvania reservoirs.

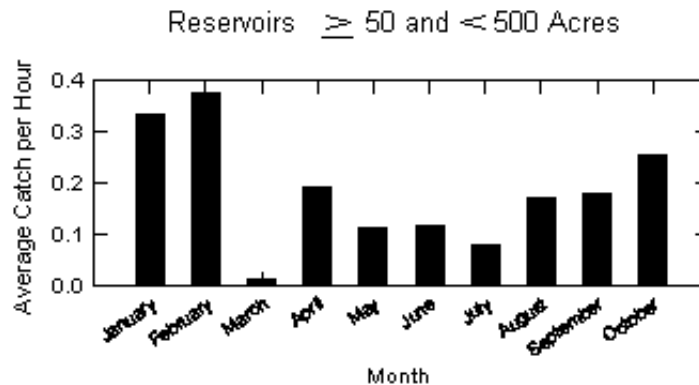


Figure 3. Average catch per angler hour of yellow perch from large size Pennsylvania reservoirs.

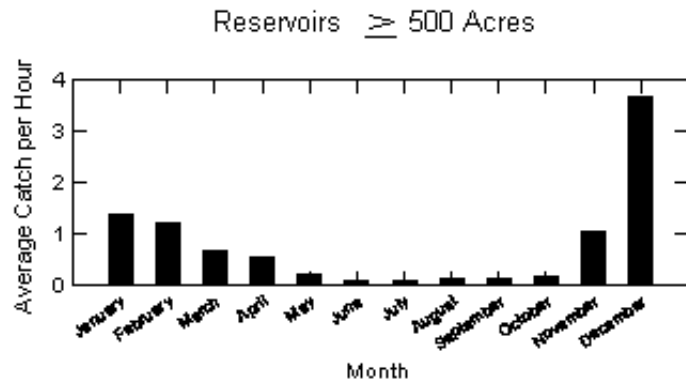


Figure 4. Average catch per angler hour of yellow perch from Pennsylvania rivers.

