

## Pennsylvania Fish & Boat Commission fishandboat.com

## Yellow Perch (*Perca flavescens*) Management and Fishing in Pennsylvania

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## 2018 Update

**Goal**: Maintain or create robust Yellow Perch 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 River Drainage includes the Ohio River, Allegheny River, and Monongahela River Drainages. The Susquehanna River Drainage includes the West Branch Susquehanna River and Juniata River Drainages. The Delaware River Drainage includes the Lehigh River and Schuylkill River Drainages. Yellow Perch typically occupy reservoir and lake (lentic) and slow-moving river and stream (lotic) habitats 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 for many warmwater or coolwater fish species, such as Yellow Perch, does not occur on an annual basis to maintain populations. Instead, stocking of Yellow Perch takes place as necessary to reintroduce the species into a waterway previously de-watered or reclaimed from pollution. Occasionally Yellow Perch are stocked to bolster a population after several years of below average natural production of young. In most of these cases, stocking is carried out from one to several years to establish or bolster self-sustaining populations in these waters. Yellow Perch populations across the Commonwealth are self-sustaining. From 2013 to 2017, Yellow Perch were stocked in from 1 to 5 waters, or water sections, depending upon year. Additional annual stocking summary details can be found elsewhere on this website. 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. 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.

Anglers may be curious as to what size some species can attain in Pennsylvania waters. Pennsylvania's current state record fish list provides perspective regarding maximum size attainable. Below, we illustrate the growth rate of Yellow Perch in Pennsylvania, and note that it requires about 3.1 years for a Yellow Perch to attain a length of 7 inches and about 5 years to reach 9 inches in length (Figure 1). In terms of 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 to most inland waters. Yellow Perch are generally considered a prolific species, which has led to liberal harvest rules.

With respect to harvest management, Lake Erie's yellow perch harvest regulations are currently more restrictive than <u>inland regulations</u>. Pennsylvania is one of five jurisdictions (Michigan, New York, Ohio, Ontario, and Pennsylvania) 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 the five jurisdictions. Each jurisdiction is responsible for regulating harvest such that they do not exceed their catch allocation. Currently Pennsylvania maintains catch compliance through adjustment of size limits and creel limits; Lake Erie sport anglers should check <u>Lake Erie harvest rules</u> that may change from one year to the next. Strict quotas also apply to commercial Yellow Perch harvest in Pennsylvania.

In addition to Lake Erie, Pennsylvania Fish and Boat Commission biologists also collaborate with biologists in neighboring states to develop harvest regulations that apply to border waters to sustain high quality fishing experiences. These waters, in addition to Lake Erie, include <a href="Pymatuning Reservoir">Pymatuning Reservoir</a>, and <a href="Conowingo Reservoir">Conowingo Reservoir</a> on the lower Susquehanna River. Border water regulations applying to these locations may differ from inland harvest regulation and can be found elsewhere on this website. Anglers should consult the current <a href="Summary of Fishing">Summary of Fishing</a> Laws and Regulations and reference and abide by harvest rules applicable to boundary waters they fish.

In some inland waters, Yellow Perch populations 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's inland waters who have kept at least one Yellow Perch is 3 Yellow Perch. Overall, angler creels range from no Yellow Perch kept to 50 kept. Low average harvest, in some cases, reflects a widespread 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 make up most of the remaining population. If a Fishery Biologist is faced with angler harvest reducing density of desirable size Yellow Perch, additional harvest restrictions may be applied in Pennsylvania 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 from select waters. This size enhancement program in Pennsylvania has proven effective where growth is adequate and where angler harvest truncates size structure. Biologists regularly sample fish populations to measure their density, growth, size structure, and sample anglers while fishing to measure harvest. Circumstances more complex than those described may apply where a variety of alternate management approaches may be employed.

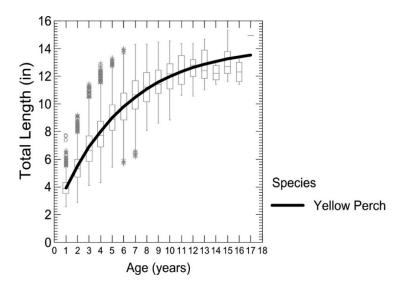


Figure 1. Average length at age of Yellow Perch collected by Fisheries Biologists in assessment gear in Pennsylvania (March-June).

Aside from enacting Panfish Enhancement regulations, Fishery Biologists faced with many slow growing Yellow Perch in reservoirs may elect to "thin their numbers" and enhance growth by reducing refuge habitat through vegetation control, bolster predator densities, or a combination of both. Here, planned over winter partial drawdown 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 (Sander vitreus) or addition of an esocid predator. What determines the specific course of action on a 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. A variety of more specialized approaches to address these and other specific issues exist. Biologists regularly sample fish populations and measure Yellow Perch 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. The Pennsylvania Fish and Boat Commission has an active corps of volunteers that assist in placement of structures after an approve habitat plan has been developed. Habitat enhancement involves careful evaluation of a water body's physical, biological, and chemical characteristics. We encourage organizations interested in volunteering time to contact our Habitat Unit for more information.

In conjunction with these evaluations, growth of Yellow Perch is also examined by measuring length, weight, and taking a scale sample to determine age. We have tabulated average ages and weights for a variety of lengths of Yellow Perch from inland populations in Pennsylvania (Table 1). Anglers find these tables useful in approximating the weight and age of their catch. It should be known that age and weight based on length can vary between individuals and across populations. Fish length at age depends on a variety of factors including habitat, gender, genetics, forage abundance, and other conditions. 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 the population. On average, the total annual mortality rate is 61%, which includes annual losses due to fishing and annual 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, recruitment of young to the population, and loss of older Yellow Perch are important considerations in developing harvest regulations that produce desirable size Yellow Perch for harvest.

Table 1. Average weight and average age of Yellow Perch, at a given length, collected by fisheries biologists in Pennsylvania (March - June).		
Inches	Pounds	Years
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

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 resource category offers best perspective on seasonal fishing success. Yellow Perch can be caught in most any time of year, generally though, the highest catch per hour occurs on medium and large size reservoirs in fall and winter (Figures 2 and 3). The highest catch per hour on rivers in Pennsylvania is in summer (Figure 4). Yellow Perch typically spawn in spring in Pennsylvania, when the water reaches between 42 to 53 degrees Fahrenheit. Since Yellow Perch are concentrated at near shore areas in association with spawning, at that time, adults can be

quite vulnerable to anglers fishing from shore. With fishing destinations identified from <u>maps on this site</u> 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 can be 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.

A <u>summary of Yellow Perch information</u> including fishing tips, best fishing waters, species identification, and more can be found elsewhere on this website. Additional information helpful in answering angling questions can be found on the <u>Fishing FAQs</u> page located elsewhere on this website.

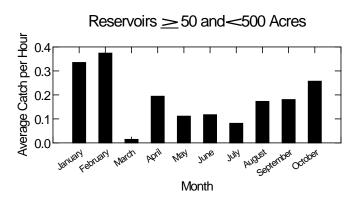


Figure 2. Average catch per angler hour, by month, of Yellow Perch from medium size Pennsylvania reservoirs.

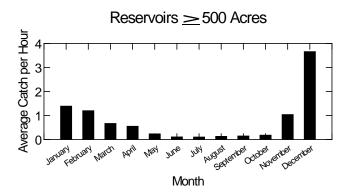


Figure 3. Average catch per angler hour, by month, of Yellow Perch from large size Pennsylvania reservoirs.

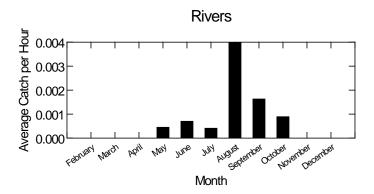


Figure 4. Average catch per angler hour, by month, of Yellow Perch from Pennsylvania rivers.