

Three Rivers Sander Surveys

SW Pennsylvania

2018-2021 Boat Electrofishing Surveys

The Three Rivers (Allegheny, Monongahela, and Ohio rivers) of Western Pennsylvania are a series of large navigable waterways that support diverse recreational opportunities. Anglers wishing to try their luck on these rivers have numerous species to target, ranging from panfish such as crappie and Rock Bass to Smallmouth Bass to large catfish and Muskellunge. One such popular group of fish that anglers often target are the two Sander species: Walleye (*Sander vitreus*) and Sauger (*Sander canadensis*), as pictured below.



A Walleye (top) and Sauger (bottom) captured from the Three Rivers

Recently, biologists from the Area 2 and Area 8 Fisheries Management Offices began to evaluate the adult Sander populations on the impounded portions of the Three Rivers. Using protocols established by the Ohio River Fisheries Management Team (ORFMT) for sampling adult Sauger on the Ohio River, biologists have been surveying tailwaters of Locks and Dams (LD) on the Three Rivers to assess the Sander populations. Surveys consist of four non-overlapping 10-minute electrofishing runs on each bank of the river beginning immediately downstream of the LD and have been conducted in the fall (November/December), early spring (March), and late spring (May/June) to assess the best time of year for sampling the adult Sander populations. So far, out of the 17 LD tailwaters on the Three Rivers in PA, biologists have surveyed nine tailwaters at various times of the year. Walleye and Sauger in the Three Rivers are managed with Commonwealth Inland Waters regulations. Walleye: January 1 through March 14 and the first Saturday in May through December 31, 15 inch minimum size limit, creel limit of 6. Sauger: January 1 through March 14 and first Saturday in May through December 31, 12 inch minimum size limit, daily creel limit of 6.

The following are a summary of results of our surveys thus far on each of the Three Rivers.

Allegheny River

Biologists surveyed the tailwaters of Lock 8 (Templeton), Lock 7 (Kittanning), C. W. Bill Young Lock 3 (Acmetonia), and Lock 2 (Sharpsburg) at various times from late spring 2019 through early spring 2021 (Table 1). On the Allegheny River, Walleye are by far the most abundant of the two species, with Sauger providing little to no fishery in the upper tailwaters. Catch rates were highest at the upper two tailwaters for overall numbers of fish, but legal sized fish were few and far between. This may be attributed to the extremely poor growth rates of Walleye in these sections of the Allegheny River. On average, fall Walleye from the Lock 8 tailwater were slightly over 11 inches at age 3+; in comparison, the statewide average of an age 3+ Walleye in Pennsylvania should be between 16 – 18 inches. Walleye growth rates improved on the lower Allegheny (Lock 2 and Lock 3 tailwaters), with fish reaching legal size (>15 inches) by age 3 or 4 in most cases.

Table 1. Length and frequency distribution of sampled fish from the Allegheny River.

Tailwater	Year	Month	Species	Number caught	Size range (inches)	Comments
Lock 8	2019	May	Walleye	124	4 – 15	Only one legal fish
			Sauger	--	--	
Lock 8	2019	November	Walleye	149	4 – 22	Only two legal fish
			Sauger	1	7	
Lock 7	2020	June	Walleye	82	6 – 23	5% legal fish
			Sauger	2	7 - 14	
Lock 7	2020	November	Walleye	132	6 - 30	Only 2 legal fish
			Sauger	--	--	
Lock 7	2021	March	Walleye	104	8 – 30	10% legal fish
			Sauger	1	13	
Lock 3	2020	November	Walleye	48	8 – 17	15% legal fish
			Sauger	6	14 – 15	All legal fish
Lock 3	2021	March	Walleye	52	9 – 28	19% legal fish
			Sauger	8	13 – 17	All legal fish
Lock 2	2019	May	Walleye	117	5 – 19	8% legal fish
			Sauger	17	11 – 14	88% legal fish
Lock 2	2019	November	Walleye	75	6 – 19	5% legal fish
			Sauger	34	10 – 15	88% legal fish
Lock 2	2021	March	Walleye	84	8 – 25	56% legal fish
			Sauger	15	9 – 16	93% legal fish

The Three Rivers have a reputation for producing trophy sized Walleye, with the lower Allegheny probably the most well-known spot for anglers tangling with these giants. Our surveys on the lower Allegheny, particularly the early spring surveys, confirmed this reputation, with big fish captured frequently during this time.



A few 23-25 inch Walleye captured below Lock 2 on the Allegheny River in March 2021



One of the trophy Walleye captured in spring 2021

Monongahela River

On the Monongahela River, biologists have thus far surveyed the tailwaters of Grays Landing LD and Braddock LD on multiple occasions. Catch rates of both species have been fairly similar on the Monongahela River, with only the 2021 early spring survey at Grays Landing and the fall 2019 survey at Braddock having a much higher proportion of Walleye than Sauger. It should be noted that the timing of our 2021 March survey at Braddock was likely too early to capture the pre-spawn movement of fish into shallower spawning habitat; therefore, catch rates are likely not indicative of the true abundance of the Sander population. We will return in future years to conduct an early spring survey at the Braddock tailwater.

In the majority of our surveys, we capture a higher percentage of legal sized (>12 inches) Sauger than legal sized (>15 inches) Walleye and we generally have no problem catching legal sized Sauger during any time period (early spring, late spring, fall). In contrast, legal Walleye catch has been substantially higher during the early spring surveys, when the bigger fish are preparing to spawn. Our survey at Grays Landing in 2021 was no exception as we doubled our catch of Walleye from the fall 2019 survey and captured more and bigger legal sized Walleye.

Table 2. Length and frequency distribution of sampled fish from the Monongahela River.

Tailwater	Year	Month	Species	Number caught	Size range (inches)	Comments
Grays Landing	2019	June	Walleye	29	7 – 20	17% legal fish
			Sauger	26	8 – 14	92% legal fish
Grays Landing	2019	November	Walleye	27	7 - 19	33% legal fish
			Sauger	21	13 – 15	All legal fish
Grays Landing	2021	March	Walleye	53	9 – 24	40% legal fish
			Sauger	5	7 - 16	60% legal fish
Braddock	2019	June	Walleye	46	6 - 16	7% legal fish
			Sauger	40	9 – 15	85% legal fish
Braddock	2019	November	Walleye	72	8 – 22	10% legal fish
			Sauger	26	8 – 19	92% legal fish
Braddock	2021	March	Walleye	13	9 – 15	15% legal fish
			Sauger	13	9 – 17	23% legal fish

Ohio River

Like the Monongahela River, the Ohio River contains good populations of both Walleye and Sauger. Catch rates of both Walleye and Sauger have varied over the years sampled. Differences in catch rates at each of the tailwaters can be attributed to differences in habitat. For example, we routinely achieve higher catch rates at the Dashields Tailwater as it has a variety of good habitats to sample, including large boulders, creek mouths, industrial structures, and back eddies that congregate Walleye and Sauger. In contrast, our catch rates at Emsworth have been poorer as the habitat consists of largely sand and mudflats that Walleye and Sauger are generally not attracted to. Sauger were more prevalent on the Ohio River compared to the Monongahela and Allegheny rivers.

Table 3. Length and frequency distribution of sampled fish from the Ohio River.

Tailwater	Year	Month	Species	Number caught	Size range (inches)	Comments
Emsworth	2018	May	Walleye	7	6 – 15	One legal fish
			Sauger	14	10 – 13	71% legal fish
Emsworth	2018	December	Walleye	2	8 – 18	
			Sauger	7	12 – 14	All legal fish
Emsworth	2019	November	Walleye	5	8 – 17	3 legal fish
			Sauger	20	11 – 18	95% legal fish
Emsworth	2020	June	Walleye	16	9 – 22	19% legal fish
			Sauger	31	10 – 16	81% legal fish
Emsworth	2020	November	Walleye	43	8 – 22	28% legal fish
			Sauger	32	8 – 19	94% legal fish
Emsworth	2021	March	Walleye	25	9 – 30	88% legal fish
			Sauger	18	13 – 16	All legal fish
Dashields	2018	May	Walleye	35	8 – 20	29% legal fish
			Sauger	56	10 – 15	61% legal fish
Dashields	2018	December	Walleye	12	8 – 17	25% legal fish
			Sauger	16	11 – 15	94% legal fish
Dashields	2019	November	Walleye	31	8 – 22	19% legal fish
			Sauger	32	11 – 15	72% legal fish
Dashields	2020	June	Walleye	18	9 – 20	33% legal fish
			Sauger	68	11 – 15	75% legal fish
Dashields	2020	November	Walleye	57	8 – 26	39% legal fish
			Sauger	74	9 – 17	96% legal fish
Dashields	2021	March	Walleye	98	8 – 31	64% legal fish
			Sauger	39	8 – 19	85% legal fish
Montgomery	2018	May	Walleye	22	7 – 23	18% legal fish
			Sauger	47	11 – 13	72% legal fish
Montgomery	2018	December	Walleye	14	7 – 9	No legal fish
			Sauger	13	8 – 14	62% legal fish
Montgomery	2020	November	Walleye	28	7 – 24	14% legal fish
			Sauger	75	7 – 17	33% legal fish

Growth rates of Walleye in the Ohio River were much better compared to the Allegheny River, with fish often reaching legal size at age 2+. A strong spawn in 2015 yielded excellent catches of 6-year-old Walleye in the spring of 2021, with most of these fish ranging from 20 – 26 inches. Many of these fish were gravid females preparing to spawn.



31 inch, 13 lb Walleye from the Ohio River



30 inch, Walleye from the Allegheny near Kittanning.

Overall, the Three Rivers provide excellent opportunities to catch Walleye and Sauger. Anglers wanting to try their luck for these species should target areas in the tailwaters of locks and dams or near the mouths of tributaries. Fishing in low light conditions, such as early morning, late evening, or cloudy days, will increase your chances of hooking up with one of these trophies.

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