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PLAN YOUR NEXT TRIP



MARYLAND

DEPARTMENT OF ATURAL RESOURCES





2024

- 1. Black Bass Conservation Fund makes first purchase of a bead filter using donations collected in 2024. Larger fish to be stocked in tidal rivers in 2025.
- 2. Black bass health in tidal rivers. A fish health index is being used during the Tidal Bass Survey to monitor the proportion of injured or diseased fish.
- **3.** Largemouth bass fisheries remain highly productive in upper Chesapeake Bay and the Potomac River, attracting Bassmaster and Major League Fishing tournaments in 2025.
- 4. Same fish, new name: largemouth bass split into two different species. New research designates a genetic difference in fish declaring some fish Florida bass and others largemouth bass.
- 5. Tidal Bass Survey data now available online. Access to over 20 years of monitoring data on tidal rivers and inland lakes in Maryland.



<u>Reglas de Pesca (en Español)</u>

Fishing and Boating Services | 580 Taylor Ave B-2 | Annapolis, MD 21401 In Maryland: 410-260-8257 | Out of state: 877-620-8367 TTY Users call via the Maryland relay. The facilities and services of the Maryland Department of Natural Resources are available to all without regard to race, color, religion, sex, sexual orientation, age, national origin or physical or mental disability. This document is available in alternative format upon request from a qualified individual with a disability. 3/2024 DNR 17-022024-1 dnr.maryland.gov/fisheries

BLACK BASS CONSERVATION FUND MAKES FIRST PURCHASE

Introduced as bills to the General Assembly and signed into law by Governor Wes Moore in 2024, the Black Bass Conservation Fund allows the general public to directly donate money to largemouth bass and smallmouth bass conservation in Maryland. Gifts will be used for aquatic habitat. enhancing bass stocking, supplies to support bass conservation, or similar efforts. Projects will be considered each year by the department and its Black Bass Advisory Committee, a body of advisors made up of public stakeholders.



A bead filter (green cylinder with piping) in use recirculating water for hatchery tank of largemouth bass.

In 2024 the department received close to \$3,500 dollars in donations to the conservation fund. The first purchase using these funds was a bead filter for the Joseph Manning Hatchery. Currently, the hatchery has a restriction on the amount of water they can pump in and the amount of wastewater they can pump out of the facility. The bead filter cleans and recirculates water, allowing them to raise and grow fish longer without the restrictions of water use.



A largemouth bass that was raised to approximately 6 inches with the help of a bead filter from Manning Hatchery.

What does this mean for black bass in Maryland? A single bead filter provides the potential to stock up to 5,000 6 to 8 inch largemouth bass per year in waters throughout the state. Previously, the department's ability to raise fish to this size was limited. Typically, most largemouth bass in the state are stocked at a 2 to 4 inch size. Additionally, the cost of the bead filter is roughly the same cost as purchasing 5,000 6 to 8 inch largemouth bass from a private fish farm. Operating at full capacity, the bead filter has the potential to pay for itself in the first year of operation.

If you're interested in supporting projects similar to this, please consider donating to the Black Bass Conservation Fund. The amount given is not tax-deductible. Login to <u>COMPASS</u>, go to Purchase Merchandise, and click on the Merchandise section to find the Black Bass Conservation Fund option. Donations by check or money order to the Black Bass Conservation Fund are also appreciated.

For donations by check of \$1,000 or less, please pay to the order of the Maryland Department of Natural Resources and include in the memo, "Black Bass Conservation Fund." Mail checks to: Martha Bruder, 580 Taylor Avenue, B-2, Annapolis, MD 21401.

For donations greater than \$1,000, please contact martha.bruder@maryland.gov.

MONITORING FISH HEALTH IN TIDAL RIVERS

Biologists typically monitor fisheries by assessing fish abundance and size over time, providing valuable insights into the health of a fishery from a historical perspective. In 2022, the tidal bass survey expanded its monitoring efforts to include another key indicator of fishery health: the number of fish exhibiting signs of disease or injury.

While all fish populations have some level of disease and injury, monitoring the amount can help forewarn of problems in the fishery. An increase in the number of fish with these symptoms can provide a "canary in the coal mine" for threats to our fisheries. During the Tidal Bass Survey each fall, fisheries biologists inspect every fish caught for several different signs of disease including black bass blotchiness syndrome, skin rashes, fin damage, and parasites. This provides valuable data on how healthy our fisheries are compared to past years, as well as other fisheries in the state.



Nick Dawson caught this largemouth bass with black bass blotchiness syndrome in Mallows Bay. Share your catch, photos, and fishing stories by emailing fishingreports.dnr@maryland.gov.

Monitoring health over the last three years has begun to give the department important baseline information into disease levels in tidal black bass populations. So far, most populations in our tidal rivers have similar levels of disease when compared to each other, usually less than 5% of fish display symptoms. Although, some fisheries have displayed higher levels. Fish that did display signs of injury or disease most often had very mild symptoms. In the future abrupt changes in the amount of these fish will flag a fishery for further investigation. These data will help the understand department better potential problems in the fishery and adapt to those threats.



Biologists on the Tidal Bass Survey measuring and inspecting fish health. In 2024 94% of all fish collected showed no signs of disease or injury.

NEW TO BLACK BASS FISHING?

Unless you are exempt, **buy a fishing license**, online with <u>COMPASS</u>, and learn <u>Fishing Regulations</u> for fishing black bass.

Find a rod with an artificial rubber worm, or borrow one from the <u>Tackle Loaner Program</u> at a library near you. Bass anglers use lots of artificial tackle, from worms to creature baits to spinners. Of all the bait types, rubber worms are probably the cheapest and most common.

Want to Watch or Fish a Bass Tournament? <u>Click Here for the 2025 tournament schedule!</u>

MANAGEMENT Black Bass Advisory Committee

The <u>Black Bass Advisory Committee</u> is an appointed public stakeholder group that advises the department on management needs for black bass fisheries in the state. In 2024, they:

- Welcomed new members Evan Morsell and Logan Summer. Evan is the co-founder of Chesapeake Reel Masters, a kayak fishing group. Logan has served as the president of Fish on Bass Anglers.
- Discussed a catch-photo-release tournament benefiting the Black Bass Conservation Fund
- Discussed and recommended best management strategies to reduce tournament mortalities in hot weather months.
- Recommended the purchase of bead filter with Black Bass Conservation Fund money to increase the number of large fish stocked.



Tournament directors often hold a safety meeting before takeoff to explain the rules of the tournament and conservation practices for effective catch and release.



All meetings are currently held virtually by webinar. Meeting dates in 2025: April 7; July 7, and October 6; all meetings start at 6:00 pm.



Eric Packard with great St. Mary's Lake largemouth bass.

Black Bass Fishery Assessments

The Tidal Bass Survey uses boat electrofishing to sample largemouth bass during the fall. Data are used to assess the status of the population.

Potomac River

A total of 769 largemouth bass, including 447 juveniles, were collected. Forty-three of these fish (or 5.6 percent) showed signs of hooking injury or disease. Relative abundance or catch indices were normal. Anglers weighed between three and four bass per tournament fishing day (on average), which was the highest recorded since 2012. Reproduction was good and juveniles were caught at 84 percent of prime habitats, which was above average. Growth indices were normal for the population and annual mortality tended to be lower than average, suggesting good recruitment and survivorship. Because of generally average statistics, the status of this fishery was designated as Good.

2024

2024

Upper Chesapeake Bay

A total of 279 largemouth bass, including 151 juveniles, were collected. Twenty of these fish (or seven percent) showed signs of injury and/or disease. Relative abundance or catch indices were within normal ranges for the fishery. As has been typical for the fishery, anglers weighed about two bass per tournament fishing day. Reproduction appeared to be good with 87 percent of high-quality habitats having juveniles, which was above average. Recruitment may have lagged in recent years as indicated by the size structure of the population. Growth rate indices also tended to be lower than normal. Because of generally good catch statistics and reproduction, the status of this fishery was designated as Good.



Fingerling bass are stocked in good juvenile habitat to help ensure better survival in our tidal rivers.

Middle River

A total of four largemouth bass, including two juveniles, were collected. No fish collected showed signs of injury and/or disease. Low levels of catch for this population do not allow for a robust assessment. Possibly owing to saltier and more challenging survey conditions, few fish were collected during survey efforts. However, anglers have reported a resurgence of the fishery. Led by Scott Sewell (Conservation Director, Maryland Bass Nation), Middle River has benefited from significant releases of purchased and hatchery-reared bass and will likely remain a focus for supplemental stocking. Because a reference dataset for comparison is on-going and not yet completed, the status of this fishery has been designated as Unknown.



Tim Bricken with a smallmouth bass caught on the fly in the lower Susquehanna River.

Pocomoke River

A total of 149 largemouth bass, including 47 juveniles, were collected. Seven fish collected (or 5 percent) showed signs of injury and/or disease. Anglers weighed between three and four bass per tournament fishing day, which is above average for the fishery. Relative abundance or catch indices were the highest observed in historical sampling and a notable increase from the previous sample in 2020. Reproduction was above average, and juveniles were caught at 73 percent of all high-quality habitats. Growth rate indices tended to be lower than average and size structure has shifted to predominantly younger fish. More frequent sampling will be done in the future to hopefully reduce the variability in sampling statistics. Because of the above average reproduction and catch statistics, this fishery has been designated Good.

Public Access Fishing Map

Check out the best places to fish for bass in Maryland. Visit our <u>Public Access Fishing Map</u> for details. Fish from one of 326 spots where you can find black bass in the state.



Gunpowder River

A total of 64 largemouth bass, including 17 juveniles, were collected. Eight of these fish (or 12.5 percent) showed signs of injury and/or disease, a greater proportion than that observed for Potomac River or the upper Chesapeake Bay. Catch indices were above average, likely owing to significant stocking efforts in the river. Anglers weighed about two bass per tournament fishing day, similar to the upper Chesapeake Bay. Juveniles represented 27 percent of the sample and were found in 62 percent of prime habitats, suggesting above average reproduction. Growth rates tended to be below average for the population. Because of above average catch statistics, likely owed to stocking, but below average growth, the status of this fishery was designated as Rebuilding.



Ray Lapidario with a largemouth bass he caught at Liberty Reservoir.

Bush River

A total of 45 largemouth bass, including eight juveniles, were collected. Six fish collected (or 13 percent) showed signs of injury and/or disease, a

greater proportion than that observed for any other tidal river. Catch has slowly increased since 2018 and was at its highest average in 2024. Reproduction was above average in Bush River with juveniles found in 70 percent of high-quality survey sites. Additionally, juveniles constituted above average proportion of the sample (18 percent). Growth rates were similar to those observed for fish from Gunpowder River. Because a reference dataset for comparison is on-going and not yet completed, the status of this fishery has been designated as Unknown.

Marshyhope Creek

A total of 81 largemouth bass, including 31 juveniles, were collected. Four fish collected (or 5 percent) showed signs of injury and/or disease. Relative abundance or catch indices were below average, including older fish. As has been typical for the fishery, anglers weighed about two bass per tournament fishing day. Reproduction showed improvement from previous years as juveniles were found at 42 percent of sites representing 28 percent of total catch. The high prevalence of juveniles could also be attributed to the heavy stocking efforts conducted by the department in the summer and fall of 2024. Growth indices were below average. Because of concerning survey metrics, the status of this fishery was designated as Rebuilding.

Black Bass Conservation



To learn more about black bass, habitat, and conservation please visit the <u>conservation</u> <u>section</u> on our tidal black bass webpage!

Non-Tidal Bass Fisheries

Non-tidal black bass fisheries in Maryland stretch from Deep Creek Lake and Youghiogheny River in western Maryland to eastern shore farm ponds and impounded waters, such as Johnson's Pond and Tuckahoe Lake. In 2024, anglers sent more reports from impounded waters of southern Maryland and central Maryland than other areas. Additionally, the non-tidal Potomac River (or upper Potomac River) and Conowingo Reservoir boast the best smallmouth bass fisheries in Maryland.

The Maryland Department of Natural Resources' Freshwater Fisheries and Hatcheries Division follows a standardized operating protocol for surveying non-tidal waters. These procedures and the indices they generate help guide managers to take various actions that improve fishing for anglers. Learn more by visiting our **Division Webpage at:**



Amy Fridaska caught this nice largemouth bass from Deep Creek Lake.

Deep Creek Lake

The largemouth bass fishery in Deep Creek Lake continues to be characterized by a relatively low density but a high proportion of large fish. The results suggest that growth rates are sufficient to support a high-quality fishery; however, recruitment to stock size may be limited. Smallmouth bass are the most abundant black bass species in Deep Creek Lake and provide a quality fishery for anglers for both numbers and quality fish. There were 11 tournaments on Deep Creek Lake in 2024 with an average winning weight for a five fish bag of 13.9 pounds and an average lunker of 4.7 pounds

What Do YOU Think?

Take our SURVEY about this year's annual review or call ryan.gary@maryland.gov at 410-260-8911. What do you want to read more about?





2024

Loch Raven Reservoir

Largemouth bass is the dominant predator in Loch Raven Reservoir. Catch rates have remained stable and the size structure indicates that Loch Raven Reservoir is a desirable fishery for quality size largemouth bass. Additionally, relative weights for quality sized fish indicated that the large fish in the reservoir are in good condition. Smallmouth bass were not collected in large numbers during the survey, but they provide an additional species for anglers to target. Four tournaments were held on Loch Raven in 2024 with an average winning weight for a 5 fish bag of 22 pounds and an average lunker of 5.6 pounds.



Recuperating tanks and release shoots are a great way to make sure bass are recovered from the weighin process and safely released back into the water during tournaments.

Conowingo Reservoir

Smallmouth bass abundance and size structure are good and should provide excellent fishing in Conowingo Reservoir. Largemouth bass abundance continues to be low. High flow and turbidity events in the spring have likely contributed to erratic recruitment. Along with direct impacts to nesting behavior, high turbidity has also likely affected the amount of submerged aquatic grasses within the impoundment. These grasses are the preferred habitat for juvenile largemouth bass and decreased availability may affect their survival. Fewer exterior lesions than last year were noted, just 4 percent of smallmouth bass and 7 percent of largemouth bass. Diseases affecting smallmouth bass in the Susquehanna River watershed have been well documented. Hooking injuries were observed for 18 percent of smallmouth bass and 23 percent of largemouth bass. In 2024 there were ten tournaments held on Conowingo Reservoir with an average winning weight for a 5 fish bag of 12.1 pounds and average lunker of 3.5 pounds.

Upper Potomac River

Smallmouth bass year-class strength has been monitored annually since 1975 using shoreline seine surveys. The mean number of juvenile smallmouth bass per seine haul is used as a metric of smallmouth bass recruitment.

Over the past ten years, mean annual recruitment was below average. The department documented poor recruitment for smallmouth bass when river flow or discharge was above average in May and June. This follows closely with other smallmouth bass research showing that annual recruitment was closely tied to flow conditions during and immediately after spawning. Additional factors that are not specifically monitored, such as turbidity, temperature, parasite loads, and intersex levels also could affect populations.

Following a period of below-average juvenile recruitment over the past decade (often linked to high spring river flows) and observed declines in the adult population in 2019-2020, supplemental stocking efforts were implemented. Hatcheryraised juvenile smallmouth bass were stocked in the upper Potomac River in 2020 and 2022.

In 2024, monitoring indicated that population metrics have improved, highlighted by increased catch rates of adult smallmouth bass. This positive trend, built on the resurgence observed at the end of 2023, meant that further supplemental stocking was not necessary for 2024. While recruitment challenges related to factors like river flow persist, the recent improvement in adult population indicates encouraging news for the fishery.

CONSERVATION CORNER

Same Fish, New Name

Maryland's most popular freshwater sportfish has undergone a name change—sort of. The American Fisheries Society has officially recognized the Florida bass as a separate species from the largemouth bass, following <u>a recent</u> <u>study by Yale University</u>. By analyzing the genetics of 394 fish, researchers found a distinct difference between fish from Florida and coastal Georgia compared to those found elsewhere in the United States.



A figure from the Yale study showing largemouth bass in blue, hybrids of largemouth and Florida bass in green, and Florida bass in yellow as identified by genetic testing.

The idea that Florida bass are a distinct species is not new. In 1949, renowned black bass researchers Carl Hubbs and Reeve Bailey first proposed the distinction based on physical differences such as scale counts on the cheek, lateral line, and tail, as well as coloration patterns along the lateral line. However, these traits had not been enough for the modern scientific community to designate them as separate species. Nearly 75 years later, genetic research has now confirmed what Hubbs and Bailey initially suspected. Despite this new classification, Florida bass and largemouth bass remain visually indistinguishable, requiring genetic testing to confirm their identity. So what is the benefit of distinguishing species? Fish are naturally adapted to their environments, and while they may look alike, their genetic differences make them better suited for survival and reproduction in their respective regions. Recognizing them as separate species helps natural resource agencies manage and conserve these fish more effectively.



Fin clips are used to assess the genetics of collected bass.

Anglers and scientists have long noticed behavioral and growth differences between the two species. Florida bass have been known to reach large sizes, while largemouth bass have been revered for their aggressiveness. Florida bass can survive and reproduce in Maryland waters, but they might not be as successful as the largemouth bass that reside in our waters. The same is true for largemouth bass being stocked in waters further south.

The ability of Florida bass to reach trophy size is largely dependent on the warm waters and long growing seasons of their native southern range. When stocked in colder, northern waters with shorter growing seasons, they may not achieve the same trophy sizes and could bring additional negative effects, such as reduced catch rates or lower reproductive success.

The influence of climate and growing seasons on these species has been widely observed by fisheries biologists. In Arkansas, for example, the state is divided into northern and southern regions. The warmer southern areas with longer growing seasons are stocked with Florida bass, while the colder northern regions are stocked with largemouth bass, better suited to shorter growing seasons.

What does this mean for bass fishing in Maryland? For Maryland anglers, not much will change. The bass we know and love will still be called largemouth bass, but its scientific name has been updated from *Micropterus salmoides* to *Micropterus nigricans*. Meanwhile, what was once considered largemouth bass in Florida will now be classified as Florida bass (*Micropterus salmoides*).

Maryland's approach to stocking will remain the same. Bass stocked in tidal waters will continue to be sourced from broodstock collected in the Potomac River or fish identified as largemouth bass. This ensures that the fish stocked in Maryland waters are best suited for survival and reproduction, maintaining a strong fishery in years to come.

This new classification of Florida bass and largemouth bass marks an important milestone in fisheries science, reflecting how genetic research continues to refine our understanding of fish species. While the names may have changed slightly, the excitement of bass fishing remains the same. Maryland anglers can continue to enjoy catching largemouth bass in the state's waters, confident that fisheries managers are using the best available science to sustain and enhance bass populations for generations to come.

Black Bass Stocking



For more information about when and where black bass are stocked in Maryland visit the <u>stocking</u> page on our website.

BASS SURVEY DATA 20+ years of data available online

2024

Have you ever seen a Department of Natural Resources electrofishing boat out on the river? Wondered what they were catching, or where they found the biggest fish? Well now you can sort through the data yourself with the new online survey map. The <u>customer resources page</u> of the tidal bass site now hosts the total survey data for smallmouth and largemouth bass from the past 20+ years.



The online survey map for largemouth bass. Each green square is a survey site where you can look up information about collected fish.

The Tidal Bass Survey has been ongoing in some of Maryland's tidal rivers since the 1990s. The survey is a way of standardizing electrofishing samples throughout our fisheries to track different biological metrics like abundance, size, and weight of bass. By standardizing sampling, we can compare survey years to each other to identify trends in the fisheries. Trends help us understand whether a fishery is declining, improving, or remaining status quo. These are the same data used in the black bass fishery assessments starting on page four in this annual review.

In total there are 1,984 sites across 12 tidal rivers and upper Chesapeake Bay in the Tidal Bass Survey. Each site is approximately 275 yards of shoreline in the tidal freshwater sections of these rivers. Sites are selected at random and may not be sampled every year, but your favorite section of river and most likely your favorite bank should have data available online for previous sampling years.



Biologists measuring fish on the 2021 Tidal Bass Survey. Data collected from this survey is now available online.

While these data have always been available to the public by request, the mapping tool, now available online, makes accessing the data for your favorite rivers quick and easy. Click on the link for your preferred species of bass and then simply zoom into the section of water you are interested in. From there you can follow instructions on the left-hand side of the map on how to select for the count of fish collected or the length and weight of fish collected.

In addition to the tidal bass survey, data are also available for several impoundments in the state. Similar to the tidal bass survey, fisheries biologist survey impoundments in Maryland to monitor the health of fish populations. These data are available on the <u>Maryland Freshwater Fisheries</u> <u>webpage</u>. Simply click the fishery you are interested in and scroll down to the map on the webpage.



An example of the survey data that is available for species sampled on impoundments in the state.

Unlike the tidal bass survey data, which only measures and weighs bass, fisheries monitoring surveys on impoundments collect additional data on most sportfish present in the fishery. For this reason, the impoundment data will have information on a variety of species available. By going to the webpage for the impoundment of your interest you will be able to find detailed summaries of largemouth and smallmouth bass, sunfish, perch, walleye, and many more!

If you are interested in more information about the Tidal Bass Survey, sampling on Maryland's impoundments, or would like a more in-depth summary from any sampling year or fishery, call or email <u>ryan.gary@maryland.gov</u> at 410 – 260 – 8911.

Black Bass Resources

Head over to the black bass <u>customer</u> <u>resources page</u> for the survey information listed above, information on bass fishing tournaments, licensed guides, and more.

2024