



Photo by Trevor Tufty, angler on Potomac River

A NEW ERA: BBAS

After decades of informal gatherings of stakeholders at annual roundtables, the Sport Fisheries Advisory Commission (SFAC) formally recommended the creation of a Black Bass Advisory Subcommittee (BBAS) in 2016. Since the early 1990s the Department of Natural Resources has hosted informal meetings, as needed, called the Black Bass Roundtable to discuss black bass management. The BBAS was appointed by SFAC and represents tournament directors, fishing guides, conservationists, and bass anglers. The BBAS makes recommendations on black bass management to the SFAC and when appropriate, the SFAC reports those recommendations directly to the Secretary of the Maryland Department of Natural Resources.

Though it has no vote during BBAS meetings, the department is leading the way in this new era of black bass fishery management. It provides staff support and information on the fisheries, as requested. Agendas and meeting times for the BBAS are [posted on-line](#). The public is invited to attend and, if desired, to contribute to the meeting during the public comment period. Meeting minutes are also drafted and posted to serve as communication to the general public who cannot attend.

For more information on the BBAS, its current membership, or to apply for membership to the subcommittee, please:

Click Here for [Black Bass Advisory Subcommittee](#)

Click the 2017 Fishing and Crabbing Guide for more information on fishing and crabbing opportunities near you!



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MANAGEMENT

Catch-and-Return Areas/Seasons

For several years the Department of Natural Resources has explored the use of catch-and-return areas in tidal waters of Maryland for managing populations of largemouth bass. The department received public feedback from on-line surveys, public meetings, phone calls and e-mails. In September, the Black Bass Advisory Subcommittee, considered the information on this style of management and advised the department not to pursue catch-and-return areas or seasons in tidal waters.

New Stuff - Keeping Bass Alive

Anglers spend a lot of money and time to keep largemouth bass alive. This is true whether an angler is fishing a tournament, chartering a guide, or just spending time on the water. An angler may quickly release a fish after it's caught or put it in a live well for a while. Live wells differ in size (generally 15 gallons to 40 gallons) and offer a small compartment to hold fish and water. Following a three year project that builds upon decades of research to keep bass alive, Dr. Hal Schramm and his graduate student Kevin Keretz have collaborated with the Department of Natural Resources to draft new recommendations to keep bass alive:

- Use a thermometer;
- Chill live wells to within 5 °F of water temperature;
- Always use re-circulation when holding bass in a live well;
- Avoid holding bass in live wells when water temperature is more than 85 °F.

To Keep Track of Water Temperatures in your Area,
Click Here for [Eyes on the Bay](#)

Management Plan Update

A management plan that outlines a strategy for managing largemouth bass fisheries in Maryland was signed in 2016 by the Secretary of the Department of Natural Resources. This plan contains a blueprint of background material and research that is used to manage the fishery. The plan is updated each year in order to make sure goals and objectives are being met - like a check list. The work conducted on black bass by the department can be read in the update, which is available [on-line](#). A spreadsheet of work is also available to the general public upon request. The management plan update, along with other research reports, are also available [on-line](#).

Click Here for [Black Bass Management Plan](#)

Do you have an interest in black bass biology and in research? Contact [Joe Love](#) if you have questions or interest in a research project.

Illegal Guiding

Illegal guiding has been a serious issue raised by bass guides for several years. Bass guides are licensed individuals who take customers on fishing trips for largemouth or smallmouth bass in the state. They also have training in CPR and boater safety. Unfortunately, some individuals are not licensed and do not have any training, yet may still charge money to take customers fishing. Customers may not know whether their guide is licensed and trained. The Department of Natural Resources offers a list of licensed and trained guides that is updated bi-annually to the general public. Please visit this website for more information on finding a licensed bass guide near you: [Licensed Charter Boats & Fishing Guides](#)

CONSERVATION

Bass Conservation Videos

Are you new to bass fishing? Or are you interested learning more about fishing from experts? The Department of Natural Resources worked with bass guides and leading experts in the field to produce conservation videos. They are free to watch and include topics such as landing a fish and live well additives.

Click Here to [watch Bass Conservation Videos](#)

*Trevor Tufty
releases
largemouth bass
to Potomac River*



Department Works with Anglers to Protect Natural Resources

In recent years constituents have expressed concerns about the status of bass fishing on Potomac River. They also expressed concern over increasing numbers of bass anglers fishing the upper Chesapeake Bay. The mission of the Department of Natural Resources is to secure a sustainable future for our environment, society, and economy by preserving, protecting, restoring, and enhancing the State's natural resources. Based on concerns from anglers and scientific data, the department used its authority granted by the State and the public to take several actions that were aimed to improve survival of bass. One of these was to modify permits issued to some tournament directors who had scheduled tournaments on the Potomac River and Upper Chesapeake Bay

from June 16 through October 31. Since modifying these permits, the department has received valuable input (verbal and written) regarding the [black bass tournament memorandum](#). This input improved understanding between the department and the directors. It also helped refine the conditions so that they would be effective when implemented. Many other states and some tournament organizations have adopted similar conditions that apply to their tournaments.

While this action may have improved the survival of some bass, it is an incomplete action that targeted a subset of participants in the fishery. To help broaden the effectiveness of the action, licensed bass anglers will receive the best available information on the problems facing bass fisheries and what they can do to help improve survival of caught and released bass. The department is also working on additional strategies, such as habitat protection and enhancement, stocking, and improving enforcement of existing regulations that prevent over-harvest of bass.

Fish Kills - *What Can be Done?*

The end of 2016 saw a fish kill in Gunpowder River near Joppatowne, MD. The fish kill was caused by a small dinoflagellate called *Karlodinium*. In 2015 a fish kill caused by the same dinoflagellate occurred in Middle River. Captain Scott Sewell and others worked with Maryland Department of Environment to identify the cause of the fish kill.

The fish kill occurred near Joppatowne on December 19th. Nine species of fish were documented in the fish kill. The gills of the fish were bright red and bleeding. No other animals seemed to be affected, including insects, worms, crayfish, birds, or mammals. No saltwater fish appeared to be killed.

Samples were analyzed by Maryland Department of Environment for dissolved metals, cyanide, nitrite, and chlorine. All results were below levels of concern. No pollution sources were identified and water quality was acceptable. The dinoflagellate, *Karlodinium venifecum*, was present in water samples at 4,300 cells/ml on December 19th. It was determined that fish died as a result of respiratory failure. Respiratory failure was caused by karlotoxin produced by *Karlodinium venifecum*.

The general public can help prevent harmful algal blooms by limiting the amount of fertilizer applied to lawns, cleaning up after their pets, installing rain gardens to control storm water, and upgrading or fixing leaky septic systems.

For more information on how you can help prevent harmful algal blooms, please:

Click Here for [Harmful Algal Blooms](#)
or for more on the [Fish Kill in Baltimore County](#)

Snakeheads - Get at 'em!

Northern snakeheads were once thought to be insatiable, unrelenting beings that could destroy ecosystems. While things aren't as bad as that, there are still some reasons to consider snakeheads harmful to the environment. Snakeheads are quick to colonize an area and to spread out. As they spread out they live well in both good and bad habitats—they tolerate horrible aquatic habitat conditions. In addition to that, they eat a lot and can get to be big and numerous when not harvested. While they haven't wiped out species, they do impact natural resources by eating a wide variety of prey and can spread some viruses (or pathogens). The Department of Natural Resources encourages people to harvest the species when caught. Harvested snakehead must be immediately killed. People are not

allowed to transport live snakeheads due to the danger the species poses if allowed to access new areas.

Anglers and archers have been going at 'em for several years. In 2016, commercial waterman reportedly harvested 4,320 pounds of snakehead. The harvest of snakehead may be responsible for declines in population size for some streams of Potomac River. But there are certainly streams where they remain plentiful, like Nanjemoy River. They have also naturally spread upstream of Great Falls on non-tidal Potomac River by using the C&O Canal. As snakeheads spread, please report occurrences outside of the tidal Potomac to: fishingreports.dnr@maryland.gov.

For more information on snakeheads, where they are found, and why they are invasive, please:

Click Here for [Our Webpage about Snakeheads](#).

First Reef for Tidal Bass

The Department of Natural Resources worked with the general public and key staff from Chesapeake Bay Foundation, National



Harbor, Maryland Bass Nation, Wetland Studies and Solutions, Maryland Artificial Reef Initiative, and Maryland National Capital Parks and Planning to build a reef in Smoots Bay (near National Harbor on Potomac River). Over eighty mini-Bay reef balls were constructed and added to Smoots Bay in order to provide habitat for fish such as largemouth bass, as well as invertebrates and other fishes. Piles of wood and large logs are also being added to the reef in order to provide a semi-natural environment for aquatic life. This is the first Maryland reef of its kind designed specifically for freshwater

aquatic organisms. The reef will be sampled each year to determine its use by fishes and invertebrates. Water quality measurements will also be taken each year. For more information on the progress of the reef, contact joseph.love@maryland.gov

Reef was only possible because of hundreds of volunteer hours and funding and/or equipment from its partners.



CURRENT STATUS OF TIDAL BASS POPULATIONS

Catch

Each fall largemouth bass are surveyed from many of the major tidal freshwater rivers of the Chesapeake Bay watershed. This year 179 sites were surveyed and each site is about 800 feet long. The sites are surveyed using boat electrofishing that puts electricity in the water to temporarily stun all of the nearby fishes. The bass are then scooped up with nets, measured, and released unharmed to where they were caught. To see a video of this process, please click on the icon:



The data that the scientists collect are analyzed and the results show how many fish are caught, how good reproduction and growth are, and how the population is doing.

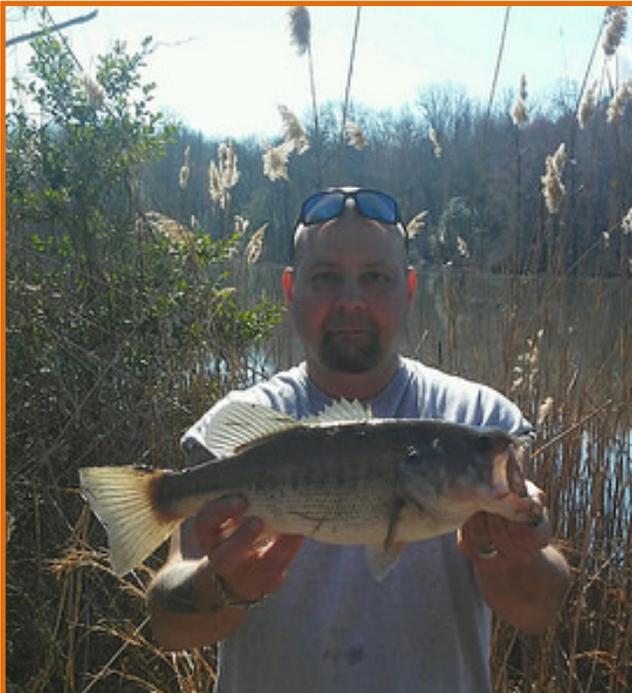
Catch using electrofishing in the upper Chesapeake Bay was below average and below

the Department of Natural Resources' target for a third straight year. Average catch by anglers was also below targets for a third straight year. In the upper Chesapeake Bay, the department surveys the Northeast River, Susquehanna River, and the Susquehanna Flats. In order to maintain and increase the number of adult bass, current projects include: increasing awareness of catch-and-release strategies, improving infrastructure for tournaments, and improved stocking policy. A weigh-in station at Anchor Marina (Northeast River) has been added to improve survival of adult bass and support bass tournaments. For more details on these improvements, please visit these [tournament requirements](#).



Department biologists inspect a bass caught during their fall survey.

The Potomac River population appears to be improving because of better annual survivorship, reproduction and recruitment. Unfortunately the average catch of age 1+ fish remains below the department's target. Projects aimed at improving survival of young bass and old bass are underway so that catch of age 1+ fish increases in the future. Current projects to meet that objective include: increasing awareness of catch-and-release strategies, improving weigh-in areas for tournaments, and improved stocking policy.



Tom Cullum caught her on Potomac River

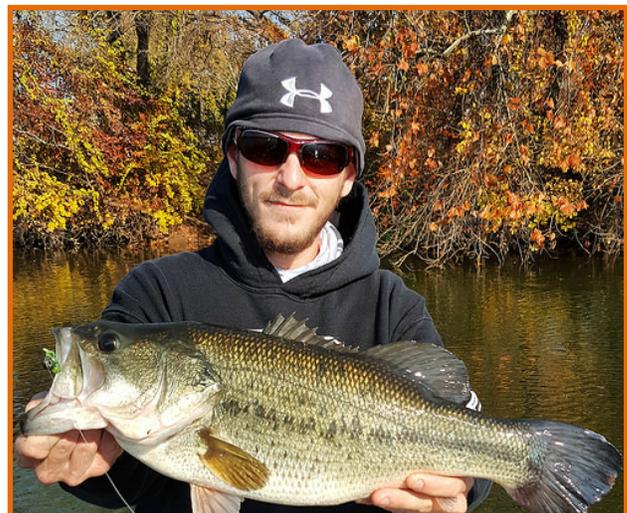
Wicomico River on the eastern shore of Maryland offers a small and important fishery for bass. Habitat quality is improving in Wicomico River. Areas near Salisbury offer a small number of good sized bass and good access to the fishery. Pond portions of Wicomico River, such as Johnson Pond, are also targeted by bass anglers.

Marshyhope Creek on the eastern shore of Maryland represents a scenic, major tributary of the Nanticoke River. The bass population in Marshyhope Creek is actively fished, both from docks of Federalsburg and from bass boats on the water. The department's survey data showed that catch rate was lower in 2016 than prior years, but was similar to that for other eastern shore rivers. The department will continue to monitor health and survival of fish in Marshyhope Creek.

Pocomoke River on the eastern shore of Maryland is a beautiful stream set in an historic cypress swamp. An outdoor writer once said it was best known for its crappie and largemouth

bass¹. The river is naturally acidic with less oxygen and a less diverse forage base. Bass may be targeted by casting to or from the shoreline and moving along shore until the bass hit. This past year and probably 2017 will benefit from strong reproduction of 2014.

Tidal areas of Gunpowder River can be a tough place to fish. It's not the best place to fish for bass sometimes. Sedimentation and seasonally higher levels of salinity, in addition to nutrient run-off, can create a challenging environment for largemouth bass. In spite of that the Gunpowder River and nearby Middle River attract a lot of anglers because of access, the number of people who live in the area, and popular fishing launches for bass anglers (for example, Dundee Marina at Gunpowder State Park). Management actions to improve the fishery include strategies that reduce run-off and pollution and using stocking as a tool to increase the number of adults.



Sean Allen Sr. caught this big fish on Gunpowder River

The work in this report is supported by funds from license sales and sales of fishing equipment, tackle, and motorboat or small engine fuel.

¹ Whitman, L. 1968. *Fishing in Maryland*.

One tool that the Department of Natural Resources uses to help offset declines in populations is stocking. In most cases stocking provides only a small, temporary improvement. That's why conservation for largemouth bass depends heavily on the actions of anglers and habitat protection. In 2016 the department released advanced fingerlings and subadults that were 3 inches to 10 inches in length to the upper Chesapeake Bay (340 fish to Bohemia River; 1008 fish to Sassafras River; 230 fish to Susquehanna River), Gunpowder River (N = 266), Patuxent River (N = 1554), and Potomac River (N = 104, 268). The department released an additional 500 subadults (10 inches to 12 inches in length) to Middle River and 500 subadults to Gunpowder River. Subadults were purposely chosen to stock these rivers because of a poor forage base and unknown predator density; larger fish may be more successful at searching out forage rich areas and escaping predation.



Jerry Stivers (Maryland Department of Natural Resources) releases young largemouth bass to Sassafras River.

Health

Similar to 2015 a small percentage of largemouth bass showed signs of injury or disease in 2016. Of 906 largemouth bass caught during the electrofishing survey in 2016, there were 38 with some sign of injury and/or disease. The most common injuries in 2016 were abrasions (n = 14) and physical damage such as

hooking injuries (n = 11). Most injuries were classified as mild.

In 2015, there were 30 fish (> 10 inches) tested for largemouth bass virus (LMBV) from Potomac River and 10 from Northeast River. Of 30 fish (> 10 inches) from Potomac River, 6 tested positive LMBV (20%) which was not different than that recorded in 2009 (20%). In Northeast River, 6 of 10 or 60% of the fish tested positive for LMBV.

Results from 2014 and 2015 were combined to learn that fish with LMBV were not skinnier than those that tested negative for LMBV. Additionally, average body girth did not differ between fish with LMBV and fish without LMBV.

For more information on bass health testing in the State, please:

Click Here for [Our Fish Pathogen Map](#).



Abrasion on largemouth bass possibly caused by hooking injury. Such abrasions are not usually lethal.

Reproduction

Reproduction and recruitment in Potomac River and upper Chesapeake Bay have improved over previous years. This could be partially owed to the greater cover of submerged aquatic vegetation. The habitat health score for Potomac River remains moderately poor, but the upper Chesapeake Bay scores higher and is showing significant improvement according to the [Chesapeake Bay Report Card](#). The Department of Natural Resources has also stocked young bass in each of these systems for the past 2 years. The protection that submerged vegetation provides young fish might help them escape predators. The vegetation also provides a source of food for young fish because tiny invertebrates live in patches of underwater grasses too.

Tidal freshwater habitats of the lower eastern shore do not offer as much submerged vegetation as the upper Chesapeake Bay and Potomac River. Lower eastern shore rivers provide smaller fisheries for largemouth bass, but many have had relatively consistent and stable populations over the past decade. Marshyhope Creek is a pristine river of the eastern shore Maryland and has a bass populations that is similar to most previous years. In the Wicomico River, stocking in 2012 may have helped to increase the number of fish. Natural reproduction was evident in 2016 and good habitat conditions provided a good home for both stocked fish and naturally reproduced fish. The Pocomoke River remains a favorite for many bass anglers - though it can be a tricky system for people unfamiliar with tidal freshwater areas of this river because it is very deep and narrow. Habitats for these lower eastern shore rivers have been showing a significantly improving trend in habitat health according to the [Chesapeake Bay Report Card](#).

Diet

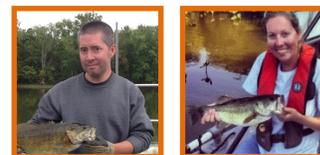
The Department of Natural Resources examined 102 fish that died during bass tournaments. Most had nothing in their guts, but 37 ate something recognizable. Bass caught in the upper Chesapeake Bay ate crayfish or fish, just like bass caught in Potomac River. The fish that were eaten by largemouth bass included: bluegill or sunfish, brown bullhead and other catfish, and minnows. A small number of largemouth bass had eaten dragonflies and snails.

Growth

Growth for largemouth bass peaks during the earliest years of its life. Body size, weight, and age all help determine growth rates for largemouth bass. From egg to its first birthday a largemouth bass living in a tidal river of Maryland can grow up to 8 inches long - and sometimes longer. After that, a young bass grows about 2 & 1/2 inches per year for its first three years of life. That's about 1/3rd to 1 & 1/2 pounds in its first three years of life! After age 3 bass, invest more energy into gaining weight rather than getting any longer.

Growth rates for fish that are 1 to 3 years old tend to be the same no matter what river the fish calls home. Average growth rates range between 2.2 inches/yr in Gunpowder River to 2.6 inches/year in upper Chesapeake Bay.

New Faces to the Department



Left: Michael Kashiwagi (Manager, Western II). Right: Rebecca Bobola (Biologist, Eastern Region).

Click here to learn more about [Freshwater Fisheries](#).

FISHING

Just Go Fishing!

Interested in going bass fishing but don't know where to start? A lot of folks start fishing small farm ponds or lakes for bass. A lot of anglers fished ponds near Baltimore and the surrounding area in 2016.

You can find a good place to go fishing if you:

Click Here for [Public Access Fishing Map](#)

Of the 500 submitted reports to the Department of Natural Resources' Angler's Log in 2016, 121 (or 24.2%) were from anglers who caught largemouth bass. This is about a 10% increase over 2015. More reports came from non-tidal anglers (80%) than tidal anglers. Similar to 2014 and 2015, the top bass locations included ponds/lakes near Baltimore.

The second and third highest fished locations were ponds and lakes of southern region and ponds and lakes in the upper Chesapeake Bay watershed. In 2014 and 2015 the second and third ranked locations had included Potomac River and flats/bays of upper Chesapeake Bay.

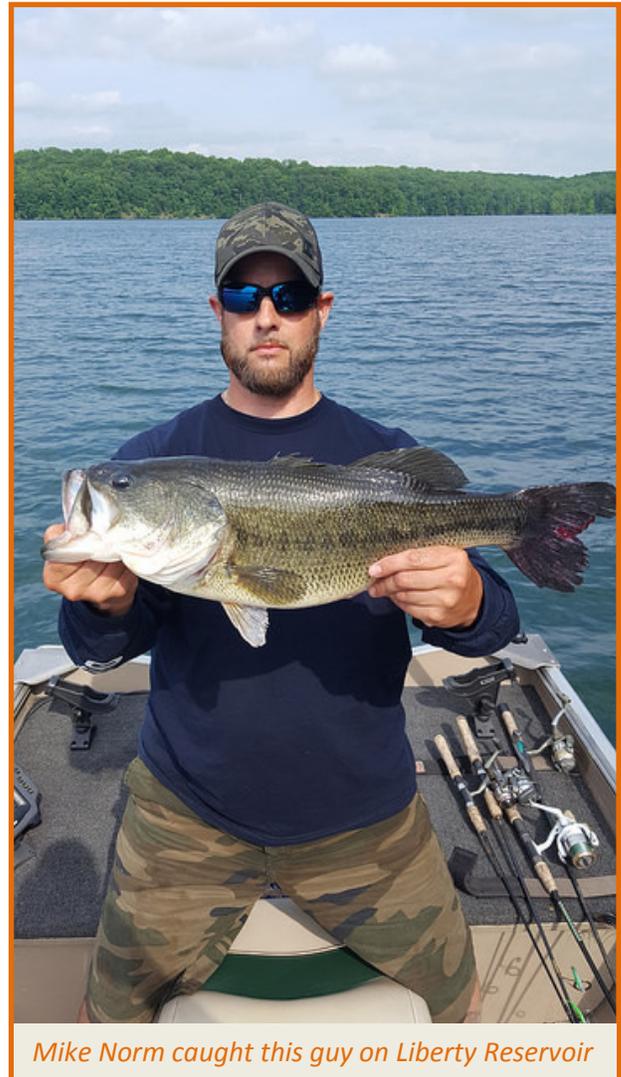
Tell us what you are catching. Please take the multi-species, freshwater fishing survey.

Click Here to [Take the Survey](#)

If your New Year's resolution is to learn from some experts at fishing bass, then consider fishing with a bass guide or a tournament. To make it easy to find their contact information, the department has a listing of both.

Click Here for [List of Licensed Guides](#)

Click Here for [List of Permitted Tournaments](#)



Mike Norm caught this guy on Liberty Reservoir

Be a Guide

Charter boat guides provide personal service to their customers - enriching not only the bass fishing experience but also the general experience on the water. They can also be great ecological historians. As stewards of the fishery, they often work with the Department of Natural Resources. They promote and protect the fishery by passing on a lifetime of quality fishing experiences to their customers within a few hours on the water. Do you think you have what it takes to be a bass guide? It's easy to get started.

Click Here to [Learn What YOU Need to be a Guide](#)



Don Goff, tournament director, is kayak fishing for bass on Blackwater River.

day during the 12" season. This catch is better than the past two years. This increase in catch could be owed to better reproduction, better adult survival, and more area of submerged vegetation which is often targeted by anglers.

Anglers reportedly weighed-in between 3 and 4 bass per day from eastern shore rivers.

Most bass are released alive after tournaments. In total there were 163 reported mortalities — that's 98.3% survival. Not everyone has reported their results. But mortality at the scale on Potomac River and upper Chesapeake Bay has reportedly declined in recent years.

For questions or comments about this report, please contact Dr. Joseph Love at Maryland Department of Natural Resources, joseph.love@maryland.gov, 410-260-8257.

Fish a Tournament

A BIG THANK YOU is owed to tournament directors (and their anglers) who voluntarily adopted year-round, best management practices, such as lowering creel limits or distributing handling practices to anglers. For a comprehensive list of these tournament organizations, please visit our website for [tournament anglers](#).

Directors reported 189 tournament fishing days in Maryland. The majority (59%) of those were held in Potomac River and upper Chesapeake Bay. About 3,604 anglers fished tournaments for approximately 8 hours between March and November. Few tournaments were reportedly held in other tidal waters of the state.

Anglers fishing Potomac River and upper Chesapeake Bay weighed-in about 3 bass per

How Some Tournaments Work

