Top Things to Know

- **Both Potomac River and upper Chesapeake Bay bass fisheries in 2021 had good levels of reproduction and abundance.**
- **Smallmouth bass populations in nontidal, upper Potomac River continue to rebuild naturally and with stocking efforts after several years of poor reproduction during heavy spring floods and summer disease outbreaks.**
- **Anglers fished in 2021, a combined 61,212 hours across 246 tournaments and caught over 17,000 bass, totaling over 40,500 pounds.**
- **Recreational bass anglers typically spent 3.9 hours and 46 dollars per fishing trip in 2021, and 72 percent of trips reported catching bass.**
- **An outbreak of disease in spring 2021 from a common bacteria in Gunpowder River and Middle River was caused by an unidentified ecological source.**
- **Alabama bass, a new invasive species in Virginia, threatens fisheries by outcompeting largemouth bass and weakening the gene pool for smallmouth bass; introducing new species outside of their home range is dangerous, unproductive, and illegal in Maryland without a permit.**

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REGLAS DE PESCA (EN ESPAÑOL)
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SCAN ME

MARYLAND DEPARTMENT OF NATURAL RESOURCES

Maryland

Larry Hogan, Governor | Jeannie H. Haddaway-Riccio, Secretary
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

3/2022 DNR 17-012022-299 dnr.maryland.gov/fisheries

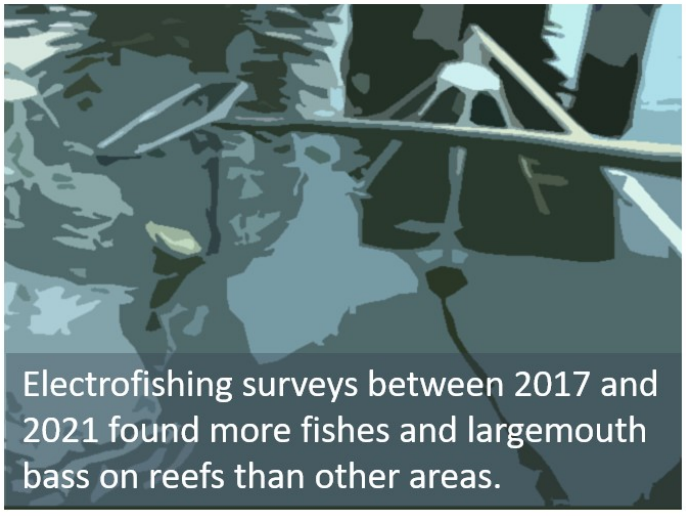
The tidal Potomac River offers a world renowned fishery for largemouth bass.

Long-term grass loss in Smoots Bay at National Harbor reduced bass habitat.

People worked together in 2015 to build artificial habitat for Smoots Bay.

Artificial reef ball habitats were added to Smoots Bay to attract fish.

Brush bundles and trees were anchored near reef balls to add natural habitat.



Electrofishing surveys between 2017 and 2021 found more fishes and largemouth bass on reefs than other areas.

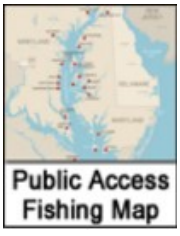
Questions? 1-800-688-3467

customerservice@maryland.gov

Wildlife Crime Stoppers

1-443-433-4112

Download App: Scan QR Code smartphone camera

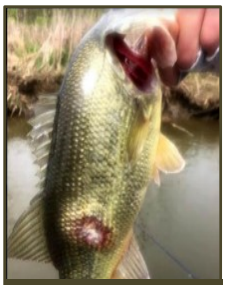


BASS DISEASE IN FISHERIES MANAGEMENT

Environmental stressors, like water pollution, increase risk of disease in fish.

Disease of juvenile smallmouth bass in the Susquehanna River (Pennsylvania) increased to alarming levels between 2005 and 2011, initiating additional regulation of the fishery to increase protections on spawning adults. Stressful warm water conditions combined with pollution caused young smallmouth bass to develop various fatal diseases from *Columnaris* and Largemouth Bass Virus. Fortunately, disease has waned in the Susquehanna River.

Juvenile smallmouth bass in nontidal Potomac River also suffered disease and death from several environmental stressors during the summer. As a result, recruitment deteriorated, threatening the fishery. The Maryland Department of Natural Resources worked with West Potomac Tour bass tournament anglers to collect pre-spawned adults. These adults were transported to the department's warm water hatchery in southern Maryland to produce offspring for supplemental stockings in the upper river.



Largemouth bass from Gunpowder River with a lesion on its side.

Disease occurred in tidal waters, as well. During spring 2021, Captain Scott Sewell reported diseased and dying largemouth bass adults from near Joppatowne (Gunpowder River). This outbreak of disease was caused by an unidentified environmental stressor that led to infection by *Aeromonas*, a common bacterial species in the Chesapeake Bay. In 2016, a fish kill near Joppatowne was caused by a dinoflagellate called *Karlodinium,* when warmer than usual water temperatures occurred in November and December. Similar to actions taken on the upper Potomac River, corrective stocking of Gunpowder River and Middle River included efforts by Maryland Department of Natural Resources, Wheelabrator Technologies, Inc. (Baltimore, MD), and Maryland Bass Nation.

Juvenile largemouth bass housed at Wheelabrator Technologies, Inc. (Baltimore).

No chemicals were identified by the Maryland Department of the Environment for causing the disease in juvenile smallmouth bass in the Potomac River or adult largemouth bass from the Gunpowder River. The outbreak of disease was caused by common bacteria or phytoplankton taking advantage of environmental or ecological stressors. Environmental and ecological stressors for bass can include intense warm water temperature, reduced habitat, spawning stress, increased predator threat, or excessive handling.

Recovery from an outbreak can be quick and in 2021, signs of recovery for bass in the Gunpowder River were observed a month after the outbreak. For all surveyed tidal rivers, the Tidal Bass Survey found only 31 of 1,112 largemouth bass had signs of disease in fall 2021, and many of them had been caught near popular weighing areas in Mattawoman Creek (Potomac River) and Northeast River (upper Chesapeake Bay). Outbreaks occur periodically, annually in the Susquehanna River for example, as environmental or ecological stressors re-emerge. Disease can re-emerge in specific areas, as it has in the upper Potomac, Gunpowder River, and Susquehanna River (Pennsylvania). As interactive climate and habitat changes influence specific ecosystems, associated ecological stressors threaten fisheries and embolden anglers and agencies to advocate for habitat protection.

MANAGEMENT

Committee Highlights

SCAN ME

The Black Bass Advisory Committee is an appointed public stakeholder group that advises the department on management needs for black bass fisheries in the state. In 2021, they:

- Welcomed new members! They were: Chris Fish, Dr. Andrew Ralowicz, Glenn Schultz, and Robert Shreeve.
- Discussed and rescinded the idea of stocking rivers with bass collected in ponds.
- Endorsed development of a voluntary, Black Bass donation option as part of the COMPASS licensing shopping service.
- Discussed and recommended some methods of encouraging or promoting catch-photo-release tournaments.

All meetings are currently held virtually by webinar. Future meeting dates are: April 4, July 11 and October 3.

Tagged Bass on Potomac River?

The largemouth bass fishery of the Tidal Potomac River is among the most popular in the Mid-Atlantic region and the United States. The river also offers other great fishing opportunities for catfish, crappie, blue crab and snakeheads.

Tag in largemouth bass from Potomac River.

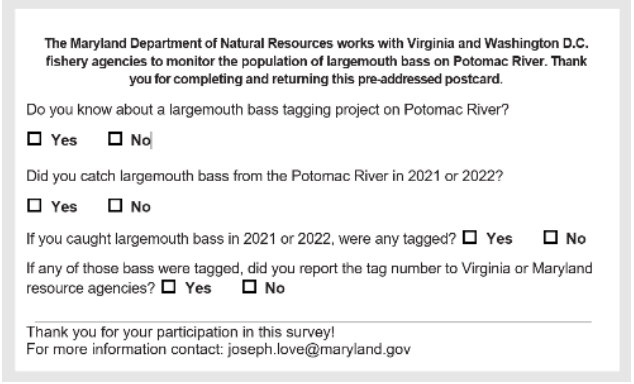
The largemouth bass fishery is managed by the Potomac River Fisheries Commission and resource agencies from four jurisdictions including Maryland, Virginia, and the District of Columbia.

Anglers work with these agencies to monitor the fishery with a vital and non-lethal, mark-recapture study. They began the work in spring 2021.

There are 798 tagged bass at large in the Potomac River, and tagged bass were reported by 133 anglers throughout 2021. Four of the anglers who reported tags were randomly drawn to win 25 dollar Bass Pro Shops gift cards. The department thanks all anglers who help protect the fishery for future generations by reporting a tagged bass after catching it.

Angler catches tagged largemouth bass from Potomac River.

The number of anglers who caught but did not report a tagged bass will be estimated in 2022. Without that estimate, agencies will have a severely biased estimate of abundance. In April, resource agencies in Virginia and Maryland will start asking anglers about their fishing day and whether they did or did not report catching any tagged bass in 2021. Anglers may also be asked to complete postcards or be surveyed during bass fishing tournaments.



The Maryland Department of Natural Resources works with Virginia and Washington D.C. fishery agencies to monitor the population of largemouth bass on Potomac River. Thank you for completing and returning this pre-addressed postcard.

Do you know about a largemouth bass tagging project on Potomac River?

☐ **Yes** ☐ **No**

Did you catch largemouth bass from the Potomac River in 2021 or 2022?

☐ **Yes** ☐ **No**

If you caught largemouth bass in 2021 or 2022, were any tagged? ☐ **Yes** ☐ **No**

If any of those bass were tagged, did you report the tag number to Virginia or Maryland resource agencies? ☐ **Yes** ☐ **No**

Thank you for your participation in this survey!
For more information contact: joseph.love@maryland.gov

Tidal Bass Fisheries in Maryland

SCAN ME

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

Potomac River
Status: Good

Of 657 surveyed largemouth bass, 547 were juveniles. Catch was average and tournament anglers reportedly caught 3 to 4 bass per fishing day, which was within management targets for the fishery. However, fewer than expected age 1 and older bass were collected by the Tidal Bass Survey. Sections of river near Woodrow Wilson Bridge had less submerged aquatic vegetation (an important habitat for young fish) than in the past, which could help explain fewer fish reaching adulthood (or lower recruitment). Reproduction was above average, which should result in more juveniles reaching adulthood. Young fish (ages 1 to 3 years) growth was also above average and bass generally exhibited good body condition. Only 11 bass showed signs of mild to moderate disease; seven from Mattawoman Creek; 2 from Piscataway Creek; 2 from Chicamuxen Creek. Because of average catch and above average reproduction and growth designated the fishery as *Good*.

Upper Chesapeake Bay
Status: Good

Of 207 surveyed largemouth bass, 137 were juveniles. Catch was average relative to previous years, though below average for age 1 and older fish. Tournament anglers reported catching 2 bass per fishing day, which is similar to previous years. Reproduction was good over recent years and should result in more juveniles becoming adults. Young fish (ages 1 to 3 years) exhibited good growth and adults, on average, had good body condition. Annual mortality was slightly higher than average but not alarming. Of all caught bass, 8 had signs of mild to moderate disease; 4 from the Northeast River, 2 from Furnace Bay, 1 from the lower Susquehanna River, and 1 from Swan Creek. Average catch indices and generally good growth contributed to the status of this fishery being designated as *Good*.

Conrad Davis catches a largemouth bass near Woodrow Wilson Bridge (May 2021)

Chester River
Status: Good

Of 116 surveyed largemouth bass, 26 were juveniles. Catch was above average and juveniles were collected at a greater percentage of sites than normal. Growth was above average, and

bass generally exhibited good body condition. Ten bass showed signs of mild disease; 8 of these were caught near Millington; 2 downstream of Highway 301. Because of above average catch and growth and average catch of age 1+ fish and juveniles, the status of this fishery was designated as *Good*.

Choptank River
Status: Good

Of 68 surveyed largemouth bass, 17 were juveniles. Catches for adults and juveniles were average and greater than prior years since 2008. Fish exhibited above average growth and average body condition, with only one showing signs of mild disease. Because of average catch and reproduction numbers, the status of this fishery was designated as *Good*.

Gunpowder River
Status: Unknown

Of 37 surveyed largemouth bass, 18 were juveniles. Catch has not changed in the past three years after greatly increasing over levels observed between 2013 and 2017. While bass showed average reproduction, recruitment appears limited because fewer than expected subadult bass (8 inches – 12 inches) were collected. No largemouth bass had signs of disease and instead, generally had good body condition. Because of the limited dataset for comparison, the status of this fishery has been designated as *Unknown*.

Jhong Vitao caught 20-inch largemouth bass from farm pond (Oct. 2021).

Middle River
Status: Unknown

We caught 9 largemouth bass, including 2 juveniles. Catch has been similar since 2018. The average index of juvenile abundance was the lowest among tidal populations of bass surveyed in 2021 and were collected at only 29% of sites. Average body growth rate was low relative to that for other tidal populations of bass, but body condition or robustness was good. None of the 9 collected bass had signs of disease. Because of the limited dataset for comparison, the status of this fishery has been designated as *Unknown*.

Bush River
Status: Unknown

Of 18 surveyed largemouth bass, 1 was a juvenile. Catch has been similar since 2018. The average index for juvenile catch was similar to nearby Gunpowder River, but proportionately fewer sites had juveniles and reproduction was poorer than in previous years. One largemouth bass had signs of minimal disease. Average growth and body condition were similar to those for the nearby Gunpowder River. Because of the limited dataset for comparison, the status of this fishery has been designated as *Unknown*.

Non-Tidal Bass Fisheries in Maryland

Non-tidal black bass fisheries in Maryland stretch from Deep Creek Lake and the Youghiogheny River in western Maryland to farm ponds and impounded waters of the Eastern Shore. The nontidal or upper Potomac River and Deep Creek Lake draw bass anglers and tournaments every year. On the eastern shore, Johnson's Pond is a local favorite.

In 2021, over 40% of black bass anglers submitting volunteer angler reports had targeted impoundments and farm ponds. Additionally, most anglers who sent reports to Maryland's Anglers Log had fished southern Maryland (St. Mary's Lake), central Maryland (Triadelphia Reservoir), and the Eastern Shore (Smithville Lake).

These non-tidal fisheries are routinely assessed by regional biologists within the Maryland Department of Natural Resources' Freshwater Fisheries and Hatcheries Division. Stay current and visit the Division's website.

Non-Tidal Potomac River Status: Rebuilding

In the upper Potomac River (Paw Paw to Seneca), mean annual recruitment scores for smallmouth bass have been below average for 10 years. In part this is due to high average stream flow during spring that can destroy nests. Also, disease caused death of juveniles during the summer. Without peak recruitment for a decade, the fishery has been threatened.

Smallmouth bass adults are the primary black bass target in the upper Potomac River. The department's catch indices for non-juvenile smallmouth bass in 2020 was 37 fish per hour, which was approximately half that measured between 2010 and 2019. The loss in catch likely reflects a decrease in population size and limited recruitment over the past several years.

Smallmouth bass in the lower river reached 12 inches in 3.1 years, while fish in the middle and upper river reached 12 inches in 4.1 years. Therefore, it could take at least 3 years after a peak recruitment year for the fishery to rebound. The good news is that those fish, once they reach adulthood, should have a long life. Annual mortality for the population remains under 20% per year and is lower than national averages. Additionally, recent surveys suggested the adult fish are in excellent condition.

Despite problems with recruitment and a smaller population size, the fishery offers a good proportion of larger sized fish, particularly in the lower section of the river. Smallmouth bass from the 2019 year class have started to recruit to a fishable size, with the exception of the middle section of the river. While relatively few tournaments are held annually on the upper Potomac River, those that were reported 2021 catching fish between 2 pounds and 4 pounds, but weighed relatively few fish in a fishing day (on average, just 1 fish per angler).

Deep Creek Lake Status: Good

The black bass fishery in Deep Creek Lake is dominated by smallmouth bass although a quality largemouth bass fishery is present based on recent spring electrofishing surveys. Of the 157 bass collected, 134 were smallmouth bass and 23 were largemouth bass.

Eric Packard caught this Smallmouth Bass on the Youghioheny River (August 2021)

The traditional size structure indices suggest that the smallmouth bass fishery is well balanced with the majority of fish falling in the stock-quality (50%) and quality-preferred (37%) size increments (7 to 11 inches and 11 to 14 inches, respectively). One fish over 19 inches was

collected during the most recent survey. Body condition of smallmouth bass was generally less than optimal and further investigations into age, growth, and diet may be warranted. Overall, the smallmouth bass fishery has good reproduction and a well-balanced population.

Traditional size structure indices suggest that the largemouth bass fishery in Deep Creek Lake is characterized by fewer, larger fish, with 65% of the adult bass collected being quality size fish (12 inches) or larger. This size structure suggests that smaller bass are not fully represented in samples that could indicate poor survival of young-of-year bass. If future samples show similar patterns, further study of the largemouth bass fishery may be warranted. Relative weight of largemouth bass from all size increments is considered optimal and we collected a fish over 20 inches, weighing 5.5 pounds.

Tournament anglers weighed lunkers (or the heaviest fish) ranging between 2.7 pounds and 5.8 pounds; between 1 fish and 4 fish per day.

Triadelphia Reservoir
Status: Rebuilding

Largemouth bass adults are the primary targets of Triadelphia Reservoir anglers, and during the survey staff caught 1,121 largemouth bass. This was greater than during the 2018 survey and mostly consisted of young fish (less than 10 inches). The fishery has been rebuilding following a draw-down of the reservoir that ended last year. While the reservoir was dry, succulents, emergent vegetation and brush grew; now flooded, this vegetation offers excellent habitat for young fish as they grow to become adults. Currently, quality and preferred sized fish by anglers are rare. As young fish grow in coming years, they should replenish the older age classes. Relative weights were high for all size groups and bass tended to be robust in body size. No tournament organizations submitted reports for the Triadelphia Reservoir.

CONSERVATION
Advancing Bass Conservation

Tim Shaw and Nate Hess (Fishers of Men) won the Director's Conservation Award in 2021 to support purchasing weigh-in supplies for a youth tournament held at St. Mary's Lake. The bass fishery at St. Mary's Lake is managed as a trophy fishery, allowing anglers to possess only one bass that is 15 inches or greater in length. To allow every caught fish to count during the Fishers of Men tournament, a catch-photo-release fishing tournament was organized.

Angler catches largemouth bass from St. Mary's Lake during Fishers of Men tournament.

Both Tim and Nate worked with the department to purchase hand scales that were used to weigh bass caught during the day. The catch data they provided to the department were the first available from a tournament on St. Mary's Lake. Twelve anglers caught and released 24 bass.

The largest was 3.81 pounds. Each angler caught and weighed 2 fish, on average, during the 6 hour fishing day.

The director of the Ike Foundation's tournament, Jocelyn Rhea, will be awarded the Director's Conservation Award in June 2022. The tournament supports youth fishing, and includes an expo and festival. The award will be used to purchase mesh bags and a chute system to release bass from docks. Occasionally, chutes are needed when hand release would cause bass to fall several feet before reaching the water surface or when hand release becomes otherwise hazardous for the bass or person.

Chute used to release largemouth bass at Smallwood State Park (Potomac River)

During summer of 2021, Captain Steve Chaconas (National Bass Guide Service) worked with department staff to create a video for the department's Bass Class and its Bass Conservation webpage. The video highlighted new information and conservation tips. The tips had been suggested by tournament directors and affiliates who meet regularly with the department's Black Bass Advisory Committee. They include using continuous live well circulation with periodic water exchanges throughout the fishing day when bass are in live wells and water temperature is at or exceeds 80 degrees Fahrenheit.

Visit Our:
Bass Conservation Webpage

SCAN ME

Want a Conservation Sign for Your Weigh-in Station?

The department printed new signs for the tournament weigh-in station built at Smallwood State Park. It conveys new information on handling bass and a link to the department's new Bass Conservation webpage. If you would like a sign for your weigh-in station, contact us: mailto:JOSEPH.LOVE@MARYLAND.GOV.

https://youtu.be/7T8IwDNR87Y

SCAN ME

The Skinny on Alabama Bass

Alabama bass (*Micropterus henshalli*), native to Georgia and Alabama, has become a popular fishing target in some southern states due to its rapid growth and fighting ability. This reputation has led anglers to illegally introduce Alabama bass into new areas where it has become invasive. Luckily, it has not been introduced into Maryland.

Alabama bass outcompetes largemouth bass and causes declines in its abundance. Alabama bass also hybridize with smallmouth bass, possibly causing genetic problems. Over just a few short years, Alabama bass densities can get very high and fish become stunted, leaving lots of skinny 1 pound bass in a fishery.

Alabama bass have been introduced illegally to Lake Gaston (North Carolina, Virginia) and Claytor Lake (Virginia). Alabama bass has been confirmed from James River (non-tidal reach).

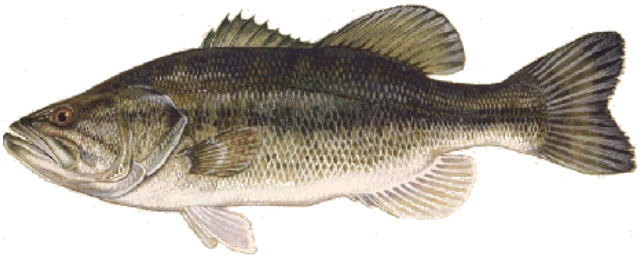
Alabama Bass (above)

- **Lower jaw does not extend beyond eye, unlike largemouth bass (below)**
- **Has dark, blotchy band, and spots below the band**

Can You Identify These Bass?

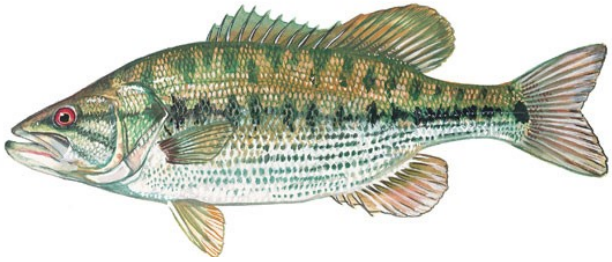
Black bass species are native and endemic to North America. They represent a special role as a top predator of North America's freshwater ecosystems. There are approximately 19 species of black bass in North America. In Maryland, 2 black bass exist: largemouth bass and smallmouth bass. Anglers fishing across southern states may have also caught spotted bass and redeye bass, or many others not shown below.

Can you spot how they differ?



Largemouth Bass

Smallmouth Bass



Spotted Bass

Redeye Bass

CATCH-PHOTO-RELEASE TOURNAMENTS IN BASS CONSERVATION

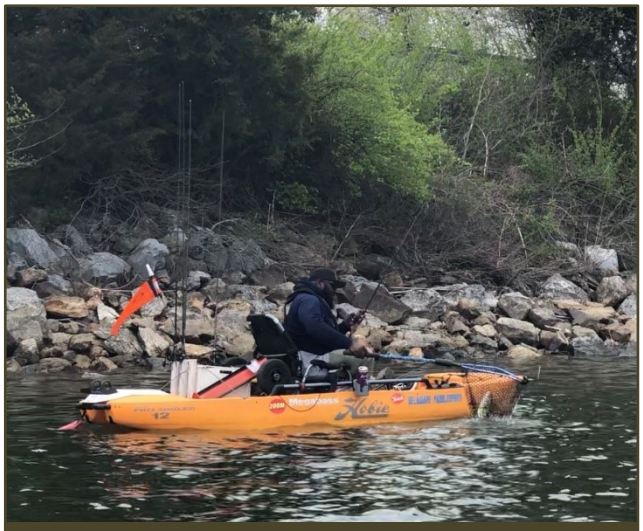
Tournament bass fishing began in earnest in the 1960s with the formation of the Bass Anglers Sportsman Society (B.A.S.S.) and other groups. Anglers competed for a limit of black bass to bring to scales, and the winner had the heaviest bag.

Black bass tournament held at Smallwood State Park (Potomac River)

At the time, tournament fish were kept after weigh-ins, and piles of dead fish were commonplace. Since the early 1970s, however, the focus of bass tournaments has shifted to conservation and keeping fish alive. Now, many tournaments have anglers catch a fish, keep it alive in a live well, weigh it on stage, and return it to the water. The fish survives, reproduces, and can be caught again. In most cases, over 95 percent of fish are returned to the water. Some fish die (up to 30 percent of catch), especially during summer (June – September) because hot water temperatures make live well maintenance more challenging. A growing number of anglers have sought alternative formats.

PLEASE TELL US WHAT YOU THINK OF THE BLACK BASS ANNUAL REVIEW

Take the One-Question Survey



Catch-Photo-Release tournaments are growing in popularity.

Catch-Photo-Release (CPR) tournaments are growing in popularity. During these tournaments, anglers catch, net, dehook, weigh or measure, and take a digital photograph before releasing the fish back to the water. Anglers work quickly to remove the fish from the net and weigh the fish using a zeroed, tournament approved scale. For some CPR tournaments, anglers may measure the fish using a standardized, tournament approved ruler. Whether weighed or measured, anglers work quickly and take several photos of the fish on the scale or measuring board before gently returning it to the water. The whole process can take 60 to 75 seconds.

According to Associated Press (April 2021), the Wisconsin Department of Natural Resources reported an increase in CPR tournaments from 6 per year (2010 – 2015) to more than 30 per year (2015 – 2020). Major League Fishing began using the format in 2011 and features some of the biggest names in bass fishing. Last year, B.A.S.S., the nation's (or world's) oldest bass fishing organization, held its inaugural kayak CPR series.

In Maryland, several CPR tournament series operate in the Chesapeake Bay watershed. Both Maryland Bass Nation's kayak division and Delaware Paddlesports Kayak Bass Fishing series

have tournaments scheduled in Maryland waters in 2021. The Maryland Department of Natural Resources recognized early efforts of kayak and CPR fishing in 2018 when awarding Don Goff, director of Susquehanna River Bassmasters, the first Director's Bass Conservation Award. Since then, the sport has grown and now offers the department and the fishery new opportunities.

Angler catches largemouth bass during catch-photo-release tournament.

Anglers fishing the Kayak Bass Fishing Trail Series presented by DEE ZEE on Potomac River in 2021 not only fished, but provided photographic data for the department. Permitted bass tournaments currently provide the department with data on catch statistics, but CPR tournaments offer the additional opportunity to provide photographic data that can be used to assess fish health and perhaps, even identify the individual fish.

Angler measures fish for qualifying in catch-photo-release tournament.

The CPR format can allow anglers an opportunity to compete in locations or at times when possession is otherwise prohibited. Some seasons or locations managed with trophy regulations cannot be fished with traditional tournament styles because of no-possession regulations. Non-tidal waters prevent possession, for example, during spring (March 1 – June 15). Trophy regulations limit the possession of 15-inch or larger bass to just one. Wanting to organize a youth tournament on St. Mary's Lake, which is managed by trophy fish regulations, the director of Fishers of Men, Tim Shaw, and organizer Nate Hess, used a CPR format to enable youth anglers an opportunity to compete and weigh several fish.

Angler weighs fish for qualifying in catch-photo-release tournament.

The CPR format also reduces handling stress on bass because each fish is immediately released rather than contained in a live well for the full fishing day. By design, CPR tournaments avoid many of the problems with possession in a live well during summer heat. Live well maintenance has been a focus of bass conservationists for decades because anglers generally do not want to kill fish. Outreach has included the department's Bass Class, Bassmaster's Keeping Bass Alive by Gene Gilliland and Hal Schramm, and a 2020 guidebook sponsored by AFTCO for safer handling practices.

Given benefits such as tournament access to non-possession seasons (e.g., non-tidal waters during spring) and reduced handling stress on bass during summer, why don't all organizations switch to CPR format? First, fishing partners in large fishing organizations may not know or trust one another. Second, some people simply enjoy holding up their catch to proudly show their catch to families and friends. Pride in catch is one tradition of bass fishing that has not changed.