



Pennsylvania Fish & Boat Commission

EXECUTIVE DIRECTOR
P.O. Box 67000
HARRISBURG, PA 17106-7000
717-705-7801 – 717-705-7802 (FAX)
E-MAIL: JARWAY@PA.GOV

April 4, 2012

The Honorable Michael Krancer
Secretary
Pennsylvania Department of Environmental Protection
Rachel Carson State Office Building
400 Market Street
Harrisburg, PA 17101

Dear Secretary Krancer:

I am writing to you to express my continuing concern about the disease issues plaguing smallmouth bass in the Susquehanna River and its tributaries. I previously sought the Department's assistance, as well as the assistance of many other organizations, in our efforts to identify the causative agents responsible for the disease causing the death of young-of-year smallmouth bass in the Susquehanna River and tributaries. On April 12, 2010, I wrote to U.S. EPA Regional Administrator Shawn Garvin to seek EPA's support in diagnosing the cause of the declines of this important fishery which was once considered to be one of the best smallmouth bass fisheries on the East Coast (letter enclosed). I also personally discussed this matter with you at our meeting in the spring of 2011. On August 11, 2011, I co-signed a letter sent jointly from Penn Future, the Chesapeake Bay Foundation, American Rivers, PA Trout Unlimited and the Fish and Boat Commission to your Department. That letter, which is also enclosed, outlines the reasons supporting our request for a 303(d) impairment designation for the Susquehanna River.

In 2007, Pennsylvania Fish and Boat Commission (PFBC) staff conducted a creel survey and economic impact study of the Susquehanna River fishery. This survey encompassed 136 miles of the Juniata (from Port Royal to the mouth) and Susquehanna River (Sunbury downstream to Holtwood Dam) and estimated total trip-related expenditures of anglers on these waters totaled \$2.734 million in 2007. The primary sport fishery of this reach of river is for smallmouth bass. Throughout the course of this investigation, \$1.37 million has been collectively spent by state and federal agencies on water quality and fish health studies. Your staff have provided valuable support for field investigations, contributed on technical research committees, and provided support to the Susquehanna River Policy Committee. Additionally, your Department provided approximately \$141,000 in funding through 2010 with additional funding since 2011. These funds were utilized to expand the number of water quality gages in the Water Quality Network, support water quality sampling conducted by the Pennsylvania

Our Mission:

www.fishandboat.com

To protect, conserve and enhance the Commonwealth's aquatic resources and provide fishing and boating opportunities.

Water Science Center, and disease investigations conducted at the U.S. Geological Survey (USGS) Leetown Science Center. I appreciate these contributions; however, recent outbreaks of disease in adult smallmouth bass, which have historically been unaffected, necessitate additional research and funding support.

In the autumn of 2011, my staff began noting diseased adult smallmouth bass in the reach of the Susquehanna River between York Haven and Safe Harbor dams. These outbreaks were so severe that approximately 40% of the adult smallmouth bass surveyed had extensive lesions and open sores. Unfortunately, the extreme hydrologic conditions this autumn prevented subsequent collections for disease analysis and, as such, the causative agents have not been identified nor could a relationship to the condition seen in juvenile fish be established. These disease occurrences were also observed by the angling community and several reports came in from anglers noting fish with obvious external lesions.

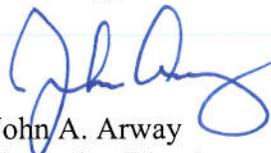
Within the past few weeks, increased sightings of melanosis in smallmouth bass have been reported throughout the Susquehanna River Basin (enclosed figure). Anglers have sent numerous emails to PFBC staff and others reporting their current observations. These angler reports have caught the attention of the media, and we are experiencing an ever increasing level of public and legislative concern and an outcry for action. The melanosis that is being observed (colloquially being referred to as black spot or blotchy bass syndrome) is an accumulation of melanin (dark pigment) in the dermis and epidermis of the fish. There is considerable speculation among fisheries researchers as to the causes of blotchy bass condition which range from hormonal changes, possible viral infections, environmental conditions and other unknown stressors. Even though there is no evidence to suggest that this is the result of either a specific or general pollution event, it has raised public awareness, in part, because it is so visibly striking and because of the well documented ongoing smallmouth bass disease issues.

Endocrine disrupting compounds (EDCs) are emerging not only in our Commonwealth, but across our nation as a matter of primary concern for both fish and public health. There is insufficient information about these compounds in the Susquehanna River Basin and in the other waters of our Commonwealth. However, wide-scale evidence of endocrine disruption exists in the smallmouth bass population of the Susquehanna River. Male smallmouth bass have been reported to have high frequency of testicular oocytes (egg precursor cells in testicular tissues). These cases are among the most severe that have been observed by Dr. Vicki Blazer, a U.S. Geological Survey researcher who has studied this condition in Pennsylvania, Maryland, Virginia and other North American waters. Similarly, studies by the USGS have found that adult male bass collected from the Susquehanna River have also exhibited varying concentrations of vitellogenin in their blood stream; a protein that serves as a precursor to egg production in females and should not be readily detectable in male fish. These intersex conditions are reason for concern. We don't know why this condition is occurring in the Susquehanna River. Unfortunately, the type and quality of data needed to characterize the contaminants leading to endocrine disruption in the Susquehanna River are lacking. While the science behind monitoring these parameters is still developing, knowledge of this information as part of this investigation is of utmost importance. The lack of available data prevents us from knowing the role that these parameters may be playing in the health issues of the smallmouth bass population.

The Pennsylvania Fish Commission was created in 1866 to restore American shad to the Susquehanna River. Since 1976 there has been an active stocking and full-scale restoration program for American shad underway. A large part of this program includes stocking of American shad fry into the Susquehanna River and several tributaries. We evaluate those stockings by seining for juvenile shad as they migrate down the Susquehanna River on their way to the ocean during late summer and fall each year. We have seined the same areas for years and have been able to establish an index which allows us to determine the success of wild reproduction and hatchery stocking each year. Since 2001, the catches for these efforts are nearly zero. Most troubling is the fact that unlike juvenile smallmouth bass which spend their time in shallow areas documented to be affected by low dissolved oxygen linked to water quality issues, the juvenile American shad are pelagic species which favor the deeper waters away from the banks and shallows. We have no explanation for the drop in seine catches and believe that they could be water quality related. The fact that a mid-river species may be affected adds additional concerns about water quality suggesting that the river's problems are more widespread than low dissolved oxygen in the shallows.

I bring these examples to your attention because we still have the original problem with young-of-year smallmouth mortality discovered in 2005, and we are now discovering new problems for other species of fish as time goes on. I again request, based on the evidence of sick fish and declining fisheries, that the Department list the Susquehanna River as an impaired water in order to "start the clock" on remedying the water quality problems. The monitoring required by the listing process would help to document and develop solutions for the water quality issues plaguing the river, and benefit all communities and users that depend on clean water. This correspondence, the joint letter requesting inclusion on the 303(d) list, and the resolution by our Board of Commissioners recognizing the Susquehanna River as impaired is testament to our resolve to see this problem remedied. We need to move beyond research and begin some action such as a TMDL before the entire fishery of the river collapses and the time for action is too late. I welcome your thoughts about this issue since it is one that we must address together.

Sincerely,



John A. Arway
Executive Director

Enclosures

cc: Paul Swartz, Executive Director, Susquehanna River Basin Commission
Christopher Abruzzo, Deputy Chief of Staff, Office of the Governor
Rebekah Myers, Senior Policy Manager, Office of the Governor
Joseph Murzyn, Deputy Secretary of Legislative Affairs, Office of the Governor
Dr. Eli Avila, Secretary, Department of Health