



Pennsylvania Fish & Boat Commission

EXECUTIVE DIRECTOR
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April 12, 2010

Shawn Garvin
Regional Administrator
United States Environmental Protection Agency
1650 Arch Street
Philadelphia, PA 19103-2029

Subject: Assistance from United States Environmental Protection Agency on the Susquehanna River Fish Health Issue in Pennsylvania

Dear Mr. Garvin:

The Pennsylvania Fish and Boat Commission (PFBC) is seeking your help to study and hopefully resolve one of our most troublesome environmental issues, the health of the Susquehanna River smallmouth bass fishery. Recently our Board of Commissioners passed the enclosed Resolution and directed me to contact you and Secretary Hanger of the Pennsylvania Department of Environmental Protection (PA DEP) for assistance in diagnosing the problem. I have met with Secretary Hanger, and we have a meeting scheduled for June 11th from 10:00 a.m. until noon with our respective staff. I would welcome your attendance at that meeting if you are available.

The good news is that the waters and aquatic resources of the Commonwealth of Pennsylvania have greatly improved over the years since the passage of the Clean Water Act. Great strides have been made in pollution control and water quality improvements in all parts of the state. However, recently, several rivers within the Chesapeake Bay watershed in Pennsylvania, Virginia, and West Virginia have experienced unexplained die-offs of smallmouth bass. We began finding diseased fish in their nursery habitats along the river's edge in 2005. We have continued to find dead and diseased young fish whenever the river flows are low and water temperatures are elevated, which also occurred in 2007 and 2008. In 2006 and 2009, we had wet springs and river flows were high and temperatures were cool and we did not observe diseased fish. This fish health issue has not been encountered in any of our other Commonwealth major river basins such as the Ohio and Delaware and appears to be limited to the Susquehanna. The Pennsylvania fish health issue appears to be different from the other fish health issues in the Chesapeake Bay watershed in that only our young-of-the-year smallmouth bass appear to be affected while the southern rivers are experiencing adult and juvenile mortality of multiple species. If this continues the entire fishery could be in trouble, and there are signs that recruitment is being affected by the disease as well as poor spawning in high flow years to the point where the fishery itself is collapsing in certain portions of the river.

Our Mission:

www.fishandboat.com

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

We formed a technical workgroup from multiple state and federal agencies in 2007 and implemented several assessment projects looking at the potential cause(s) of the fish health issue. The PA DEP and the PFBC have invested a significant amount of resources in an attempt to find the cause(s) and a solution to this significant problem.

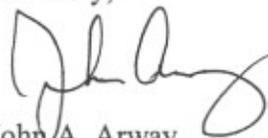
We appreciated your agency's funding in 2008 to allow our workgroup to evaluate water quality chemistry at the designated fish health assessment sites. The studies that have been implemented over the past two summers have provided some insights and valuable information into our adaptive management approach to understanding the problem. This year, the workgroup agencies, which include our agency along with the PA DEP, United States Geologic Survey, the Susquehanna River Basin Commission, the U.S. Fish and Wildlife Service and the U. S. Environmental Protection Agency are sharing resources to complete the next series of studies.

Each partner of the technical workgroup has contributed technical expertise and equipment to the process. Using available science and professional judgment, we have designed the next phase of the study to identify the cause(s) of the fish health issue. A critical tool that would help our efforts are continuous water quality monitoring units for deployment in selected tributaries and mainstem sites along the Susquehanna River. The units would complement the units deployed by the Susquehanna River Basin Commission that are designed to monitor Marcellus Shale water resource impacts within the Basin and the other monitors deployed by PA DEP staff to target this problem.

The Freshwater Biology Team, in particular Dr. Frank Borsuk, based in your Wheeling Office has provided important support for our efforts, and I personally appreciate their advice on the design of the studies and interpretation of the study results thus far. Our team needs, and appreciates, your commitment to provide the funding to purchase the units and work with us for the duration of this study. The symptoms that we have observed with the juvenile smallmouth bass indicate to me that when we have sick fish, we have a sick river. My hope is that we can work together to assess the problem and develop solutions in the very near future to correct it.

In closing, thank you for your time and assistance in this matter. Please do not hesitate to contact me at 717-705-7801 or jarway@state.pa.us to discuss this matter further.

Sincerely,



John A. Arway
Executive Director

Enclosure

cc: Secretary John Hanger
PFBC Board of Commissioners
Mr. James Campbell, USGS

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Drafted by: J. Arway *red 4-14-10*
bc: L. Young, G. Smith, D. Spotts, D. Miko

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Whereas, the Pennsylvania Fish & Boat Commission (PFBC) holds its Board of Commissioners (Board) as the entity entrusted to establish programs and services for the betterment of the Commonwealth's aquatic resources and the fishing and boating recreational services that they provide to the anglers and boaters of the Commonwealth,

Whereas, the Board strives to be aware of problems and challenges facing the Commonwealth's aquatic resources and, as such, has received numerous complaints from anglers fishing the middle reaches of the Susquehanna River with regard to a serious decline in their catch rates of smallmouth bass,

Whereas, PFBC staff biologists, having monitored juvenile bass populations at various locations in the Susquehanna and its tributaries for decades and have found the Susquehanna River smallmouth bass population in the middle reach of the river to be in serious decline and, based upon staff projections, will continue to decline for sometime into the future because of poor recruitment from weak year classes,

Whereas, the PFBC staff have detected *Flavobacterium columnare*, a bacterium that typically infects stressed fish, in juvenile smallmouth bass in the Susquehanna River, such infections being first discovered in the Susquehanna River and major tributaries in the summer of 2005 and again in 2007 and 2008,

Whereas, the Board instructed staff and allocated significant agency resources (\$400k) to support a two-year water quality study coordinated by the U.S. Geological Survey (USGS) in 2008 and 2009,

Whereas, the USGS in reporting the results of the 2008 study at the October 2009 Commission meeting emphasized that they found stress factors including but not limited to elevated water temperature and low dissolved oxygen during times critical for survival and development of smallmouth bass (May 1 through July 31) with daily minimum dissolved-oxygen concentrations lower than the applicable national criterion (5.0 mg/L) in microhabitat in the Susquehanna River at Clemson Island on 31 days (of 92 days in the critical period) compared to no days in the corresponding main-channel habitat,

Now Therefore Be It Resolved, the Board of Commissioners of the Pennsylvania Fish & Boat Commission hereby expresses deep concern for the health of the Susquehanna River's smallmouth bass fishery and asserts there is evidence showing that the water quality of the Susquehanna River has become increasingly impaired to the level that it is seriously impacting important elements of the Susquehanna River fishery, especially its nationally-reputed smallmouth bass fishery.

Be it Further Resolved, the Board of Commissioners strongly recommend that the Pennsylvania Department of Environmental Protection and the U.S. Environmental Protection Agency immediately expand ongoing efforts to find the sources and causes of pollution that are contributing to the demise of the Susquehanna's smallmouth fishery and restore this national treasure to its former healthy status.