

Tributary Summary: York River

Invasion status

When were blue and flathead catfish introduced?

- Flathead catfish were a result of unauthorized introduction to the James River in the 1980s. From there anglers introduced the species to the Pamunkey River, which leads to the York, sometime in the early 2000s. The species is not known to be established in the Mattaponi [York].
- See "[Ecological Role of Blue Catfish in Chesapeake Bay Communities and Implications for Management](#)"

(Schloesser et al., 2011) for history and description.



A blue catfish weighing 52 lbs collected in the Pamunkey River in 2007. Photo courtesy of VIMS.

What methods are being used to determine population size and structure? What population data exists?

- Virginia Department of Game and Inland Fisheries (VA DGIF) will be conducting mark-recapture population estimates in the Pamunkey, Rappahannock and Powell Creek in summer 2015.
- VA DGIF monitors catfish assemblage in the York using standardized 15 pulse-per-second electrofishing at fixed stations throughout the range of blue catfish habitat. This program provides knowledge of the status and trends in blue catfish relative abundance, size and age distribution, growth and mortality. It also provides surveillance and early detection of expansion of invasive catfish.
- Virginia Institute of Marine Science (VIMS) conducts monthly trawl surveys to estimate abundance and size structure of blue catfish in the York River system.
- Virginia Tech (VT) and VA DGIF modeling efforts to produce models of blue catfish abundance in Virginia tributaries of the Bay.

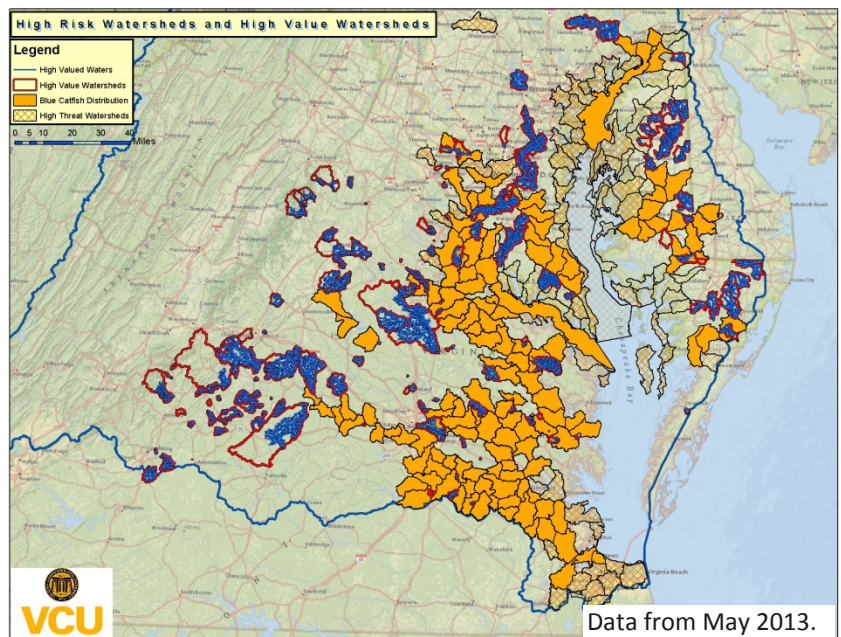
What are the specific ecological impacts (i.e. predominant prey species)? Is there any mapping or information on the spatial extent of the species?

- VA DGIF has full understanding of the extent of blue catfish and flathead catfish occurrence in these rivers.
- Current data suggests that blue catfish, which are omnivores, feed indiscriminately. This creates competition for forage with native fish. See [Schloesser et al.](#) for description of diet.

Monitoring and Science

What survey(s) are you using to monitor?

- VA DGIF and VT are working to conduct an extensive food habits assessment in four rivers over multiple years. The project is now headed into analysis period to develop models of diet, population demographics, and potential of various management strategies.



- VIMS juvenile fish trawl survey. This is a stratified random survey conducted monthly in the York River system from the mouth of the river up to the tidal freshwater zone of the Pamunkey.
- VIMS also conducts a [seine survey](#) in this system; this is a fixed-station design that samples each site 5 times between early July and mid-September. This survey monitors the relative abundance of juvenile striped bass in the Rappahannock, York and James rivers. It also examines relationships between juvenile striped bass abundance and environmental conditions.
- VA DGIF has been conducting a low frequency electrofishing (LFEF) monitoring program in the York, Pamunkey and Mattaponi rivers since 2001.

List any active research projects.

- VIMS juvenile fish trawl survey
- VIMS striped bass seine survey
- VT and VA DGIF food habits and diet study
- VT and VA DGIF modeling of population dynamics, likely potential impacts on other resources, and evaluation of likely efficacy of various management strategies
- Blue Catfish maturity schedules (PhD student research)

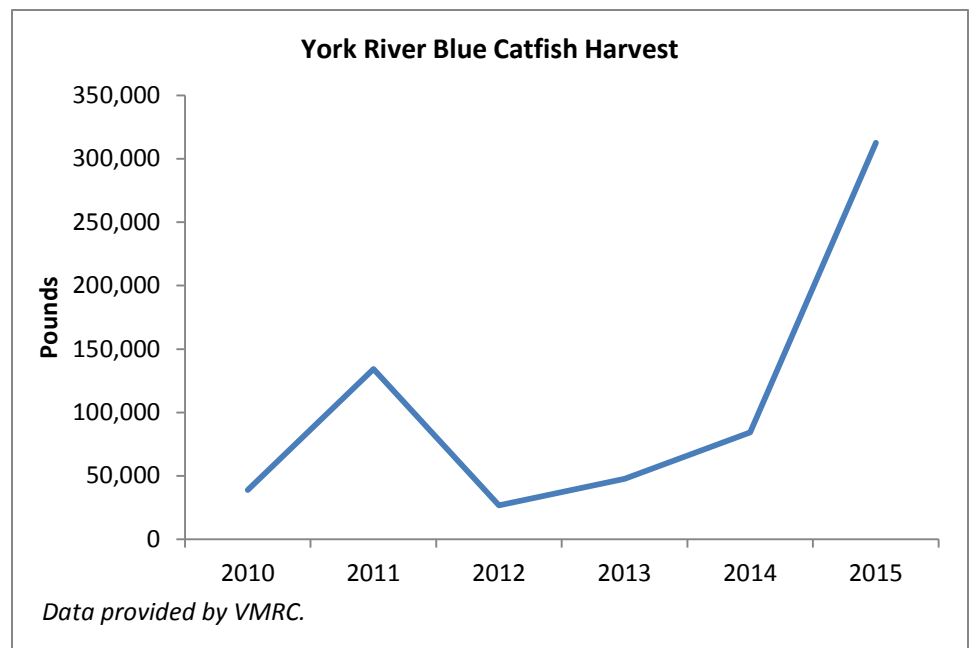
What information exists on the contaminant burdens of fish?

- Consumption advisories for contaminants in fish are issued at the federal and state levels and exist for both commercial and recreational fishing. More specific advisories are recommended for individual species depending on size of the fish and where it was caught in the water body. The main contaminants of concern for fish are Mercury (Hg) and PCBs.
- In the [York](#), specifically the Pamunkey, the Virginia Department of Health recommends a two 8-ounce meal maximum per month for blue catfish.

Fishery

Is there an active commercial fishery? What harvest data exist? What gear is being used to catch the fish?

- There is commercial activity on the York River with blue catfish. Harvest data are shown in the chart on the right for blue catfish in the York. According to data from the Virginia Marine Resources Commission (VMRC), the three gear types with the highest sum of pounds in 2014 in the Bay included fish pots and traps, gill net sink/anchor other, and fish pound net.



Is there recreational fishing? Specifically, what types: charter, subsistence, or both?

- The York and tributaries Mattaponi and Pamunkey still support a modest trophy fishery, but it is in serious decline. There is also recreational harvest for food.

What fishing regulations exist in the tributary?

- There is a [statewide limit](#) of possession to 1 fish over 32" per day for blue catfish. In tidal waters there is unlimited possession for blue catfish under 32" and for all flathead catfish. This regulation applies to

recreational and commercial fisheries. Outside of tidal waters, there is no commercial harvest and the recreational catch limit is 20 catfish per day.

Communications and outreach

Who are the primary contacts and key stakeholders (scientists, managers, fishermen, conservation groups)?

- Bob Greenlee (VA DGIF), Virginia Tech, VIMS, The Bay Catfish Advocates, The Virginia Anglers Club

Are there any active public messaging campaigns?

- VA DGIF has an active invasive species public messaging campaign. It is in the process of posting signs at all DGIF boat ramps in Virginia that feature a QR code with a link to a DGIF webpage with information about the potential impacts of invasive species and non-native introductions.
- VA DGIF has distributed information about blue catfish overabundance in Virginia rivers since the early 1990s and promotes expanded harvest as a potential mechanism to control catfish overabundance.

Management strategies

Are there active management strategies in place for invasive catfish in this tributary?

- There is a two-pronged management strategy for blue catfish in Virginia. The 32-inch regulation supports the trophy fishery, while the zero limit on harvest of blue catfish less than 32 inches is intended to reduce overabundance.

What strategies could be developed or implemented to reduce impacts of invasive catfish?

- The Invasive Catfish Task Force under the Chesapeake Bay Program's Fisheries Goal Implementation Team has taken charge of this issue. They have developed a list of possible management strategies, including creating a fishery, increasing public messaging, and developing control methods to reduce population and slow its spread. The task force is currently revising their final report based on comments from peer reviews. Click [here](#) to see the draft document.