

# Susquehanna River and West Branch Susquehanna River

## 2015 Young-Of-Year Black Bass Survey

Young-of-year (YOY) or recently spawned and hatched black bass (*Micropterus* species) are surveyed annually by Division of Fisheries Management staff at major rivers statewide as an index of reproductive success. Since 2005, this index has also been used to determine incidence and prevalence of disease affecting YOY Smallmouth Bass *Micropterus dolomieu* in the Susquehanna River system as well as for detection in areas where this condition has not been noted historically.

Division of Fisheries Management staff from Areas 3, 4, 6, and 7 surveyed YOY black bass (primarily Smallmouth Bass) at the West Branch Susquehanna River, upper Susquehanna (North Branch), lower Susquehanna, and middle Susquehanna River, respectively. Surveys were conducted using backpack electrofishing gear and targeted near-shore, gravel and cobble habitats favored by YOY Smallmouth Bass that, for the most part, have been sampled annually in the past.



*Representative young-of-year Smallmouth Bass collected during 2015 surveys*

Survey results varied by river reach during 2015. Surveys at the upper Susquehanna River (North Branch) and lower Susquehanna River yielded catch rates substantially above the long-term median values (Figures 2 and 4, respectively) while catch rates at the West Branch Susquehanna River and middle Susquehanna River yielded catch rates below long-term medians (Figures 1-3, respectively).

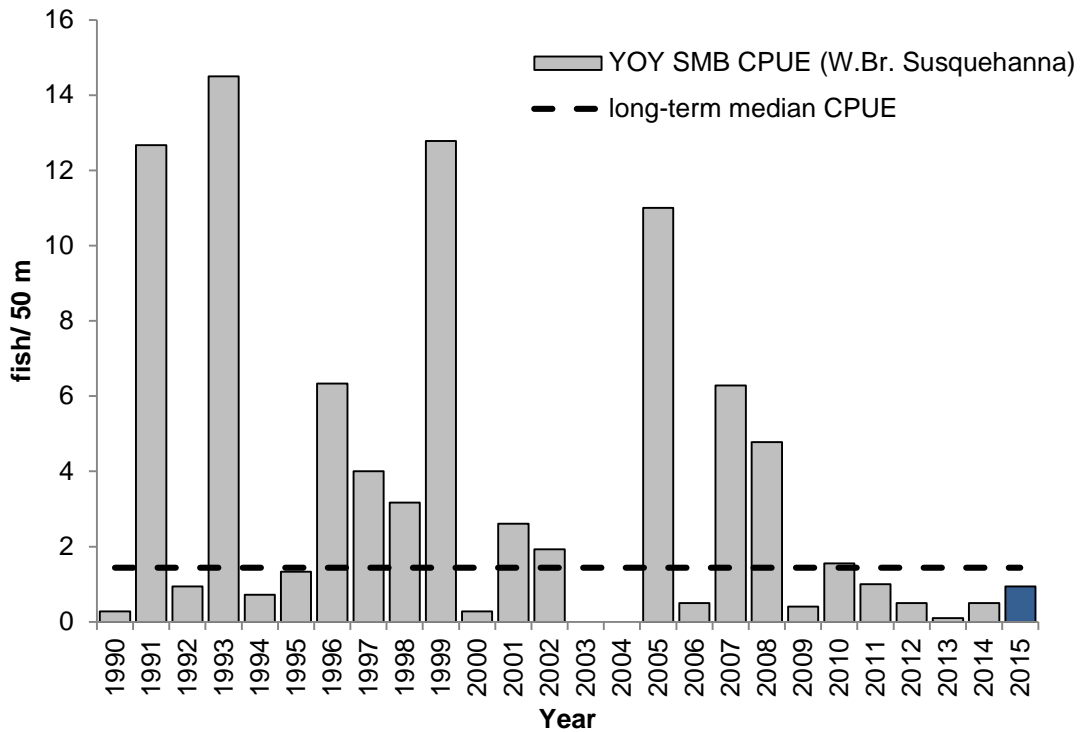


Figure 1: Catch rate of young-of-year Smallmouth Bass at the West Branch Susquehanna River.

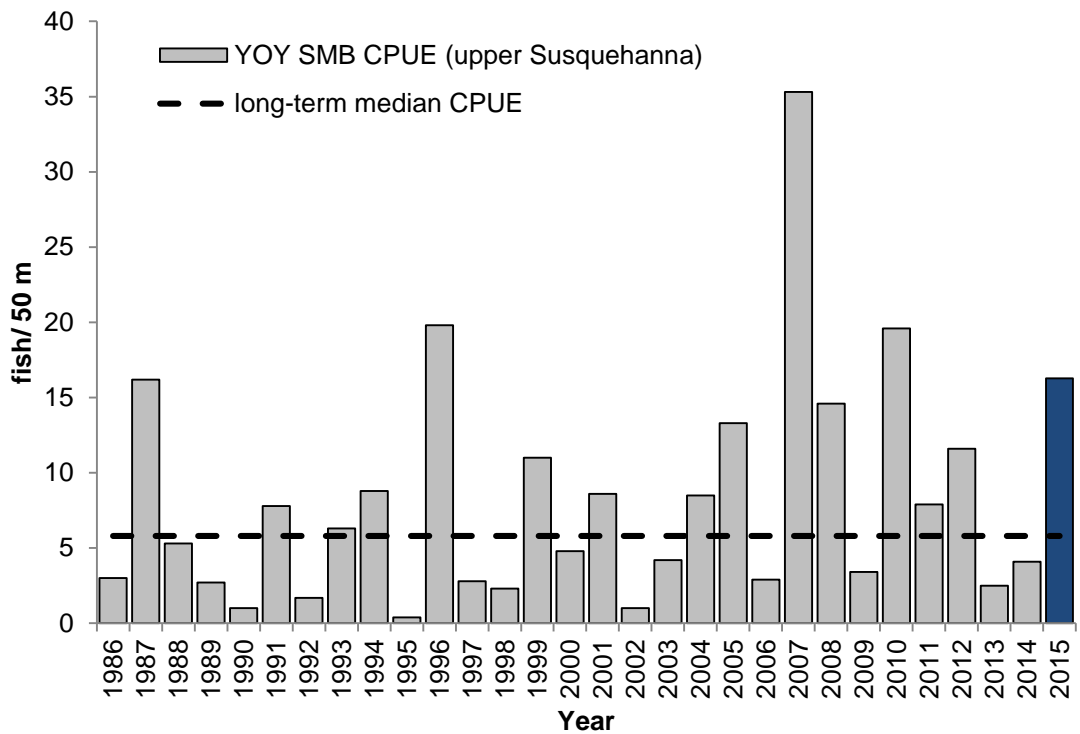
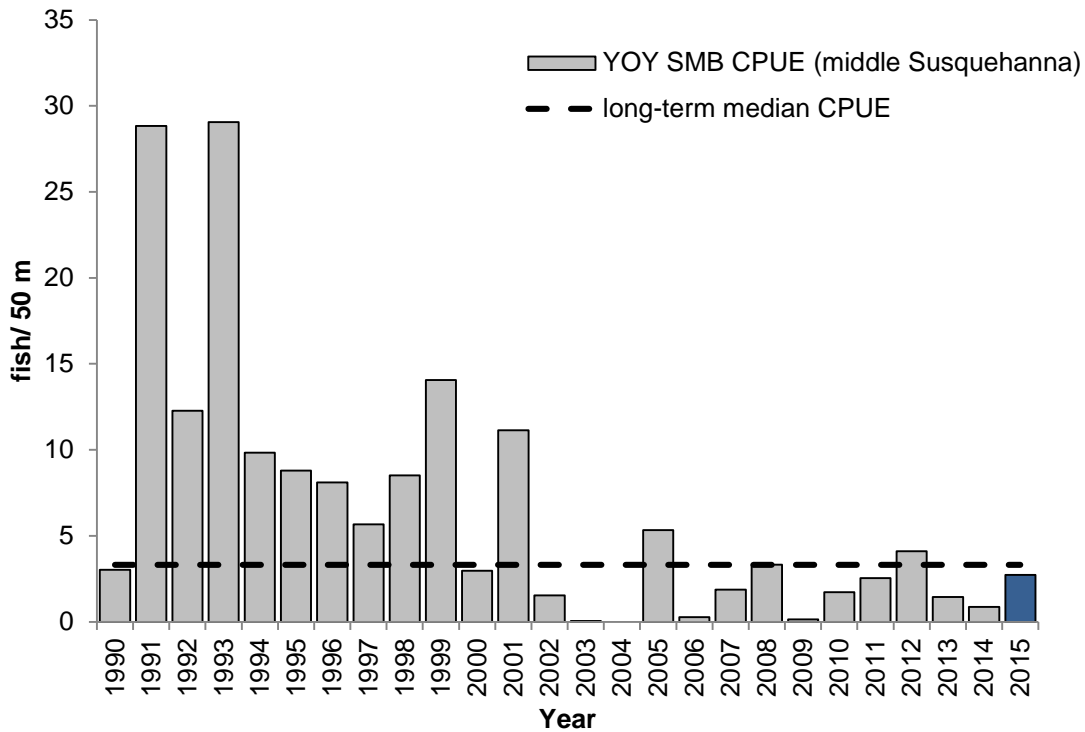
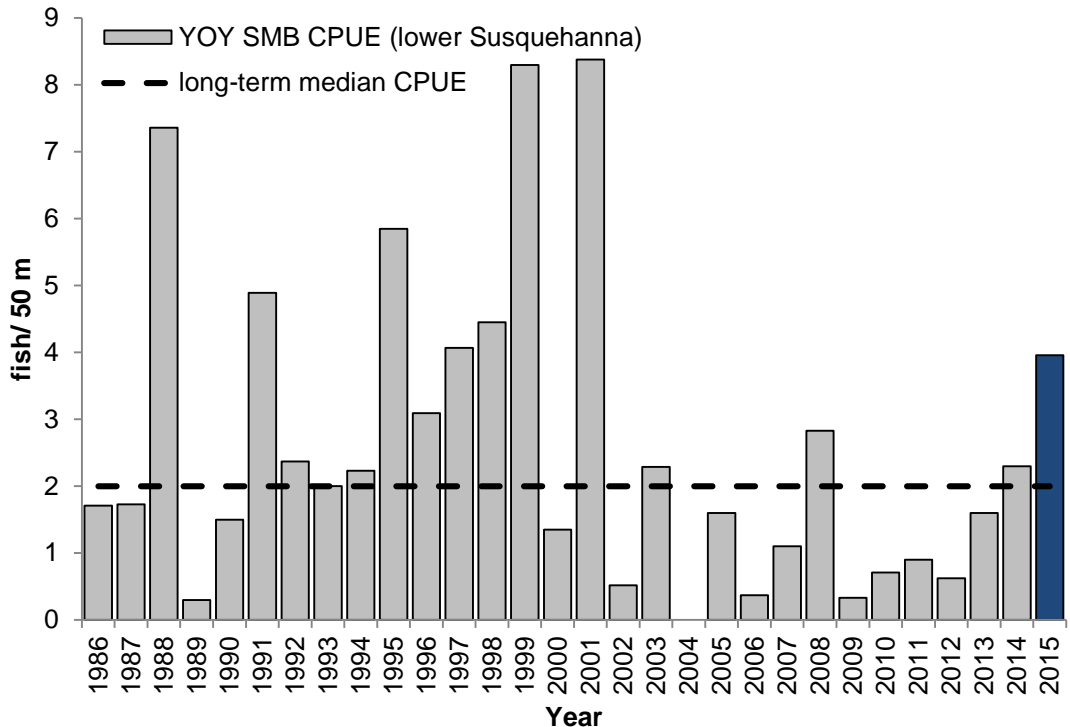


Figure 2: Catch rate of young-of-year Smallmouth Bass at the upper Susquehanna River (North Branch). Note difference in scale among graphics.



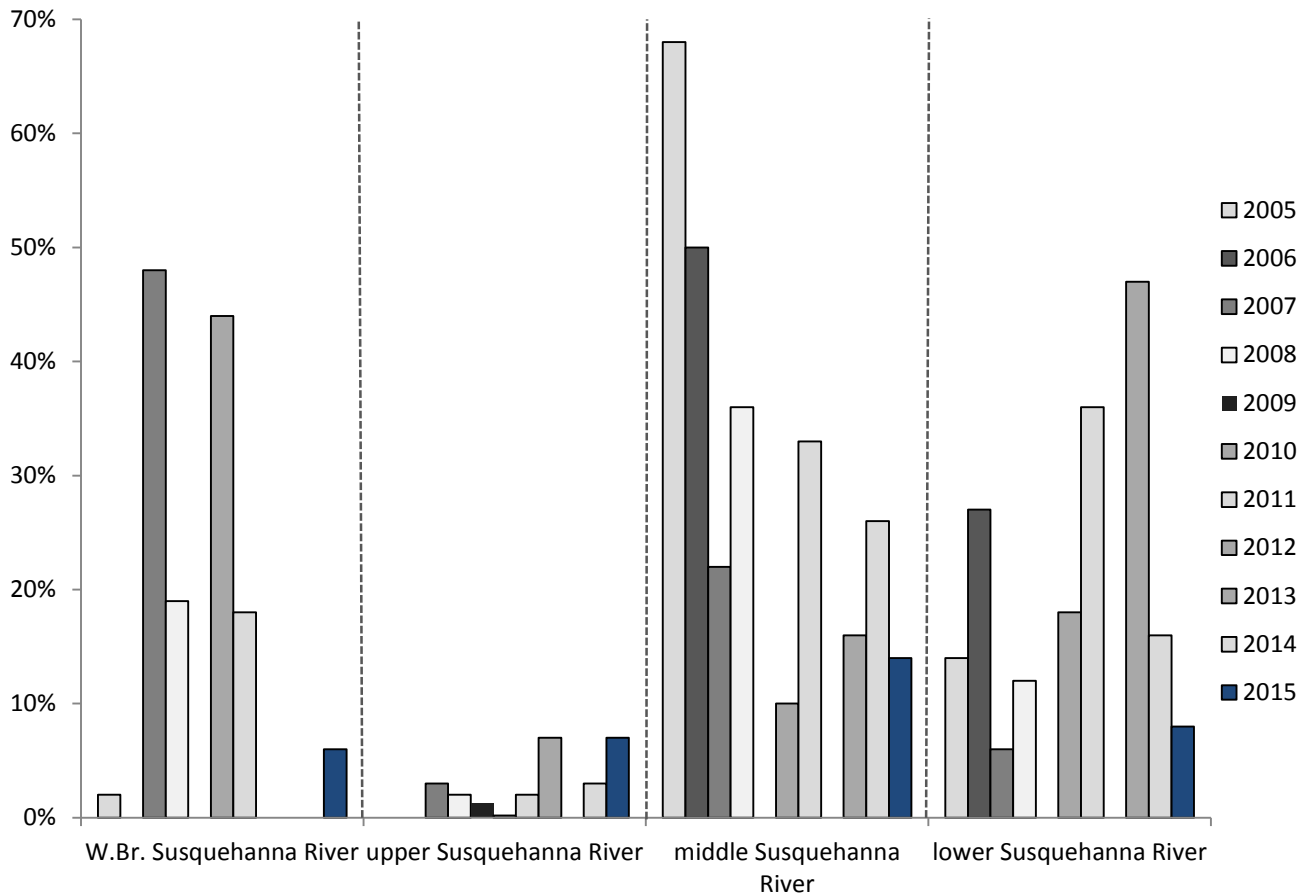
**Figure 3: Catch rate of young-of-year Smallmouth Bass at the middle Susquehanna River (Sunbury to York Haven Dam). Blank values indicate years when surveys were not conducted not zero values. Note differences in scale among graphics.**



**Figure 4: Catch rate of young-of-year Smallmouth Bass at the lower Susquehanna River (York Haven Dam to Holtwood Dam). Blank values indicate years when surveys were not conducted not zero values. Note differences in scale among graphics.**

Disease occurred at all river reaches during 2015; however, reach-wide prevalence was low at all reaches. Prevalence of disease among YOY Smallmouth Bass collected during 2015 was highest in the middle Susquehanna River (14%) while prevalence at other reaches varied between 6 – 8% (Figure 5). The reach-wide prevalence of disease at the middle Susquehanna River during 2015 was largely driven by a high proportion of diseased fish at one site near Selinsgrove.

Future boat electrofishing surveys targeting adult Smallmouth Bass will provide further insight into the survival and contribution of the 2015 year class to the catchable bass population in the West Branch Susquehanna River and various reaches of the main-stem Susquehanna River.



**Figure 5: Prevalence of disease among YOY Smallmouth Bass captured since discovery of the condition in 2005. Results depict disease prevalence from collections at the West Branch Susquehanna River and various reaches of the Susquehanna River. Due to small sample sizes during some years, prevalence values reported are considered site-specific and cannot be extrapolated to be representative of the entire population.**