

Upper Potomac River Smallmouth Bass Status and Management

Maryland Department of Natural Resources
Freshwater Fisheries Program

June 18, 2020

Collecting Data and Monitoring the Population

- Monitor annual juvenile recruitment
- Monitor electrofishing catch rates for multiple size classes of smallmouth (>8", > 11", > 14", > 17")
- Monitor changes in size distribution
- Determine total annual mortality and fishing mortality
- Track angler catch rates through Tournament Permit reporting and online Volunteer Angler Survey

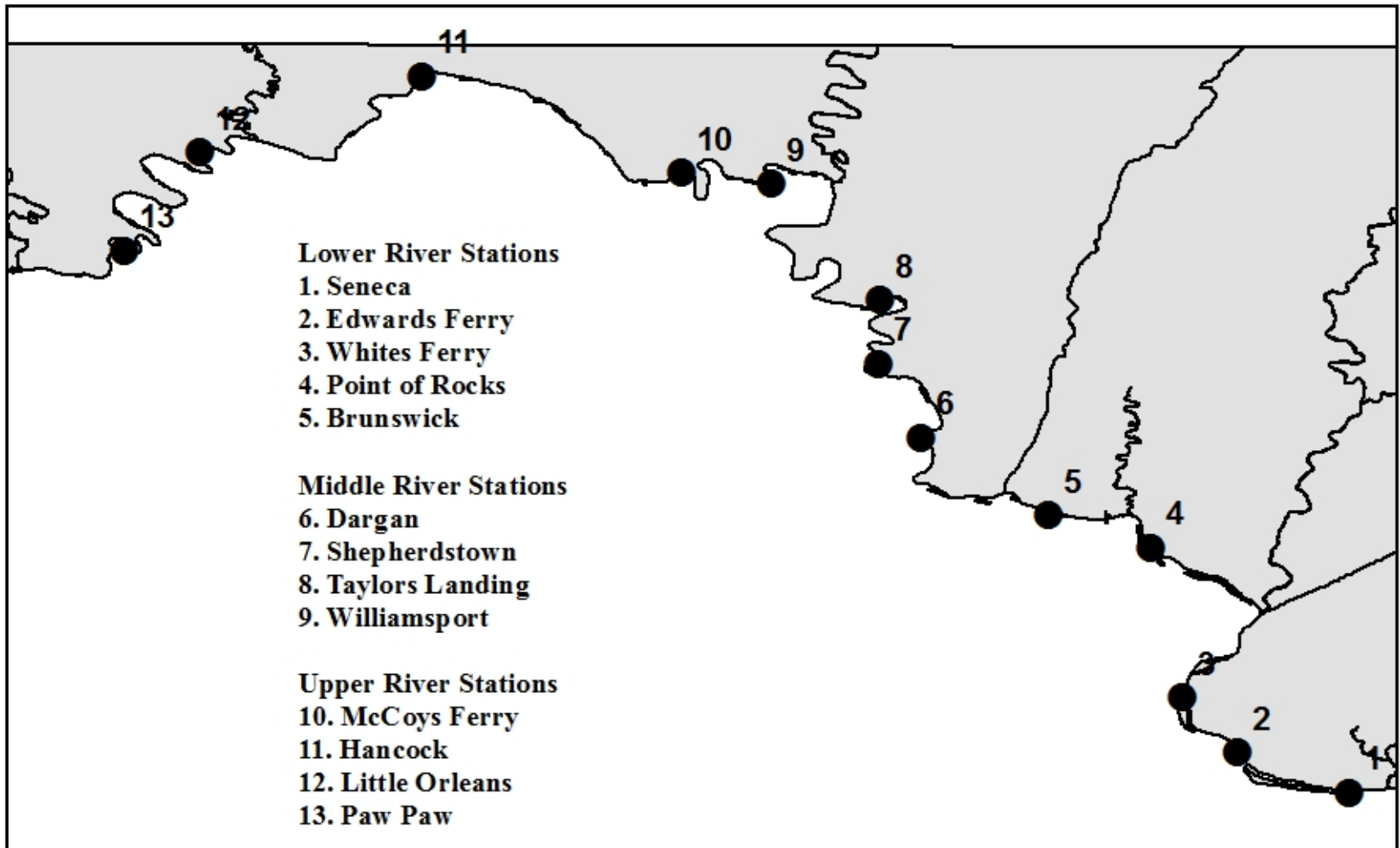


Management Goal – maintain a productive smallmouth bass fishery for anglers in the upper Potomac River

2020 Objectives

- Maintain a mean electrofishing catch rate ≥ 28 quality-size bass (> 11 inches) per hour (25th percentile of 2008 – 2017 mean catch rate for entire river)
- Supplement natural reproduction to improve smallmouth bass yearclass strength and to reduce annual recruitment variability

Upper Potomac River Survey Sites



Smallmouth Bass



Recruitment

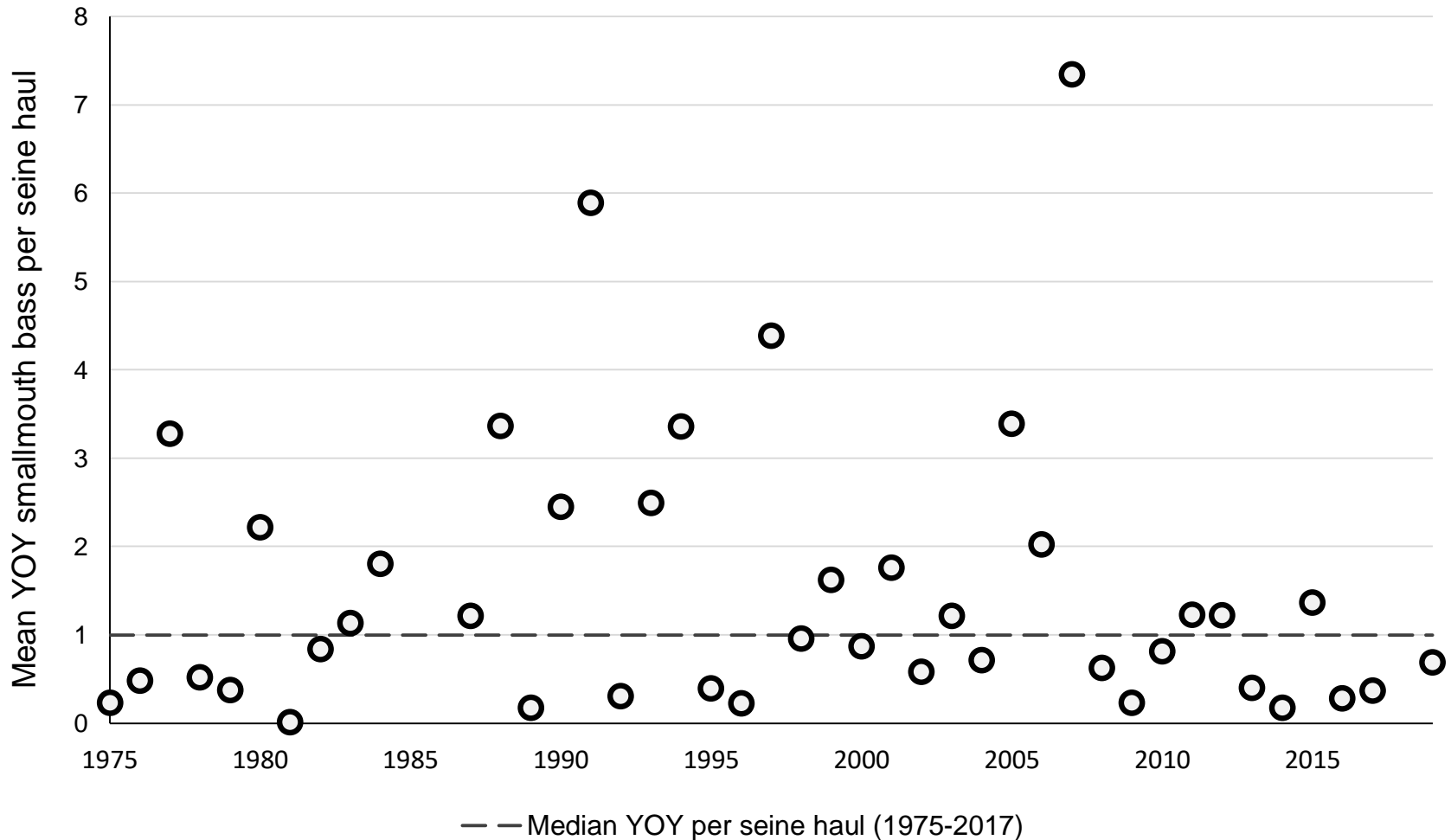
- Annual juvenile surveys (1975-current)
- 30 ft haul seine
- Young-of-year SMB
 - Bass <90 mm (3.5 inches)
- 10-12 stations along river
 - Seneca upstream to Paw Paw, WV



Smallmouth Bass



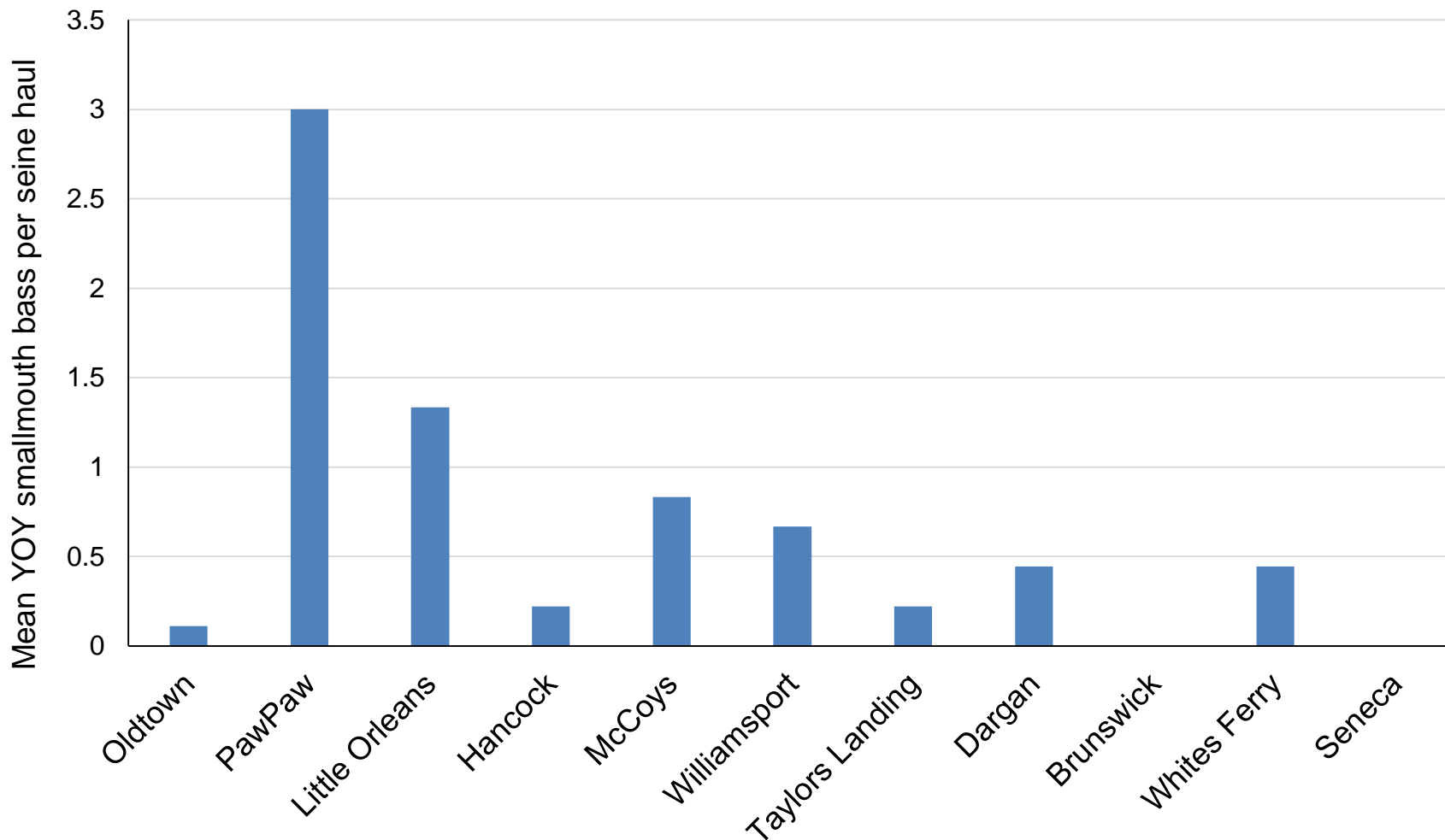
Summer SMB young-of-year seine survey catch rates (1975-2019)



Smallmouth Bass



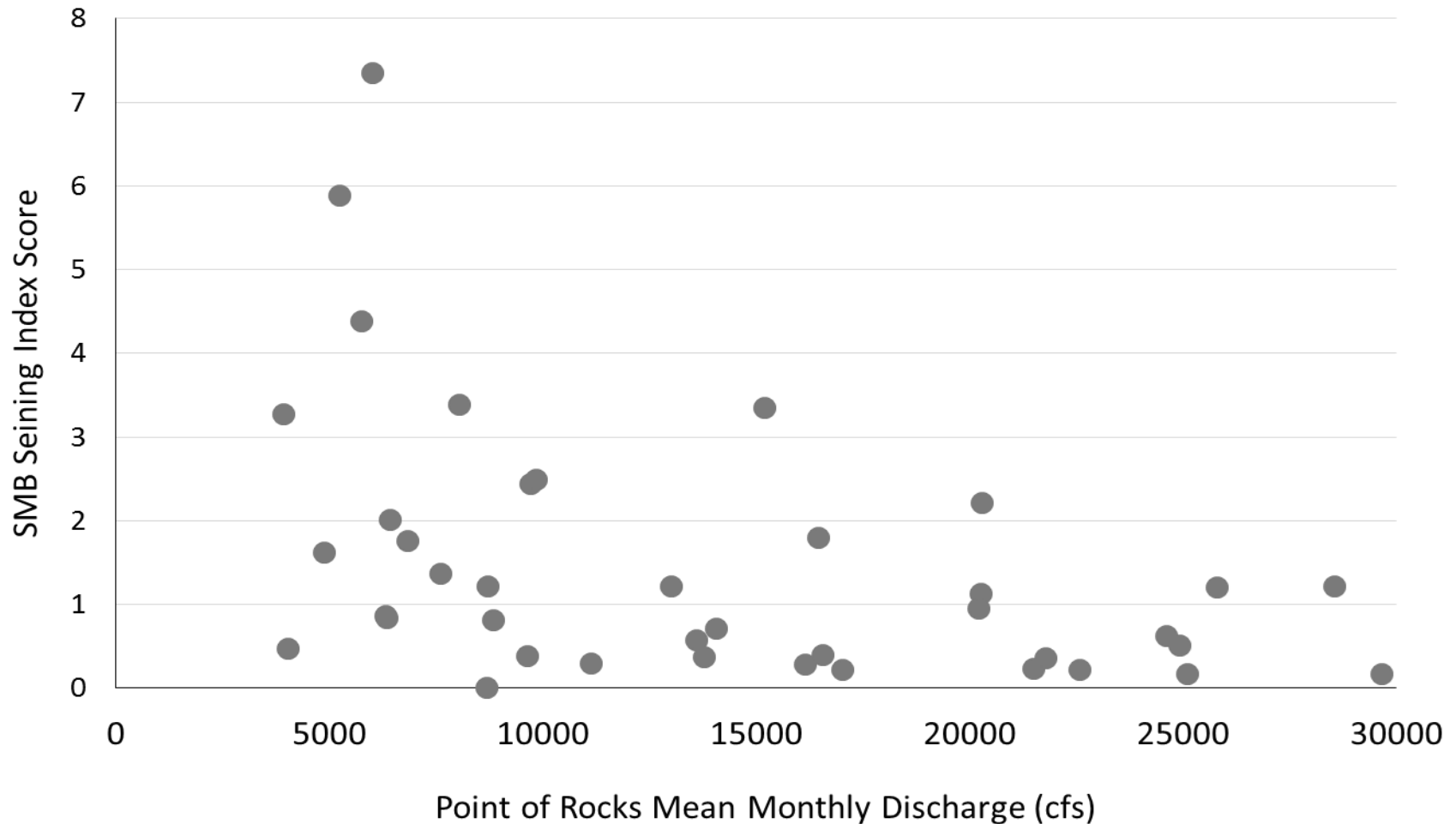
2019 SMB young-of-year seine survey catch rates by location



Smallmouth Bass



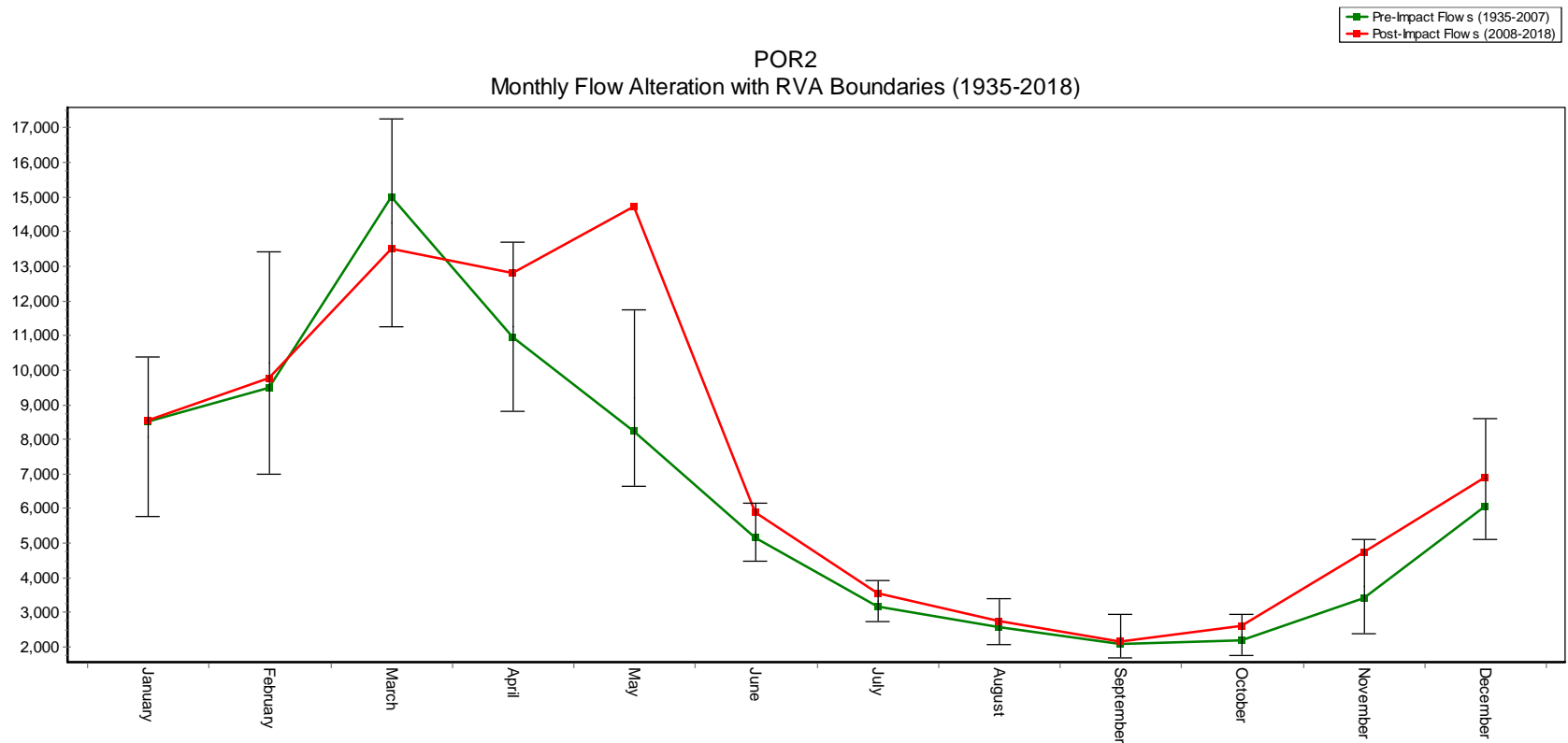
SMB juvenile recruitment versus May river flow levels (1975-2017)



Smallmouth Bass



Flow alteration curve for USGS Point of Rocks gage (1935-2018)



Statistically significant higher recent May river flows

Smallmouth Bass



- Problems with juvenile recruitment
 - Poor year-classes (2008-2018)
 - Average seine index score = 0.67 fish/haul (1975-2007 = 1.8)
 - No dominant year-class
 - High spring flows (May-June)



Dam 5 - June 4, 2018



Shepherdstown - June 4, 2018

Smallmouth Bass



Adult monitoring

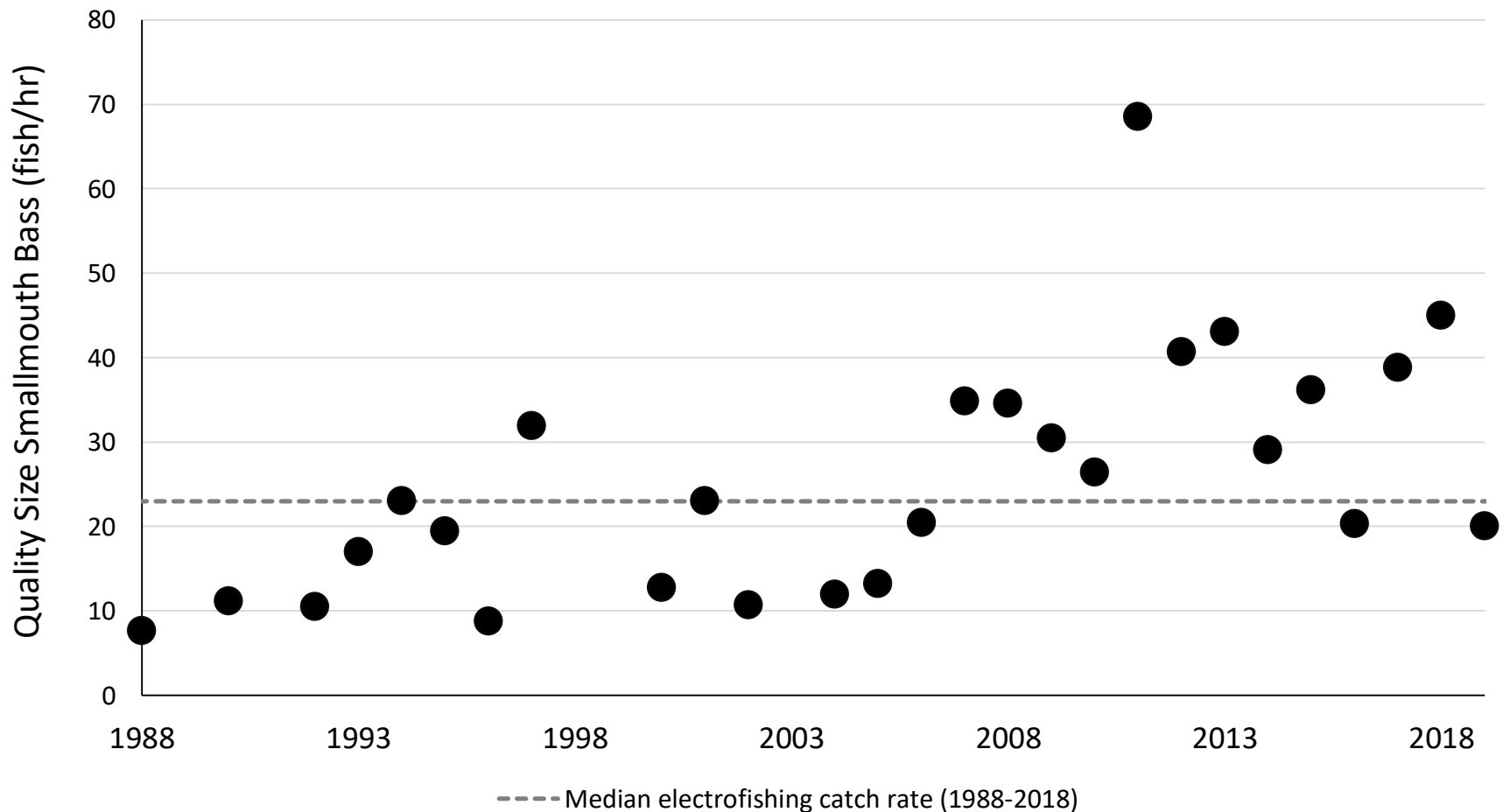
- Annual fall boat electrofishing surveys (1988-current)
- Catch rates and size distribution for different sections of the river
- Bass tournament catch rate data
 - Number of anglers
 - Legal size fish caught



Smallmouth Bass



Fall electrofishing adult smallmouth bass catch rates (1988-2019)

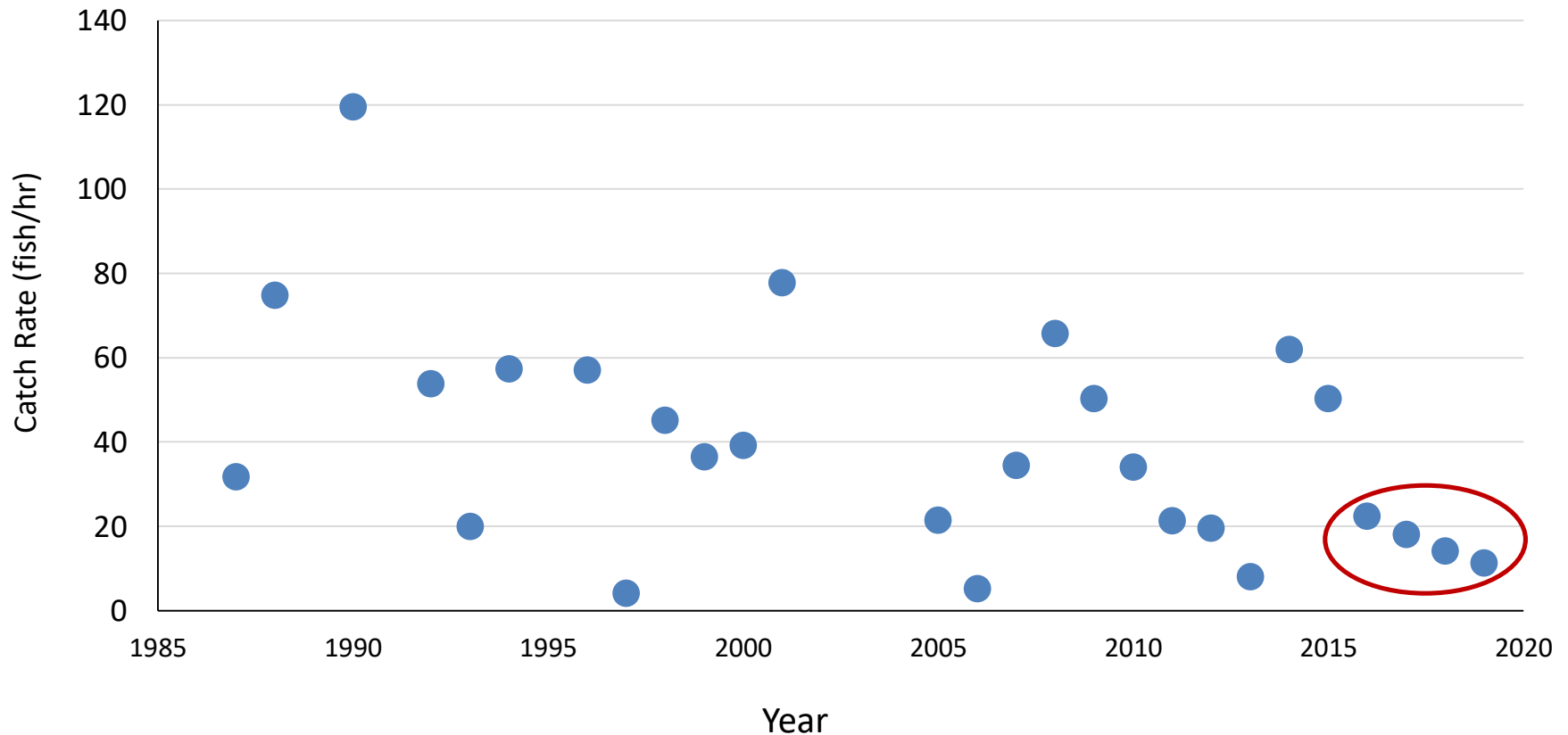


Smallmouth Bass



Stock-Quality size (7 - 11 inches) smallmouth bass catch rates by river section (1988-2019)

Lower

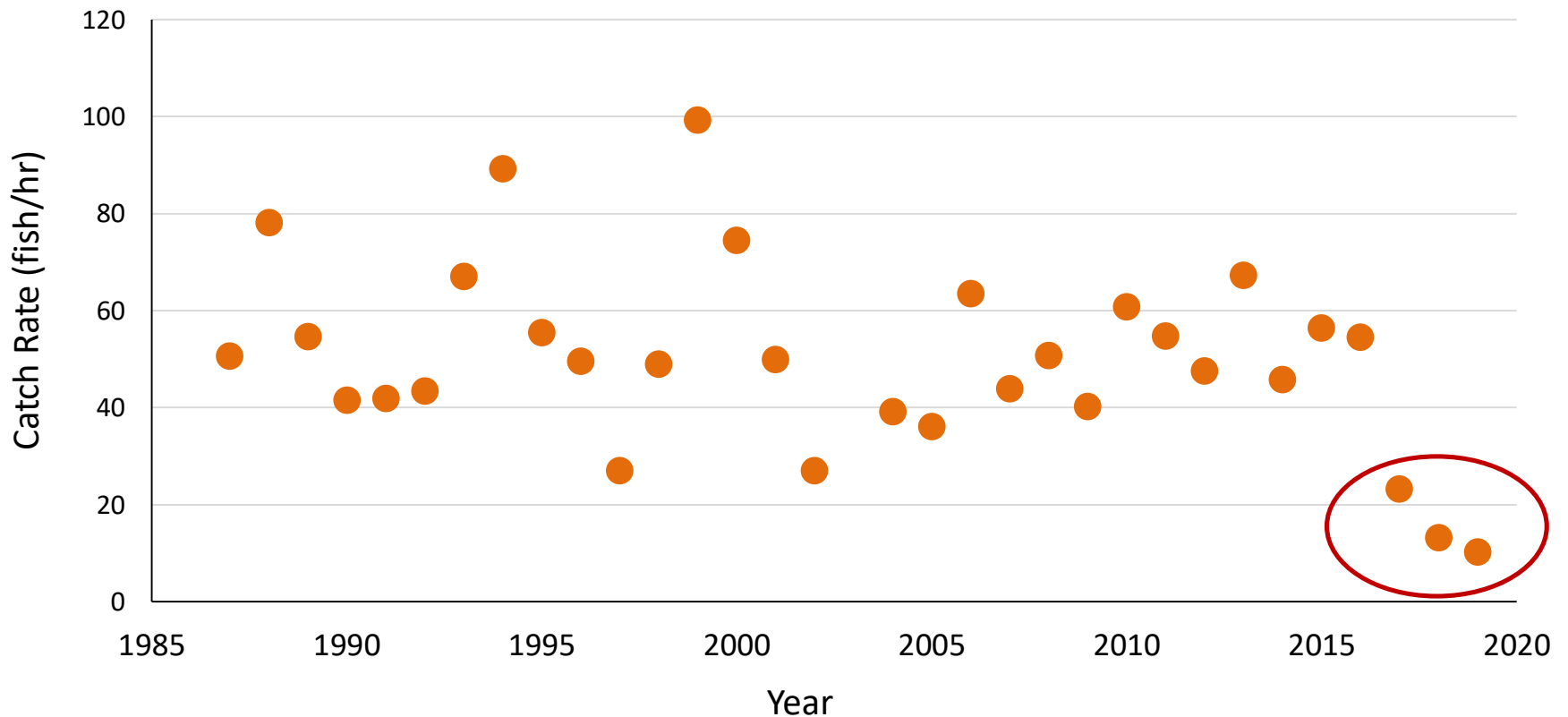


Smallmouth Bass



Stock-Quality size (7 -11 inches) smallmouth bass catch rates by river section (1988-2019)

Middle

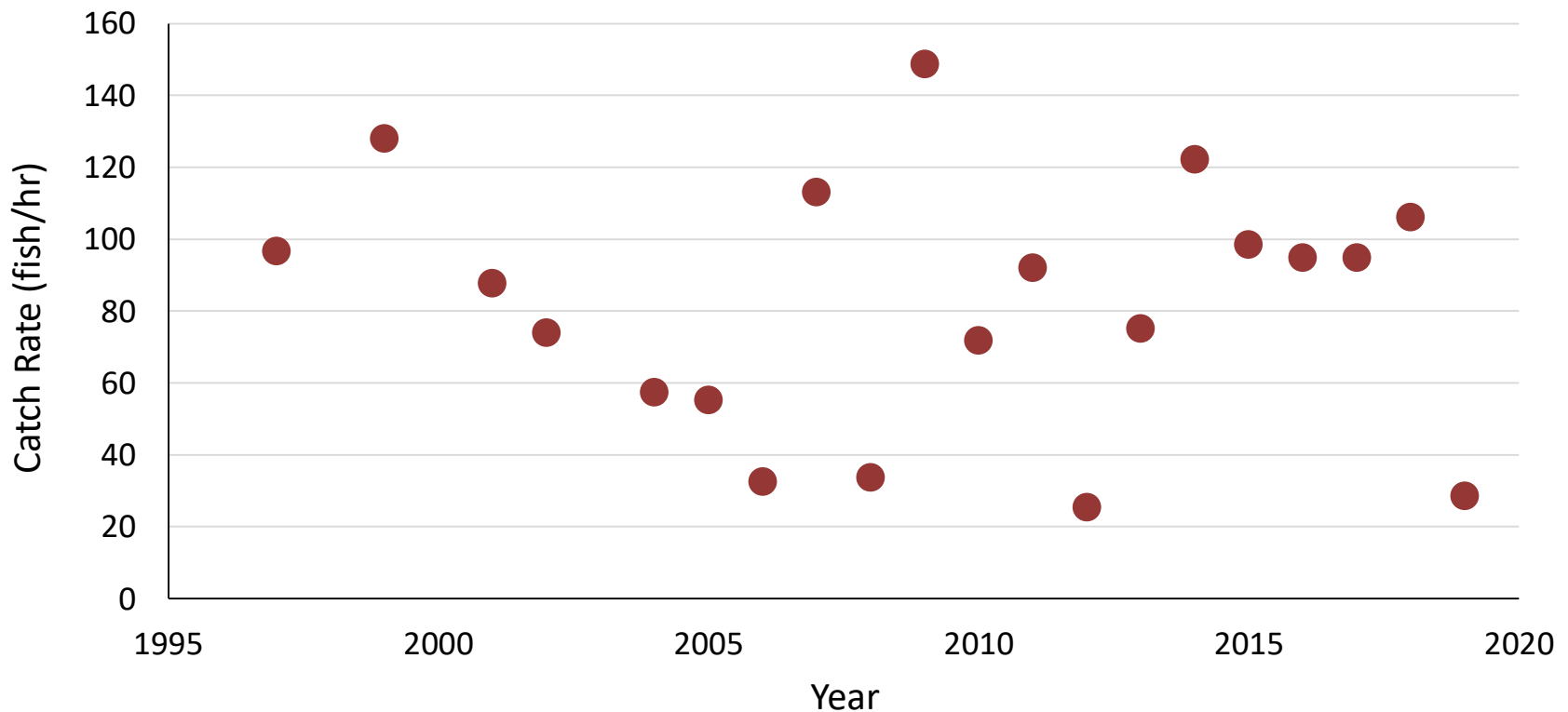


Smallmouth Bass



Stock-Quality size (7 - 11 inches) smallmouth bass catch rates by river section (1988-2019)

Upper



Smallmouth Bass



Management Action



- Smallmouth bass stocking plan
 - Supplement juvenile recruitment with hatchery raised fingerlings
 - Adult smallmouth bass broodstock collected by spring tournament anglers (35 adult fish)
 - Transported to a state hatchery (Manning)
 - Spring 2019 – No spawning in hatchery ponds
 - Broodstock returned to UPR

Smallmouth Bass



Fall 2019

- DNR purchased 2000 juvenile smallmouth bass from commercial hatchery
- Stocked into upper Potomac River
 - Taylors Landing
 - Dargan
 - Brunswick



Smallmouth Bass



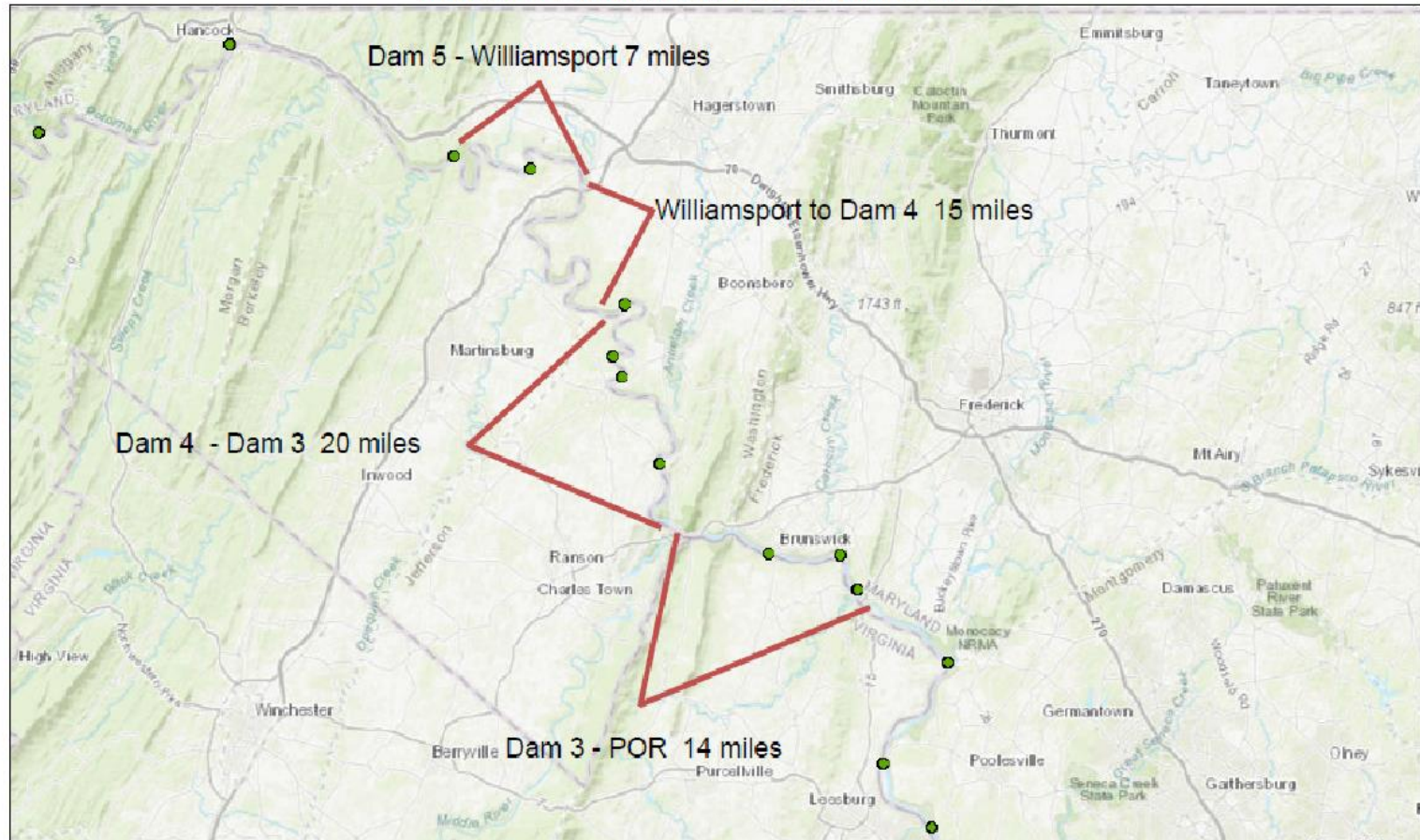
Winter/Spring 2020

- January Bass Tournament
 - 15 adults to USGS Leetown
- April DNR electrofishing
 - 30 adults to DNR Manning
- Successful reproduction in May
 - Fry observed emerging from prepared spawning nests
- Fry transferred to grow out ponds
- Late summer/fall stocking



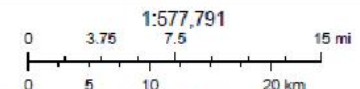
Smallmouth Bass

Potential Smallmouth Stocking Locations



11/9/2018, 11:15:32 AM

● Potomac_Surveys



Smallmouth Bass



Information for the public

- Distribute handout outlining stocking project plans
- Meet with angler groups, river guides, NGOs
- MD DNR website for this project
 - Background information on fishery, project plan outline
 - Document all steps in the stocking process from start to finish
 - Annual update of results and potential changes to project plans

Thank You!



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<http://dnr.maryland.gov/fisheries/Pages/inland.aspx>