



*Wes Moore, Governor*  
*Aruna Miller, Lt. Governor*  
*Josh Kurtz, Secretary*  
*Allan Fisher, Deputy Secretary*

### **2024 Muskellunge Volunteer Angler Survey Summary:**

The Maryland Department of Natural Resources Freshwater Fisheries Program would like to thank all the 2024 Volunteer Angler Survey participants for providing information. These data assist the department with the management of the upper Potomac Muskellunge fishery. Recent trends in participation continue to indicate that fewer anglers are participating in this survey; and/or anglers are only reporting successful outings. Given the lack of participation, greater angling effort is likely occurring and not being reported. To fully participate, all trips must be entered including days where zero fish were caught. Recent data from the creel diary program indicates that anglers are only reporting successful outings. Not reporting unsuccessful trips where zero fish are caught artificially inflates the catch rate, which minimizes the ability to detect changes in the population.

An [electronic reporting application](#) was created in 2019. Anglers can save this app to any smartphone or personal computer and enter catch information electronically. For those who choose to use a paper copy, it can be printed [here](#) and mailed to: 10932 Putman Road, Thurmont, Maryland 21788 - at the end of each calendar year.

The following incentives exist for each participant:

- 1) Entry into a prize lottery
- 2) A custom Maryland Muskie hat and sticker (upon request; email [josh.henesy@maryland.gov](mailto:josh.henesy@maryland.gov))
- 3) An annual summary report that includes the most recent updates on muskie management
- 4) The opportunity to be actively involved in the management/data collection of Potomac River muskies

Angling has proven to be a more efficient means of collecting data on muskellunge (Electrofishing = 27 muskellunge/year; Angling = 122 muskellunge/year). Since 2010, the Freshwater Fisheries Program has relied on volunteer angling as the primary means of obtaining data for Potomac River Muskellunge (Table 1). The program uses volunteer angler survey data to calculate catch rates (catch per hour or hours per fish) and size distribution estimates on an annual basis. Angler catch data have also provided much larger samples of tagged recaptures to estimate movement, growth, and an overall recapture rate (46 percent). These data help indicate the health and density of the population. Consecutive years of lower catch rates and/or decreasing average size would suggest that overfishing or excess mortality/harvest may be occurring. Fisheries managers could then adjust regulations accordingly to assure a high-quality fishery is available for the angling public.

To continue monitoring these trends, we encourage all muskellunge anglers to consider participating in this survey!

Table 1. Summary of volunteer angler survey data (2010-2024)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
# Caught	94	205	226	168	212	180	119	110	141	128	94	41	37	45	29
Angler Hours	545	1413	2988	2633	2839	1771	1480	1546.5	1104.5	1425	839	296	541	539	313
Total Catch/Hr	0.17	0.15	0.08	0.06	0.07	0.10	0.08	0.07	0.13	0.09	0.11	0.14	0.07	0.08	0.09
# of Trips	67	172	295	321	378	332	286	183	132	192	142	54	81	75	45
Hours/Fish	5.9	6.7	12.5	15.7	13.5	9.8	12.4	14.1	7.8	11.5	8.9	7.2	14.6	11.9	10.8
Participant #	5	10	15	16	15	13	12	12	11	25	33	21	11	9	11
Recaptures	14	19	15	12	20	14	6	14	18	15	8	9	3	2	0
Percent Recaptures	14.9	9.3	6.6	7.1	9.4	7.8	5	12.7	12.8	11.7	8.5	22	8	4	0.0
Mean Length	36.4	35.4	36	36.8	36	36.1	37.1	36.5	35.2	37.2	36.5	38.2	36.8	37.6	35.0

The percentage of trophy muskellunge (42-50”) reported from the 2024 catch data remains above the long-term average (Figure 1). The proportion of 30-38” increased from 2023 while the 38-42” size class of fish declined (Figure 1). This was predicted due to the consecutive years of poor reproduction from 2016-2019. Data indicates that the 2020–2023 year classes were successful, which are reflected in the 20-30” size designation (Figure 1). These fish, as well as the increases in 30-38” fish will be contributing to the fishable population in 2025. Anglers should expect a moderate density muskellunge population with above average numbers of larger fish for the 2025 season

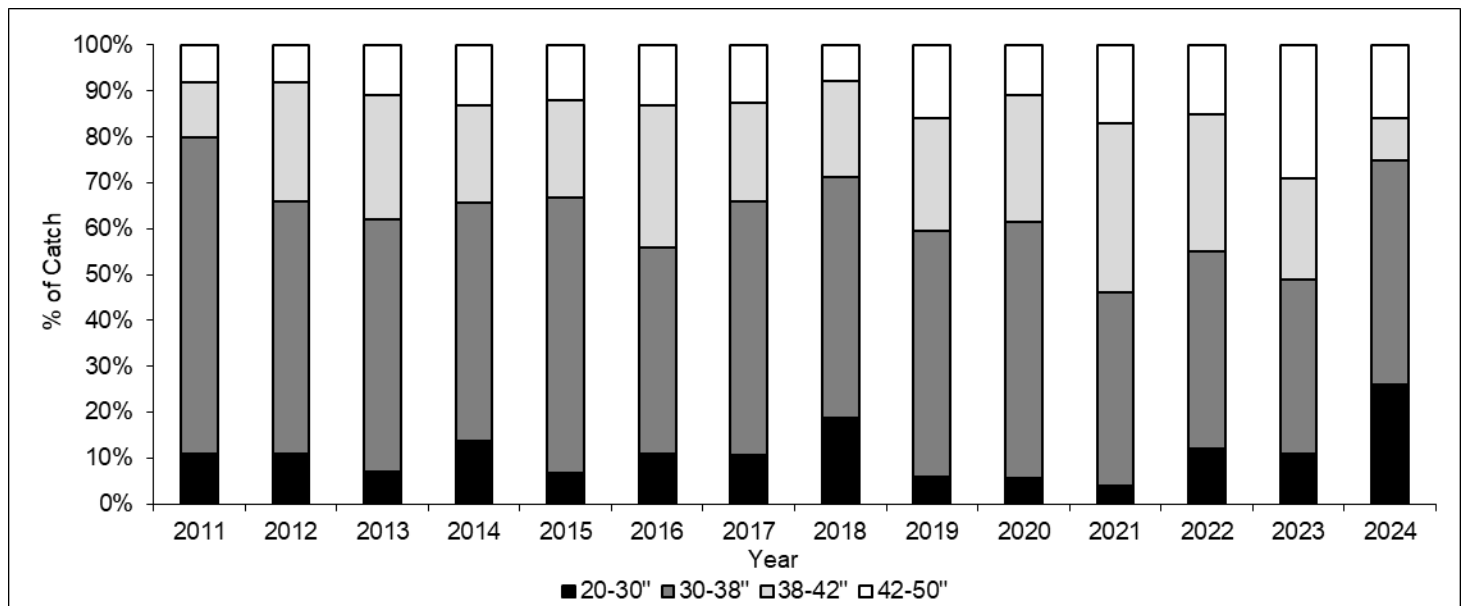


Figure 1. Incremental length-frequency distribution of angled Muskellunge from the volunteer angler diary program (2011-2024)

For information or questions regarding Potomac River Muskellunge contact Josh Henesy:  
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