Project update: Blue catfish movement in the tidal James River

ICW Spring Meeting 2025

Margaret Whitmore

Tidal Rivers Fisheries Biologist

3801 John Tyler Memorial Hwy. Charles City, Virginia 23030

margaret.whitmore@dwr.virginia.gov



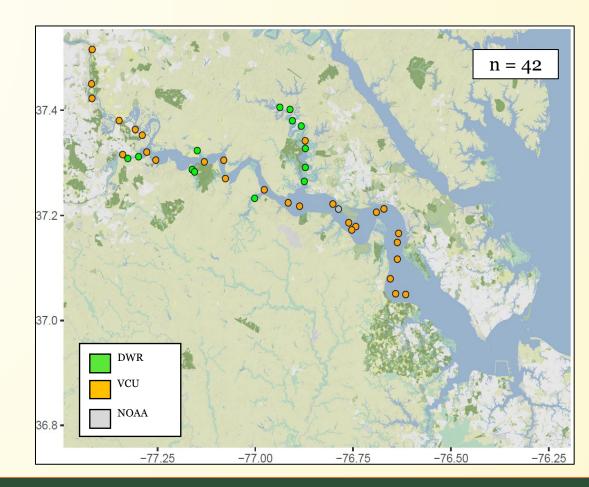
Project overview

Tagged BCF: 90 tagged since fall 2021 (2021: 40; 2022: 10; 2023: 30; 2024: 10)

Included, n = 58

Size range: 32 - 113 cm / 12 - 45 in

Weight range: 0.6 – 45 lbs





Spatial networks by size class

Small size class, n = 19

- Size: < 45 cm/18 in, < 2 lbs.
- Greatest distribution, most even
- Detected on 38 receivers





Spatial networks by size class

Commercial size class, n = 30

- Size: 45 81 cm/18 -32 inches, 2-13 lbs.
- Detected on 33 receivers
- Wide distribution, less even



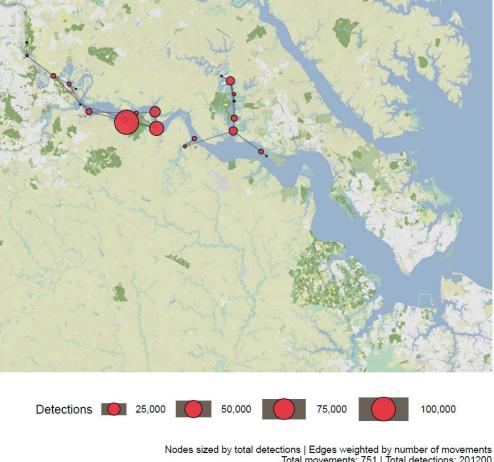


Nodes sized by total detections | Edges weighted by number of movements Total movements: 3168 | Total detections: 347528

Spatial networks by size class

Trophy/ consumption warning size class, n = 9

- Size: 45 81 cm/18 -32 inches, 14-45 lbs.
- Detected on 22 receivers
- Fewest movements, highest residency
- Smallest distribution





Nodes sized by total detections | Edges weighted by number of movements Total movements: 751 | Total detections: 201200

Overall spatial network (Fall 2021 – Spring 2024)

Consistent high use areas

Tributary fidelity maintained: Powell and Upper Chippokes creeks

Two spawning sites identified

Next steps:

- More data!
- Modelling biological and environmental drivers
- Exploring trib fidelity and aggregations

