

Commercial Low-Frequency Electrofishing for Invasive Catfish

George Trice IV
Virginia Commercial Fisher

Matt Balazik
Virginia Commonwealth University

Charles Frederickson
Virginia Commercial Fisher

Robert Fisher
Virginia Sea Grant (VIMS)

Will Stuart
Virginia Commonwealth University
Drone



Permitting

- Grant Funding for 2014-2017 Provided by Virginia Sea Grant Fisheries Resource Grants (FRG)
- Research Collection Permits Provided By Virginia Marine Resources Commission
- Overall Project Goal was to Reduce Introduced Catfish Biomass in Virginia

Catfish Introduced To Virginia



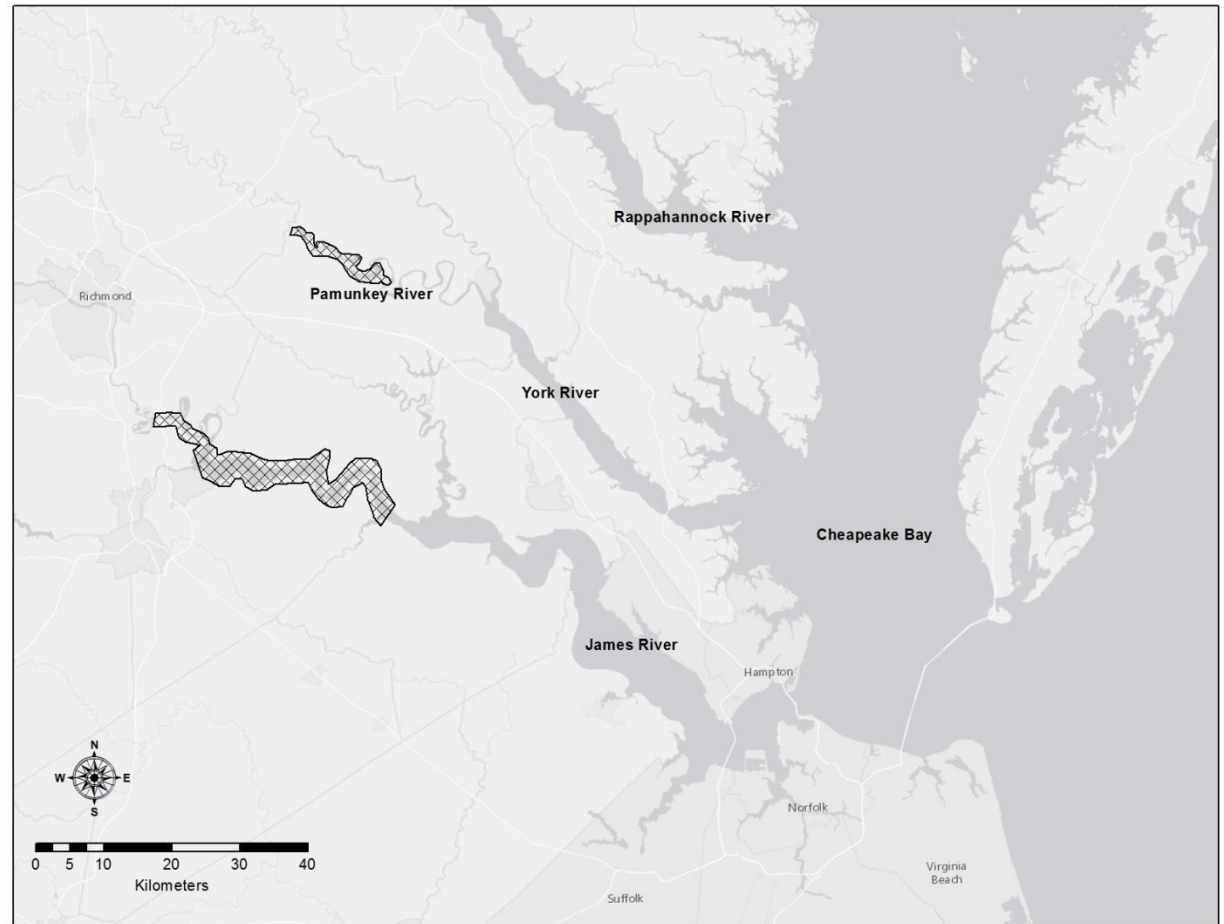
- Channel catfish (1893-1894)
 - ~5 pounds for all four years
- Flathead catfish (1965-1977)
- Blue catfish (1974-1977)

Research Timeline

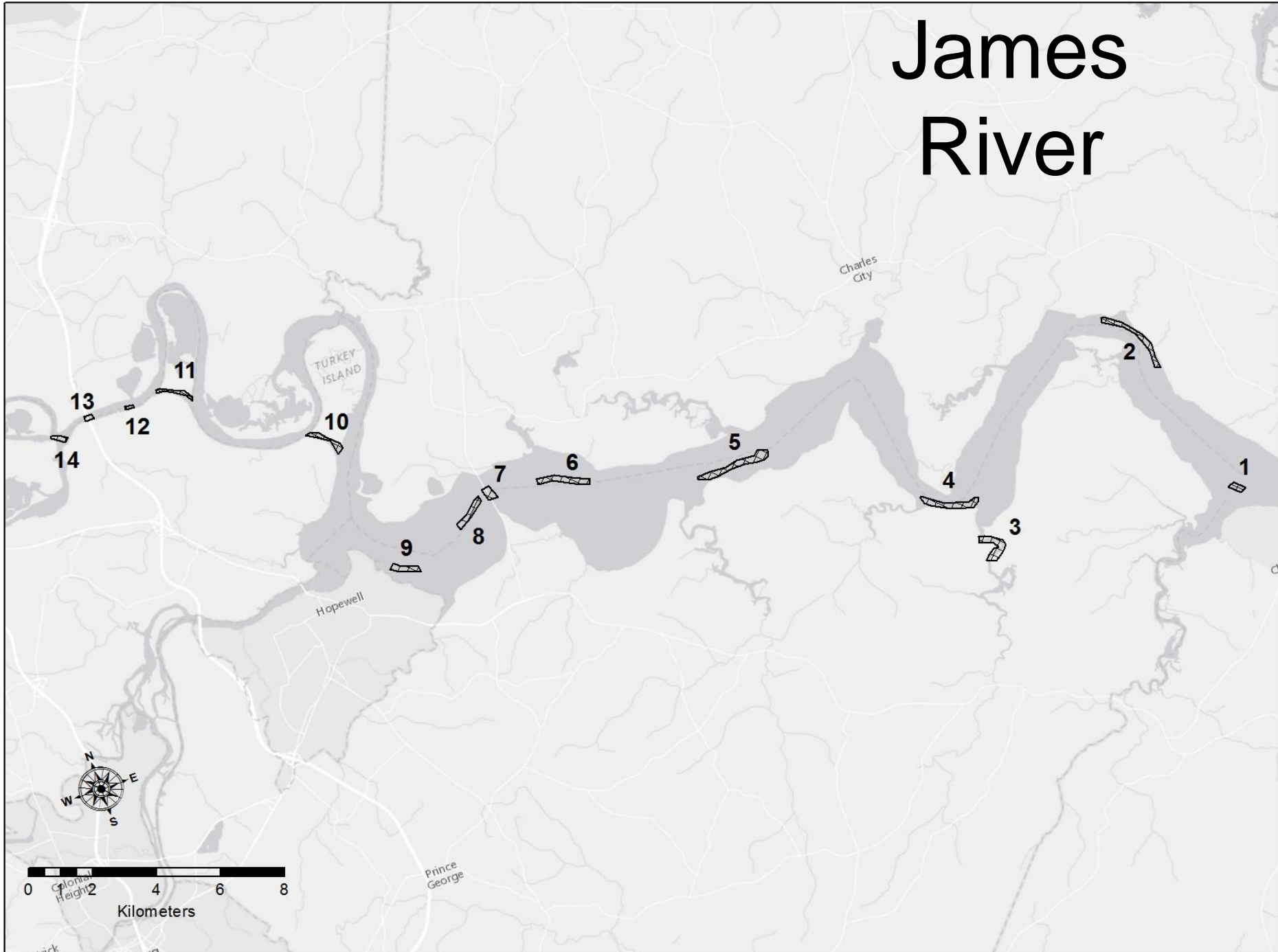
- 2013 - Feasibility of Using Low-Frequency Electrofishing (LFE) to Reduce Blue Catfish Biomass - Rejected by FRG
- 2014 - Feasibility of Using LFE to Reduce Blue Catfish Biomass
- 2015 - Testing Experimental Collection Gear to Increase Harvest Efficiency of catfish during LFE
- 2016 - Describe the Effects of LFE on Hoop-Net Fishery
- 2017 – Comparison 7.5 and 9.0 kW General Powered Pulsator (GPP)

Study Area

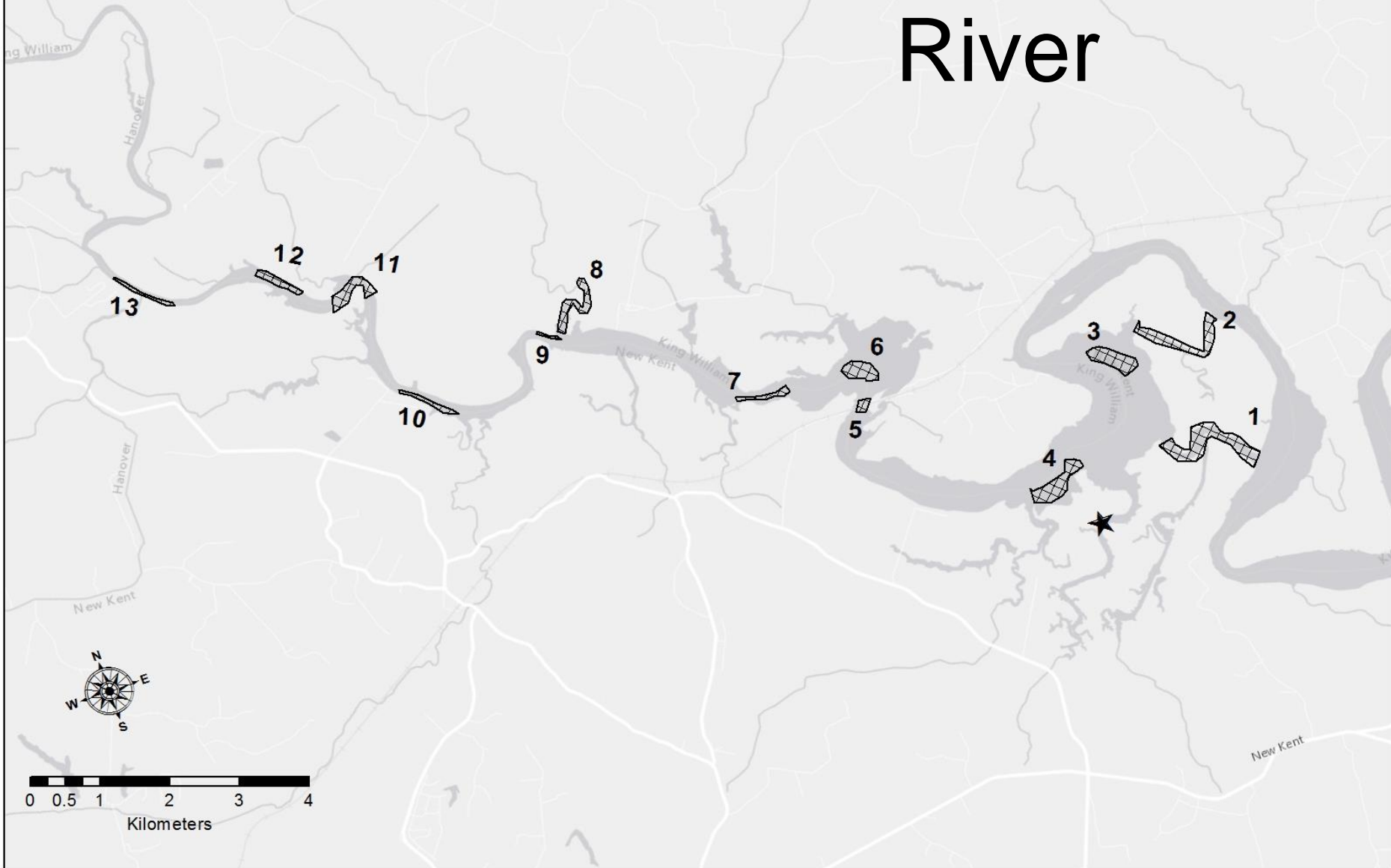
- LFE Occurred at Two Rivers
- James
- Pamunkey



James River

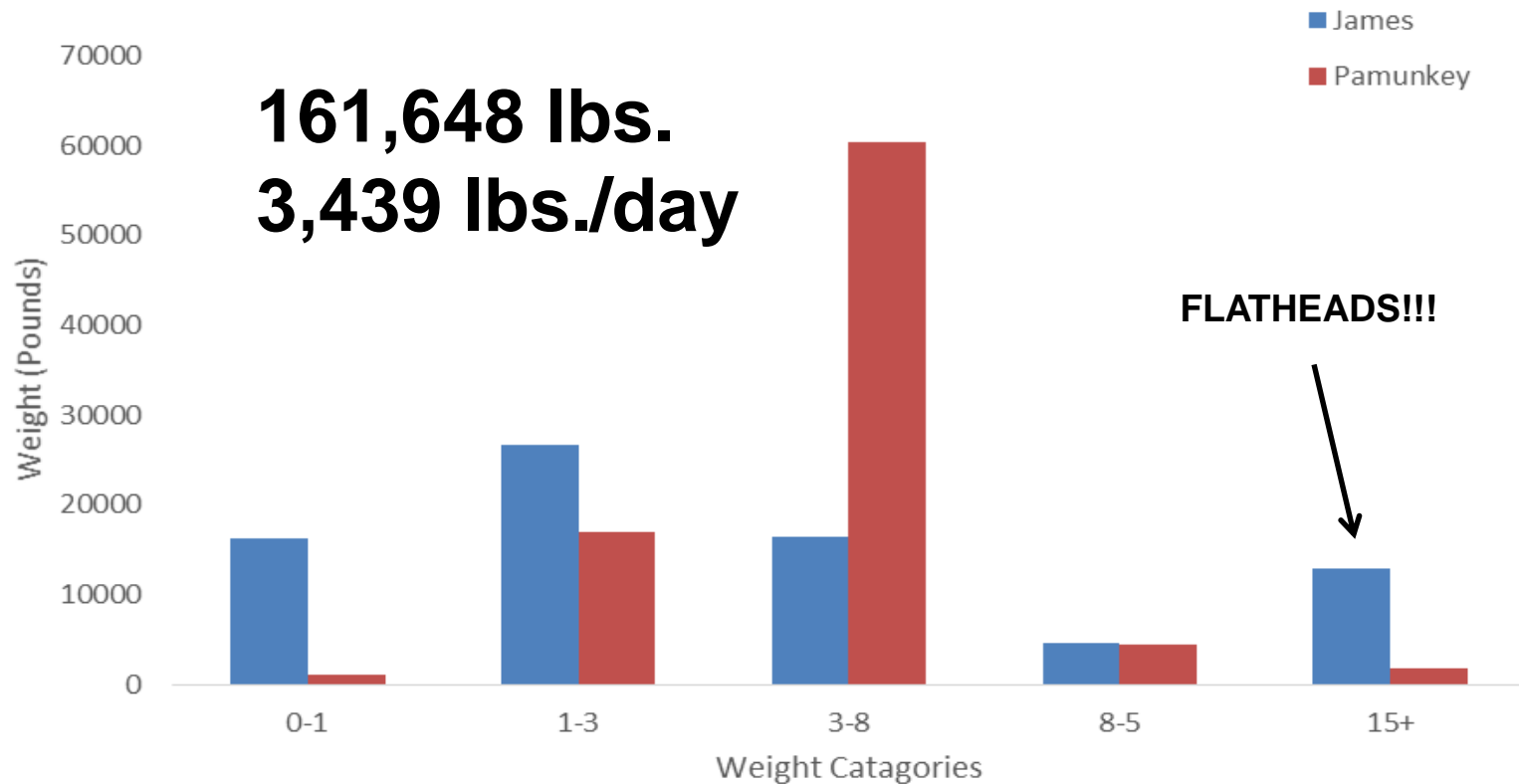


Pamunkey River



2014

- 34 Days in James
- 13 Days in Pamunkey



2014 FRG Project

- Does it Work? **YES!!**
- No Noticeable Effects on Other Fish
- No Bycatch
- More flatheads than expected



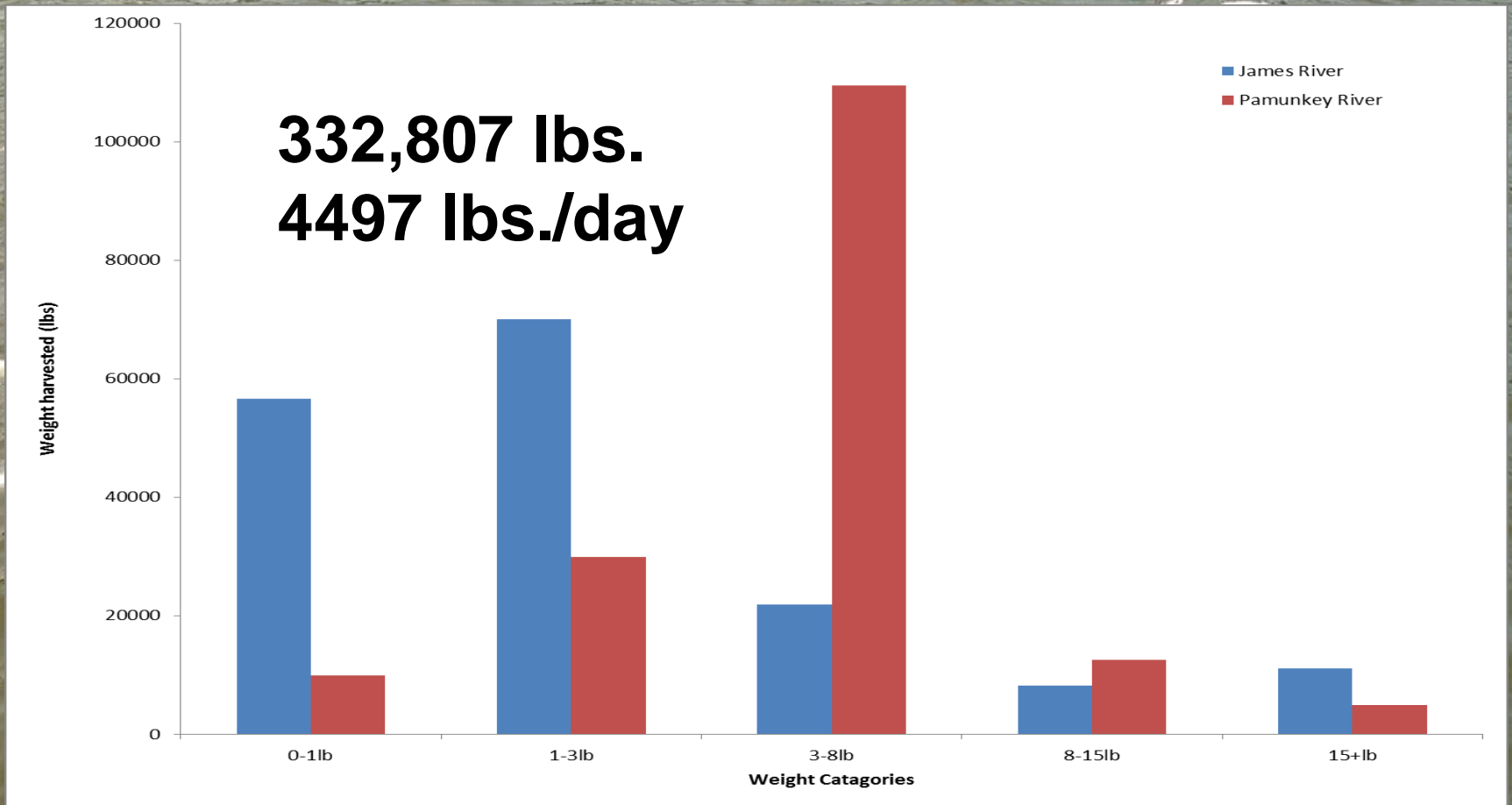
Takeaways of 2014

- Need to Increase Catch Efficiency
- Possible Interactions with Hoop-Net Catch



2015

- 36 Days in James
- 38 Days in Pamunkey



2015 FRG Results

- Devices Did Not Work
- Beat by dip netter every time



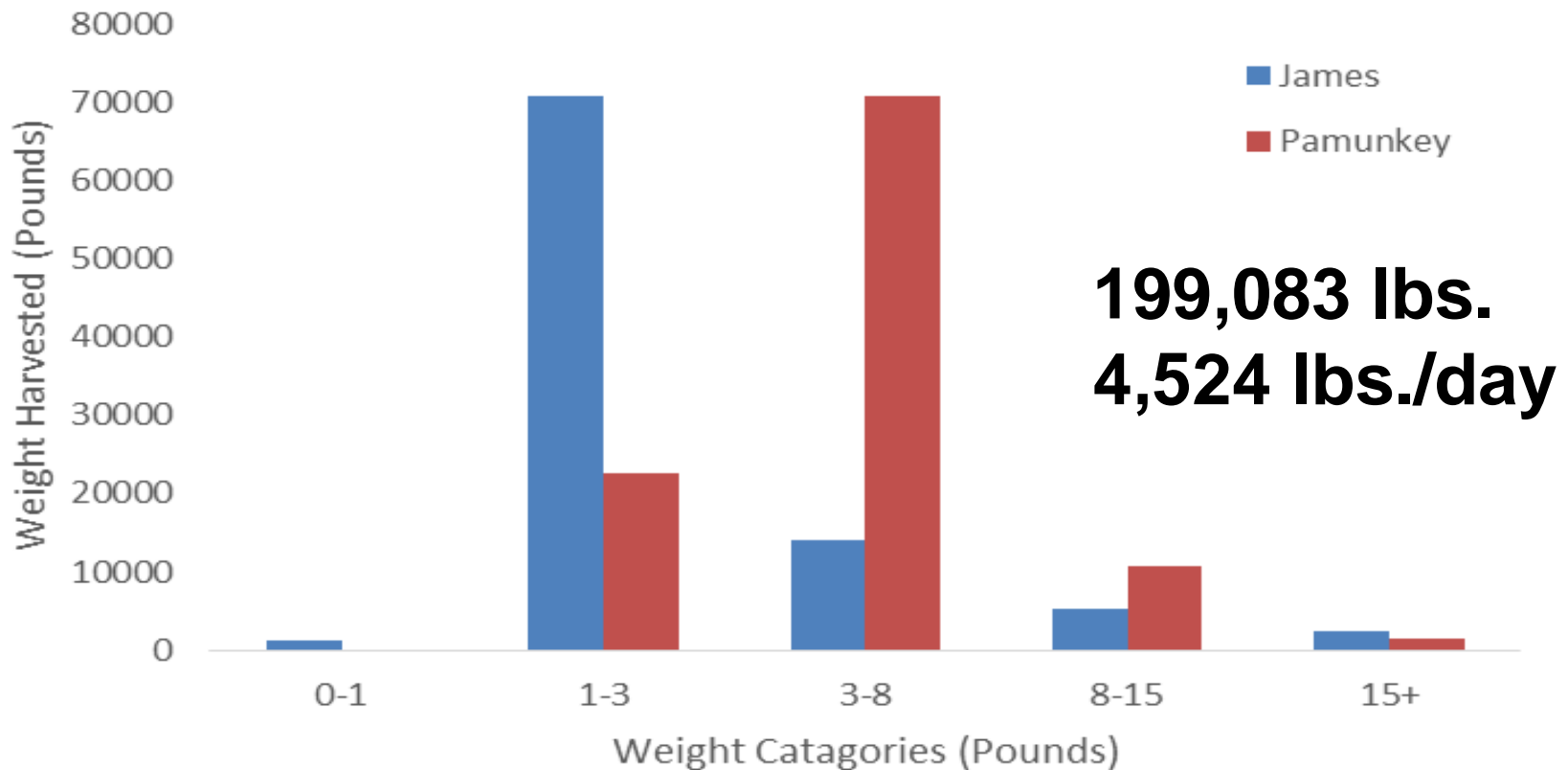
Takeaways of 2015

- Need to find a more efficient way to collect catfish when they come up in large numbers
 - Carp Dozer?
- Hoop-Net fishery interactions
- Different GPPs



2016

- 18 Days in James
- 26 Days in Pamunkey



2016 FRG Project

- GPP Problems
- Hoop-Net (Info From Bob)
- Gill Nets



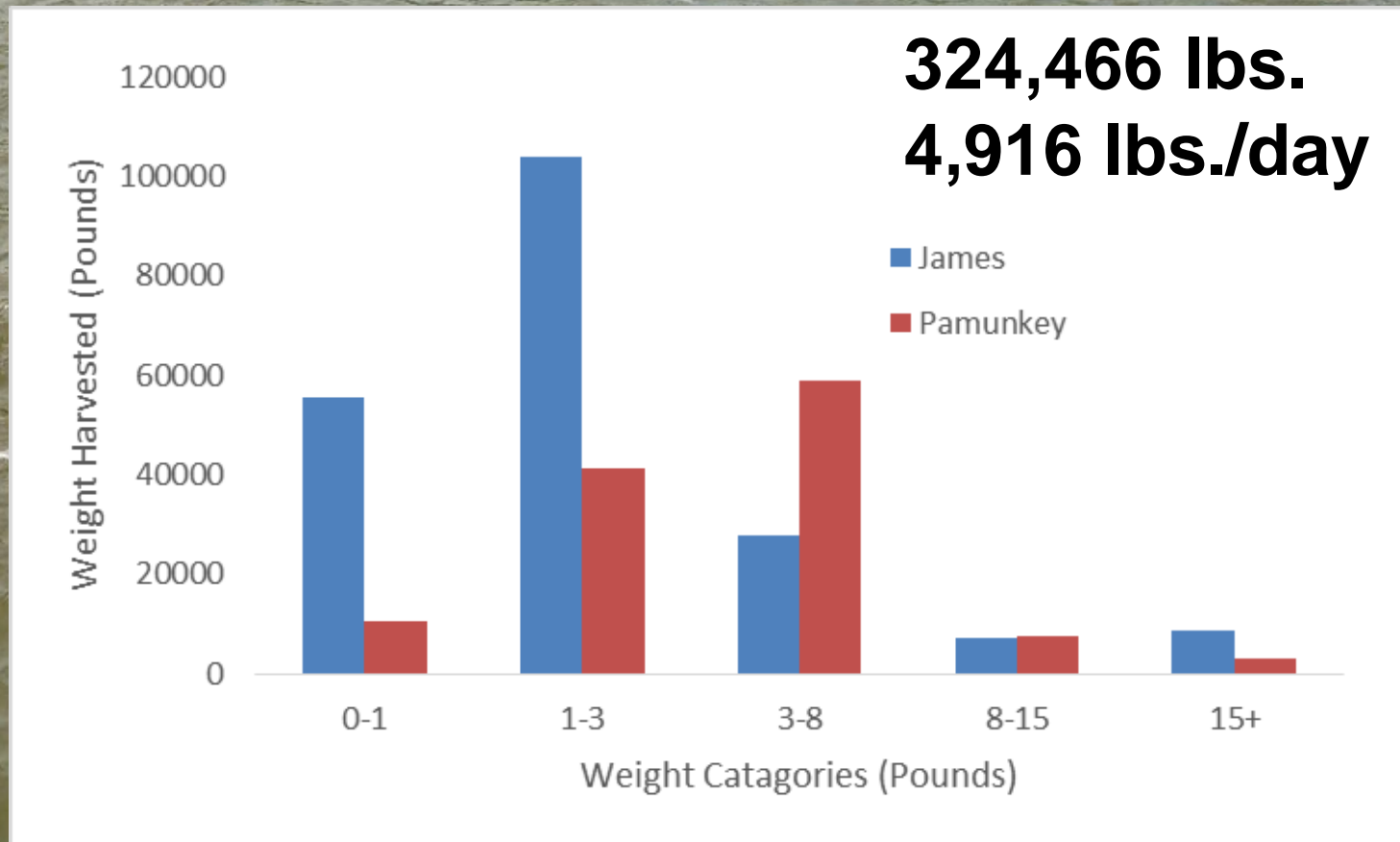
Takeaways of 2016

- LFE doesn't seem to have any effect on hoop-net fishery
- Continues to be a great conservation fishery



2017

- 38 Days in James
- 28 Days in Pamunkey



2017 FRG Results

- Really didn't "open up" new fishing area downstream
- Repeat shocking
- Water temperature
- Fish size

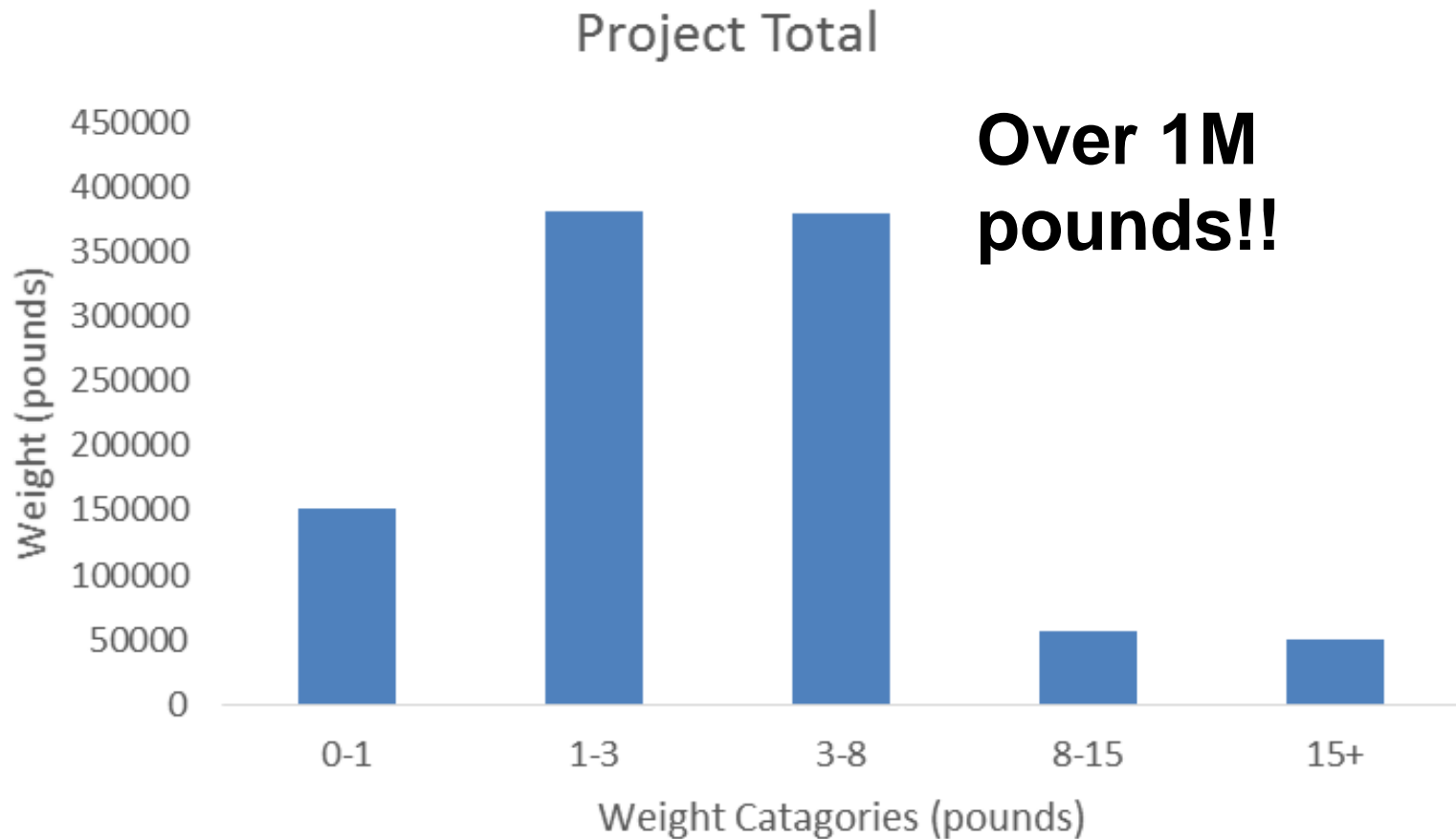


Takeaways of 2017

- 7.5 and 9.0 both have pros and cons
- One per river
 - James and Pamunkey
- Continues to be a great conservation fishery
- Hindered by USDA Law
 - Demand Yes, Time No



Entire Project



Bonus

- Samples for VIMS
- 0-1 Discarded
- The Birds!



Future

- Fortunately (and unfortunately) this is a sustainable fishery for years in the future



Closing

- Over 1M pounds with no bycatch
- Address USDA
- Flatheads Spreading
- Legal Fishery



Acknowledgements

- Tom Murray (VA Sea Grant)
- Jon Bull, Rob O'Reilly, Joe Cimino (VMRC)
- Albert Spells and Mike Odom (USFWS)
- Bob Greenlee (VDGIF)
- Greg Garman (VCU RRC)

Drone Work

