

Invasive Species of The Catawba-Wateree

Water for All Summit – April 3rd, 2025





Defining "Invasive" Species

- "Non-native" does not always mean "Invasive"
- Less than 2% of introduced species become invasive BUT – Those 2% have cost \$Billions in loss and damage
- Invasive is
 - 1. Non-indigenous to a location or region (scale dependent)
 - 2. Causes economic and/or environmental harm
- Invasiveness defined by
 - Ability to "survive and thrive" and reproduce rapidly
 - Lack of natural enemies or disease
 - No competitors or adaptive advantage



THE INVASION CURVE



Figure credit - Rachel Rabon (UF/IFAS)



How Do They Get Here?





Accidental Introduction



Imported as "Pets"



Ornamental or economic value



Improperly Vetted Control or Mitigation Strategy



Notable Aquatic Invasive Species of the Catawba-Wateree





Corbicula



Mystery Snail



Hydrilla



Alligatorweed



NC STATE UNIVERSITY

Notable Aquatic Invasive Species of the Catawba-Wateree





Alabama Bass



Blueback Herring



Alewife





Eelgrass (Vallisneria sp.)???



Aquatic Plants – The Good

- Food, shelter, and breeding habitat for fish and wildlife
- Shoreline stabilization
- Oxygenation
- Aesthetics





Aquatic Plants – The Bad (and Ugly!)

- Invasive species cause ecological and economic impacts
 - Outcompete native/beneficial species
 - Create fluctuation in water quality
 - Alter food webs
 - Clog or damage water control structures
 - Reduce or halt public use
 - Impact local economy







Why So Problematic In Reservoirs?

- Large areas of clear, shallow water
- Nutrient availability in water/sediment
- No competitors
- Competitive advantage
- Rapidly changing systems





How Do Most Invasive Aquatic Plants Spread?





The Science – What Management Options are Available?

- Cultural
- Mechanical/Physical
- Biological
- Chemical
- Prevention/EDRR





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Timeline Means EVERYTHING

PROACTIVE Stakeholder Driven Management

- Multi-use resource = Multi-user.....identify, engage, and set expectations <u>BEFORE</u> problems arise or management implemented
- Develop meaningful relationships
 - Leverage existing partnerships/ processes
 - Build knowledge base through active participation
 - Identify and prioritize critical partnerships
 - Utilize proactive engagement



THE INVASION CURVE

Figure credit – Rachel Rabon (UF/IFAS)

Importance of Partnerships in Managing Invasive Aquatic Plant Species



Emerging Aquatic Plant/Algae Species Issues and Management Options





Native Aquatic Plant Species of the Catawba-Wateree





A Never-Ending Battle





A Never-Ending Battle



What YOU Can Do

- Clean, Drain, Dry!
- Management is NOT DIY!
- See something strange? Let us know!

North Carolina Witdlife	FDDMans	STOP NREP
RECOMMENSION Apple Snails and Two Egg Masses (Ben Ricks)		
Bighead Carp / Silver Carp:	Ponti Catolina 👻	
	How many did you see? If you saw something associated with the animal (shell, egg clutch, etc) but not the animal itself, please enter 1.	Stop the spread of invasive aquatic species Take these 4 steps after each trip on the water
Distantion of the		CLEAN: equipment of aquatic plants and animals
C-	What was the date of your observation?*	DRAIN: water from boats, live wells, and equipment
	2/27/2025 ∨	DRY: allow equipment to thoroughly dry NEVER MOVE: fish from one body of water to another
Top – Silver Carp (Great Lakes Fishery Commission)	What was the time of your observation?	Warm water hitchhikers to be on the lookout for:
Bottom – Bighead Carp	🔘 hhamm 🗸	
	Where did you see the animal(e)?* Zoomto the location of your charmation and click on the map to provide WIC with the most accurate information possible. If your report location is outside of North Carolina, please submit your charmation to the relevant state agency or to be <u>USGS Northologonous Apartic</u> .	Hydrilla Zebra Mussel Glant Sylvinia Crested Floating Heart
	Indiadess place	For more information about aquatic hitchhikers visit: www.protectyourwaters.net
Top - Blue tilapia (Univ. of Fiorida Aquaculture Dept.)	Control of the second states of the second sta	
Bottom – Redbelly tilapia (U.S. Army Corps of Engineers)	 No geometry captured yet. 	

1:10 PM 내내 수 📼	
eryn	Plant location*
Aquatic Plant Report - Duke Energy	Please try to report as close as possible to location where the plant was seen
Please fill out the following to report any issues	Richmond
regarding aquatic plants to Duke Energy's	Find address or place
Aquatic Plant Management Program.	Norfolk
To learn more about how Duke Energy manages	
aquatic plants, visit our website duke-	Creensboro Raleigh
<u>energy.com/AquaticPlants</u> .	
	Charlotte
Name*	
	Tip: This question will try to use your location. Press to continue.
	Columbia Atlanta
	Birmingham 1
Email*	
This is only to be used if there is additional follow up needed	ama Georgia
	Earthstar Geographics Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS Powered by Esri
	No geometry captured yet.
Phone number	
ex: 704-222-1919	
	Photo of plant*
	Having a photo is useful for quick and accurate identification
Lake name	Some tips for taking a great picture:
-Please select-	Take a clear photo of the plant
	 If possible, separate a single stem out of a bunch
	Try to take a picture of the plant next to a common object (pencil, coin, shoe, etc.) for

