



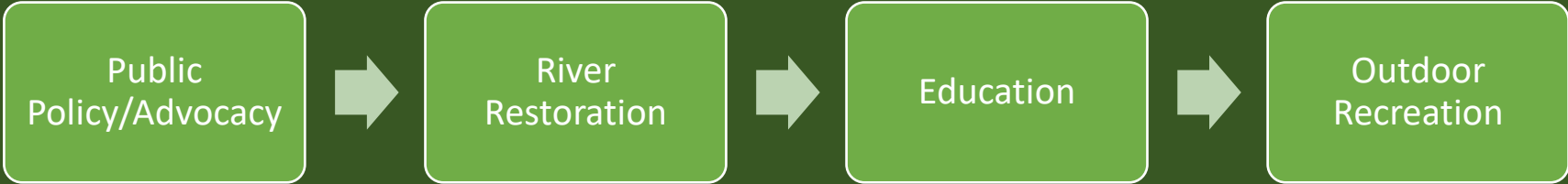
Aquatic Invasive Species in the Anacostia River, *a recovering urban river*

Jorge Bogantes Montero
Anacostia Watershed Society

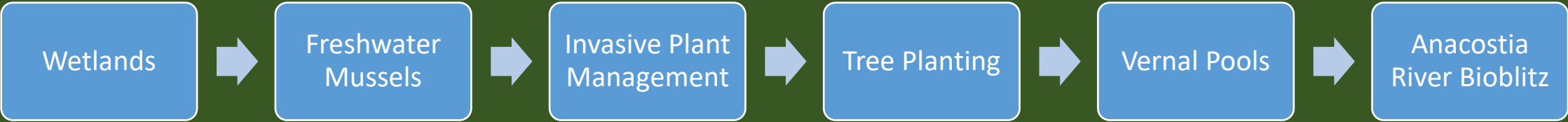
Anacostia Watershed Society



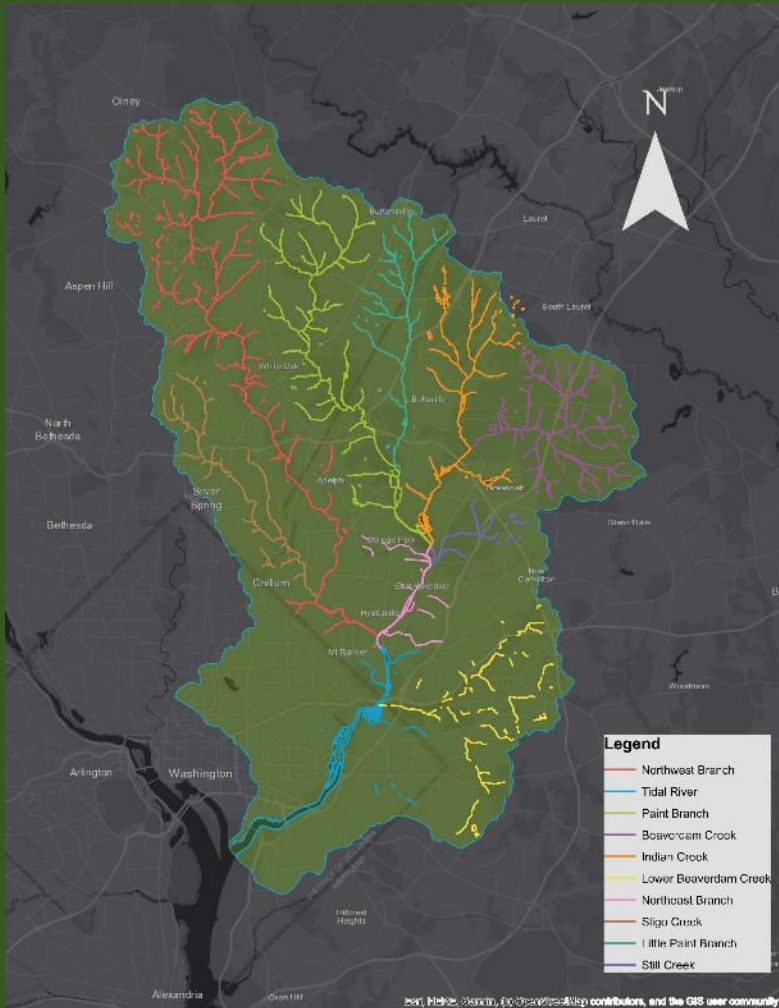
ANACOSTIA
WATERSHED
SOCIETY



Anacostia Watershed Society

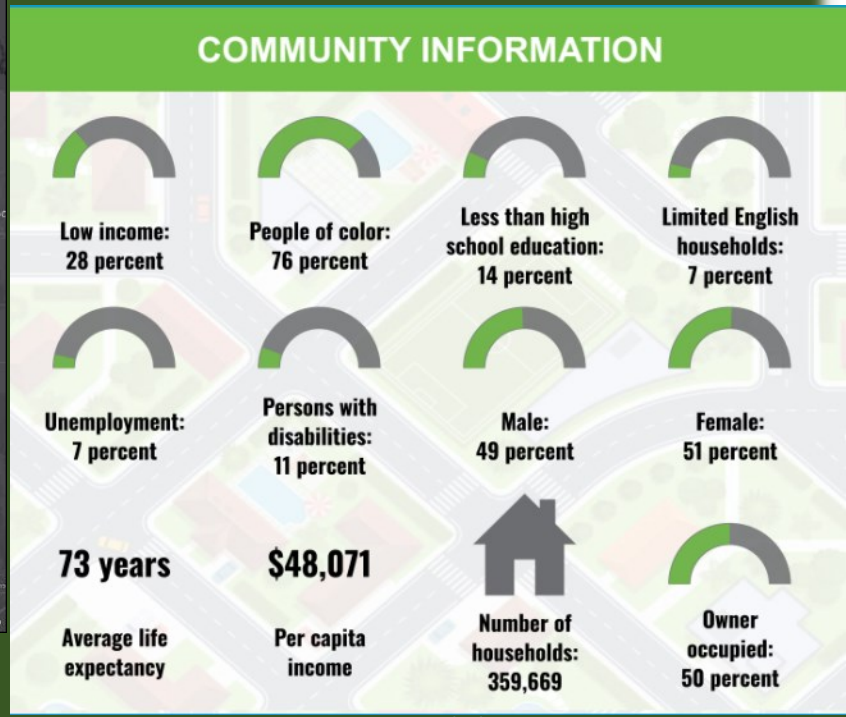
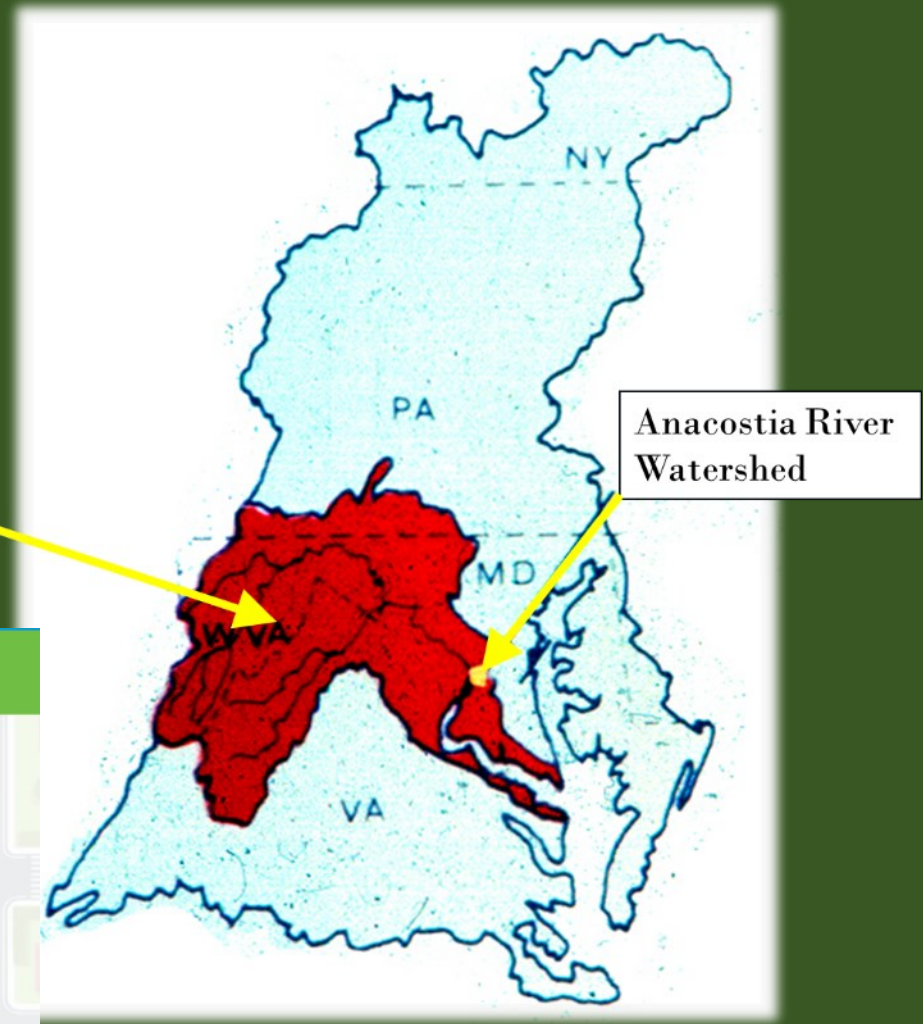


Anacostia River Watershed



- 173 Sq. Mi.
- 1 million people
- Residential development: 45%
- Imperviousness: 23% (as much as 37% and 48%)
- Forest/parks cover: 30%

Potomac River Watershed









Mussels:
8 species

Fish: 62 spp
(11 nonnative
species)



Herpetofauna:
56 species
(7 nonnative)

Biodiversity



Mammals:
35 species
(3 nonnative)

Birds: 260
species
(4 nonnative)



State of the Anacostia River Report Card

2023 State of the Anacostia River (2022 Data Analysis)

	Parameter ^{*1}	Dissolved Oxygen	Fecal Bacteria	Secchi Disk Depth (Water Clarity)	Chlorophyll (a)	SAV ^{*3}	Stormwater Runoff Volume	Toxics	Trash	Average of % Score	Grade for section ^{*2}	%Score and Grade for the entire Anacostia		
Section 1 (Mid Anacostia)	% Score	81	43	47	83	% Score 16	% Score 34	% Score 62	% Score 66	54	F	% Score 52		
	Grade for each parameter ^{*2}	B-	F	F	B									
	Long Term Trend	Improving	Sign of degradation	Improving	Improving									
Section 2 (Upper DC Anacostia)	% Score	42	53	51	79	Grade F	Grade F	Grade D-	Grade D	51	F		Grade F	
	Grade for each parameter ^{*2}	F	F	F	C+									
	Long Term Trend	Sign of improvement	Improving	Improving	Improving									
Section 3 (Lower DC Anacostia)	% Score	43	62	52	83	Trend Needs attention	Trend static	Trend Improving	Trend Improving	52	F			F
	Grade for each parameter ^{*2}	F	D-	F	B									
	Long Term Trend	Degrading	Needs attention	Improving	Improving									

*1 AWS scoring method used for Stormwater, Toxics and Trash. EcoCheck scoring method for all other parameters. (100% is best.)

*2 Standard school grading system (Below 60 = F)

*3 From 2017, AWS decided to use DOEE data since DOEE does survey on the ground and it is more accurate than VIMS data for SAV in the water of DC

Note: 2022 Data sets were used for all parameters.

For trend analysis, data sets from 1984 to 2022 were used.

Aquatic Invasive Species

- Shipping/ballast water and other transportation
- Pet releases/ accidental escapees
- Trade: horticulture, aquaria, pets, etc.
- eCommerce



Red-eared Slider (*Trachemys scripta ssp. elegans*)

Trionychids (Softshell turtles)

First obs. In the Potomac River in 2003



Spiny Softshell (*Apalone spinifera*)

First obs. In the Anacostia River in 2020



Chinese Softshell Turtle (*Pelodiscus sinensis*)

Photo: @belyykit

Fishes



Northern Snakehead (*Channa argus*)



Common carp (*Cyprinus carpio*)



Goldfish (*Carassius auratus*)



Blue catfish (*Ictalurus furcatus*)



Channel catfish (*Ictalurus punctatus*)

Plants



Two-horned Trapa (*Trapa bispinosa*)

First obs. in 2022 in the watershed



Purple Loosestrife
(*Lythrum salicaria*)



Yellow Iris (*Iris pseudacorus*)

Plants



Common Water Hyacinth
(*Pontederia crassipes*) 2020

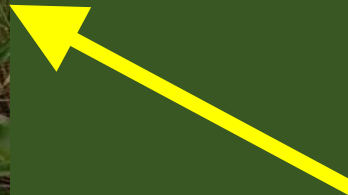


Water spangles (*Salvinia minima*) Photo: Jenny Glenn
Observed during the 6th
Anacostia River Bioblitz 2022



Curly-leaf pondweed
(*Potamogeton crispus*)

Phragmites Control



Freshwater Mussels

- Over 36,000 native freshwater mussels released in the Anacostia River
- 5 native species



Invasive Mollusks



Asian clam (*Corbicula fluminea*) sensu lato (red circle)/
native hatchery-raised mussels of 3 species (green
circle)

Invasive Mollusks



- Virtually impossible to tell apart from Chinese Mystery Snail (*Cipangopaludina sinensis*) without DNA test

Japanese Mystery Snail (*Heterogen japonica*)/ Since the 1960's

Invasive Crustaceans



Red swamp crayfish (*Procambarus clarkii*)



Virile crayfish (*Faxonius virilis*)

Emerald Ash Borer (EAB)

- Before 2012 (picture above),
After 2017 (picture below).



Photo: Sam Droege, USGS Bee Inventory and Monitoring Lab (2016).



Reforestation in Riparian Areas Affected by Emerald Ash Borer



Reforestation in Riparian Areas Affected by Emerald Ash Borer (700+ trees planted)

- American hophornbeam (*Ostrya virginiana*) (FAC)*
- American sycamore (*Platanus occidentalis*) (FACW)
- Black willow (*Salix nigra*) (OBL)
- Pawpaw (*Asimina triloba*) (FAC)
- Pin oak (*Quercus palustris*) (FACW)
- River birch (*Betula nigra*) (FACW)
- Swamp chestnut oak (*Quercus michauxii*) (FACW)
- Swamp white oak (*Quercus bicolor*) (OBL)
- Sweetbay magnolia (*Magnolia virginiana*) (FACW)
- American Hornbeam (*Carpinus caroliniana*) (FAC)
- Tag Alder (*Alnus serrulata*) (FACW)
- Black gum (*Nyssa sylvatica*) (OBL)
- White oak (*Quercus alba*) (FACU)
- Willow oak (*Quercus phellos*) (FACW)
- Bald Cypress (*Taxodium distichum*) (OBL)



Anacostia River Bioblitz – Community Science

2024 Results 8th Anacostia River Bioblitz



305

people engaged



943

species observed in
the watershed



3,356

observations



Jenny Glenn

50

Birds



belyykit

12

Mammals



Dan Treadwell

9

Reptiles



o/balkus

313

Insects



- Biodiversity of the Anacostia River (collection project)
- Annual Anacostia Bioblitz in the fall
- 355,000+ observations
- 9,500+ species
- 16,673 observers

Aquatic Invasive Species

- Legislation: inspections, decontamination, etc.
- Funding: NatCap PRISM/ early detection/rapid response
- More coordination
- Research: including eDNA
- Data: iNaturalist, etc.
- Public education (multilingual/ culturally competent)



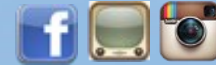
Red swamp crayfish (*Procambarus clarkii*)



ANACOSTIA
WATERSHED
SOCIETY

www.anacostiaws.org

Join us:



Thank you!

