



CITY OF ALEXANDRIA

# Meaningful Watershed Education Experience (MWEE)

Fall 2024





# What is a MWEE?

- ▶ **Meaningful Watershed Educational Experience (MWEE)** is a learner-centered framework that focuses on investigations into local environmental issues and leads to informed action.
  - ▶ Indoor and outdoor components
  - ▶ Increase environmental literacy through student engagement



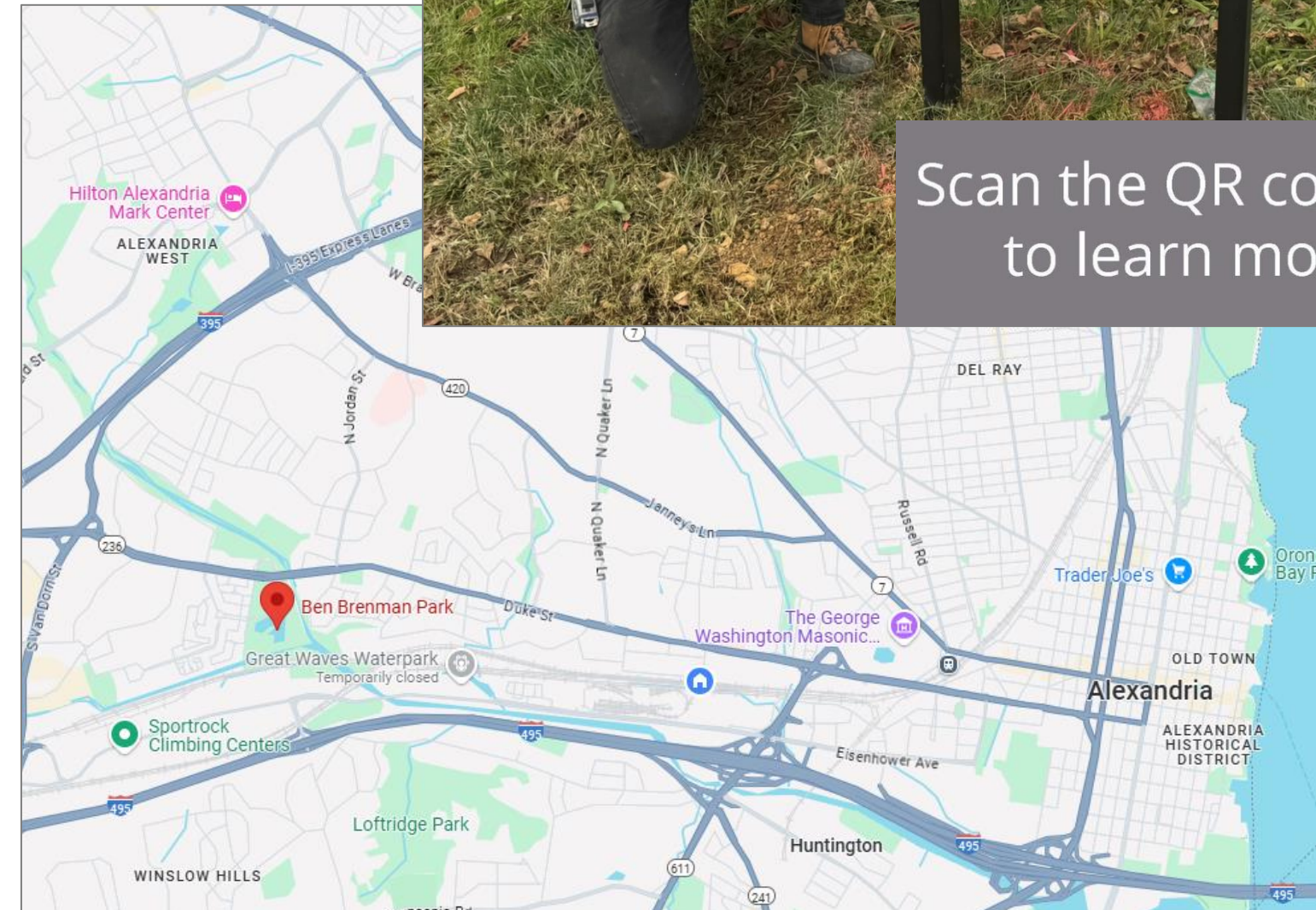


# Why Ben Brenman Pond?

- ▶ Ben Brenman Pond Retrofit completed in 2020 & part of Phase 2 Chesapeake Bay TMDL Action Plan.
- ▶ Developing educational interpretation signs for the pond retrofit.
- ▶ Large outdoor space for different educational components and parking for buses.



Scan the QR code to learn more!







# Goals/Objectives of Field Day at Ben Brenman



- ▶ **Outdoor learning.** Each student gets up to 2.5 hours of hands-on environmental education.
- ▶ **Expand our Reach.** All ACPS 7<sup>th</sup> grade students are educated on watersheds. Over 1,000 students!
- ▶ **Strengthen the ACPS - City Staff Relationship.** Each of the station activities are run by staff and ACPS experts in education.





# Updated Classroom Curriculum

- ▶ ACPS developed new ecology curriculum for all 7<sup>th</sup> grade science classes that started 3 weeks before the field trip.
  - ▶ Students learned about human impacts on the environment, local species, and watersheds in the classroom.
- ▶ After the field trip, students assessed how the mitigation strategies have been effective.



# ACPS Teacher & Staff Commitment

## ▶ Teacher Training

- ▶ All thirteen (13) 7th grade teachers received on-site professional development in August and October to prepare for the nature walk.

## ▶ ACPS Administration

- ▶ Central office coordinated transportation, training, pushout of all curricular materials and acted as a liaison with the city.





# Station 1: Ben Brenman Watershed Walk



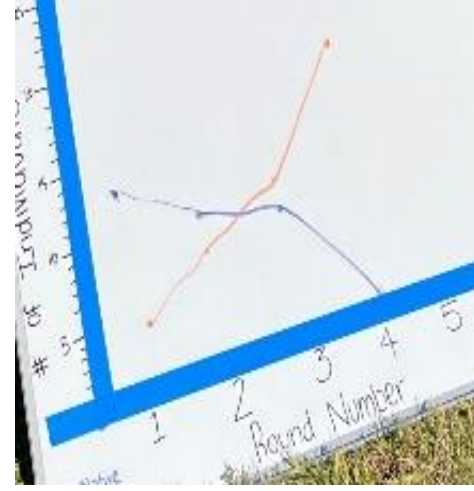
- ▶ **Teacher and Volunteer led**
  - ▶ All 7<sup>th</sup> grade teachers, ~40 volunteer chaperones
  - ▶ Volunteers from ALX Libraries & Master Naturalists
- ▶ **Walking tour of Ben Brenman Stormwater Management Pond**
  - ▶ Connect watershed walk to other stations.
  - ▶ Provides an educational field trip that represents best practices in science teaching and learning
- ▶ **Connect City efforts to Curriculum topics**
  - ▶ See the City's pollution reduction "in action."

**Station 1**





# City Led Stations



## Invasive Species:

- Led by RPCA's Buddie Ford Nature Center
- Learning Objectives: Understand the difference between native and invasive species and how they compete for space and resources.



## Climate & Carbon:

- Led by Office of Climate Action
- Learning Objectives: Understand the carbon cycle and climate change. See how making responsible choices can decrease your carbon footprint.



Group #	Ideal Range	Result	Temp. C	Water Quality
2	6-8	X	X	X
TDS Pen (ppm)	50-150 ppm	0.77	32.1	
Carbonate (ppm)	40-120 ppm	0		
pH	6.8-7.8	6.8		
Hardness (ppm)	50-250 ppm	250		
Total Chlorine (ppm)	0-0.5 ppm	0.5		
Free Chlorine (ppm)	0 ppm	0		
Nitrate (ppm)	0-25 ppm	0		
Nitrite (ppm)	0 ppm	0		

## Water Quality Testing

- Led by Stormwater Management
- Learning Objectives: Understand how scientists test water for chemical, physical, and biological characteristics to understand the overall health of the waterways.





# Program Considerations & Goals

## City Benefits:

- Optimize/expand partnership with ACPS during a hands-on, outdoor experience that promotes city programs.
- Reach a more diverse audience.
- Leverage city resources by hosting the field trip at Ben Brenman, which was recently upgraded with grant money and is now being used to educate students.

## School Benefits:

- Experience will address standards LS. 2 and LS. 9 as well as meet the requirements of the MWEE experience outlined in the Environmental Literacy Goal and Outcomes of the new Chesapeake Bay Watershed Agreement (signed 6/19/14).
- Provides an educational field trip that builds on classroom curriculum requirements.

## Connection to City Priorities:

- MS4 Permit (Public Involvement Opportunities).
- Promotes educational awareness of existing stormwater BMP retrofitted to support the Chesapeake Bay TMDL Action Plan.
- EAP 2040 Initiatives (Section 10, Outreach & Education).
- City Council Priorities (Community Connection).





CITY OF ALEXANDRIA

## Next Steps:

- Incorporate event feedback to next year's plan.
- Coordinate Fall 2025 event dates.







# Recognition

**FFX County Park Authority**– for providing information on how FFX runs their successful MWEE program and allowing Alexandria to use materials and model program, as desired.

## **City Staff Point Of Contact for each Team:**

- **Laura Prince**, ACPS Secondary Science Specialist
- **Paige Edwards & Erin Dempsey**, RPCA Buddie Ford Nature Center
- **Ryan Freed & Dustin Smith**, Office of Climate Action
- **Jessica Lassetter**, Stormwater Management