



Bridging the Knowledge Gap: the MSRA's Public Outreach Initiative



## Purpose of Organization:

“...the informal discussion and exchange of ideas relating to the scientific study and field application of stream restoration in Maryland, collaboration on an as needed basis with organizations and institutions regarding stream restoration and its impact on water quality...”

- *MSRA Constitution and Bylaws*

# Recognizing the Need



**B** Bay Journal

## Stream restoration techniques draw pushback | Pollution & Solutions | bayjournal.com

During dry weather, two little streams in Hollin Hills trickle gently downhill, shaded by a thick canopy of trees. The streams are part of a restoration project that has attracted considerable controversy, as local residents and environmentalists have expressed concerns about the impact of stream restoration on the surrounding landscape.

## Opinion | Urban stream renewal in Chesapeake Bay

The goal should be to preserve and protect the streams and not bulldoze them and hope we can replant the trees. Stream restoration projects look to reduce Chesapeake Bay runoff while leveling suburban woods.

May 28, 2021

**S** Baltimore Sun

## What's proposed for Elkhorn is not stream restoration | Stream Fairfax

The proposed Lake Elkhorn Stream Restoration project is a stream ("Columbia needs stream restoration project,"...)

Feb 25, 2022

Jan 25, 2020

**M** Maryland Today

## Paddling Against the Current on Stream Restoration

Stream restorations filter pollutants out of local waterways and improve the health of streams.

**W** WUSA9

## Hundreds of trees cut down in Virginia, Maryland for controversial stream restoration projects

Controversial stream restoration projects look to reduce Chesapeake Bay runoff while leveling suburban woods.

Jul 22, 2022

Connection Newspapers

## Stream 'Restoration' of Arlington Streams a Misnomer?

Jeff Elder used to think the stream restoration along Donaldson Run's Tributary B was a good idea. But when he saw the number of mature trees being cut down, he changed his mind.

1 month ago

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# Identifying the Information Gap



GAITHERSBURG, Md. — Cities in Maryland and Virginia are taking on controversial stream restoration projects **cutting down hundreds of trees**. The effort aims to reduce the amount of sediment running into the Chesapeake Bay.

When asked what was lost after the project was done, Gaithersburg resident highlighted the **loss of the entire ecosystem**

Alexandria calls itself an Eco-City. But is it really? What does that really mean? In the case of the "restoration" of the Taylor Run the city says its goal is to reduce water pollution that harms the Potomac River and the Chesapeake Bay. Instead, the city's projects may do just the opposite, and also **destroy the remaining natural habitat** Taylor Run, Lucky Run and Strawberry Run.

"Right after the stream 'project' - I can't call it a 'restoration' - all these new **new invasive species arrived** with all the light coming through now because of the lack of tree canopy, the invasives are growing like crazy."

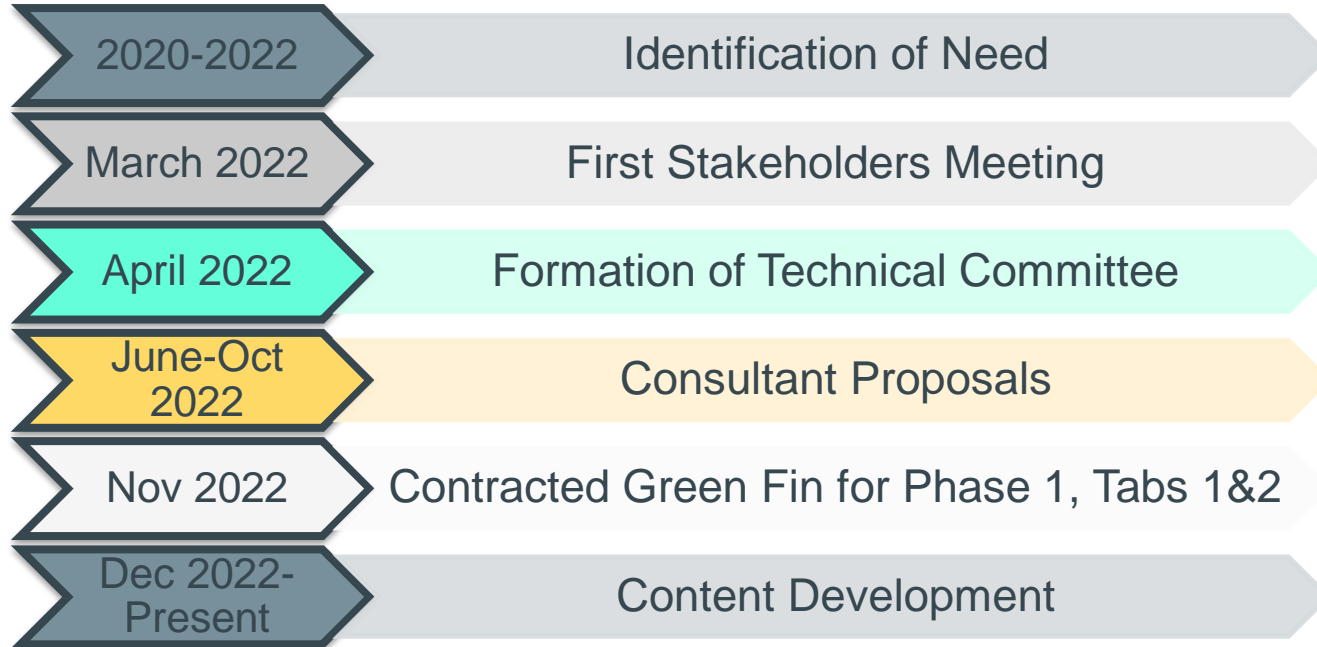
Saying "stream restoration" is only one tool in the toolbox for addressing stormwater



Is like your brain surgeon saying a chain saw is only one tool in his toolbox.



# Project Timeline



# Project Inception Lessons Learned



- In March of 2022, we intended for the project to be done by August of 2022
- Content generation can't be subcontracted
- Must be able to pivot on design styles
- Volunteer-based projects need a team, not a quarterback





# Transition from Procurement to Production

## Kick-off Meeting




- Review the scope of work and discuss updates
- Establish the format and frequency of meetings
  - Biweekly Teams meetings with the technical committee – 13 meetings since January 2023
  - Data Framework
  - Bi-monthly Zoom calls with Green Fin

# Production and Management



















## Data Framework:

Over 150  
photos and  
videos



My Drive > MSRA Public Education I...   

Type ▾ People ▾ Modified ▾

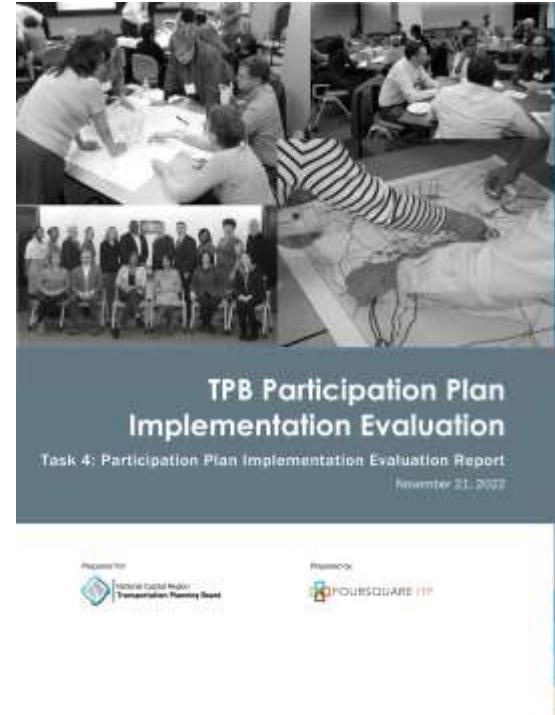
Name	Owner	Last m...	↓
 Baltimore County EPS Stream Photos, Graphics...	 Lisa Bledsoe	Jun 16, 2023	
 Photos of Degraded Streams - Channel Incision	 Adam Nabors	Mar 9, 2023	
 Photos of Channel Degradation over time	 Adam Nabors	Feb 17, 2023	
 Aerial Imagery reflecting channel migration	 Adam Nabors	Feb 17, 2023	
 Photos of Degraded Streams - Excessive Aggre...	 Adam Nabors	Feb 17, 2023	
 Photos of Degraded Streams - Streambank Ero...	 Adam Nabors	Feb 17, 2023	
 Videos during storm events	 Erin McArdle	Jan 23, 2023	
 Healthy streams - natural	 Shannon Luc...	Jan 23, 2023	
 Beaver References	 D Merkey	Jan 4, 2023	





## Production Lessons Learned

MWCOG: “The target grade level score for public consumption lies between 7.0 and 8.0 (seventh to eighth grade-level in the U.S. school system)”

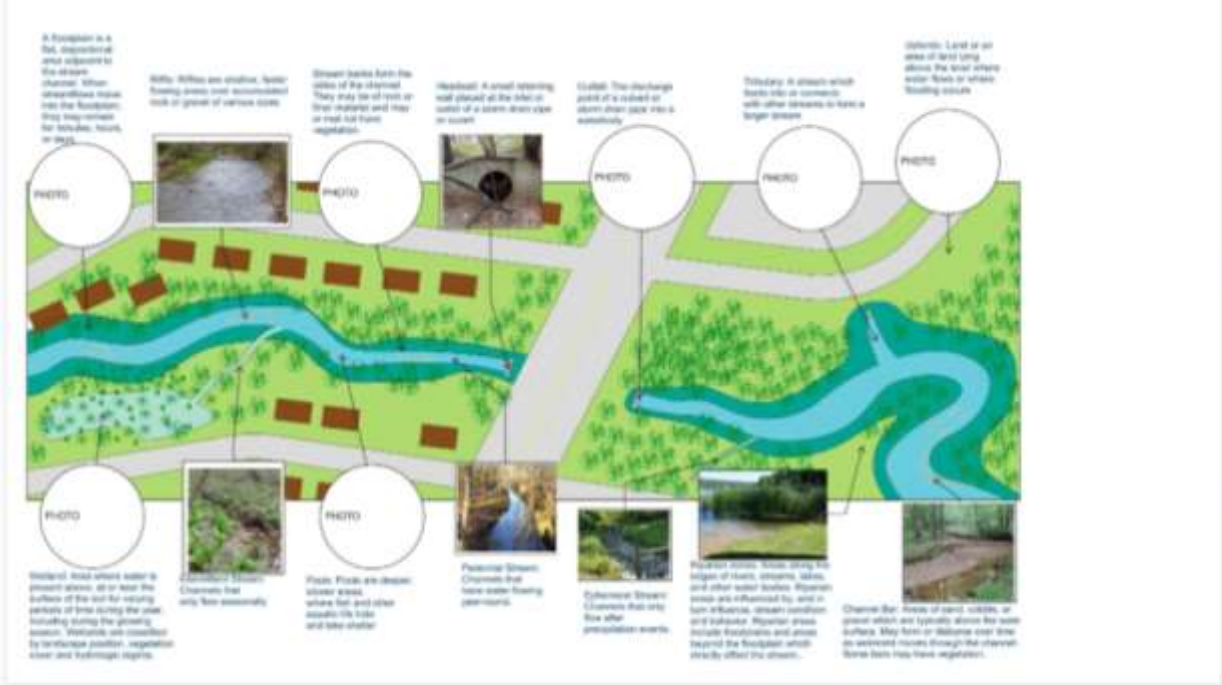


# Committee Challenges and Benefits



- Diverse perspectives
- Reaching consensus
- Scheduling
- Communicating clear direction to our consultant

# Production Lessons Learned



Adam Nabors  
2:25 PM Jun 30

Macon - Liz created this image based upon the link below. Please create an comparable image in GF graphical style.

Adam Nabors  
2:13 PM Jul 12

MSRA to provide photos labeled by slide number and photo subject for GF to insert

Elizabeth Kanner  
2:34 PM Jun 9

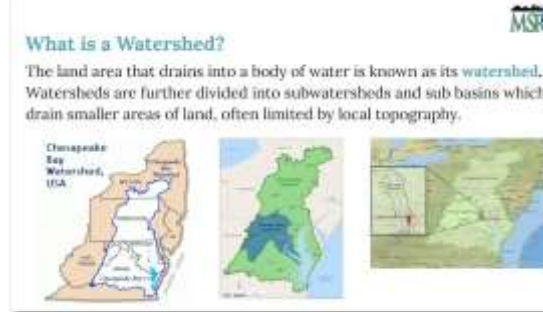
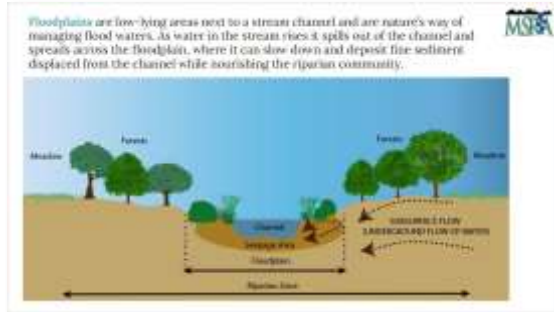
Based on:  
<https://www.montgomerycountymd.gov/DFP/Resources/Files/PostersPam>



## Technical Committee/Contributors

- Michael Galvin, JMT
- Shannon Lucas, KCI
- Joe Berg, Biohabitats
- Joe Arrowsmith, Straughan
- Sadie Drescher, Chesapeake Bay Trust
- Bob Siegfried, RES
- Mark Richmond, Howard County
- Peter Mattejat, MDOT MdTA
- Pete Daly, EQR
- Mark Secrist, USFWS
- Erin McArdle, M-NCPPC
- Rebecca Oaks, RKK
- Denise Clearwater, MDE
- William Weaver, RES
- Catherine Hoy, JMT
- Lisa Bledsoe, Haley & Aldrich
- David Merkey, Greenvest
- Will Brogan, EQR

# Phase 1: Tab 1 – Understanding Streams in Maryland



A high functioning watershed incorporates various components in addition to wetlands that make a healthy, functioning system.

Wetlands act as huge storage tanks and filters for flood waters - this is why floodplain wetlands are important to reducing flooding.

Photo of a healthy wetland:

# Phase 1: Tab 2 – The Legacy of Maryland's Streams



## Modern Urban & Sub-Urban Development/How Stream Degradation Happens

- Without loss of stream floodplain & wetland habitat
  1. Development past a certain threshold (20% impervious) causes the legacy of streams to only partially protect stream & riparian-dependent species. In addition, species are lost.
  2. Most of impervious on Maryland past 1970? (see <http://www.waterdata.org/press/pubs/2008/080101a.html>)
  3. <http://www.waterdata.org/press/pubs/2008/080101a.html>
  4. <http://www.waterdata.org/press/pubs/2008/080101a.html>
- Potential growth (density) of human gathering developed in a watershed also



Image credit: extension.umd.edu



Image credit: epa.gov

**How DYNAMITE streamlines streams**

*streamlines streams*

AMERICAN FORESTS

DU PONT

## The Role of Wetlands

Wetlands are "areas where water covers the soil, or is present either at or near the surface of the soil all year or for varying periods of time during the year, including during growing season."

Remarkably, in Maryland wetlands covered \_\_\_\_\_% acres, etc. However since the 1940s, due to rapid growth and land use changes, Maryland has lost over 40,000 acres of wetlands!

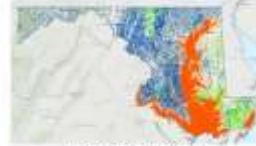


Image credit: news.maryland.gov



# Public Outreach Initiative

## Phase 2 - Expand upon Phase 1

- Secure funding for additional work
- Distribute and actively present Phase 1 content to interested communities and organizations
- Create additional content further explaining natural process of stream systems



# Public Outreach Initiative

## Phase 2 - Expand upon Phase 1(cont.)

- Facilitate retrofit of MSRA website, improving functionality for members and guests, and expanding resourcer library
- Hire communications consultant
- Host field trips
- Expand MSRA membership beyond stream restoration community





Questions? Ask Adam Nabors, Elizabeth Kanner, Katrina Emery-Davis or Rebecca Oaks