



# Thriving Communities Network (TCN) Learning Series

August 28, 2024

FEMA's Building Resilient Infrastructure  
and Communities (BRIC) Program

[ThrivingCommunitiesNetwork@dot.gov](mailto:ThrivingCommunitiesNetwork@dot.gov)

# What is the TCN?

For decades, communities have requested resources and tools to successfully compete for federal funding.

The Thriving Communities Network (TCN) is a federal interagency effort that coordinates place-based technical assistance (TA) and capacity-building resources for urban, rural, and Tribal communities experiencing a history of economic distress and systemic disinvestment.

TCN was established in response to disadvantaged communities' request for tools and resources to successfully compete and obtain funding that can address their economic, climate, and infrastructure needs.

These federal resources include grant and financial management support, pre-development assistance, community engagement, planning, and project delivery support.

# TCN Agency Partners

- Currently, TCN has 11 participating federal agencies.
- The TCN is co-chaired by DOT and EPA



8/28/2024

# **Thriving Communities Network Learning Series: FEMA's Building Resilient Infrastructure and Communities (BRIC)**

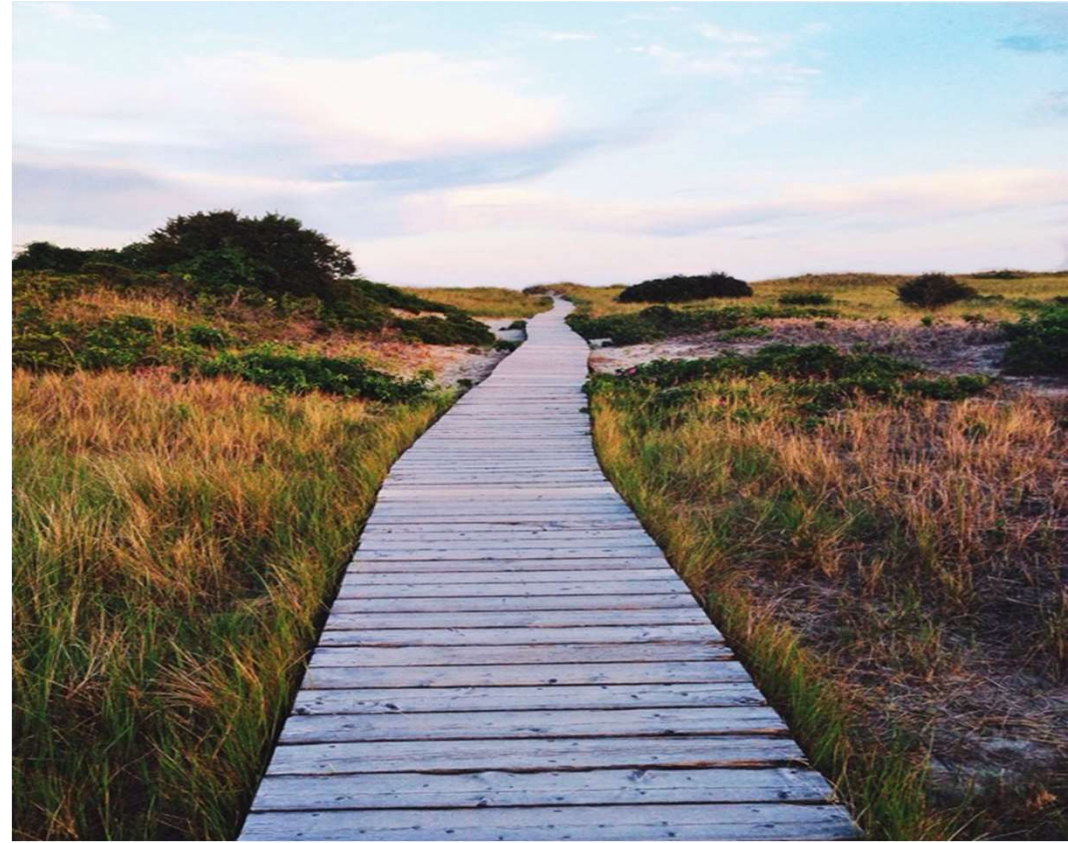
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**FEMA**

## Speakers Today:

- Josh Human, Partnership Lead, FEMA BRIC HQ
- Hailey Stern, Partnership Coordinator, FEMA Region 3
- Darlene Taylor, Mayor, Crisfield, Maryland
- Jen Merritt, Grants Administrator, Crisfield, Maryland



# Building Resilient Infrastructure and Communities (BRIC) Guiding Principles

Helping people before, during and after disasters



Support Community Capability & Capacity Building



Encourage and Enable Innovation



Promote Partnerships



Enable Large Infrastructure Projects



Maintain Flexibility



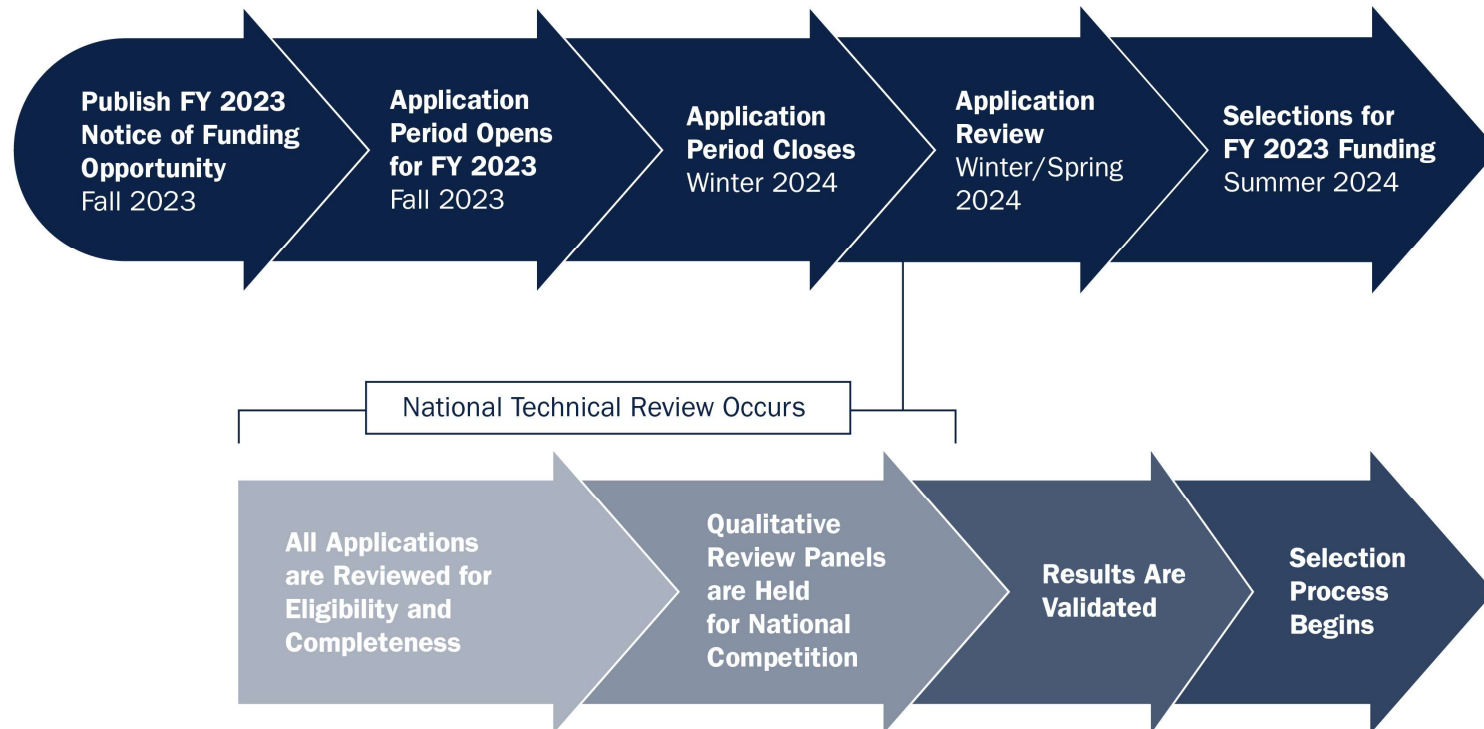
Provide Consistency

## FY23 BRIC Priorities

- Incentivize natural hazard risk reduction activities that mitigate multi-hazard risks to public infrastructure and disadvantaged communities as referenced in EO 14008.
- Incorporate nature-based solutions. This includes those designed to reduce carbon emissions.
- Enhance climate resilience and adaptation.
- Increase funding to applicants that facilitate the adoption and enforcement of the newest editions of building codes.

*\*BRIC encourages mitigation projects that meet multiple program priorities\**

# Application Cycle





# Goals of the BRIC Direct Technical Assistance DTA Initiative

- Increase the climate and hazard resilience of underserved and/or disadvantaged communities and Tribal Nations.
- Focus on community planning and project development.
- Facilitate and encourage access to BRIC funding.
- Leverage partnerships.



## BRIC DTA Overview: A Non-Financial Initiative Under the BRIC Program

Levels the playing field through capability building

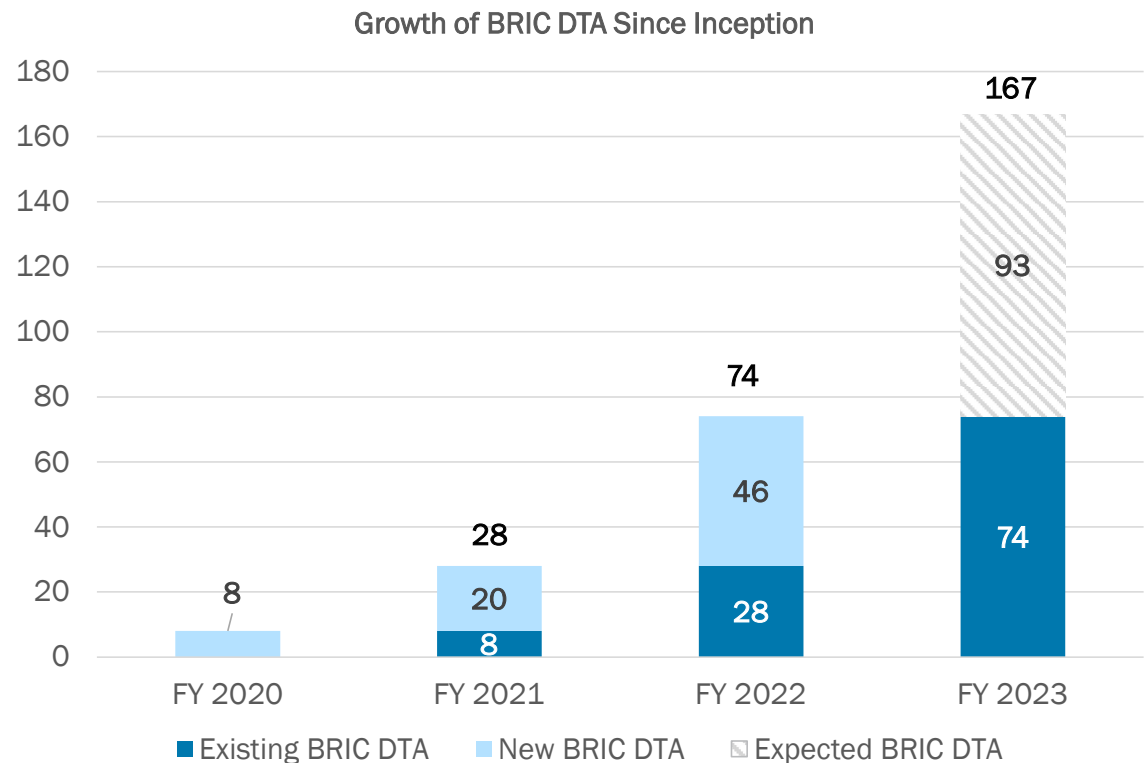
Increases collaboration and planning on mitigation solutions for communities

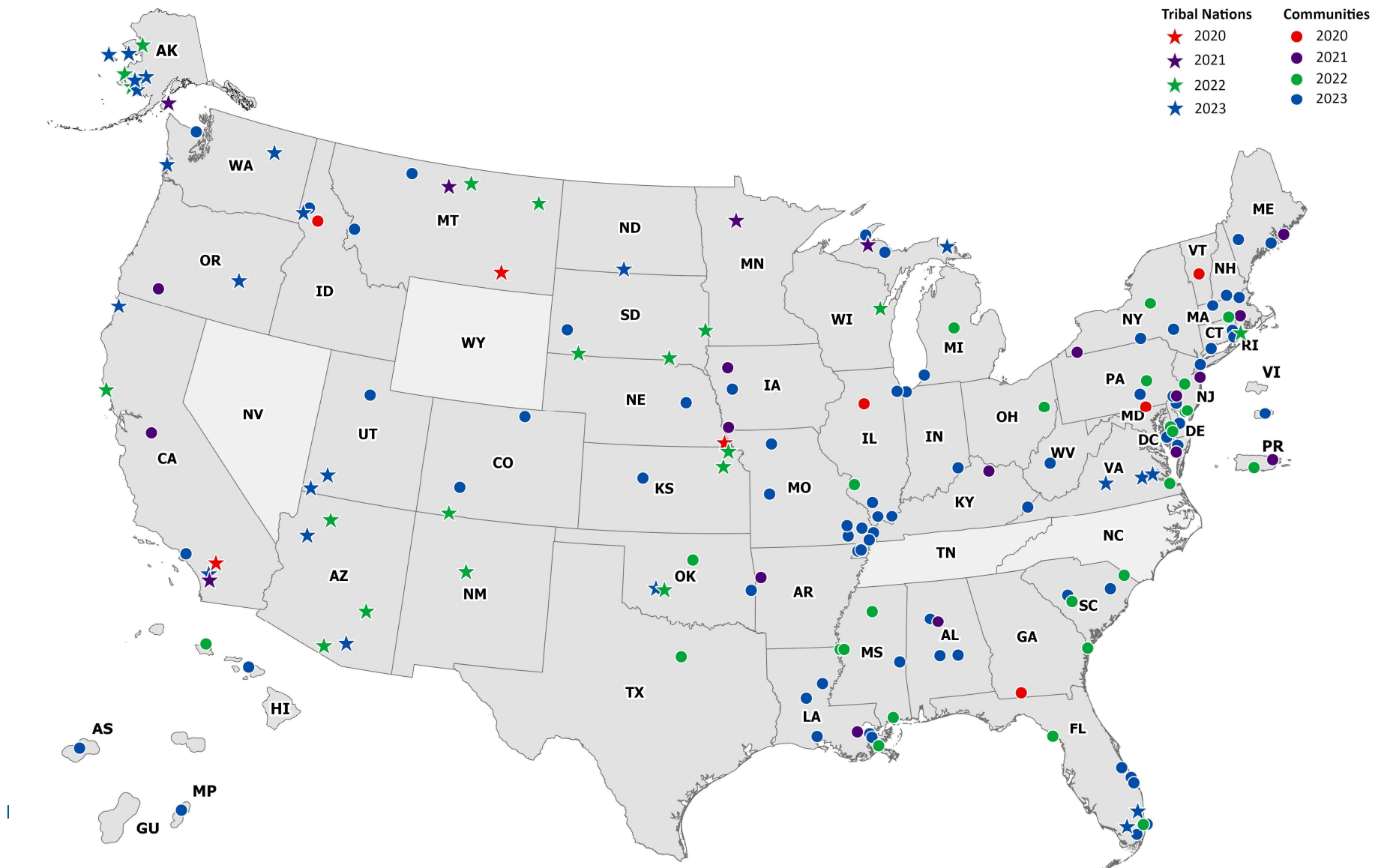
Encourages and promotes local decision-making and local partnerships



# BRIC DTA Selections

- BRIC DTA has rapidly scaled (~2x) each year since its inception.
- In FY23, BRIC DTA selected 93 communities and tribal nations to receive BRIC DTA.
  - Of the 93, 23 are tribal nations, 3 are territories, and 67 are communities.
  - Across all ten (10) FEMA regions, in 36 states and three (3) territories.
  - Three (3) territories and eleven (11) states were selected to receive BRIC DTA for the first time.





# Eligibility for BRIC DTA

- ✓ Cities
- ✓ Towns/townships
- ✓ Municipalities
- ✓ Boroughs
- ✓ Counties
- ✓ Parishes
- ✓ Special District Governments
- ✓ Territories
- ✓ Federally recognized Tribal Nations
- ✓ Metropolitan or regional planning organizations
- ✓ Other political subdivisions of a state
- ✓ Groups of two or more communities that fit the above criteria



## NOT REQUIRED!

✗ A BRIC grant subapplication or award under the state/territory allocation, tribal set-aside, or national competition.

✗ An approved hazard mitigation plan

Presentation Name Goes Here

Federal Emergency Management Agency

14

# FEMA BRIC DTA Regional Perspective

Hailey Stern, FEMA Region 3

Helping people before, during and after disasters

FEMA.GOV

# Services Provided

## Technical Assistance

- Grant application assistance
- Project scope of work development
- Data analysis and mapmaking
- Review existing local codes and make recommendations for changes.
- Compare mitigation projects for implementation
- Conduct project benefit-cost analysis
- Conceptual engineering design for mitigation projects
- Architecture and engineering services (CY25)

## Planning Outreach and Capacity Building

- Building relationships with partners
- Community planning
- Facilitating meetings and events
- Designing communications strategies and materials
- Research for risk communication materials
- Create content for press and social media
- Academic partnerships



# BRIC DTA Team: Roles and Responsibilities

## BRIC DTA

### Coordinator



The **DTA Coordinator** is a role for regional FEMA staff. This person coordinates the DTA Facilitators and the overall work across the region.

### Facilitators



The **DTA Facilitator** works directly with a community and is their main point of contact with FEMA.

### Contractor



A **DTA Contractor** is directed by FEMA to work with the community to support a specific deliverable or outcome based on their subject matter expertise and contractual agreement.

## OTHER REGIONAL TEAM MEMBERS



While **regions** might identify the primary DTA Coordinators and Facilitators, a range of other staff or a team structure may support DTA, depending on the needs and structure in each region.

## PARTNER



**Partners** can be organizations from within or outside the government. They may facilitate capacity building, offer subject matter expertise, leverage resources, and/or enhance community engagement.

Partners may include other government entities, nonprofits, non-governmental and community-based organizations, labor unions, advocacy groups, chambers of commerce, major employers or anchor institutions, philanthropic organizations, and more.



# BRIC DTA Support Team

## FEMA BRIC DTA Personnel

- Project Officers, Outreach Specialists, Planners

## Hazard Mitigation Technical Assistance Program (HMTAP)

- CDM Smith – CBA, grant development, technical analysis, etc

## Community Engagement and Risk Communication (CERC)

- Resilience Action Partners – outreach support, materials development, etc.



# Thank You

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FEMA

# *Turning the Tide:* Crisfield, MD Flood Mitigation Partners and Projects

Darlene Taylor, Mayor

Jen Merritt, Grant Administrator

City of Crisfield

August 28, 2024



# Questions

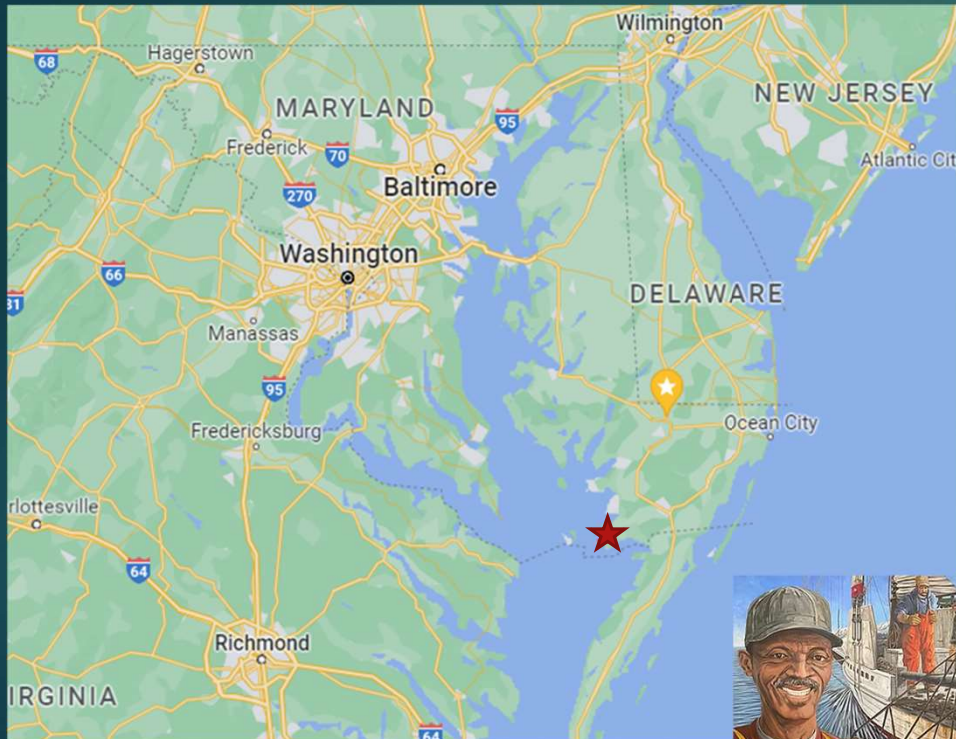
- Tell us a little bit about your community and why you needed BRIC DTA support.
- How has your experience of being selected for BRIC DTA supported your community's journey toward becoming more resilient?
- How have you used partners and networks to support your community's resilience goals?
- What lessons have you learned about working with federal partners that you can provide to others that are working in this space?



Tell us a little bit about your  
community and why you needed  
BRIC DTA support.



# Crisfield



# Crisfield - The Seafood Capital of the World??

- Amazing Small Waterfront Town on the Chesapeake Bay
- **MAJOR MARYLAND ASSETS**
  - Rich Seafood Legacy
  - Janes Island State Park
  - Top Rated Marina – Somers Cove - One of the Largest on the East Coast
  - Home of the Ward Brothers (Decoy Carvers)
  - Gov. J. Millard Tawes Museum
  - Gateway to Smith and Tangier Islands – (State Cake)
  - City Dock – Future Home of the Ferry Connector
- **CULTURALLY RELEVANT**
  - Generational Community
  - Rich African American Heritage
  - Peace and Tranquility
  - Low Crime Rate
  - Beautiful Sunsets
  - Birding, Bike and Nature Trails
- **OTHER ASSETS**
  - Arts & Entertainment District and 3 Art Galleries
  - McCready Hospital
  - Wellington Beach

“Seafood is our Legacy.....Tourism is our Future, Come for the Crabs.....Stay for the Sunsets”

# Crisfield Demographics Today

- ▶ Population – 2,475
- ▶ Race
  - ▶ White: 55%
  - ▶ Black or African American: 35%
  - ▶ Two or More Races: 5%
  - ▶ Hispanic: 4%
  - ▶ Asian: 1%
- ▶ Median Household Income: \$36,146
- ▶ Unemployment Rate - Crisfield 9.7%, State: 3.2%

Source: 2020 Census & Bureau of Labor Statistics



# Crisfield Top 10 Priorities



1. Infrastructure – Flooding
2. Business Development
3. Revitalization of Main Street
4. Waterfront Development (City Dock and Boardwalk)
5. Rehabilitation of Derelict Housing (Affordable Homes)
6. Marketing
7. Zoning (Code Updates – Review)
8. Recreation
9. Youth Engagement
10. Hotel & Conference Center

# Flooding in Crisfield (Why BRC DTA Support)

Hurricane Sandy Devastated Town  
The Frequency and Severity Appears to be Increasing.

- In October of 2021 and December of 2022, floods with more than 3 feet of water throughout most of the town.

## Flooding Impacts

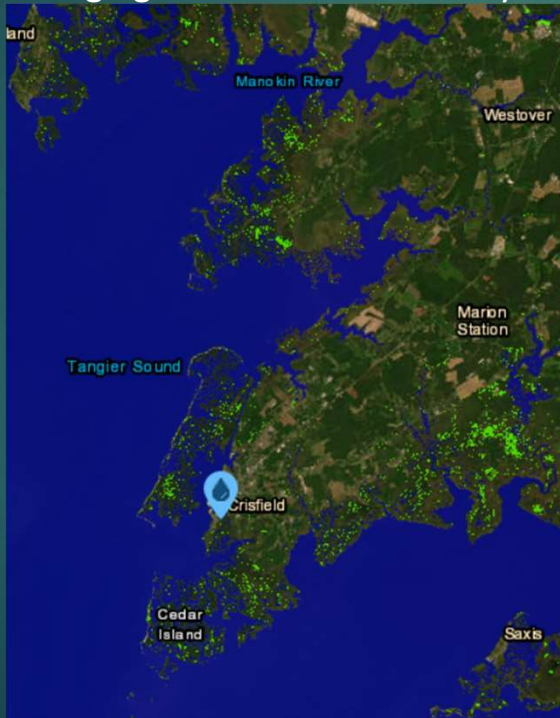
- Rainfalls Over One inch per Hour - Stormwater System Overflows.
- Economic and Access Impacts
  - ▶ Businesses are Shut Down
  - ▶ Entire County School System Shut Down on Multiple Occasions
  - ▶ Residents Unable to Get to Work
  - ▶ Events are Cancelled
  - ▶ Costly Damage to Homes and Businesses
  - ▶ Expensive Flood Insurance
- ▶ Health related Impacts
  - ▶ Unable to Access Healthcare (Hospital, Appointments)
  - ▶ Water Reaches Doorways/Inside of Some Homes
  - ▶ Residual Mold and Mildew to Homes and Businesses

# Flooding in Crisfield

27

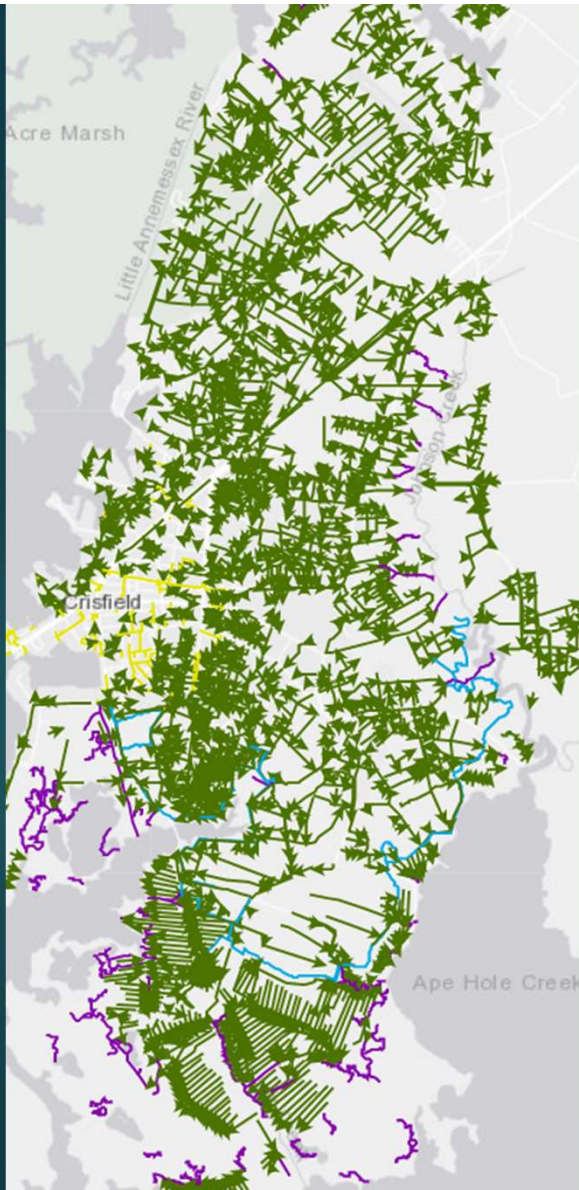
- Unique challenges

- Extended low elevation – flooding is not localized, but **throughout most of town**. Because of Crisfield's **low elevation** water which enters land often cannot leave by running downhill. Standing water remains until evaporation occurs or the groundwater level drops, which may take days.
- Inefficient Aging stormwater “ditch” system



2 ft sea level rise  
<https://coast.noaa.gov/slr/>





Map of Ditches by Eastern Shore Regional GIS Cooperative

<https://salisburyu.maps.arcgis.com/apps/webappviewer/index.html?id=8a6695a14f76408e8e56608b005713a6>

WBOC Broadcast  
9/27/2023  
27

Miss Crustacean Marissa Burke at Tawes Crab and Clam Bake  
WBOC Broadcast 9/27/23





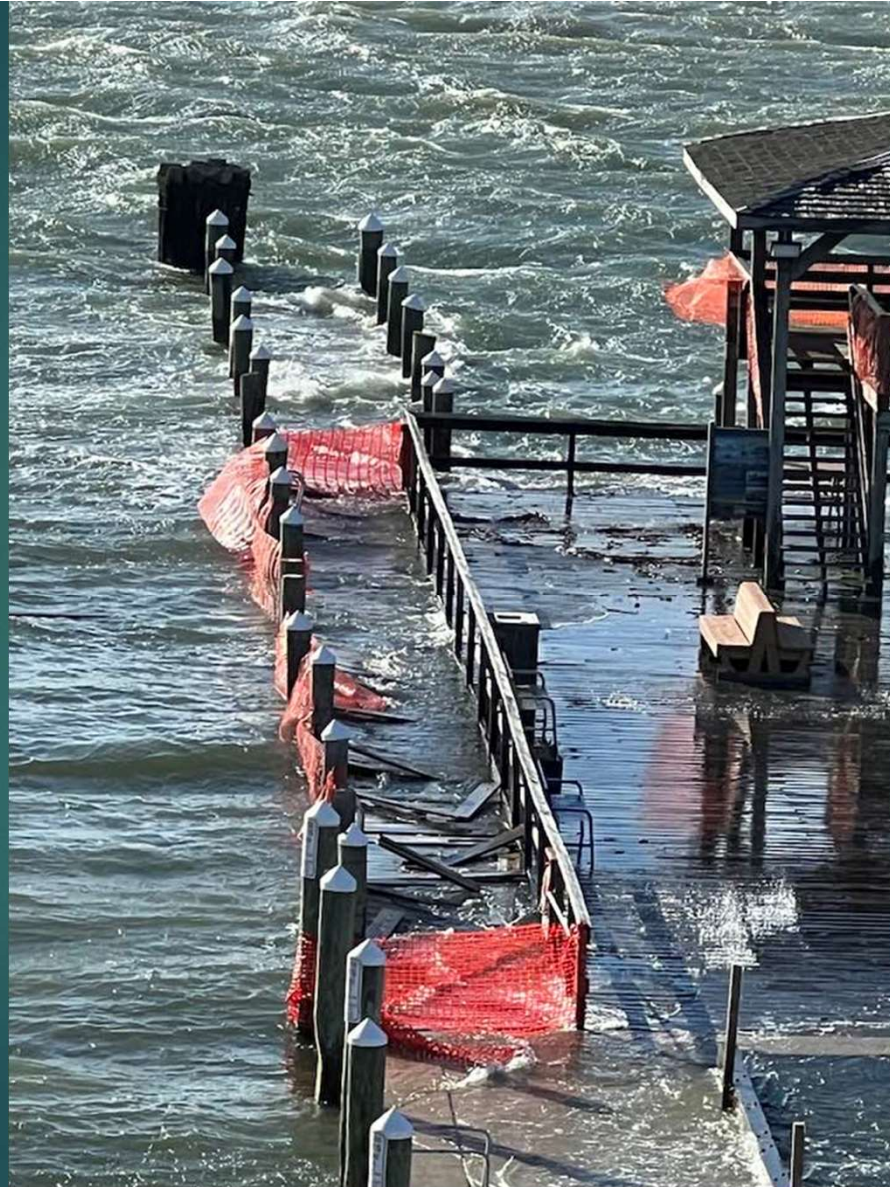


2019

Photo © William Johnson



Storm Damage  
to City Dock  
October 2021

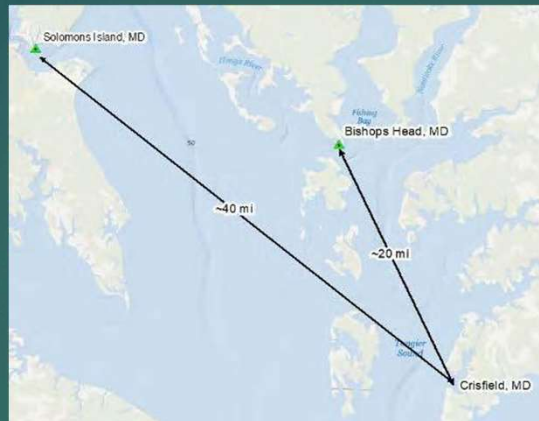
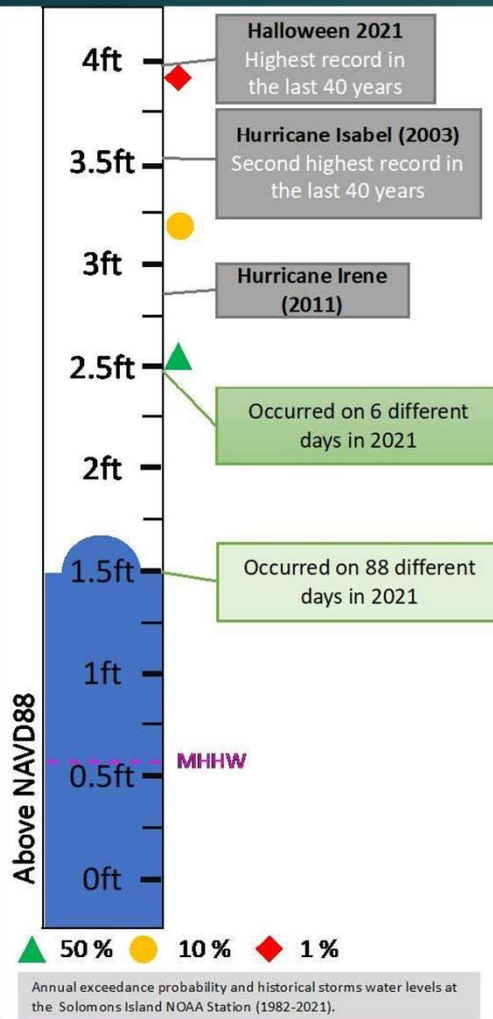




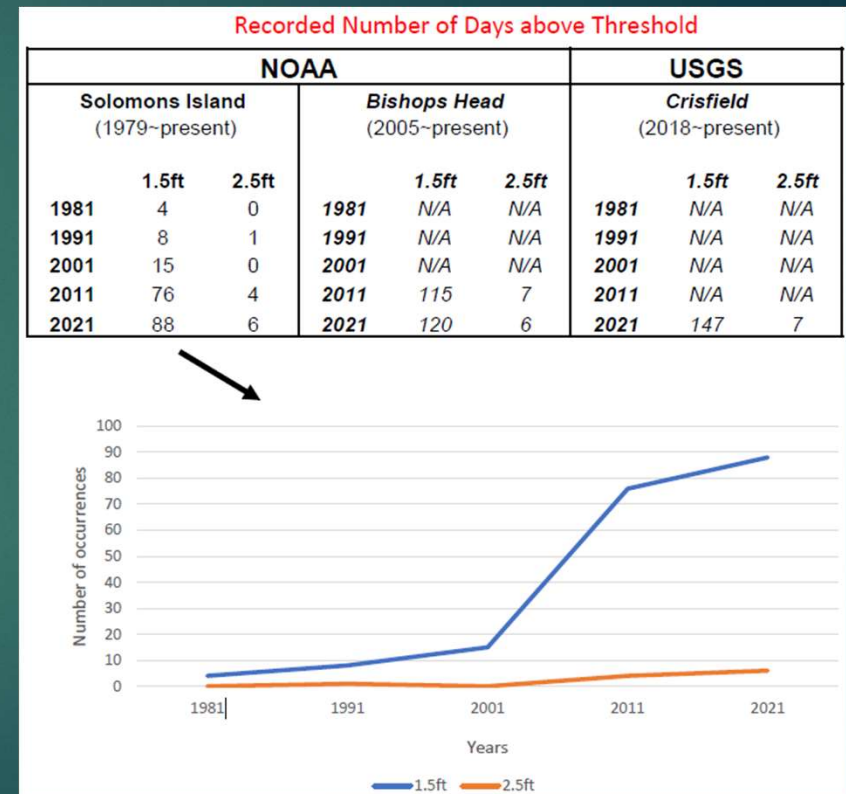
December 23 & 24, 2022  
Storm followed by freeze.




# Increases in Frequency



Information and graphics from May 6, 2023 presentation The Nature Conservancy, George Mason University (GMU) and the University of Maryland's Environmental Finance Center (EFC) funding from NOAA's Adaptation Science Program and Lockheed Martin





How has your experience of being selected for BRIC DTA supported your community's journey toward becoming more resilient?

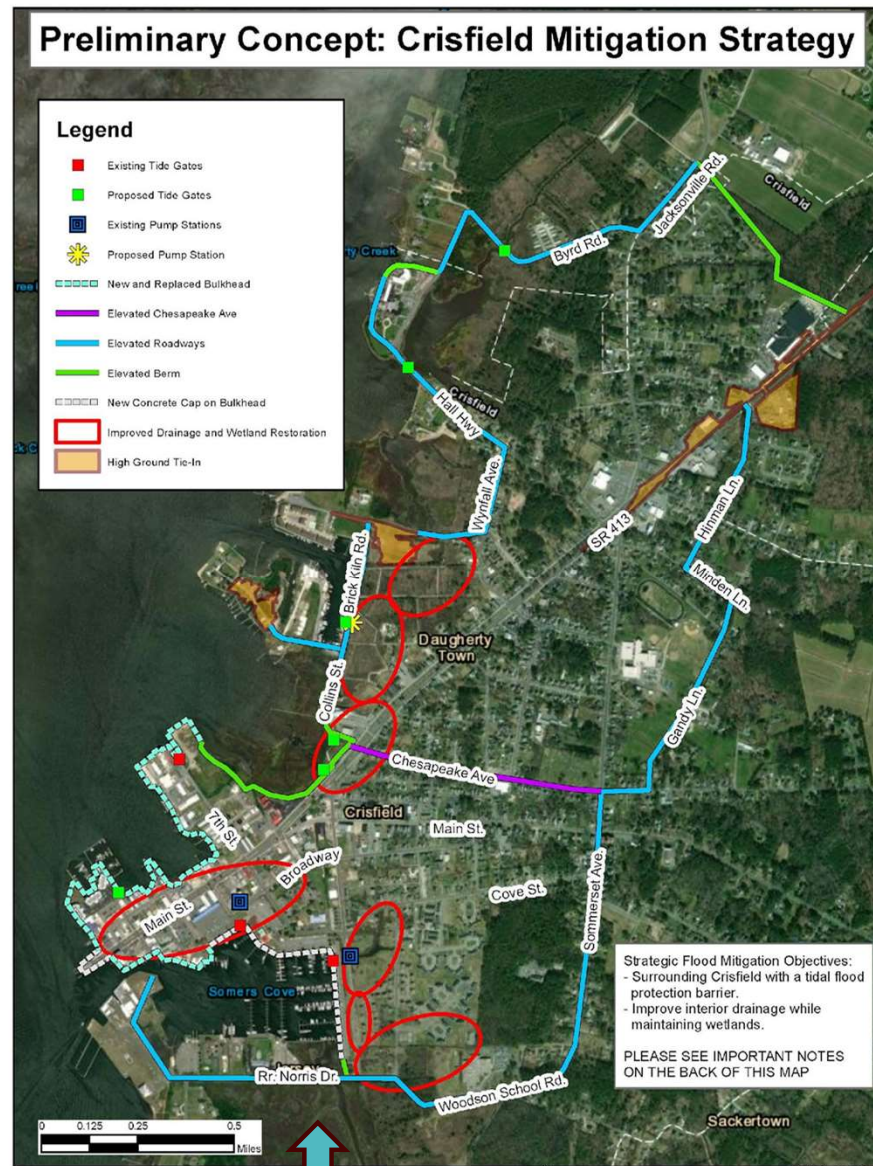
# FEMA Building Resilient Communities and Infrastructure (BRIC) Direct Technical Assistance (DTA)

- ▶ FEMA BRIC DTA program application was submitted by the previous City administration.
- ▶ The current administration began meeting with FEMA BRIC DTA in November 2022 to develop solutions to flooding problems.
- ▶ FEMA BRIC DTA provided engineering expertise that the City could not otherwise have afforded.
  - ▶ Research & analysis for \$40 million project, including Benefit Cost Analysis (BCA), Technical documentation
  - ▶ The DTA team, including coastal & stormwater engineers, provided hundreds of hours of expert assistance.

## FEMA Crisfield Flood Mitigation Project

A conceptual layout of the project consists of the following components:

- **Continuous tidal flood protection barrier** completely surrounding the project area, composed of elevated roadways, restored or capped bulkheads, and earthen berms
- **Internal drainage system composed** of new storm sewers, swales, improved ditches, pump stations, storage facilities, and restored/constructed wetlands
- **Tide gates** designed to keep high tidal waters out of the drainage system while maintaining intertidal flows during average tides to support wetland health



# 2 Projects were defined

## Each Project has 2 Phases

- ▶ **Southern Crisfield Flood Mitigation Project**

- ▶ Awarded
  - ▶ Project cost is \$40,022,095
  - ▶ Match is the Southern project is \$3.8M
- ▶ Phase 1 – Design, Engineering, & Permitting
- ▶ Phase 2 – Implementation

- ▶ **Northern Crisfield Flood Mitigation Project**

- ▶ Will submit this winter
- ▶ Phase 1 – Design, Engineering, & Permitting
- ▶ Phase 2 - Implementation



# Southern Crisfield Flood Mitigation Project: South of Chesapeake Avenue

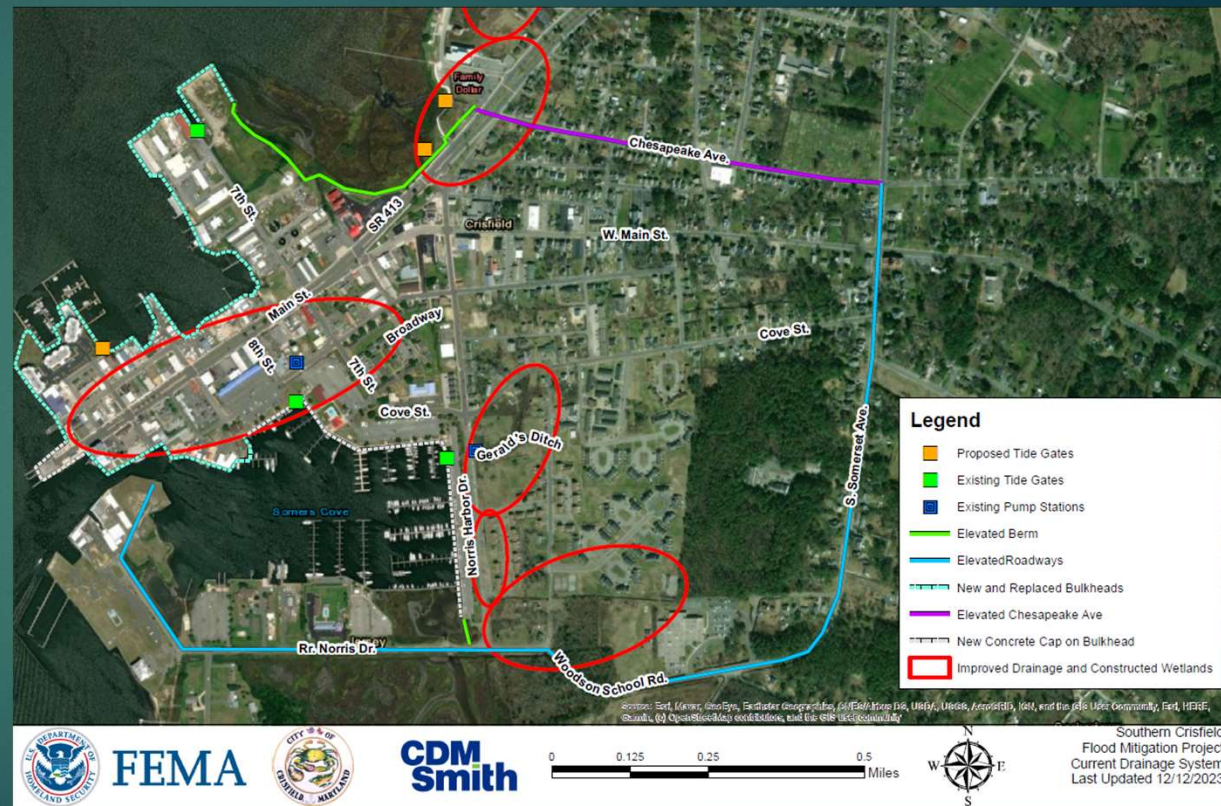
38

## ► Coastal Improvements:

- Elevated bulkheads and concrete caps on existing Bulkheads
- Construction of new berms and elevating existing berms
- Elevation of Chesapeake Avenue, Somerset Avenue, Woodson School Road, R R Norris Drive
- Replacing and upgrading tide gates

## ► Drainage Improvements:

- Restore and improve functionality of wetlands at Gerald's Ditch and near Norris Harbor Drive and Woodson School Road
- Additional drainage conveyance
- Additional stormwater pipes
- Underground water storage vault



*\*This concept is preliminary, actual solutions and locations will be determined after further study*

# Northern Crisfield Flood Mitigation Project: North of Chesapeake Avenue

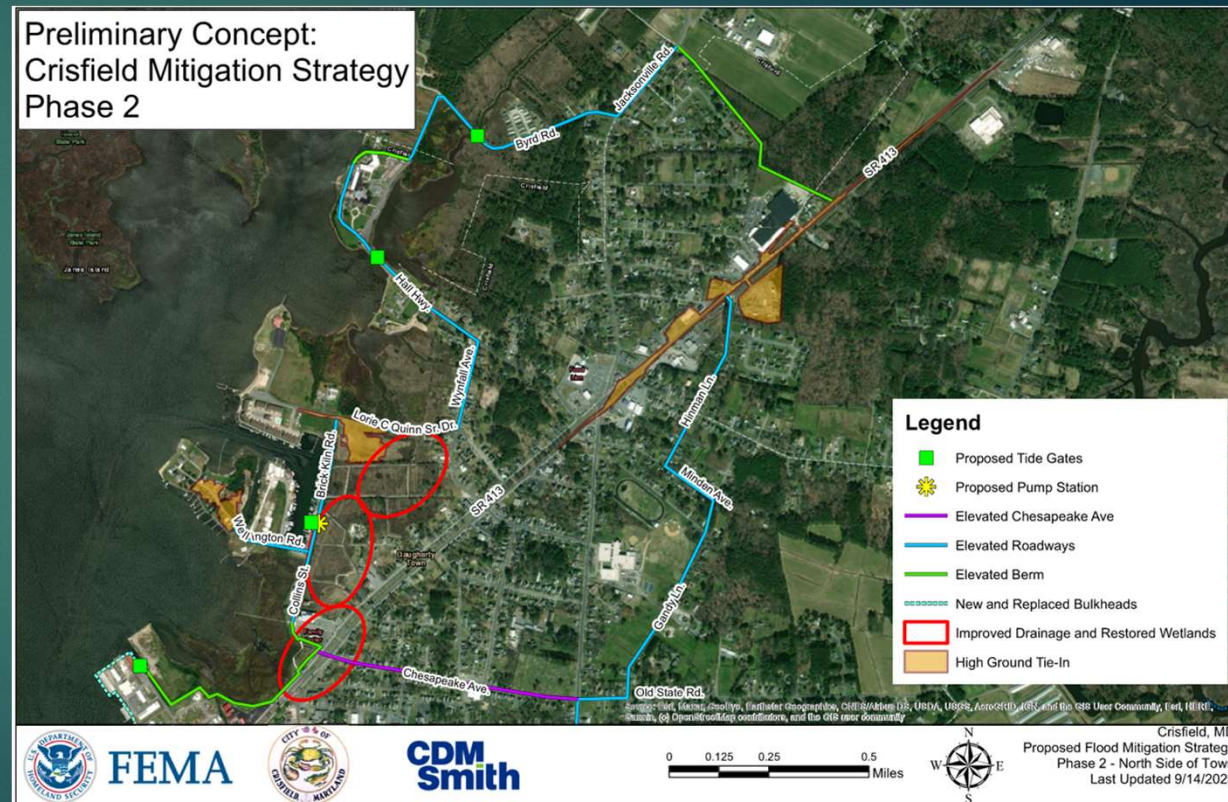
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## Coastal Improvements:

- ▶ Elevate Wellington Road, Collins Street and Brick Kiln Road
- ▶ Elevate Lorie C. Quin Sr. Drive, Wynfall Avenue and Hall Highway
- ▶ Elevate Byrd Road, Hinman Lane, Minden Avenue, Grandy Lane and Old State Road
- ▶ Elevate existing berms
- ▶ Slide tide gates at the Hall Hwy and Byrd Rd Bridges

## Drainage Improvements:

- ▶ Restore and improve wetland functionality East of Brick Kiln Road
- ▶ Install new pump station and tide gate along Brick Kiln Road
- ▶ Improved and additional storm water drainage pipes



*\*This concept is preliminary, actual solutions and locations will be determined after further study*



# Southern Crisfield Flood Mitigation Project Timeline

- ▶ Estimated 1.3 years to project award
- ▶ 2.5 years design, engineering & permitting
- ▶ 1.5 years construction



# BRIC DTA has also assisted with:

- ▶ Stormwater Maintenance Plan
- ▶ Partner Coordination
  - ▶ Including meetings of all partners on alternate months.

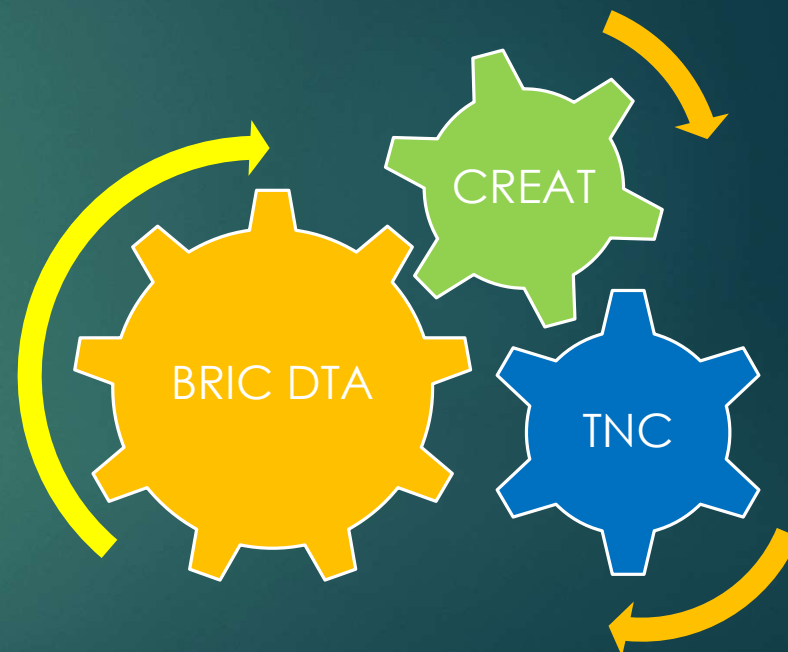


How have you used partners and networks to support your community's resilience goals?

# Crisfield Resilience Partners

43

- FEMA BRIC DTA
- EPA
- TNC (The Nature Conservancy),
- MDEM (Maryland Department Emergency Management)
- USACE (US Army Corps of Engineers)
- MDE (Maryland Department of the Environment)
- DNR (Maryland Department of Natural Resources)
- DHCD (Department of Housing and Community Development)
- Legislative Body - Congressman Harris, Senator Cardin and Senator Van Hollen, Senator Carozza
- ESLTRC (Eastern Shore Long Term Recovery Committee)
- MDP (Maryland Department of Planning)
- ESRGC (Eastern Shore Regional GIS Cooperative)
- Interfaith Partners for the Chesapeake
- SERCAP (Southeast Rural Community Assistance Project, Inc.)
- University of Maryland Environmental Finance Center
- Somerset County Tourism - Passenger Ferry (Economic Resilience)



# Stormwater Maintenance Plan

- The City of Crisfield is working with the following organizations to improve the current stormwater system.
  - FEMA BRIC DTA,
  - Eastern Shore Regional GIS Cooperative (ESRGC)
  - US Army Corps of Engineers
  - Southeast Rural Community Assistance Project, Inc. (SERCAP),
  - University of Maryland Environmental Finance Center
  - functioning ditches and tide gates can prevent flooding to 1.75 feet.



The Eastern Shore Regional GIS Cooperative recently mapped Crisfield's ditches, the first time that such a project has occurred. This map can be found at [crisfieldfloodmitigation.com/map](http://crisfieldfloodmitigation.com/map)

# The Nature Conservancy and Partners

- ▶ In 2022 – 2024, a research team from The Nature Conservancy (TNC), George Mason University (GMU), and the University of Maryland Environmental Finance Center (UMD-EFC), Environmental Protection Agency Office of Research and Development (EPA-ORD) to support a flood resilience planning project.
- ▶ Citizen's Advisory Committee
- ▶ Looked at reducing flooding up to 2.5 feet
- ▶ Funded by NOAA's Adaptation Sciences Program
- ▶ Evaluates the potential costs, benefits, and feasibility of select flood mitigating strategies for Crisfield.
- ▶ Used for Southern Crisfield Flood Mitigation Application
- ▶ \$200,000 Green Infrastructure match to FEMA's Southern Crisfield Mitigation Project

# Maryland Department of Emergency Management

- Maryland Department Emergency Management (MDEM)
  - 0.5% loan approved
    - Crisfield Flood Mitigation Project Match - \$5 million
    - City Dock Project - \$250,000
  - Stormwater pump & tide gate grant implementation



# EPA Office of Research and Development

47


## Nature Based Solutions

- ▶ Research will address coastal resilience through natural infrastructure strategies, such as restoring saltmarshes or implementing living shorelines.
- ▶ Assess additional community benefits provided by nature-based coastal resilience.
- ▶ Research and educational programming will support community capacity to implement strategies.

# Possibilities most likely to attenuate waves and storm surge



- ▶ Protect and restore marshes to benefit from natural, protective wave attenuation properties
  - ▶ Janes Island marsh restoration
  - ▶ Cedar Island marsh restoration
  - ▶ Cedar Island Marsh Sanctuary (Jersey Island) marsh restoration
- ▶ Sand dunes and living shorelines considered ancillary edge protection
- ▶ Potential combinations



What lessons have you learned about working with federal partners that you can provide to others that are working in this space?

# BRIC DTA Experience (How and Why It Works)

- July 2022 Notified of the BRIC DTA Award
- Initial Orientation Meetings
  - ▶ MOU was Crucial
    - ▶ Project Understanding
    - ▶ Service Definitions
  - ▶ Agency Role Definitions Importance
    - ▶ City as Lead
    - ▶ BRIC DTA as Support
      - ▶ Seamless Agency Roles
- Program Support
  - ▶ City Needs Defined
    - ▶ Prioritizing
    - ▶ Limiting Scope (No Direct Maintenance)
  - ▶ Understanding Maximum Benefit
    - ▶ FEMA Project Application

# BRIC DTA Experience (Cont'd)

## → Project Definition

- ▶ Flooding Support
  - ▶ Project Requirements Definition and Project Assumptions
    - ▶ What Can We Do
    - ▶ What Will it Look Like (Separate Analysis, Same Conclusions)
    - ▶ What Resources are Required
    - ▶ What is Our Timeline
- ▶ Liaison With Resilience Partners (Needed Every Agency's Help)
  - ▶ Elimination of Duplication of Effort
  - ▶ Collaboration and Tracking
    - ▶ Aligning Goals
    - ▶ Sharing Resources
    - ▶ Master Schedule

# BRIC DTA Experience (Cont'd)

## → Project Implementation

- ▶ Bi-Weekly Meetings
  - ▶ BRIC DTA Staff
  - ▶ City Leadership
  - ▶ MDEM
- ▶ Site Visit (Ground Truthing Assumptions)
- ▶ Partner Coordination Meetings
  - ▶ Project Reviews
  - ▶ Collaboration Forum
  - ▶ Resolution of Concerns/Overlap
- ▶ Stakeholder and Community Meetings (Understanding and Buy-In)
  - ▶ City Leadership (Multiple Council and Community)
  - ▶ County Leadership
  - ▶ Mayoral Association
  - ▶ Community Forum (TNC Multi-Agency Review)
  - ▶ Individual Stake Holders and Community Members
  - ▶ External Agencies (Permitting Agencies)
  - ▶ Broad Agency Stakeholder Meeting (Information and Breakout Sessions)



# BRIC DTA Experience (Cont'd)

- On-going Project Implementation
  - ▶ Collaborative Application Creation and Submission
    - ▶ BRIC DTA
      - ▶ Benefit Cost Analysis
      - ▶ Data Research, Analysis and Presentation
      - ▶ Documentation Support
    - ▶ TNC, GMU
      - ▶ Modelling Support
    - ▶ MDEM Requirements Collaboration
    - ▶ City Grant Administration
      - ▶ Oversight
      - ▶ Content Creation
      - ▶ Data Coordination
      - ▶ Application Submission

# BRIC DTA Experience (Cont'd)

## → Model Project

### ▶ Intentional

- ▶ Understanding of Project
- ▶ Partner Collaboration
- ▶ Information Dissemination

### ▶ BRIC DTA Leadership (Agency & Contractor)

- ▶ Phenomenal Seamless Support (FEMA & CDM Smith)
- ▶ Megan, Hailey, Rae, Alex, Jacob, John
- ▶ Always the Right Level of Intervention
  - ▶ Brining Issues Up the Chain
  - ▶ Sensitivity to City Concerns
  - ▶ Collaboration with External Agencies
- ▶ Phenomenal Technical Expertise
  - ▶ Research and Data Analysis Coastal Scientist, Storm water Engineers
  - ▶ Internal Agency Resources
  - ▶ External Partner Resources

# BRIC DTA Experience (Cont'd)

## → Transformational

- ▶ Acquired Knowledge
- ▶ Excitement
- ▶ Exposure
- ▶ Potential Impact of Project Award

# Next Step:

56

- Even with Proposed Strategies
- Continued Collaboration Is the Key to Long Term Resiliency





# Thank you!

- ▶ More information at [Crisfieldfloodmitigation.com](http://Crisfieldfloodmitigation.com)
- ▶ Mayor Darlene Taylor
  - ▶ [mayordtaylor@crisfieldcityhall.com](mailto:mayordtaylor@crisfieldcityhall.com)
- ▶ Jennifer Merritt, Grant Administrator
  - ▶ [jmerritt@crisfieldcityhall.com](mailto:jmerritt@crisfieldcityhall.com) or 410-968-1333



# Questions?

Contact us:

[ThrivingCommunitiesNetwork@dot.gov](mailto:ThrivingCommunitiesNetwork@dot.gov)

