

Natural Hazards 101 Series

Session #3: Connecting Community Planning to Hazard Mitigation Planning

October 24, 2024



Agenda

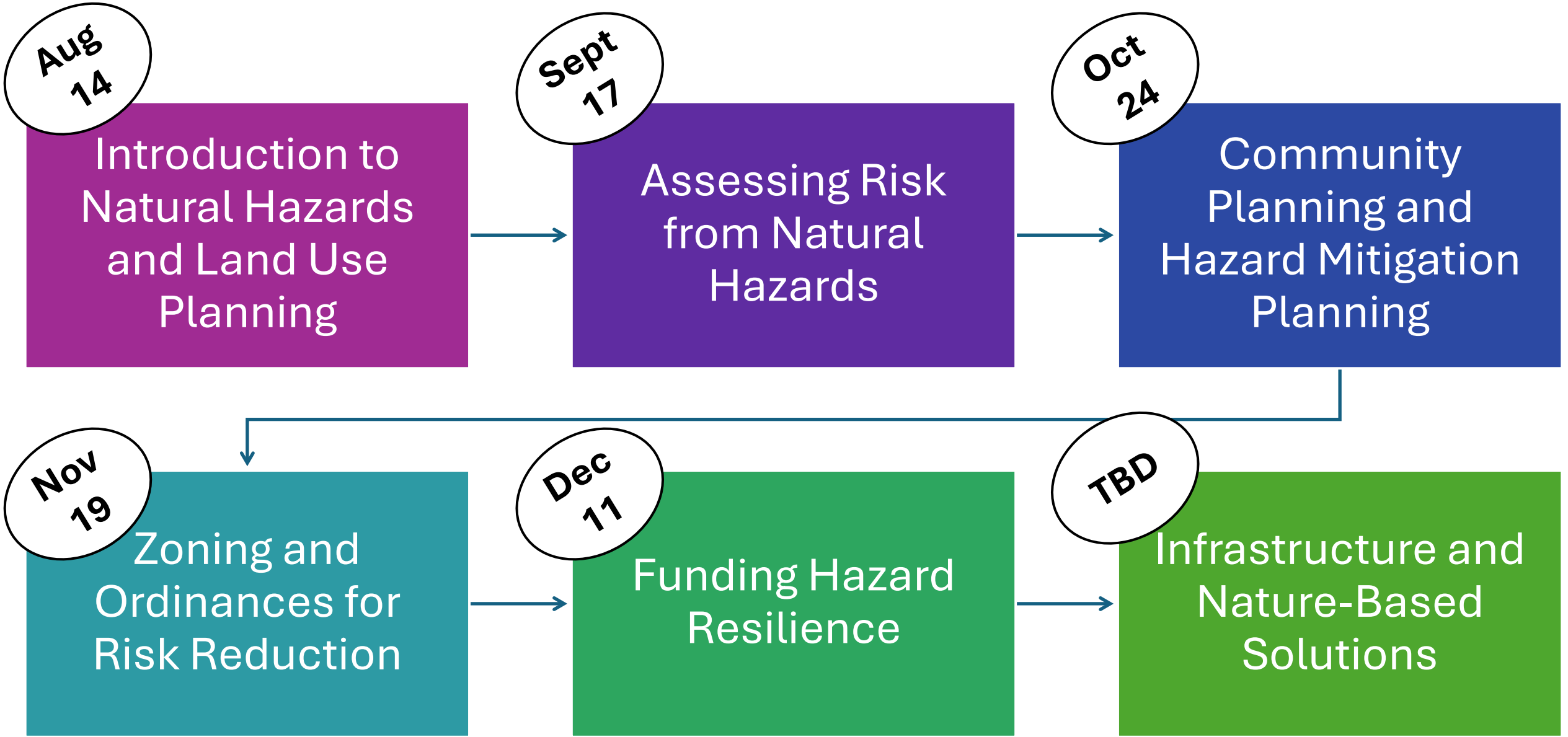
5:15-5:30pm – Sign-in

5:30-6:30pm – Presentations

1. Foundations
2. Community planning
3. Hazard mitigation planning
4. Mapping hazards

6:30-6:35pm – Break

6:35-7:30pm – Activity: Next steps in hazard planning goals



Foundations of Community and Hazard Mitigation Planning

Presented by Rachael Hamilton

NOAA Coastal Management Fellow, Maine Coastal Program



	Community Plan (ex. Comprehensive or climate plan)	Hazard Mitigation Plan
Lead	Local planner, planning board, committee, Regional Planning Organization, or Land Use Planning Commission	Emergency management agency, director, or public safety
Goal	To produce a community driven guide with consensus around their long-term vision; may include goals in land use, housing, transportation, culture, economy, environment, etc.	Assess hazard risks, vulnerabilities to assets, and identify actions to reduce risks
Funding	May set up a community for success in seeking grant funding	Certain federal funding requires approved HMP
Shared Components that Present Opportunities for Collaboration	<ul style="list-style-type: none"> • Public engagement process and partnerships • Gathered data and risk assessments • Capacity (funding for shared goals, staff time) • Established strategies and actions 	



Natural Hazard Planning Session #3

Connecting Community to Hazard Mitigation Planning

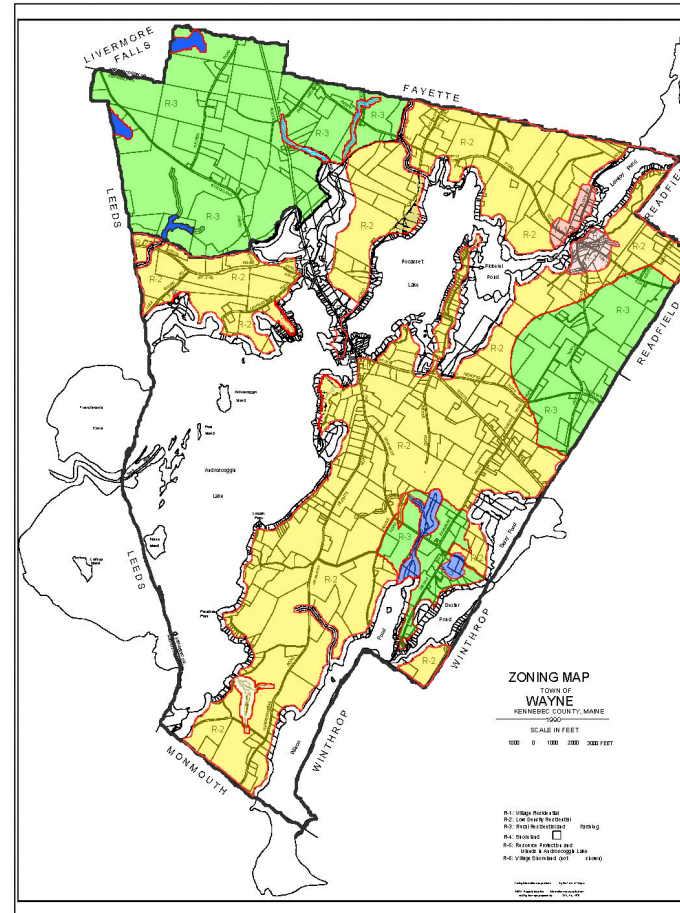
Joan A. Walton, AICP, Director
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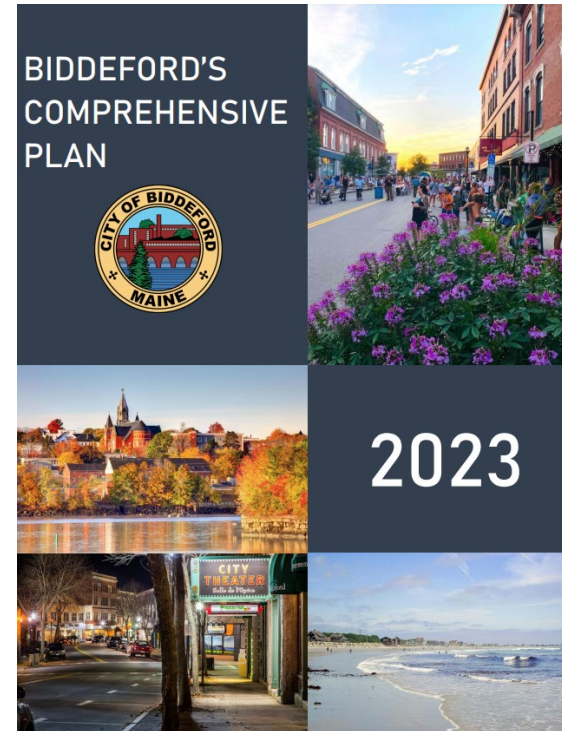
Protect Public Health, Safety and Welfare

- ▶ Regulate development
- ▶ Building codes
- ▶ Development standards - building setbacks, etc.
- ▶ Code enforcement



What is a Comprehensive Plan?

- ▶ Community Vision
- ▶ Data Analysis
- ▶ Policies & Strategies
- ▶ Protect Resources
- ▶ Future Land Use Plan
- ▶ Legal Basis for Land Use Regulations
- ▶ Capital Improvement Planning



Comprehensive Plan Elements

(Maine Growth Management Law-Title 30-A MRS §4326)

- ▶ Economic & Demographic Data
- ▶ Significant Water Resources
- ▶ Significant/Critical Natural Resources
- ▶ Marine-Related Resources & Facilities
- ▶ Commercial Forestry & Agricultural Land
- ▶ Recreation, Parks, Open Space, Points of Public Access to Shorelands
- ▶ Transportation Systems
- ▶ Housing
- ▶ Historical & Archeological Resources
- ▶ Current & Projected Development Patterns
- ▶ Assessment of Capital Facilities & Public Services
- ▶ Climate Vulnerability Assessment (if locally adopted climate action plan)

Maine Shoreland Zoning Act

(Title 38, MRS §§435-449)

- ▶ The shoreland zone is comprised of all land areas within 250 feet, horizontal distance, of the
 - normal high-water line of any great pond or river;
 - upland edge of a coastal wetland, including all areas affected by tidal action, and
 - upland edge of defined freshwater wetlands; and
 - all land areas within 75 feet, horizontal distance, of the normal high-water line of certain streams.

Maine Shoreland Zoning Contacts

- ▶ For specific questions about a municipality's shoreland zoning ordinance, contact the local Code Enforcement Officer.
- ▶ For general questions about shoreland zoning, municipal officials can contact their Regional Council.
- ▶ For questions for MDEP's Shoreland Zoning Unit, contact:
 - Central Maine Region: Colin Clark 207-441-7419
 - Eastern and Northern Maine Regions: Jessica Sayers 207-275-9836
 - Southern Maine Region: Jeffrey Kalinich 207-615-7044
 - Northern Maine Region: Ross Gatcomb 207-242-0063

National Flood Insurance Program

- ▶ More than 8,600 miles of floodplains in Maine
- ▶ 33,000 structures at risk of flooding in Maine
- ▶ 75% of homes and businesses in floodplains in Maine are not covered by flood insurance
- ▶ Average flood insurance policy premium is \$944
- ▶ 30-day waiting period before flood insurance policy goes into effect

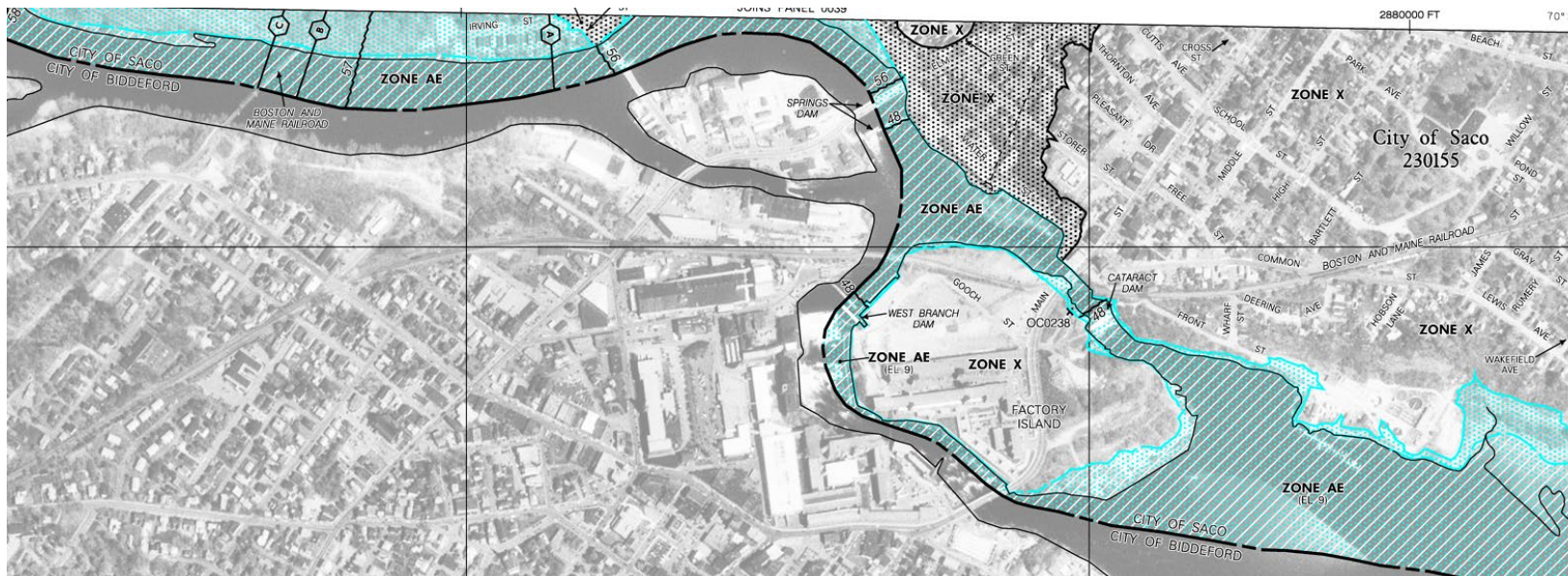
Maine Floodplain Management Program

▶ Sue Baker, CFM, Program Coordinator

207-287-8063

▶ Janet Parker, Planner

207-287-9981



Capital Investment Plan

(Maine Growth Management Law-Title 30-A MRS §4326)

- ▶ Develop a capital investment plan for financing the replacement and expansion of public facilities and services required to meet projected growth and development.



Maine Planning Basics Webinar Series

- ▶ First Friday of every month
- ▶ <https://www.maine.gov/dacf/municipalplanning/technical/webinars>

- ▶ **Microsoft Teams**
 - ▶ [Join the meeting now](#)
 - ▶ Meeting ID: 227 624 313 81
 - ▶ Passcode: frTWF4

Municipal Planning Assistance Program Contact Information

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joan.walton@maine.gov

<https://www.maine.gov/dacf/municipalplanning>

207-419-8661

HAZARD MITIGATION PLAN UPDATES



WHO ARE THE STAKEHOLDERS?

- Knox County
- Municipalities (18 organized communities and Unorganized Territory)
- Community members (residents, businesses, non-profits, and all other non-governmental organizations, etc.) “Whole Community”

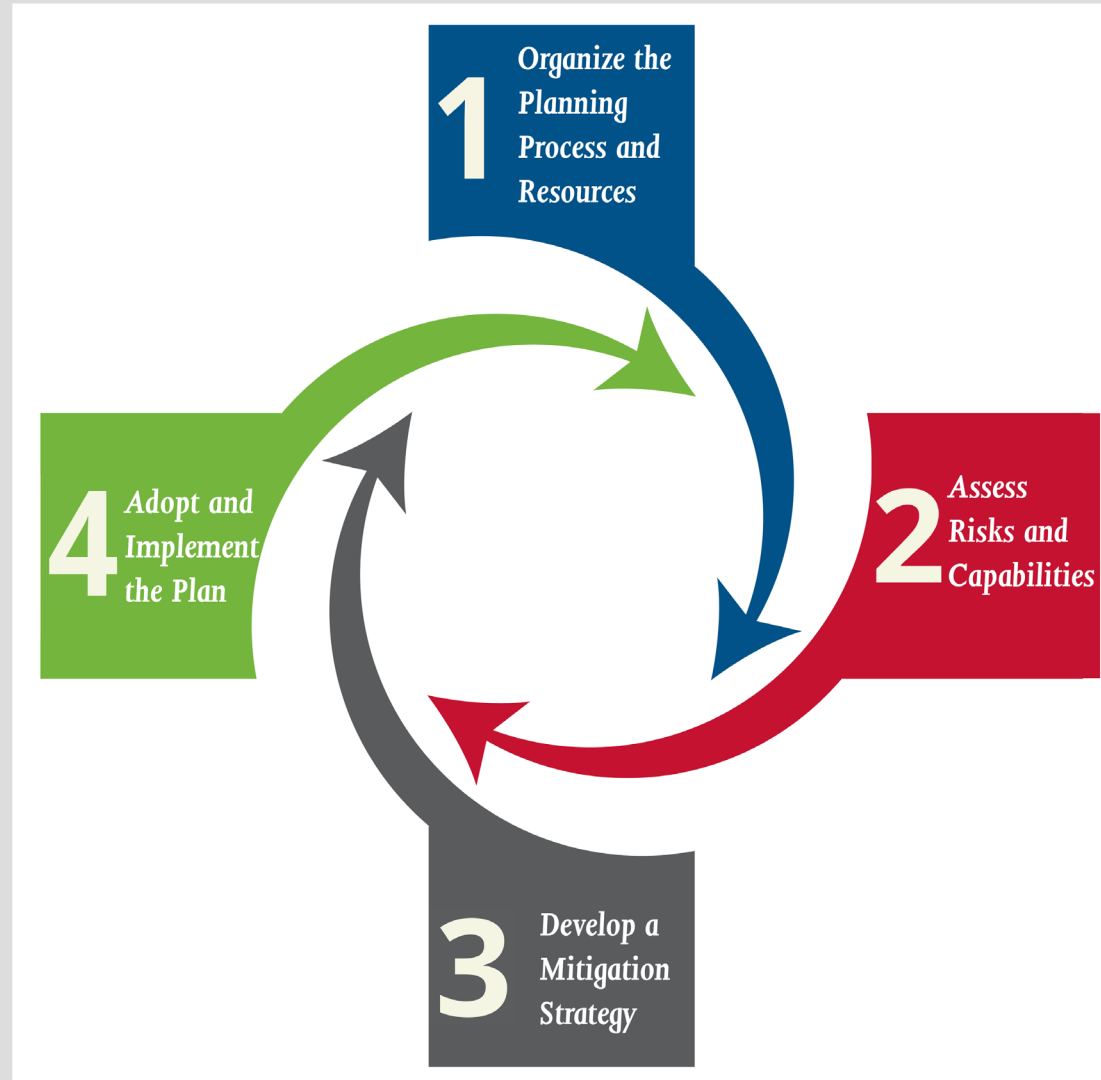
PARTICIPATING COMMUNITIES

- Appleton
- Camden
- Cushing
- Friendship
- Hope
- Isle au Haut
- Matinicus Isle Plantation
- North Haven
- Owls Head
- Rockland
- Rockport
- St. George
- South Thomaston
- Thomaston
- Union
- Unorganized Territories
- Vinalhaven
- Warren
- Washington

WHAT IS MITIGATION?

Mitigation is the effort to reduce or eliminate loss of life and property by lessening the impact of disasters.

Put simply, the goal of mitigation is to make our communities safer, stronger, and more able to bounce back after an event.



WHY DO WE NEED A HAZARD MITIGATION PLAN?

- *Disaster Mitigation Act of 2000* was enacted as an amendment to the *Robert T. Stafford Disaster Relief and Emergency Assistance Act*.

**ROBERT T. STAFFORD DISASTER RELIEF AND
EMERGENCY ASSISTANCE ACT**

[Public Law 93–288; Approved May 22, 1974]

[As Amended Through P.L. 117–328, Enacted December 29, 2022]

- Once approved, the HMP is effective for 5 years
- Provides guidance for a hazard-resistant county that vigilantly assesses, plans for and mitigates any natural hazard.
- Particular emphasis is placed on those natural hazards which pose the greatest threat to Knox County.
- Required for certain categories of mitigation grants and can help with disaster declarations.

2024 HMP

- Sections:

Overview

1. Planning Process
2. Risk Assessment
3. Mitigation Strategy
4. Plan Maintenance
5. Plan Update
6. Plan Adoption
7. High Hazard Potential Dams

APPENDICES:

- Maps
- Municipal Surveys
- Defensible Space
- King Tide Comparison
- Participation
- Outreach

THINGS TO CONSIDER

- What has changed in the area since the last plan was finalized? (Sea level rise, above average rainfall, new construction obstructing water flow, etc.)
- Is the property affected public or private property? Is one negatively affecting another?
- Does road damage from storms result in blocked roads? Are public safety agencies affected?
- Are there photos and/or video that shows the before and after (or even during!) a significant weather event? Who has a copy of the photos, videos, narratives of damage, etc.?

PROCESS TIMELINE

- Kickoff meeting with the public to educate them on the process and the plan
- Kickoff meeting with the municipal EMA directors to help them understand their role and responsibilities in the process
- Start collecting surveys from the public (hard copies and online surveys)
- Start working with towns on their municipal surveys, projects, maps, etc.
- Once initial draft is put together, accepting Public comments on plan draft (will also have a Zoom mtg to hear verbal comments)
- Send draft of plan to FEMA for review
- Respond to any Requests for More Information from FEMA
- Upon FEMA approval, each municipality must formally adopt the plan as their own

MUNICIPAL PARTICIPATION

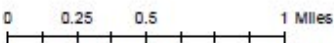
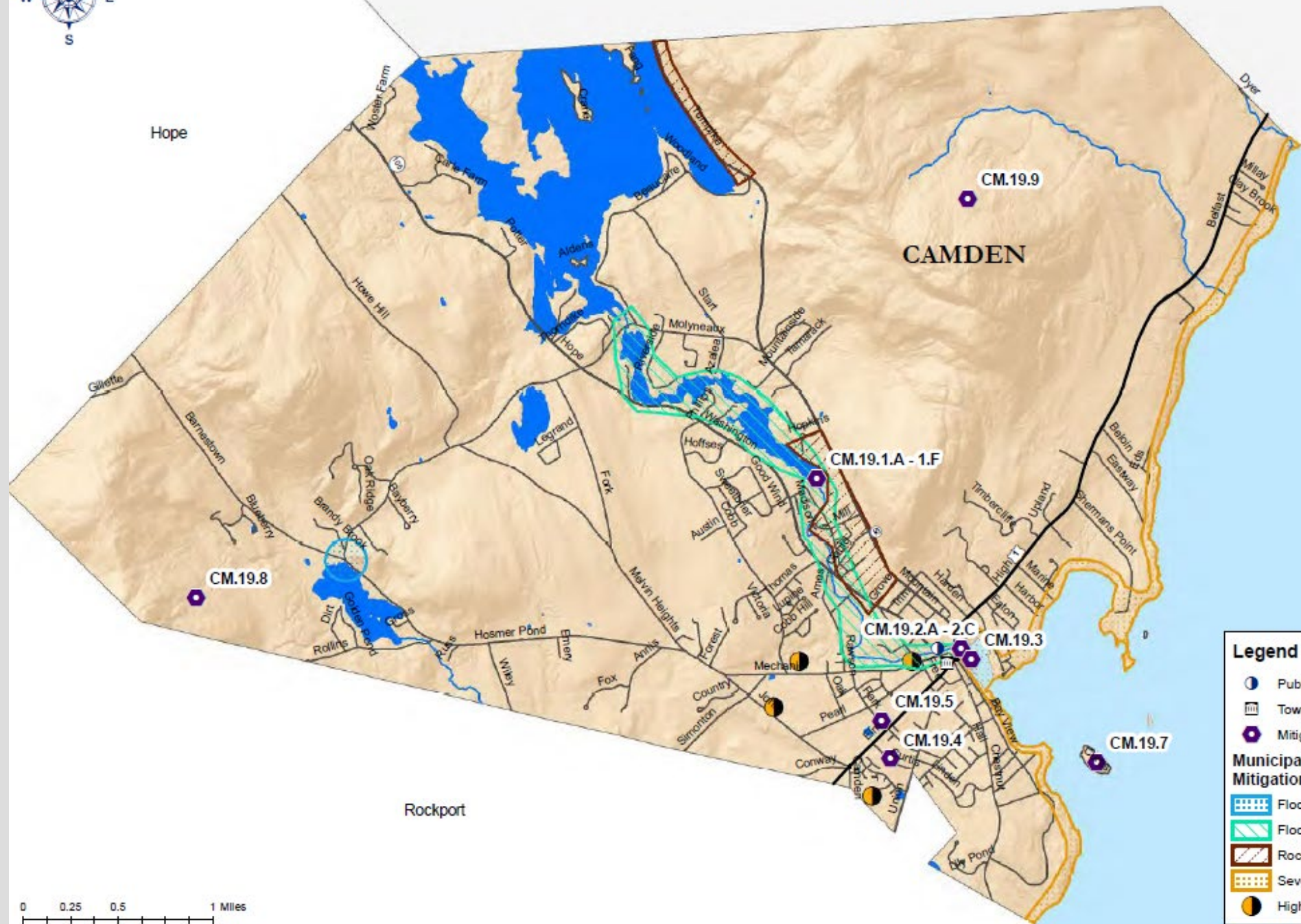
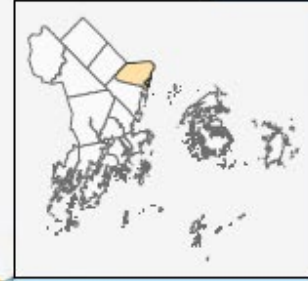
- Municipal Survey
- Updating list of projects from prior plan
- Updated map of project locations and areas of concern
- Inviting input and participation from the public (who may know of ongoing issues that municipal staff aren't aware of), including documentation (notes, photos, videos, etc.) and keep that for historical reference
- Keeping attendance rosters from meetings, especially when members of the public are participating in work or discussions

Community	Project (in Order of Priority)	Project Lat/Long	Cost estimate in 2018 dollars	Timeline	Responsible Agency	Status of Plan resubmitted 2019
Appleton, Town of	(1) Peabody Rd: Ditch 1,000' and add (1) 18" x 40' HDPE culvert.	44.29391/ -69.22495	\$4,500	Short Term	Road commissioner	In planning phase
	(2) Improve drainage, upsize culvert projects as needed	Various Locations	\$3,000-10,000	Long Term	Road Commissioner	New – deferred pending funding
Camden, Town of	(1.a) Update flood profiles for the Megunticook River drainage basin and determine flow capacity at Various sites prone to flooding	44.223444/ -69.079599	\$50,000 estimate	Short Term	Town Manager (TM) Planning & Dev Director (PDD)	Pending
	(1.b) Determine flood risk impact of Knox Mill Dam, Knowlton Dam, and one additional abandoned barrier		\$50,000	Short Term	TM and PDD	Pending
	(1.c) Evaluate dams for removal		\$200,000	Short Term	TM and PDD	Pending
	(1.d) Assess options for reducing flood hazards associated with privately owned dams on the Megunticook River		\$50,000	Short Term	TM and PDD	Pending



Lincolnton

Hope



Legend

- Public Safety Critical Infrastructure
- Town Office
- Mitigation Projects

Municipally Identified Areas with Mitigation Opportunities

- Flooding
- Flooding/Severe Summer Storms
- Rockslide/Falling Debris
- Severe Summer Storms
- High Density Vulnerable Population

MUNICIPAL PROJECTS

- Are you guaranteed funding for the projects you've listed? NO
- If costs go up after the plan was approved, can you seek grant funding above the amount you've listed in the approved plan for that specific project? YES – it's just your best guesstimate at the time – FEMA doesn't lock you in at that amount.
- Does listing projects require you to complete them within any specific timeframe? NO – you're merely telling FEMA that the municipality has identified an issue that needs to be addressed at some point. It shows that the municipality has considered mitigation strategies and is willing to proceed if it makes sense to do so (usually when there's funding available)

MUNICIPAL PROJECTS

- **Do you need a minimum number of projects?** NO. Some smaller municipalities may only have one or two projects, while some larger communities may have a lot more. FEMA just wants to see that you've thought things through.
- **Why bother if it doesn't guarantee you any funding?** While the process of updating the HMP can be a lot of work, several federal grant programs require you to have federally approved plans. For example, Hazard **Mitigation grants** and **BRIC grants** require that your municipality have an **active Hazard Mitigation Plan**. (You also get **Community Resilience Partnership** application points!) Since our 2019 plan in Knox County expired in August, *none of our towns can currently apply for BRIC grants.*

MUNICIPAL PROJECTS

- **Who worries about State roads and mitigation issues for those?** The state! ME DOT has the responsibility for state roads and highways so any damage from storms on those roads, culverts, etc. are the responsibility of the State of Maine. Those roads, etc. are not in the county's hazard mitigation plan but any damages to those roads during storms do count towards damage thresholds.

PUBLIC PARTICIPATION

- Narratives of damages, changes or concerns
- Photos
- Videos
- Bringing concerns to municipal officials
- Attending public meetings / volunteering
- Submitting damages after a storm (Individual Assistance damages:
<https://www.maine.gov/mema/grants/individual-assistance-grant-program>)

PUBLIC ASSISTANCE VS. MITIGATION

Public Assistance

- Applies to “public property”
- Restores damaged property to the same state it was in prior to the storm
- Reimburses for exact allowable expenses already incurred if within the appropriate timeline if certain thresholds are met

Mitigation

- Applies to “public property” (although there are exceptions)
- Improves/upgrades to prevent the same damages from happening again (e.g. increasing the size of a culvert)
- Grant process with no expenses or work allowed until grant awarded

KNOX COUNTY SURVEY

- **Survey:**

- Online (use link <https://arcg.is/0XGW8a> or QR code)
- Paper copy – either email to kxeoc@knoxcountymaine.gov or mail or deliver to Knox County EMA 301 Park Street Rockland, ME 04841
- Talk to your municipal emergency management director with your ideas/concerns
- Comment period







USING GEOSPATIAL DATA TO MAP HAZARDS IN KNOX COUNTY

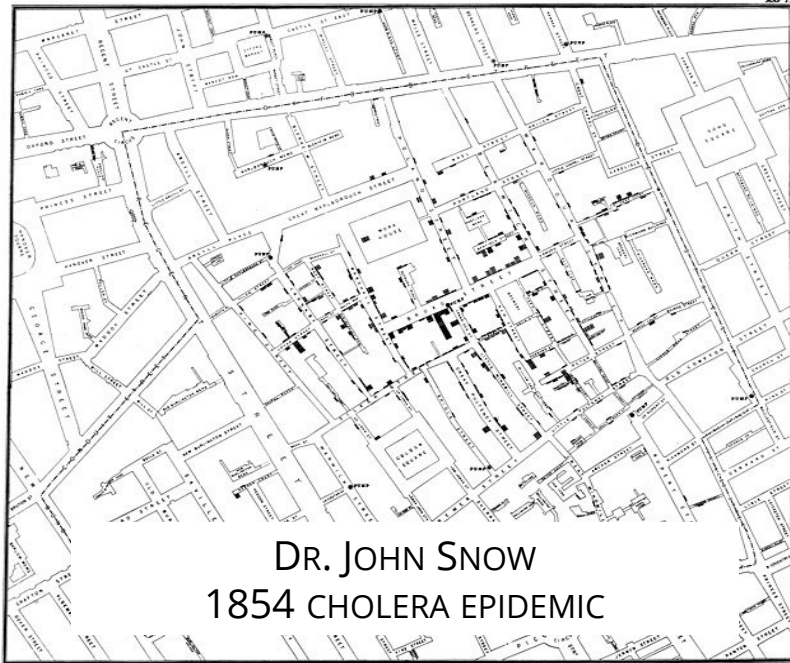
THE 10,000 FT VIEW

PRESENTED BY LETICIA VANVUUREN
GEOSPATIAL DATABASE MANAGER, KNOX COUNTY EMA

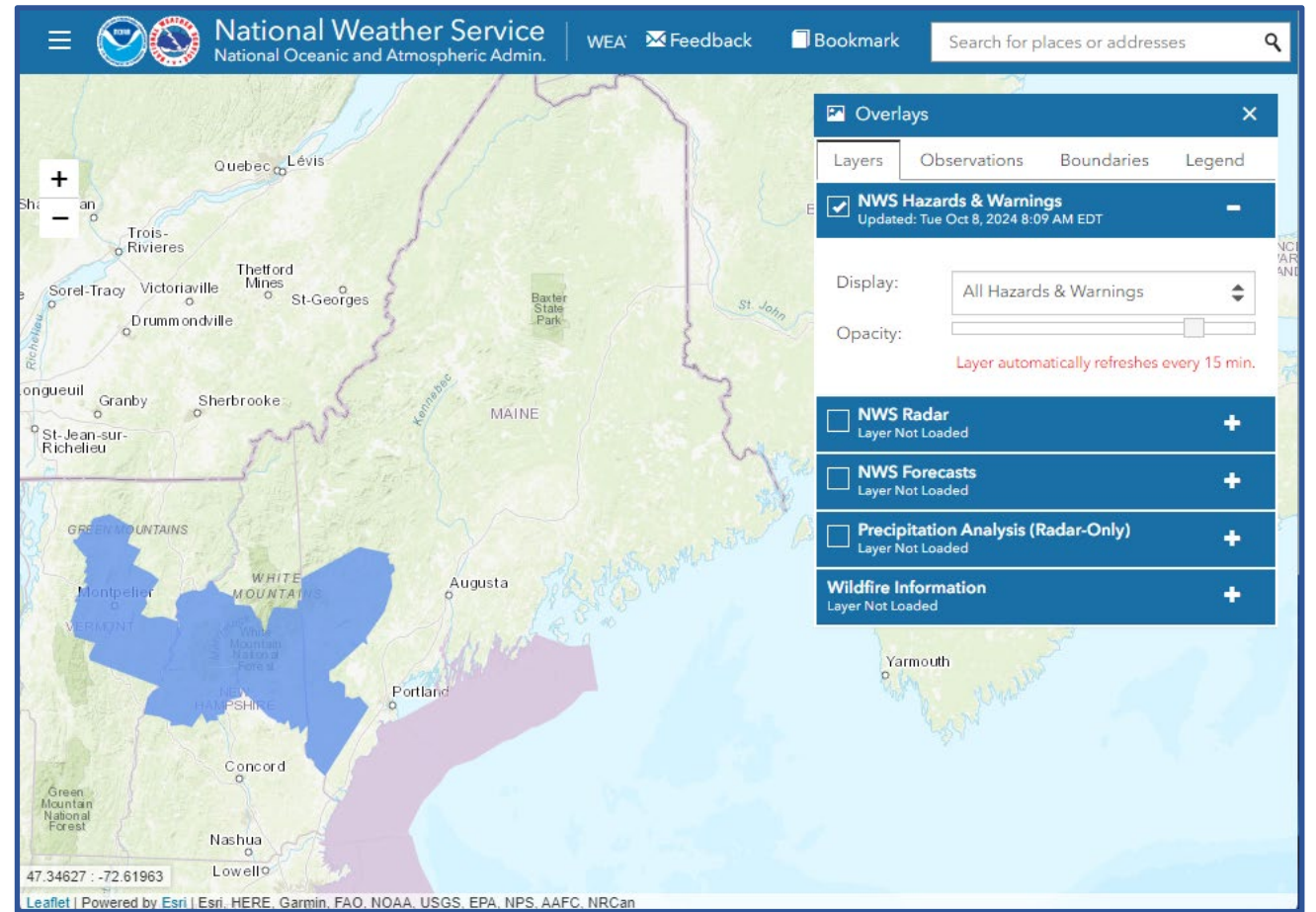
WHAT IS GIS?

Geospatial Information Systems

- use technology to create, manage, analyze, and map *data*
- comes in multiple formats



Paper Map



Data Viewer

DATA IS KEY

Potential Hazard/Risk Data *(including by not limited to):*

- Historical, Observed/Current, Predicted Extents
Flood, Storm Surge, Wildfire
Landslide, Wind Damage, Invasive species . . .
- Road & Utility Infrastructure inventory
- Habitat & Environmental inventory
- Historical & Preservation inventory



UNION, MAINE

DATA IS KEY

Potential Data Sources *(including by not limited to):*

- Aerial & Satellite Imagery
- Elevation Surfaces (e.g. lidar)
- Photos & Surveys
- Documentation for Disaster Declarations
- Plans (current & previous)
- Risk Assessments



WASHINGTON, MAINE

FROM SURVEY TO MAP

Focus on *Local* data source ~ Municipal Hazard Mitigation Survey

End Goal is to visualize both the municipal hazard risk assessment & mitigation projects to address risk

Knox County Hazard Mitigation 2024 Update

Municipal Survey

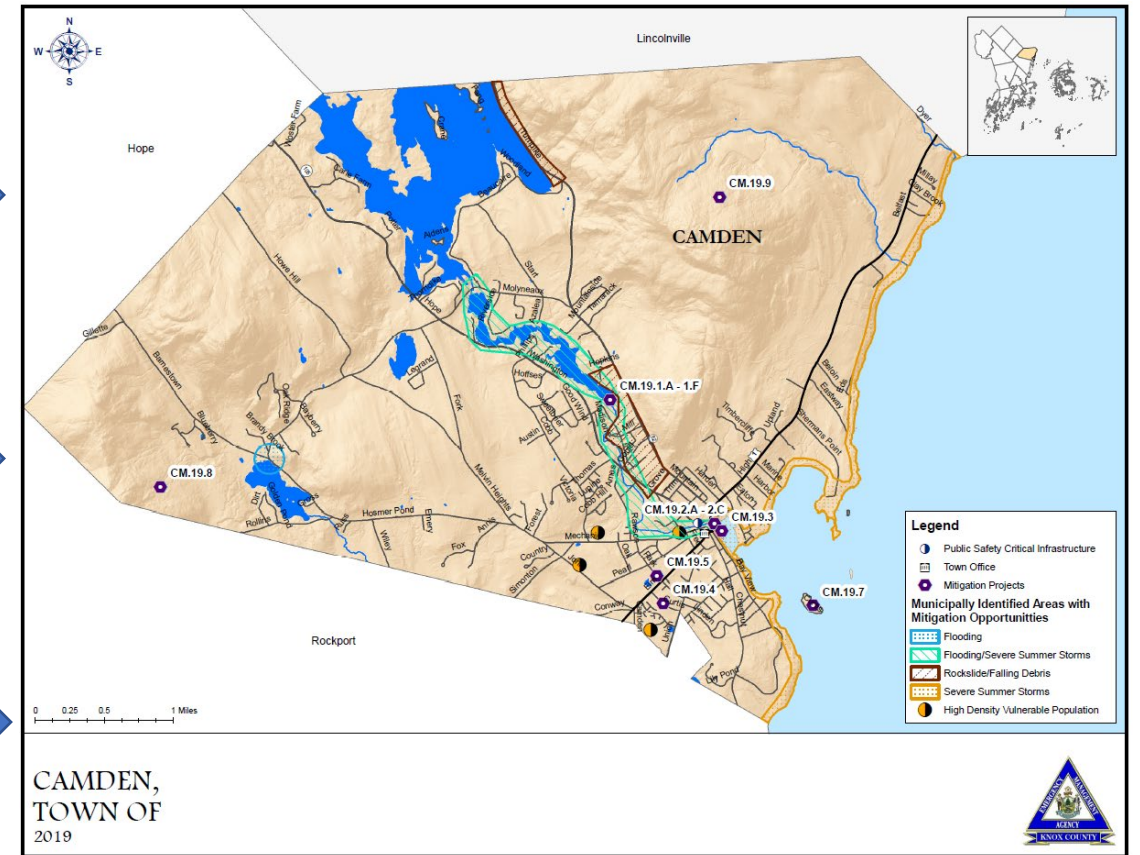
Knox County Emergency Management is updating the Knox County Hazard Mitigation Plan. We are fortunate to be allowed to complete a county-wide plan, meaning you will not have to complete one on your own. We do however need your input and assistance!

Completion of this survey is one of several ways that your municipality and the general public can provide details and stay involved in the plan revision process. We will use your information to help identify and prioritize the natural hazards to be profiled in the plan revision.

In addition to completing the survey and participating in plan update meetings, we will assist you with updates to your community hazard mitigation map and mitigation projects from the current Hazard Mitigation Plan.

[Next](#)

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FROM SURVEY TO MAP – STEP 1

Survey Development

- Standardize input where possible
- Leave room for freeform feedback
- Ease of use – Paper & Digital version

Hazard Impacts

Select Roads impacted by **Flooding**

Select all that apply.

Describe **Flooding** impacts

Select Roads impacted by **Mass Wasting/Landslides**

Select all that apply.

Describe **Forest Mass Wasting/Landslides** impacts

Community Jurisdiction & Hazard Selection

Select your Community/Jurisdiction. *

Which Hazards impact your community? *

Select all that apply.

- | | | |
|--|--|--|
| <input type="checkbox"/> Air Quality | <input type="checkbox"/> Blight/Infestation | <input type="checkbox"/> Dam Failure |
| <input type="checkbox"/> Disease Outbreak | <input type="checkbox"/> Drought | <input type="checkbox"/> Erosion |
| <input checked="" type="checkbox"/> Flooding | <input type="checkbox"/> Forest Pests | <input type="checkbox"/> Harmful Algal Blooms |
| <input checked="" type="checkbox"/> Mass Wasting/Landslide | <input type="checkbox"/> Severe Summer Storm | <input type="checkbox"/> Severe Winter Storm |
| <input type="checkbox"/> SLR/Climate Change | <input type="checkbox"/> Tropical Cyclone | <input type="checkbox"/> Other Natural Hazards |

Additional survey sections include Vulnerable Populations and Governance

FROM SURVEY TO MAP – STEPS 2 TO 5

2 ~ Distribute Survey

- Initial Distribution is to Local Emergency Managers



3 ~ Monitor survey responses

4 ~ Process Responses

- Build a GIS layer with incoming data
GIS layers are pulled into a map
- Map/locate the at-risk roads & areas by individual hazard

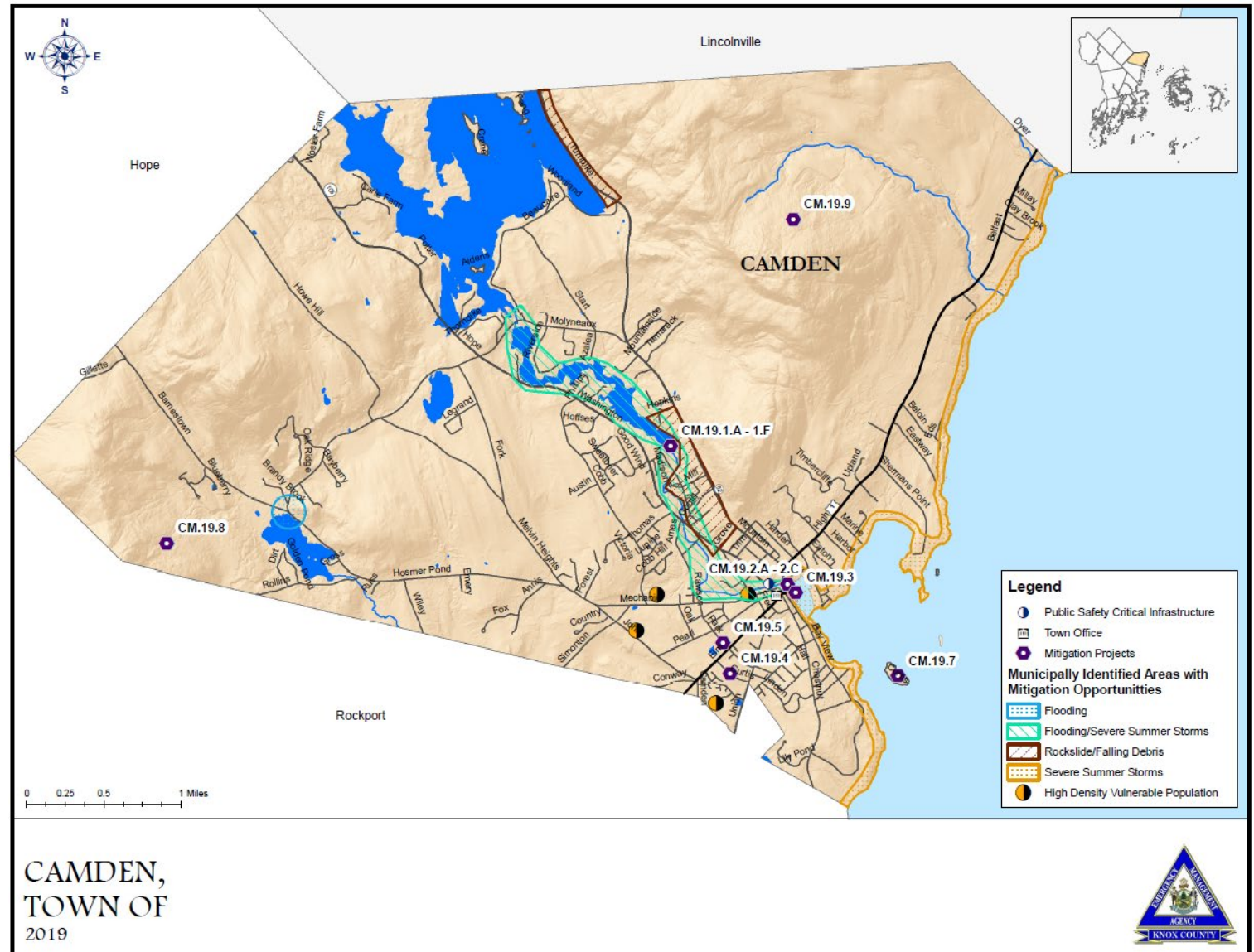
5 ~ Process Municipal Mitigation Projects

- Projects are sourced separately from the survey
- Build GIS layer
- Map/locate projects

FROM SURVEY TO MAP – STEP 6

Develop Municipal Map

- Pull ALL GIS layers (data) together
- Reference Information
 - Roads
 - Elevation
 - Jurisdiction Boundaries
 - Other . . .
- Hazard Mitigation Information
 - Survey Responses
 - Municipal Mitigation Projects



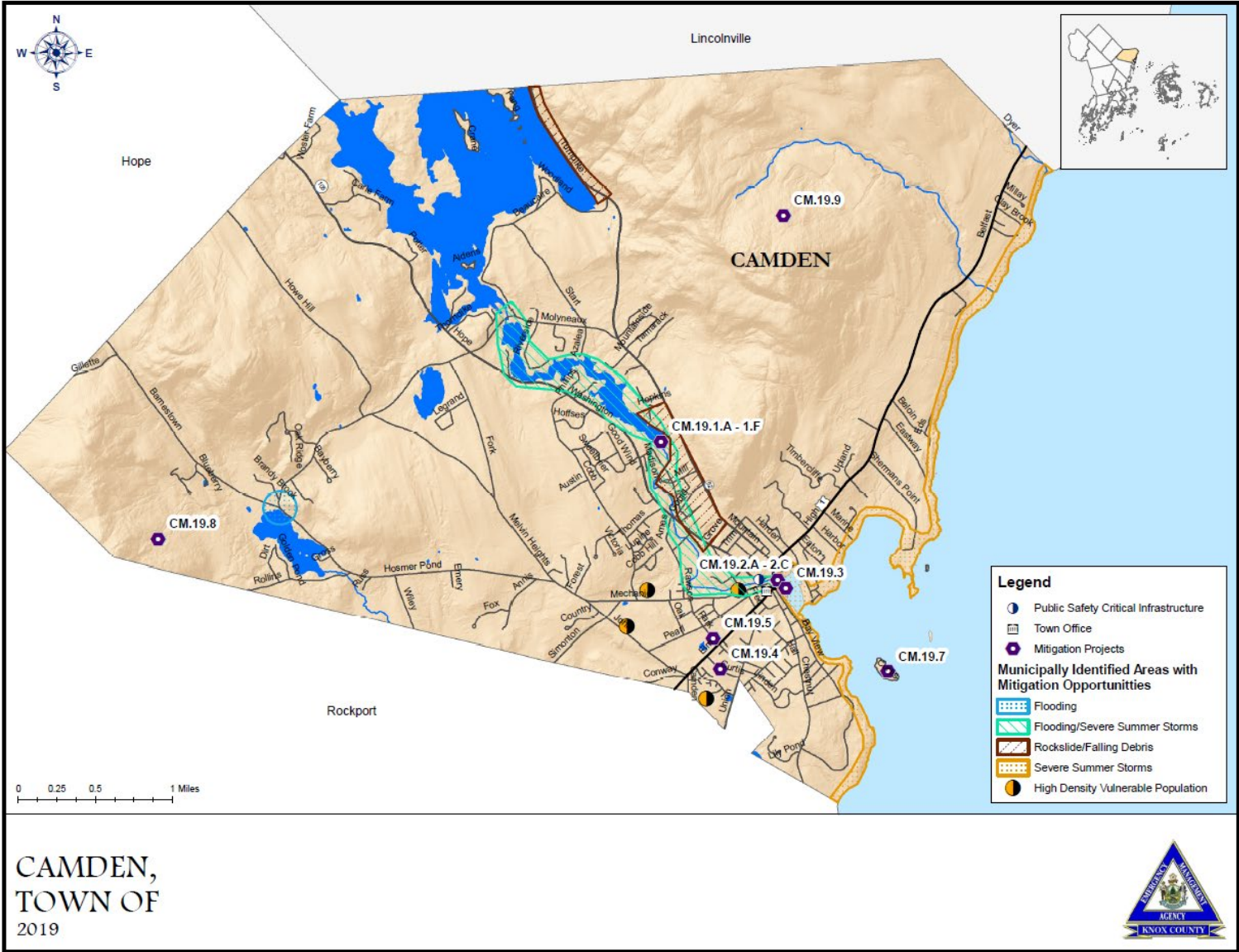
FROM SURVEY TO MAP – STEPS 7 TO 9

7 ~ Review Map with Municipality

8 ~ Once approved, incorporate map into the plan

9 ~ Plan for how the data/map will be maintained

- Storage
- Access to data
- Updating GIS layers and map
- Distribution



WHAT COMES NEXT?

- Data source for the future
- Serve as documentation for
Grants, Budgeting, Planning, Other . . .
if not documented, it "didn't happen"
- Resource to incorporate into other planning or analytic processes
- Connect Hazard Mitigation & Comprehensive Planning



Maine Comprehensive Plan Data Portal and Mapping Services

Municipal Planning Assistance Program

October 8, 2024

Story Map



Final mapping thought: challenge of symbology
How to be clear when multiple layers overlap?
Hint: Look to maps of the past

Presenter Contact Information

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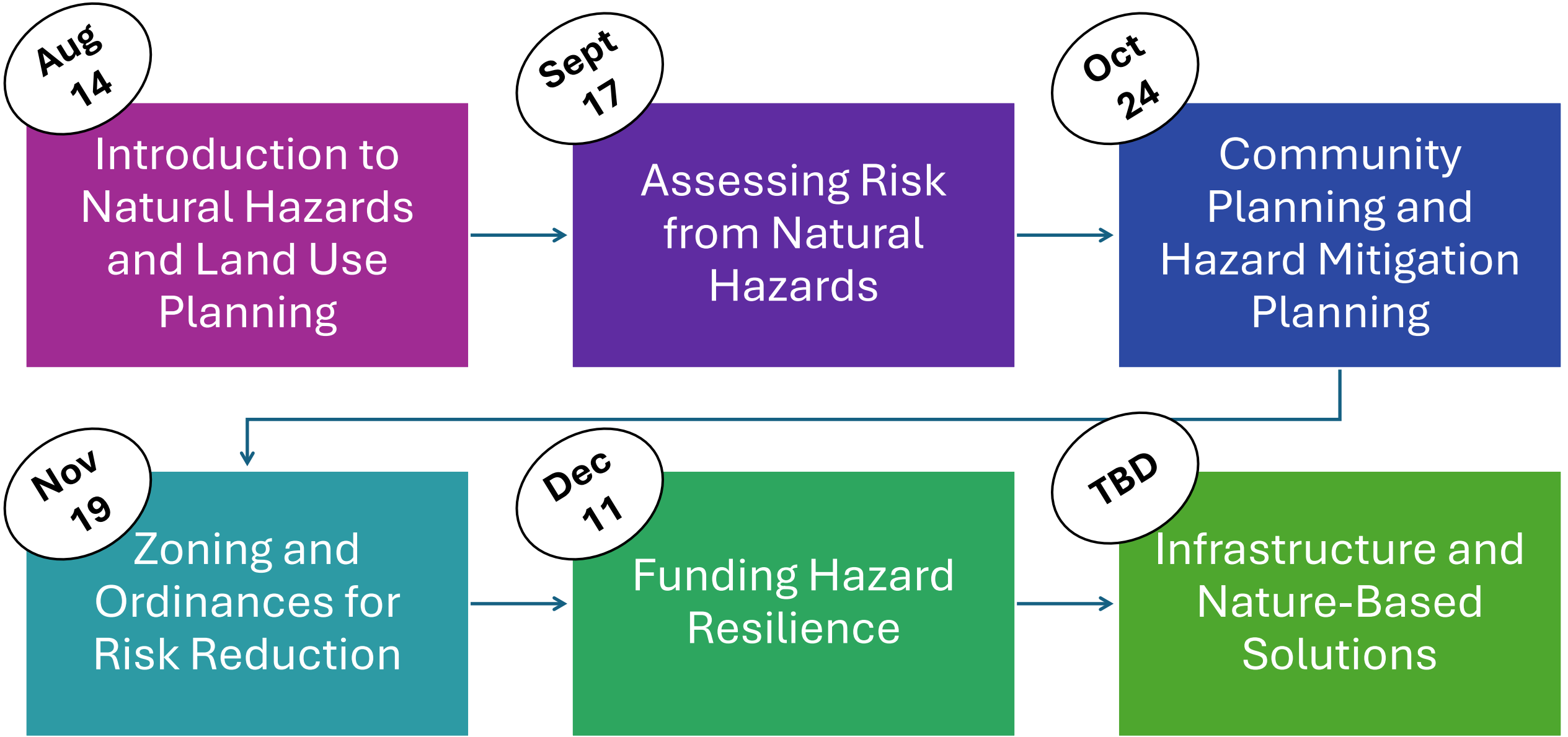
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Return at 6:35pm for activity.

