

# Virginia Flood Protection Master Plan

## Stage Setting Workshop

Meeting Summary



### Stage Setting Workshop Overview

Virginia stakeholders were given introductory information on the VFPMP project by the Arcadis team. Initial information included an overview of the project, its components, timeline, and how the Arcadis team plans to engage stakeholders throughout the development of the VFPMP. Stakeholders have been defined in two categories for this effort, “Core” and “Supporting” stakeholders. “Core” stakeholders were invited to attend this meeting in-person. “Supporting” stakeholders and members of the public were invited to listen into the presentation virtually via Teams. After the conclusion of the presentation, the virtual portion of the meeting ended. The “Core” stakeholders in the room then participated in a small group activity where they were split into four groups. Each group consisted of various Virginia state agencies and organizations and the Arcadis team organized the individuals in the groups by level of responsibility in their organization (e.g., agency directors were assigned to one group, program managers were assigned to one group).

Each group was asked to discuss flood resilience successes and challenges in response to recent flood events. Discussion points were recorded by notetakers. Summarized below are the flood resilience success and challenges that were discussed in the small groups. Each group also came up with 1-3 goals in relation to addressing the challenges they discussed.

## Breakout Group 1

### SUCCESSFUL EFFORTS

- Successful initiatives in reforestation, such as the Hardwood Habitat Initiative, along with effective forest land retention and management, contribute significantly to enhancing ecological health and resilience.
- The Department of Forestry (DOF) supports green infrastructure (GI) projects and living shorelines, while the Voluntary Wetland Restoration Enhancement and Protection Program actively improves wetland ecosystems, further bolstering coastal resilience.
- The non-profit RISE has played a role in advancing resilience planning and redevelopment in the Norfolk watershed, with successful permitting for living and hardened shorelines supported by innovative shoreline management technologies, alongside Community Flood Preparedness Fund (CFPF) grants and FEMA compliance assistance that strengthen local efforts.

### CHALLENGES

- There is a need for effective community outreach, with consistent engagement primarily from local government.
- There is a need for intentional concentration on critical infrastructure, particularly dams, with a lack of proactive management.
- There is a need for funding, many projects may not qualify for federal funding unless they meet specific criteria.
- There is a need for greater emphasis on the value of coastal forests in resilience planning.

### REPORT OUT GOALS

- Effective community outreach is needed to address the difficulty in reaching parts of the broader public to participate in master plans and local resilience planning. Feedback consistently comes from the same group of folks, such as local government officials and NGOs. Establish a process/program for quick-need funding for localities/communities
- Address resource capacity issues for state agencies to be able to achieve flood resilience responsibilities
  - Identify needs by agency and coordinate through Resilience Team
  - Identify potential sources of funding and develop strategies to secure them to increase capacity and funding for resilience efforts.

## Stage Setting

Facilitator: Linda Warren

Note Taker: Dave Hirschman

### Group Participants:

First Name	Last Name	Job Title	Organization Name
Michael	Perez	Deputy Chief Diversity Officer	Office of Diversity, Opportunity, and Inclusion
Becky	Gwynn	Deputy Director	Virginia Department of Wildlife Resources
Alex	Samms	Chief Deputy, DEQ	Virginia Department of Environmental Quality
Jamie	Green	Commissioner	Virginia Marine Resources Commission
Shawn	Crumlish	Executive Director	Virginia Resources Authority
Shawn	Talmadge	State Coordinator	Virginia Department of Emergency Management
Terry	Lasher	Assistant State Forester	Virginia Department of Forestry

## Breakout Group 2

### SUCCESSFUL EFFORTS

- VDOT has updated structure and bridge standards to address sea level rise, while the Community Flood Preparedness Fund and the Resilient VA Revolving Loan Program enhances local resilience efforts.
- Increased staffing and consultant support have assisted the development of tools that leverage various data sets to evaluate flooding and climate impacts on individual properties.
- Initiatives include creating public-facing toolkits for property owners, localities, and preservation planners, along with funding opportunities for projects after hurricanes in coordination with the Department of Historical Resources.
- More grant funding opportunities have provided further education, implementation, and resources for resilience planning.

### CHALLENGES

- Local communities need to increase their participation in the National Flood Insurance Program (NFIP) and seek greater inclusion in the decision-making process, emphasizing the importance of accessible communication strategies for public engagement. Capacity from the state is not available to help the communities be compliant.
- Enhanced political support is essential, as elected officials play a crucial role in securing funding and influencing decisions related to flood resilience.
- There is a pressing need for dedicated funding for flood resilience initiatives and improvements in stormwater drainage systems to effectively manage and mitigate flooding impacts.

### REPORT OUT GOALS

- Targeted Communications
  - Challenge: Communication with stakeholders including general public, legislators, and state actors
  - Goal: Develop a specific Outreach and Engagement strategy to educate and foster widespread support for implementing solutions, especially among those with the power to support through funding (fostering political will).
- Long-term resilience solutions
  - Challenge: There is a lack of focus on long-term issues including relocation and retreat.
  - Goal: Develop a long-term strategy to address relocation issues (and other long-term issues).

## Stage Setting

Facilitator: Sidney Huffman

Note Taker: Keesler Morrison

### Group Participants:

First Name	Last Name	Job Title	Organization Name
Peter	D'Alema	Director of Program Management	Virginia Resources Authority
Jolene	Smith	Director, Resource Information & Register	Department of Historic Resources
Adrienne	Kotula	Virginia Director	Chesapeake Bay Commission
Sharon	Baxter	Dir, Division of Environmental Enhancement	Virginia Department of Environmental Quality
Tom	Berry	Planning and Intelligence Division Director	Virginia Department of Emergency Management
Chris	Berg	Assistant Division Director, Environmental Division	Virginia Department of Transportation

### Breakout Group 3

#### SUCCESSFUL EFFORTS

- PDCs (Planning District Commissions) effectively serve as administrative arms of the Commonwealth, facilitating the implementation and distribution of funds during disaster events. This has been proven to be highly effective.
- The use of data to identify flood-prone and socially vulnerable areas enhances the development of resources during flood events, supported by the development of local resilience plans and institutional structures that ensure consistency in program implementation.
- Initiatives such as the Hampton Roads pilot flood sensor for roads and a 5-year planning cycle foster collaboration among various partners, creating valuable touchpoints for local and regional staff during the hazard mitigation planning process.

#### CHALLENGES

- State agencies face challenges due to policies that restrict cash-flowing projects upfront, impacting indirect costs, staff salaries, and overall project feasibility, while planning efforts often lack synchronization across various departments.
- The reliance on outdated data during state plan submissions has hindered effectiveness, compounded by the presence of "hidden" or "unwritten" rules that complicate the planning process and communication with the public.
- Localities struggle with different incentives compared to state agencies, leading to gaps in riverine and rainfall-driven data, highlighting the need for improved governance structures and enhanced attention to data-rich systems like the Smart Scale, which effectively prioritizes funding and projects.

#### REPORT OUTS

- Goal: Strong state leadership: decision makers need to be action-oriented, but also need to understand the downstream implications of their actions, including unintended consequences. Need to conduct front end analysis – and once that has been conducted, actions of change need to happen so the same barriers/mistakes/etc. don't continue to happen.
- There is a need to fill in data gaps and build trust of that new data through training. The data needs to be reliable, and known levels of accuracy of the data need to be shared transparently.

## Stage Setting

Facilitator: Katya Wowk

Note taker: Madison Teeter

### Group Participants:

First Name	Last Name	Job Title	Organization Name
William	Curtis	DHCD Assistant Director	Virginia Department of Housing and Community Development
Debbie	Messmer	Deputy Director Grant Management and Recovery	Virginia Department of Emergency Management
Lewie	Lawrence	MPPDC Executive Director	Middle Peninsula PDC
Jitender	Ramchandani	Statewide Transportation Planning Manager	Virginia Office of Intermodal Planning and Investment
Ryan	Green	Program Manager	Virginia Coastal Zone Management Program
Brandy	Buford	NFIP Coordinator	Virginia Department of Conservation and Recreation
Rachel	Slotter	Strategic Planning Branch Manager	Virginia Department of Emergency Management



## Breakout Group 4

### SUCCESSFUL EFFORTS

- VDOT Flood Resilience Master Plan and VDOT Data Viewer have been successful.
- VDOT research – flooding (research council)
- DEQ: currently collecting high and low flow data for flood and drought risk. DEQ has a drought monitoring task force. DEQ has a cooperative agreement with USGS that allows them to directly upload their stream gauge data to the USGS website. It's almost real-time data, there is only a 15min lag time. DEQ's stream gauge data is used internally and externally.
- DGS: state agency compliance for construction in the floodplain will help simplify some processes.
- DWR: jetties protect boat ramps to ensure access
- DCR: a success of Phase 1 of the Coastal Resilience Master Plan was having data readily available to customers (as raw data, a map explorer, etc.). A way to build on this success would be to provide information to users on how to use the data.
- Regular funding to 8 coastal PDCs (Planning District Commissions) for resilience planning and engagement/communications.

### CHALLENGES

- Working across multiple jurisdictions/jurisdictional boundaries has been a challenge, whether that has been state, federal, regional, or otherwise. Coordination between state agencies has also been a challenge.
- Operational challenges include consistent funding for equipment maintenance upgrades. A lack of available resources and maintenance over the years had led to deteriorating infrastructure, due to a lack of funding. In need of sufficient funding for flash flood equipment downstream, preparedness and response capabilities for vulnerable areas are limited.
- Inconsistent data availability, including flood data and VFRIS Base Flood Elevation data.
- There are multiple unconnected GIS databases across the state at the state (inter-agency) and local levels.
- There is no catalog of existing data and tools, which often leads to duplicative efforts by state agencies.

### REPORT OUTS GOALS

- Funding for resiliency
  - Identifying existing sources of funding, how they are being used and how they could be used

- Define buckets of funding needs (e.g., data, maintenance & operations, projects)
- Unified way of prioritizing funding, focusing on where the risk is
- Data quality, synthesis, and coordination and finding ways to optimize funding around data resources
- Coordination
  - Maximize opportunities for coordination across agencies and levels of government from the respective lenses of different entities' priorities.
  - Educational component – integrate data and tools

## Stage Setting

Facilitator: Colleen McHugh

Note Taker(s): Muthu Narayanaswamy and Catherine Johnson

Group Participants:

First Name	Last Name	Job Title	Organization Name
Jacob	Compton	Dam Safety Project Manager	Virginia Department of Wildlife Resources
Fred	Kirby	State Review Engineer	Department of General Services - Division of Engineering and Buildings
Emmett	Heltzel	State Location and Design Engineer	Virginia Department of Transportation
Will	Isenberg	Coastal Planner	Virginia Department of Environmental Quality
Mitchell	Smiley	Policy Manager	Virginia Municipal League
Dave	Davis	Manager, Office of Wetlands & Stream Protection	Virginia Department of Environmental Quality
Abiot	Gemechu	Hydraulics Engineer	Virginia Department of Transportation



# Virginia Flood Protection Master Plan Presentation

Thursday, September 26<sup>th</sup> 2024



Photo: Virginia Department of Conservation & Recreation

# Arcadis Team Introductions



John Millspaugh, PE, PMP



Krista Jankowski, PG, PhD



Catherine Johnson



Madison Teeter, CFM

# Subcontractor Introductions



# Anticipated Meeting Outcomes

Stakeholder participants in the Stage Setting Meeting will...

1. Have a clear understanding of the purpose of the VFPMP
2. Feel confident about their role in the development of the VFPMP
3. Understand the development timeline of the VFPMP
4. Feel comfortable connecting with DCR and the Arcadis team with input and feedback they may have on the VFPMP throughout its development

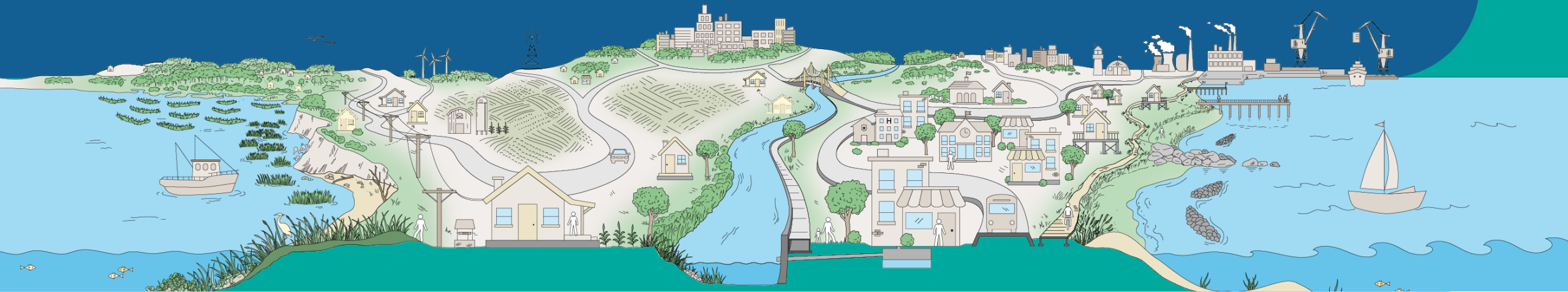
# Anticipated Meeting Outcomes

## Plan Development Team will...

1. Understand the best methods of how to communicate with stakeholders throughout VFPMP development to include their expertise and insights
2. Understand stakeholders' expectations of our team as the VFPMP is developed



The Virginia Flood Protection Master Plan (VFPMP) will be **an actionable plan** for the Commonwealth to use in crafting policies and programs to mitigate the impacts of flooding on people, the economy, and the environment.



# Virginia Flood Protection Master Plan (VFPMP)

## MOTIVATION

**Recurrent Flooding and Minimizing Losses:** Frequent storm events and rising tidal waters cause recurrent flooding, leading to loss of life, property damage, and unsafe conditions. The development of the VFPMP aims to minimize losses from future flooding events.

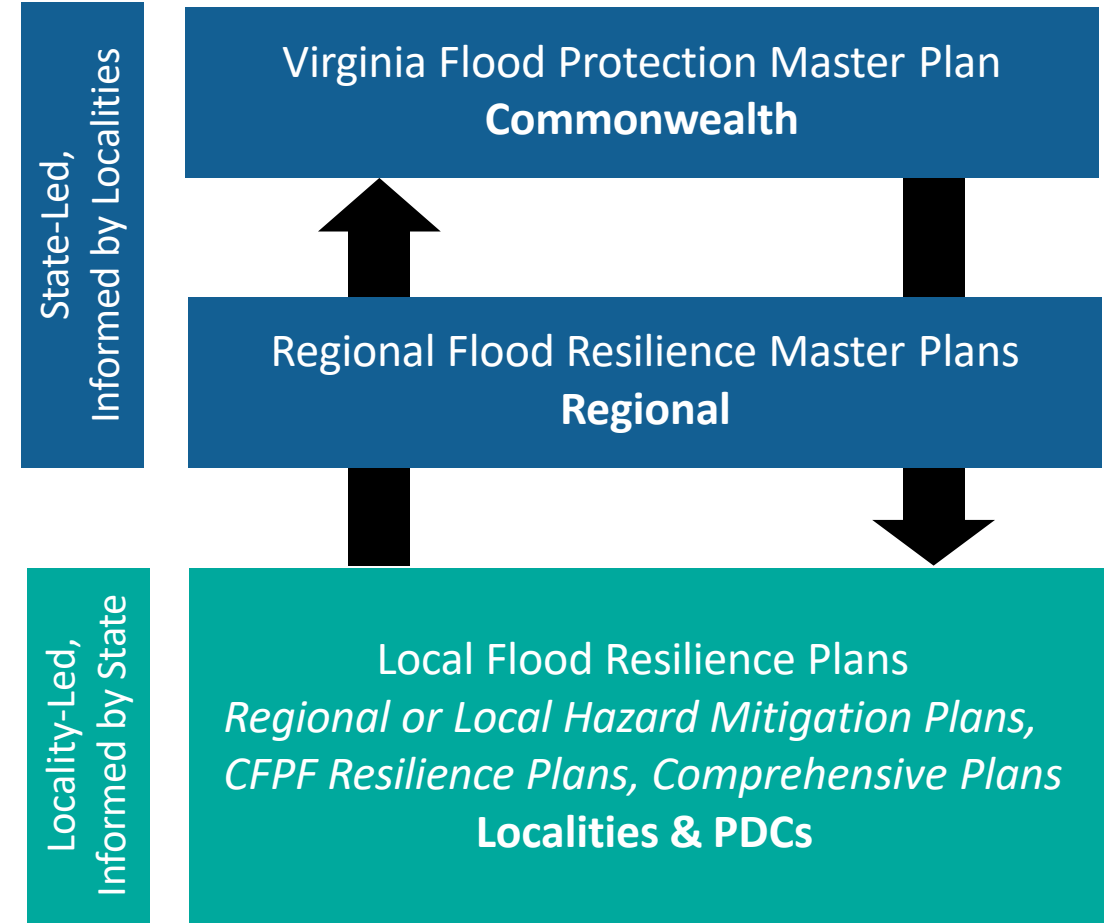
**Enhancing Resilience:** The VFPMP development process seeks to improve the Commonwealth's flood resilience. The ability to anticipate, prepare for, respond to, and recover from flood hazards with minimal damage to social well-being, health, the economy, and the environment.

**Need for a Coordinated Approach:** Flood resilience planning has become common at local and regional levels, but there is a need for a coordinated state-level approach in the Commonwealth to connect state agency initiatives with local needs.

The VFPMP will be updated every 5 years to identify further gaps and needs as approaches are implemented and more information about how flooding impacts the Commonwealth is collected.

# Understanding VFPMP's Role in Virginia's Flood Resilience Planning Efforts

- The Virginia Flood Protection Master Plan is intended to inform smaller scale plans and vice-versa
- The primary end users of the Virginia Flood Protection Master Plan will be Virginia state agencies
- Focus on state agencies will allow for flood resilience planning to spread throughout state initiatives and flow down into regional & local programs



## Components of VFPMP

Flood  
Impact  
Summary

Flood  
Resilience  
Gap Analysis

Policy &  
Program  
Strategy

# Flood Impact Summary

## Process

- Flood data collection and review
- Asset inventory of population, economic, environmental, and critical infrastructure data
- Develop & perform statewide impact analysis

## Outcome

- A holistic picture of current and future flood impacts across Virginia to use in prioritizing state resources

# Flood Resilience Gap Analysis

## Process

- Identify gaps in flood data necessary for decision-making in resilience planning informed by **Flood Impact Summary**
- Identify technical and capacity resources that will be needed to implement flood resilience activities statewide

## Outcome

- A list of potential actions to fill gaps in data, resources, capacity needs at the state agency level

# Policy & Program Strategy

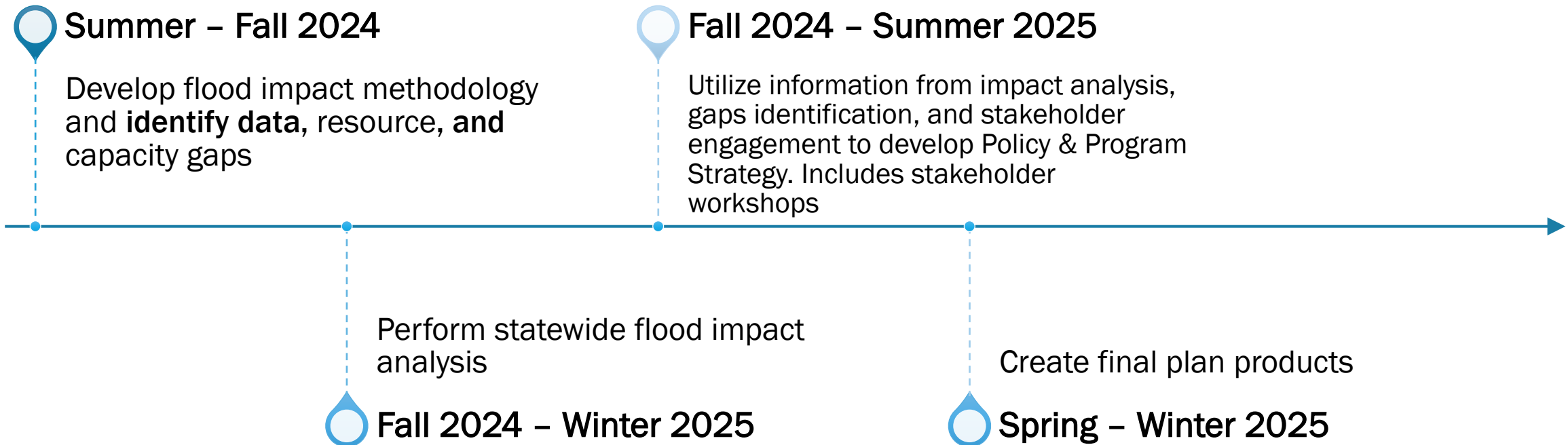
## Process

- Create a shared vision and goals for the VFPMP through a collaborative stakeholder engagement process
- Identify flood resilience strategies informed by **Flood Resilience Gap Analysis**
- Develop an implementation road map for the flood resilience strategies to be implemented in 2025-2030

## Outcome

- An actionable strategy to achieve a shared vision and goals, which includes flood resilience metrics for state agencies

# Overview Timeline of VFPMP Component Development





# Stakeholders' Role in VFPMP Development

## Core Stakeholders

- State agencies or entities that will play a critical role in developing and/or implementing the VFPMP.
  - Based on their agency's or organization's function, they will be able to contribute actionable input and feedback during multiple stages of plan development.
  - These stakeholders can play a leading role in implementing the plan after its development.

## Supporting Stakeholders

- State agencies or entities situated outside of the core plan development team who may:
  - Possess a vested interest in the plan
  - Be impacted by the plan's activities
  - Be able to provide expertise to specific components of the plan.

## General Public of the Commonwealth

- All other entities, organizations, and individuals in the Commonwealth. Engagement opportunities will be made available to these stakeholders throughout the VFPMP's development.

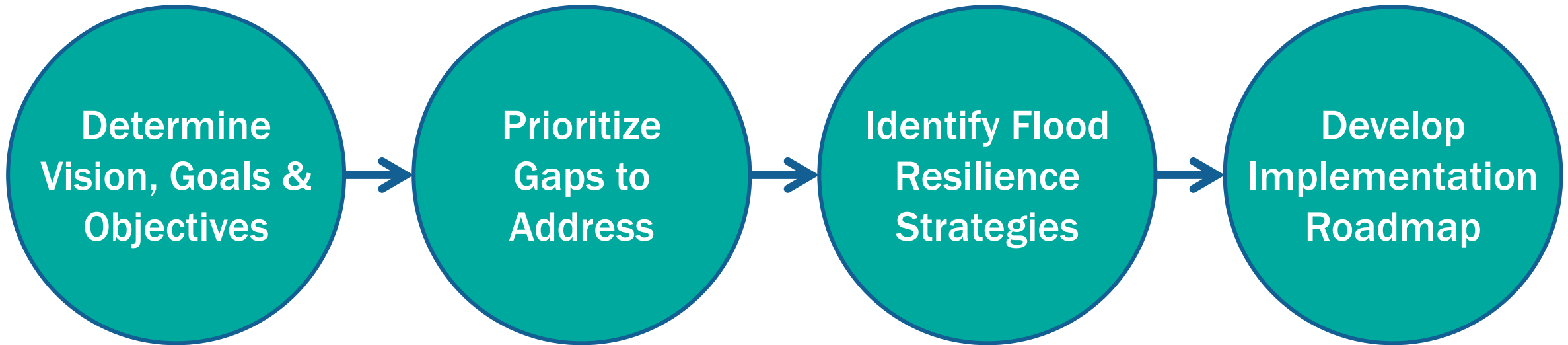
# Core Stakeholders

- Flood Resilience Advisory Committee
- Office of Commonwealth Resilience / Chief Resilience Officer
- Office of Diversity, Opportunity, and Inclusion
- Virginia Department of Conservation and Recreation
- Virginia Department of Emergency Management
- Virginia Department of Environmental Quality
- Virginia Department of Forestry
- Virginia Department of General Services
- Virginia Department of Historic Resources
- Virginia Department of Housing and Community Development
- Virginia Department of Transportation
- Virginia Department of Wildlife Resources
- Virginia Marine Resources Commission
- Virginia Resources Authority
- Office of Intermodal Planning and Investment
- Chesapeake Bay Commission
- Virginia Association of Counties
- Virginia Association of Planning District Commissions
- Virginia Municipal League
- Virginia Silver Jackets

# Key Points in Collaboratively Developing the VFPMP

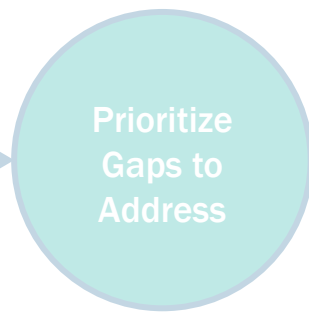


Today's Stage Setting meeting & workshop will help inform future key collaboration points with stakeholders by mapping out agency roles and identifying past and on-going flood resilience efforts. Future engagement points will be centered around the following topics:





*Collectively define clear desired outcomes to guide the Virginia Flood Protection Master Plan.*



### **Inputs**

---

A draft set of goals and objectives, drawing from and crosswalking against existing state agency documents and resources.



### **Virtual Feedback Session**

---

Review and provide input on draft goals and objectives.

What's missing? How can we strengthen?



### **In-Person Workshop**

---

Collaborative vision-setting exercise.

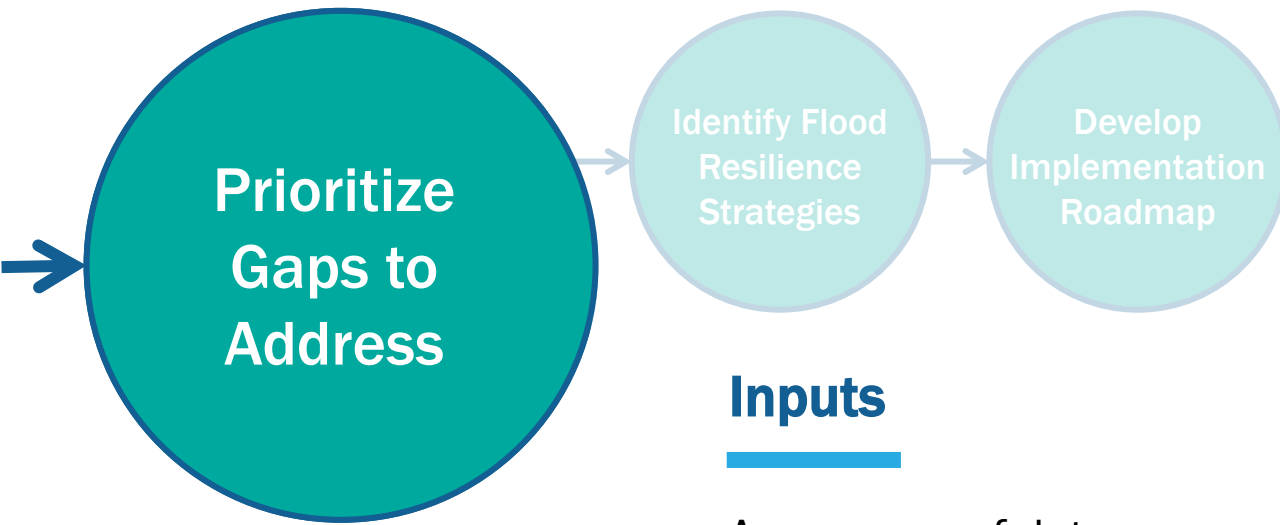
Finalize goals and objectives.

Identify objectives that may require trade offs later in the process.

#### **Attendance:**

- Core & Supporting stakeholders will be invited to the Virtual Feedback Sessions
- Core stakeholders will be invited to the In-Person Workshops

**Consensus on objectives** that will provide the foundation for how gaps and strategies are prioritized.



*Identify and prioritize data, resource, and capacity gaps in statewide management of flood risk.*

**Attendance:**

- Core & Supporting stakeholders will be invited to the Virtual Feedback Sessions
- Core stakeholders will be invited to the In-Person Workshops

**Inputs**

A summary of data, resource, and capacity gaps that emerge from a review of existing documentation.

**Virtual Feedback Session**

Review identified gaps and map them to plan objectives.



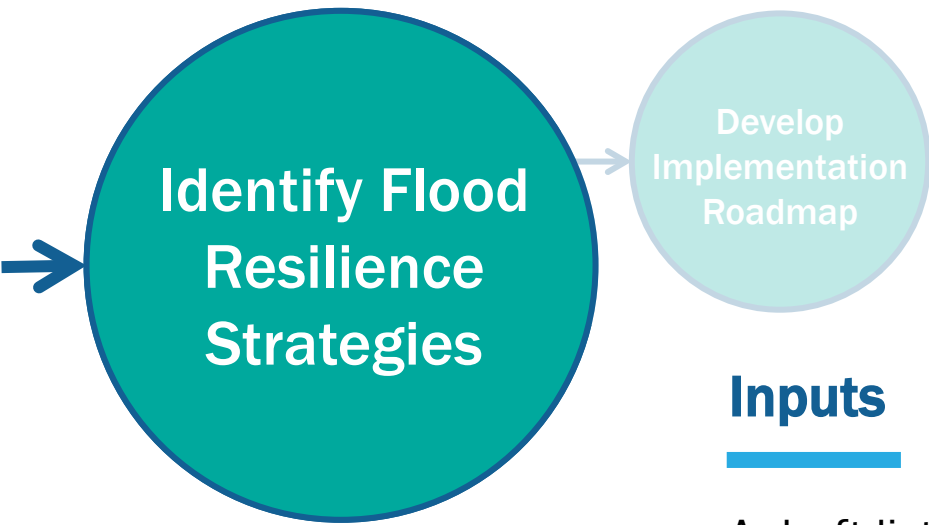
**In-Person Workshop**

Discuss how identified gaps may impact plan objectives in the future if not addressed.

Prioritize gaps based on objectives and feasibility.

Map gaps to agency roles and responsibilities.

**Consensus on priority data, resource, and capacity gaps to address through flood resilience strategies.**



## Identify Flood Resilience Strategies

Develop Implementation Roadmap

### Inputs

A draft list of potential solutions and strategies to address identified gaps and flood impacts.

### Virtual Feedback Session

Review and provide input on identified list of potential strategies.

What additional options are there? How can strategies be improved?



### In-Person Workshop

Discuss how potential strategies may improve plan objectives if implemented.

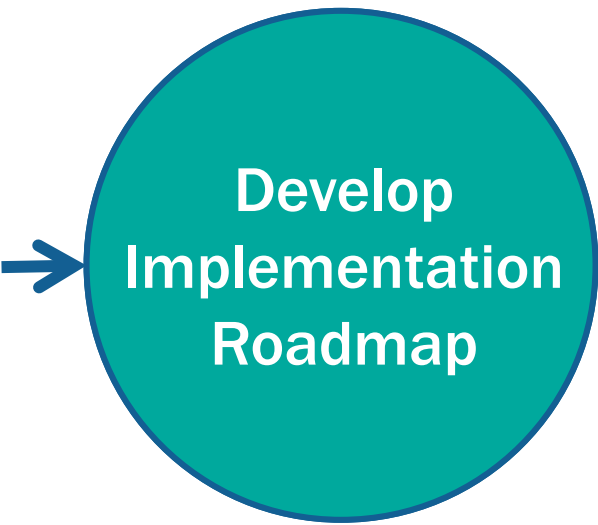
Discuss and weigh tradeoffs between different approaches.

*Identify statewide actions that can be taken within the next five years to address gaps and strengthen Virginia's flood resilience.*

#### Attendance:

- Core & Supporting stakeholders will be invited to the Virtual Feedback Sessions
- Core stakeholders will be invited to the In-Person Workshops

**Collectively developed set of flood resilience policies and programs to include in the plan.**



# Develop Implementation Roadmap

*Outline mechanisms, timelines, responsible parties, required resources, and success metrics to guide implementation.*

## Attendance:

- Core & Supporting stakeholders will be invited to the Virtual Feedback Sessions
- Core stakeholders will be invited to the In-Person Workshops

## Inputs

---

Draft implementation details for identified strategies.

## Virtual Feedback Session

---

Review and provide input on draft implementation details.

Discuss alignment with other plans and programs.



## In-Person Workshop

---

Identify agency roles, responsibilities, and opportunities for collaboration and plan alignment

Identify sequencing, necessary resources, and adaptive management of plan.



**A clear roadmap** for how the plan will be implemented and managed across agencies over its five-year timeframe.

# Other Forms of Engagement

## One-on-one Interviews with Core Stakeholders

- Interviews with Core Stakeholders who have a high influence over how the VFPMP will be implemented

## General Public

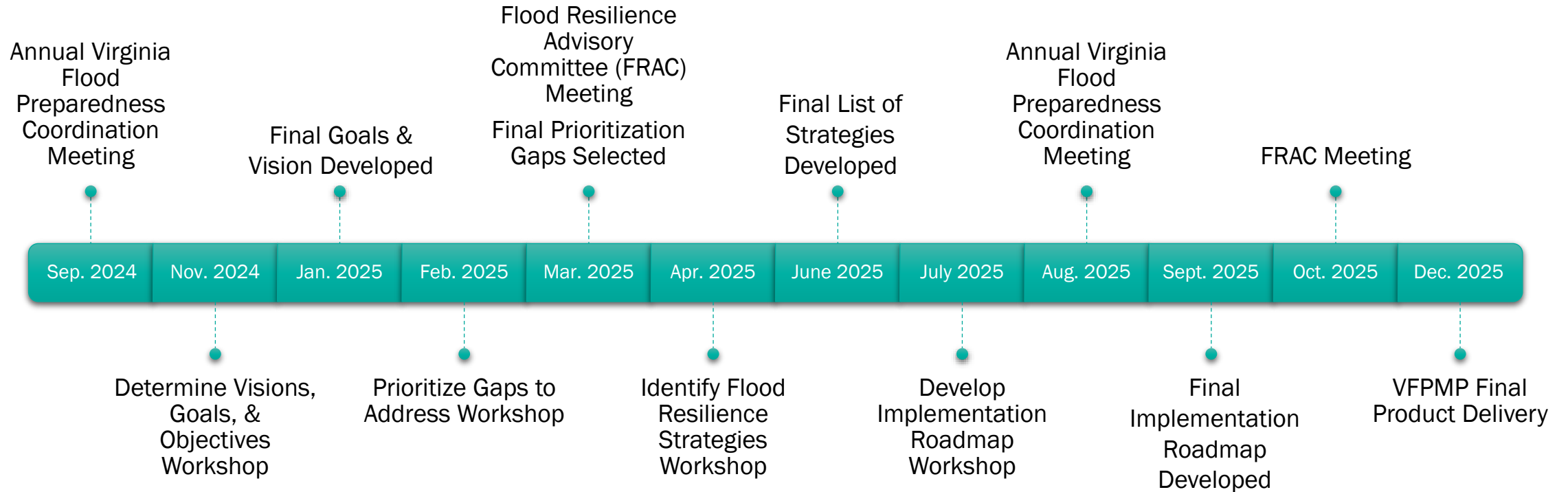
- The public will have the opportunity to provide feedback on the VFPMP during its development through:
  - Public surveys
  - Public comment periods during meetings

## Further Engagement Sessions for Stakeholders

- Based on the level of feedback and engagement received from stakeholders throughout VFPMP development, other engagement points may become available, such as:
  - Working Group sessions focused on specific VFPMP components
  - Detailed feedback surveys



# Overview of VFPMP Development Schedule & Engagement Points



\*Schedule subject to change based on VFPMP development

# VFPMP Final Products



Written PDF Plan

The full plan document designed for state leadership, and appendices designed for use by practitioners.

Audience:  
Governor & GA



Implementation Guide

A summary of the policy and program strategy designed for quick reference.

Audience:  
State Agencies



StoryMap & Data Viewer

A summary of the major plan elements that allows for interactive engagement.

Audience:  
Public



VFPMP Webpage

General plan information (purpose, process, & results). Periodically updated with progress/metrics tracking.

Audience:  
Public

# Questions?

# Thank you!



**Web** [dcr.virginia.gov/resilience-planning](https://dcr.virginia.gov/resilience-planning)

**Newsletter** [dcr.virginia.gov/signup](https://dcr.virginia.gov/signup)

**Email** [flood.resilience@dcr.virginia.gov](mailto:flood.resilience@dcr.virginia.gov)



## Data Survey & Small Group Activity Instructions

- During the break, please pick up and complete your Data Survey
- At the end of the break, please locate and sit at your assigned small group table

# Small Group Activity – Introductions Discussion

## Goal 1 – Through VFPMP Overview Presentation

Provide a clear overview of the planned VFPMP development process and the role of stakeholders in that process

Outcome: Ensure you feel equipped to participate and contribute to the collective decision-making about recommendations for inclusion in the plan

## Goal 2 – Through Small Group Discussions

Gain additional information about your recent and current experience with regard to flood resilience and flood mitigation work in your role

Outcome: Gain valuable insights from the directors and practitioners that work daily to keep Virginians safer in light of flooding hazards

# Small Group Activity – Objectives

## Small Group Discussions

Through facilitated discussion, we aim to

- Identify what is working for your agency with regard to flood resilience responsibilities
- Identify what is not working as well for your agency with regard to flood resilience responsibilities
- Understand the data, resources, and capacities that your agency has or needs to be more successful

We will be taking notes to capture all of your input and insights.

## Small Group Activity – Flood Resilience Successes Discussion

What flood resilience efforts are you aware of in your agency/organization that were successful?

Questions to help guide the conversation:

- Was data used to inform the process? If so, what specific type of data was most useful? What was the source and how often do you use that data?
- What was the role of your agency/organization in the process? How did your capacity to work on the effort enhance the process? What was really important?
- What resources were critical to the effort's success (e.g. funding, previous planning efforts, staff expertise, etc.) Which of these resources was the most important?



# Small Group Activity – Flood Resilience Challenges Discussion

What challenges are you facing when trying to plan or implement flood resilience efforts?

Questions to help guide the conversation:

- What types of information or data did you not have access to that would have made decision-making more effective or efficient?
- How did/do limitations in agency capacities (e.g. data, resources, knowledge, staff) impact your ability to carry out flood resilience efforts?
- Were any of the resources you did have access to insufficient for carrying out tasks related to the flood resilience efforts? If so, how?

## Small Group Activity – Group Report Outs

1. Assign a Group Reporter to share out during the Report Out section
2. As a group, consider the notes from the “Challenges” discussion and think about the questions:
  - a. If you could reframe some of your “Challenges” as goals for your agency to achieve, what would those goals be?
  - b. What would it look like for your agency to better support flood resilience across Virginia?
3. As a group, select 1 or 2 reframed “Challenges” to share out to the group and provide an explanation of what challenge led to identifying this goal and (as applicable) what data, resources, or capacities are needed to support achieving the goal in the near-term.
4. Keep comments brief (~2 minutes max) to ensure we can get through all groups and wrap up on time

# Thank You & Next Steps

# Conclusion & Final Remarks

Director of the Department of Conservation and Recreation,  
Matthew Wells