

# Virginia Coastal Resilience Technical Advisory Committee

## Quarterly TAC Meeting Agenda

Date: Thursday, December 01, 2022

Time: 09:00 AM

Location: Patrick Henry Building, East Reading Room  
1111 East Broad Street, Richmond, VA 23219

Virtual Public Access: Register at <https://attendee.gotowebinar.com/register/7735530920838210573>

## Meeting Agenda

- 1) Call to Order, Roll Call, and Introductions
- 2) Adoption of Meeting Minutes from September 16, 2022
- 3) Reports from DCR
  - a. Virginia Coastal Resilience Master Plan Update
  - b. Summary of Feedback on Framework and CRMP Phase I
  - c. Community Outreach and Engagement Plan Update
  - d. Summary of Feedback on TAC Subcommittees
- 4) Old Business
  - a. TAC Member Discussion
- 5) New Business
  - a. TAC Member Discussion
- 6) Public Comment
- 7) Adjourn

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Public Comment: If you seek to provide public comment, please sign up either in-person or virtually using the Chat window.

# Coastal Resilience TAC

DCR Update 12/01/2022

## Presentation Outline

- Coastal Resilience Master Plan Update
- Summary of Feedback TAC and Public Comments
  - Framework
  - CRMP Phase I
  - CRMP Phase II
- Community Outreach and Engagement Plan Update
- Summary of TAC Feedback on Subcommittees

# Virginia Coastal Resilience Master Plan Update

## Coastal Resilience Master Plan Update

### Phase 2 Code Requirements

- SACAP in coordination with DCR, shall update the Virginia Coastal Resilience Master Plan no later than December 31, 2024 (every 5 years thereafter)
- CRMP shall be a place-specific plan for mitigating severe and repetitive flooding and shall [adhere to the Framework Principles]
- Phase 2 will incorporate:
  - all major flood hazards, including precipitation-driven flooding
  - a comprehensive risk assessment of critical human and natural infrastructure
  - a list of all projects considered and an update of the status of all projects previously implemented
- Phase 2 will implement the Community Outreach and Engagement Plan

[2022 GA HB516/SB551 now §[10.1-658, 659](#)]

# Coastal Resilience Master Plan Update

## Phase 2 Status Update

- Dewberry Contract
  - Project Database Web Application
  - Funding Database Web Application
  - Pluvial Modeling
  - *Updated Impact Assessment*
  - *Updated Impact Assessment Report*
  - *Updated Web Explorer*
- Additional DCR Efforts
  - Community Outreach and Engagement Plan
  - Status of Flood Resilience Report
  - Annual Coordination Meetings
  - Resilience Coordination Workgroup
  - Virginia Flood Protection Master Plan

# CRMP Framework, Phase I, & Phase II

## Summary of TAC and Public Comments

# Solicitation of Input

## TAC Member Survey

- Framework
  - Principles
  - Goals
  - Master Planning Regions
  - Time Horizons
- Coastal Resilience Master Plan, Phase I
  - Outreach and Engagement
  - Technical Study Components
  - Plan Delivery
- Coastal Resilience Master Plan, Phase II

## Public Comment via Virginia Town Hall

- Documents for Comment
  - Master Planning Framework
  - Coastal Resilience Master Plan, Phase I
- Outreach Awareness via
  - News Release
  - Social Media
  - Direct Email

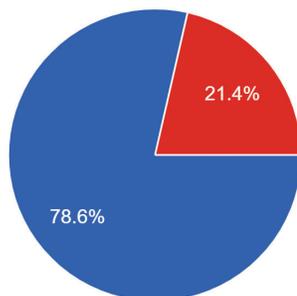
# Responses

## TAC Member Survey

Did you participate in the 2021 CRMP TAC?

14 responses

- Yes
- No



## Public Comment

- Framework
  - 7 Comments
- CRMP Phase I
  - 11 Comments
- Individuals, Localities, PDCs, NGOs

# Coastal Resilience Master Planning Framework

## TAC and Public Comments

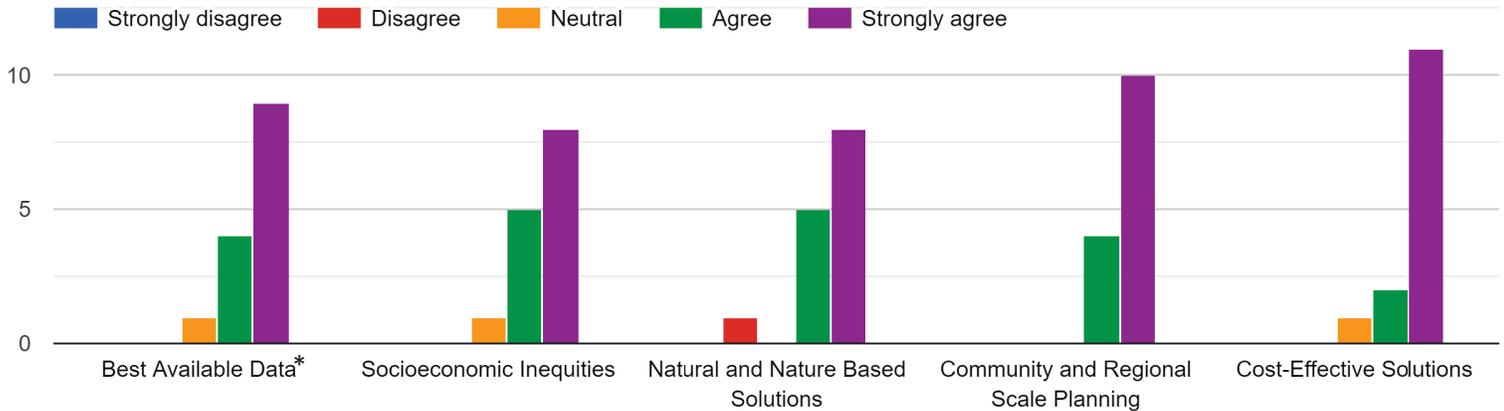
## Framework Discussion

### TAC and Public Comment Summary

- Principles
  - Supportive
  - Additional clarity for implementation
- Goals
  - Supportive
  - Additional clarity and interim steps needed
- Master Planning Regions
  - Statewide Integration
- Time Horizons
  - Major Flood Hazards Integration

# Framework Principles

TAC Survey - Do you agree with the Framework Principles?



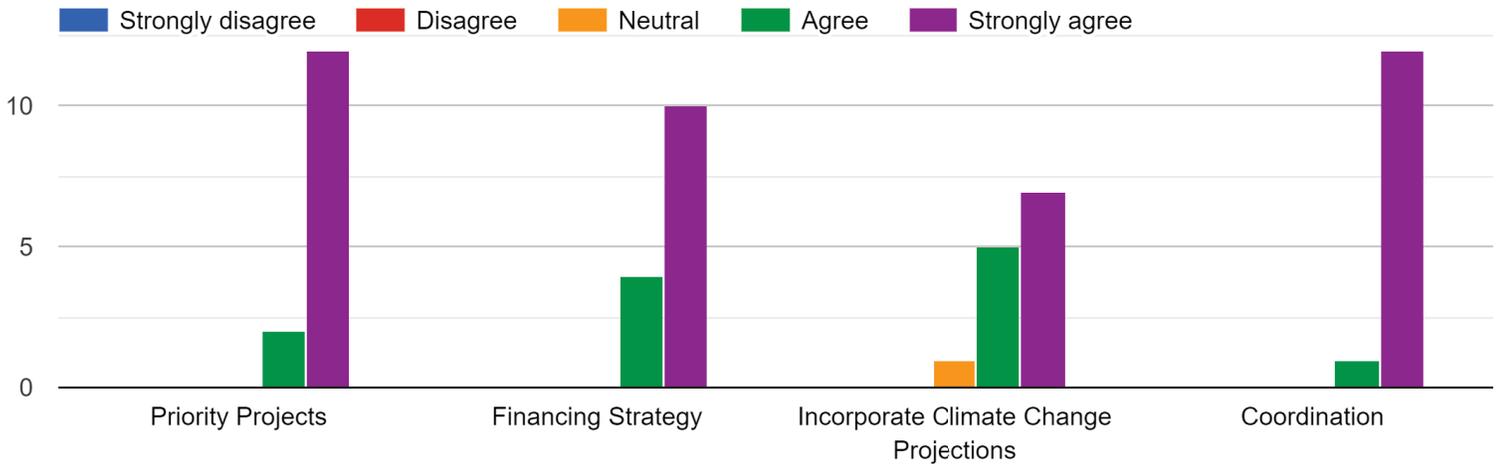
# Framework Principles

TAC and Public Comments

- Best Available Science vs Best Available Data
- Equity: Objective vs Co-Benefit
- Natural and Nature Based: Assets vs Solutions
- Community and Regional Scale Planning vs Private Property
- Cost Effective: Direct vs Indirect

# Framework Goals

## TAC Survey - Do you agree with the Framework Goals?



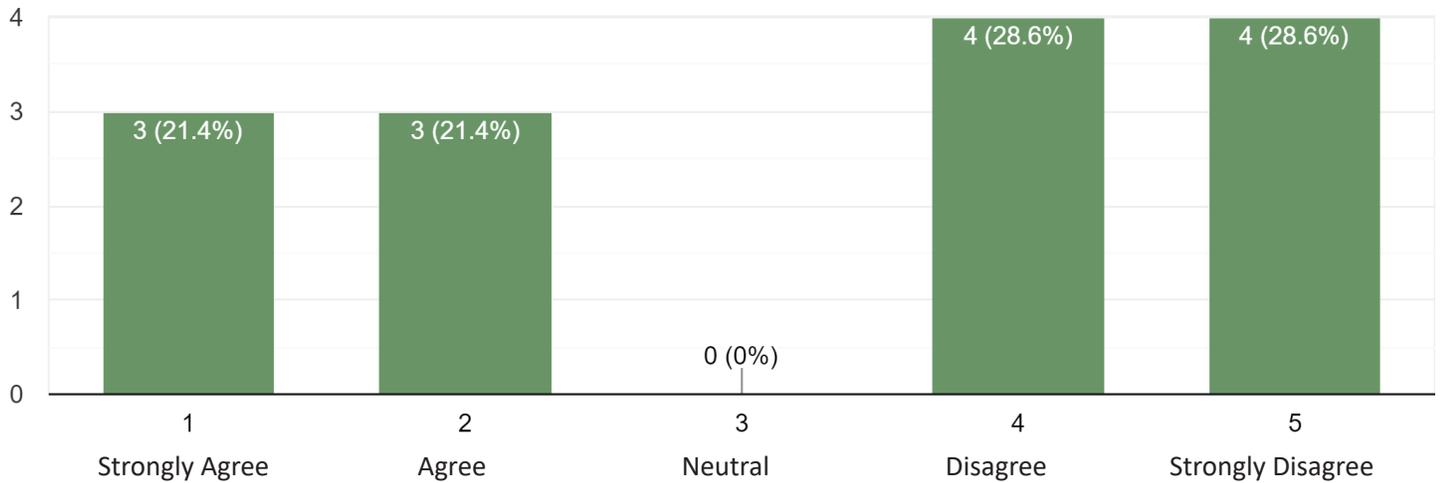
# Framework Goals

## TAC and Public Comments

- **Priority Projects**
  - Critical Infrastructure & Vulnerable Communities
  - Commonwealth vs Region vs Local vs Organizations vs Individual
  - Projects vs Programs
  - Needs vs Solutions
- **Funding**
  - Communication, Coordination, and Collaboration
- **Incorporate Climate Change Projections in Commonwealth Programs**
  - Adaptive Management
  - Regional and Local Program Integration
- **Coordination**
  - Resilience Must Align and Work Across Borders. Whole Community.
  - Programs. Regulations. Legislation.
  - Communication

# Master Planning Regions

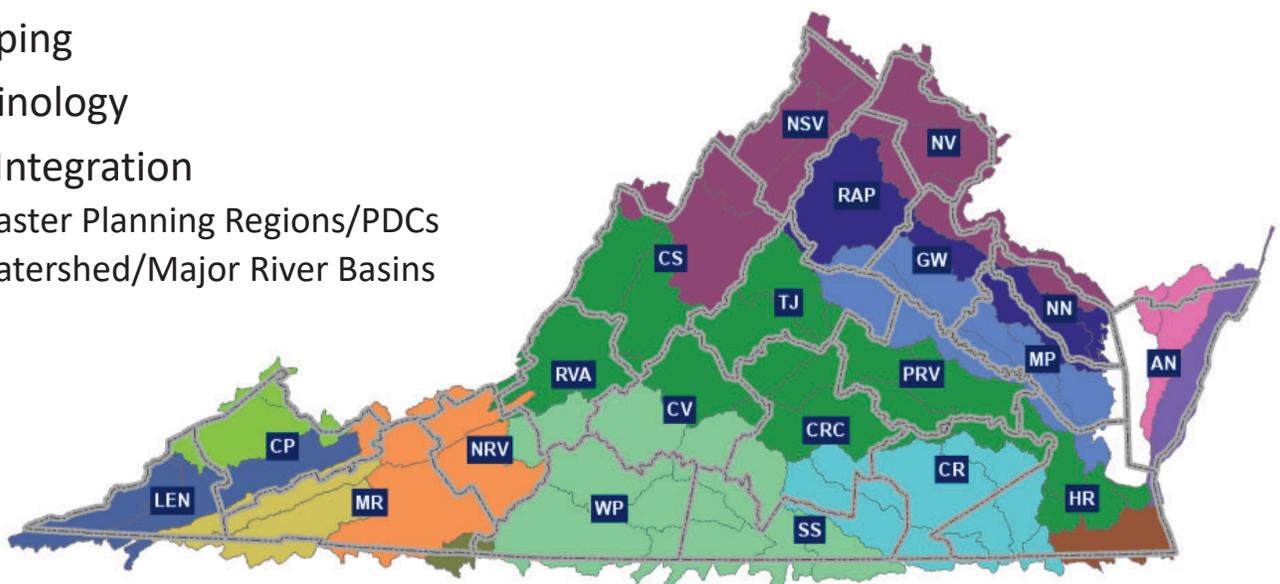
TAC Survey - Do you agree with the organization of the Plan according to the Master Planning regions?



# Planning Areas

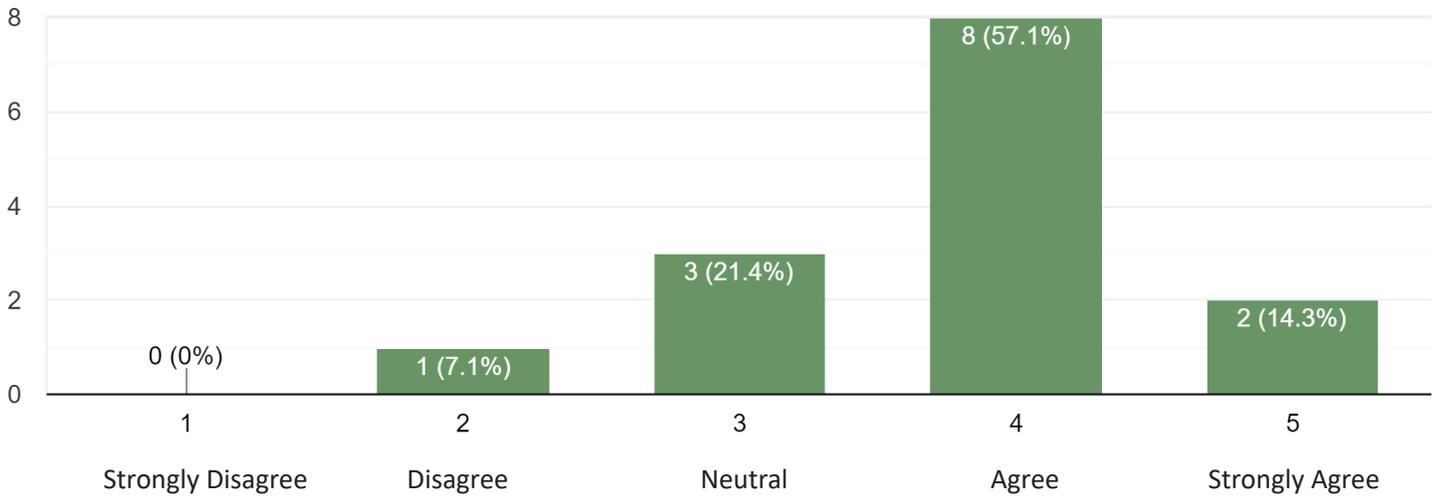
TAC and Public Comments

- Grouping
- Terminology
- Plan Integration
  - Master Planning Regions/PDCs
  - Watershed/Major River Basins



# Framework Time Horizons

TAC Survey - Do you agree with the Plan planning time horizons (2020, 2040, 2060, 2080)?



# National Climate Assessment Progression

This is a continuous process without an end point.

Each cycle, we update and advance.

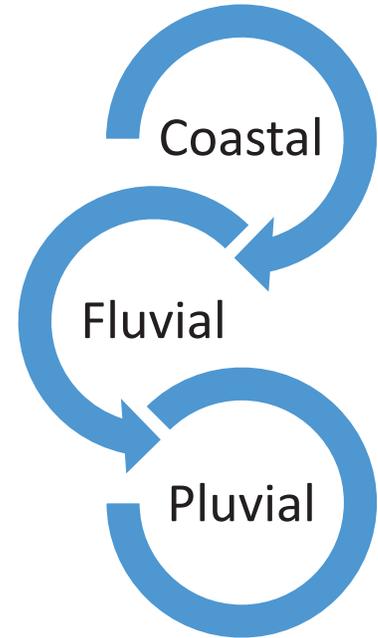


Source: [NCA 2018](#)

# Planning Scenarios

## Major Flood Hazard Integration

- CRMP Flood Scenario: function of time & location
- Integrating Major Flood Hazards
  - Sea Level Rise – Location Specific at 2020, 2040, 2060, 2080, 2100
  - Predictive IDF – County Specific at 2020-2070 and 2050-2100
  - Riverine Discharge – Unknown (River Specific?)
  - Compound Flooding
- Simplified Approach for Planning Purposes?
  - 2025, 2050, 2100
  - +3ft, +5 ft
  - Watershed/Locality



# Coastal Resilience Master Plan Phase I

## TAC and Public Comments

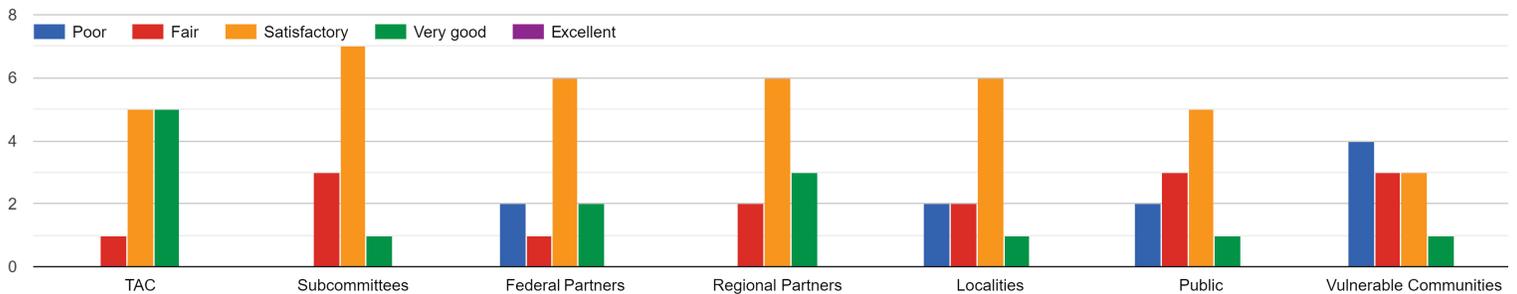
# CRMP Phase I

## TAC and Public Comment Summary

- Outreach and Engagement
  - Improvements Needed
- Technical Study
  - All Major Flood Hazards
  - Critical Human and Natural Infrastructure
- Plan Delivery
  - Statewide Integration

# CRMP Phase I, Outreach and Engagement

## TAC Survey - Outreach and Engagement Rating



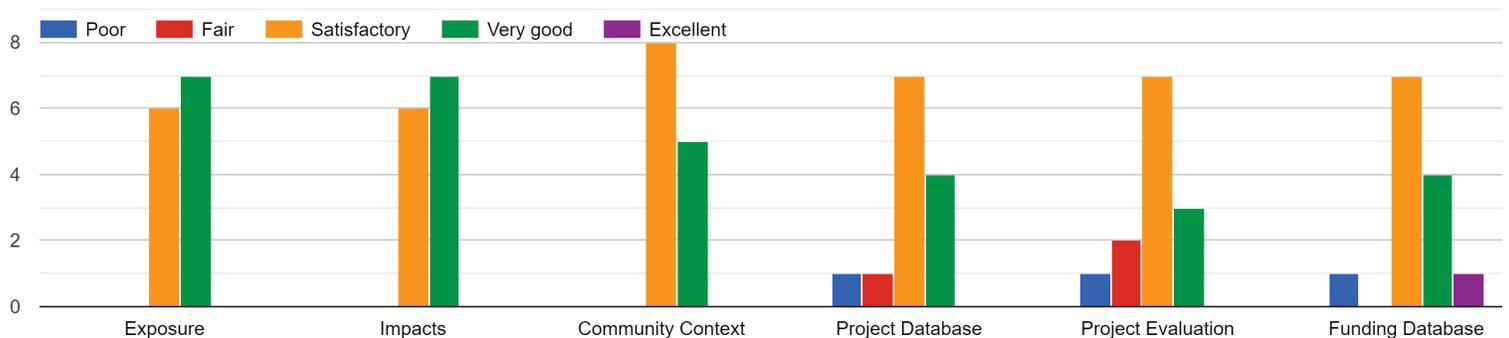
# CRMP Phase I, Outreach and Engagement

## TAC and Public Comments

- Improve Communication, Coordination, and Collaboration
- Support Community Led Planning Efforts
  - Identify Community Needs
  - Providing Resources to Communities
  - Collecting and Sharing Community Data
  - Combining CRMP and CFPF Outreach
- Communicate a Path Forward

# CRMP Phase I, Technical Study

## TAC Survey – Technical Study Ratings



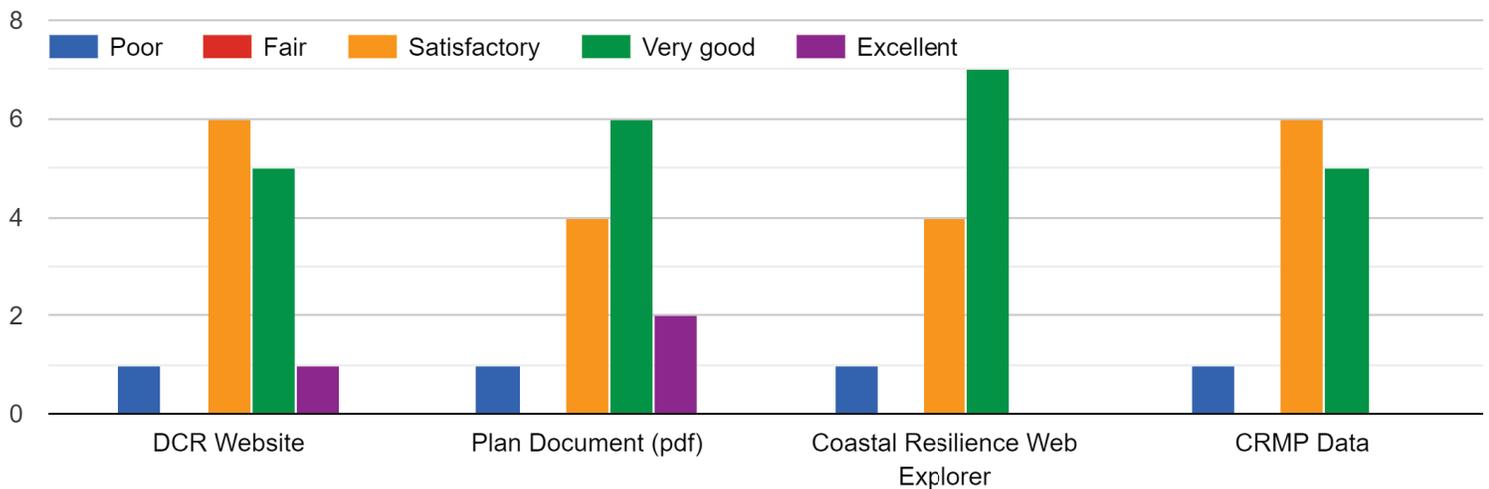
# CRMP Phase I, Technical Study

## TAC and Public Comments

- Other Major Flood Hazards
  - Pluvial Flooding
  - Fluvial Flooding
  - Compound Flooding
- Critical Infrastructure Includes Natural and Nature Based Systems
- Impacts to Natural Infrastructure
- Project Database is not Inclusive of all Projects
- Project and Funding Database Purpose/Benefit

# CRMP Phase I, Plan Delivery

## TAC Survey - Plan Delivery Rating



# CRMP Phase I, Plan Delivery

## TAC and Public Comments

- End User
  - Public vs Practitioner
- Schedule
- Defining the End Product
- Integration with Statewide Plan
- Consider 2021 TAC Recommendations

# Coastal Resilience Master Plan Phase II

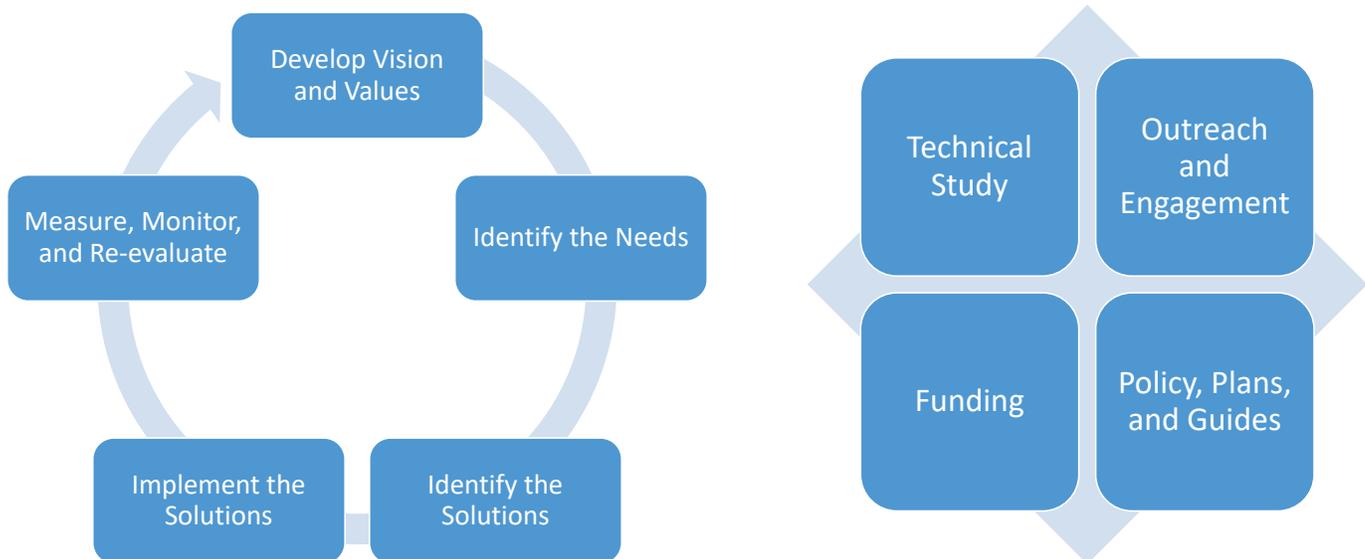
# CRMP Phase II

## TAC and Public Comments

- **Technical Study**
  - Exposure (Pluvial, Fluvial, Compound Flooding, Erosion)
  - Impacts (Environmental Assessment)
- **Coordination**
  - Resilience Data Catalog
  - Asset Owners (Public and Private)
  - CFPF & CRMP
- **Statewide Integration**
- **Funding**
- **Implementing Resilience at State and Local Levels**
- **Community Planning**

# Flood Resilience Planning – Paths to Success

Providing communities what they need to succeed.



# CRMP Phase II

## Code Requirements

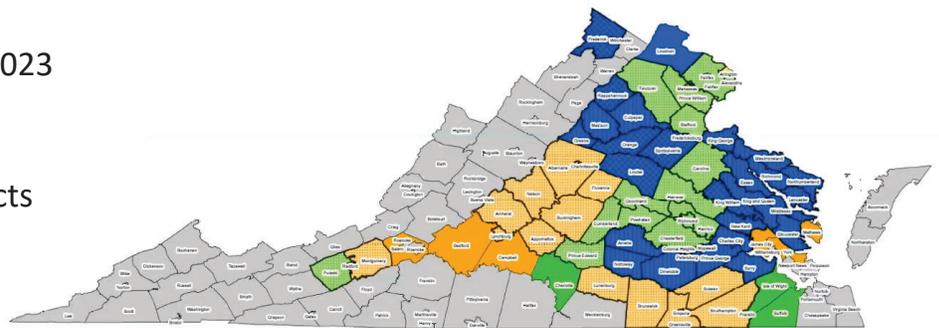
- CRMP shall be a place-specific plan for mitigating severe and repetitive flooding and shall [adhere to the Framework Principles]
- Phase 2 will incorporate:
  - all **major flood hazards**, including precipitation-driven flooding
  - a comprehensive risk assessment of **critical, human, and natural** infrastructure
  - a list of all **projects** considered and an update of the status of all projects previously implemented
- Phase 2 will implement the Community Outreach and Engagement Plan

[2022 GA HB516/SB551 now §[10.1-658, 659](#)]

# CRMP Phase II – Major Flood Hazards

## Current and Potential(+) Investments for Phase II

- Coastal Flooding
  - + Adopt 2022 SLR Projections
  - + Update Exposure & Impacts
- Pluvial Flooding
  - Contracted, Work Starting 2023
- Fluvial Flooding
  - + Leverage FEMA Data for Existing Exposure and Impacts
  - + Future Fluvial Exposure and Impacts
- Compound Flooding
  - + Historical Analysis



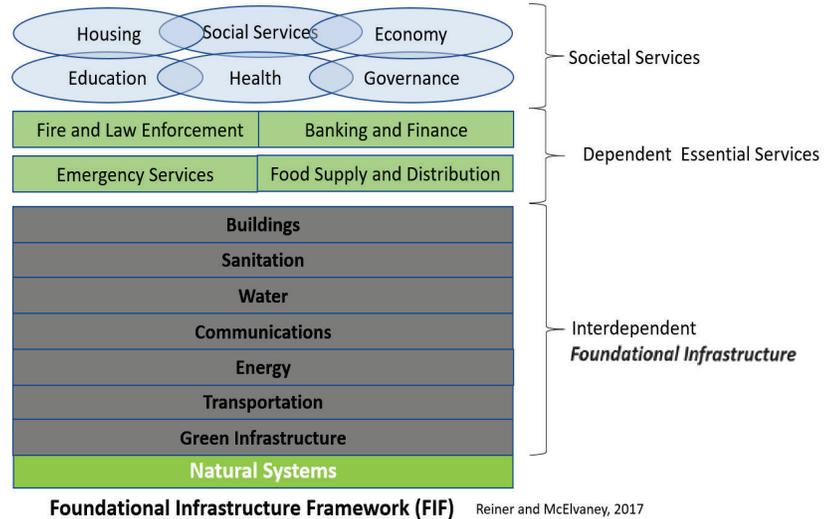
VFRIS Data Organization Status as of August 31, 2022

# CRMP Phase II - Comprehensive Assessment

## System of Systems with Interdependencies and Colocation

### Status of Flood Resilience Report

- Natural Infrastructure
- Human Infrastructure
- Critical Infrastructure
  - Transportation
  - Energy
  - Communication
  - Water and Food Supply
  - Waste Management
  - Health
  - Emergency Services



[2022 GA HB517 now §2.2-220.5]

## CRMP Phase II - Status of Flood Resilience

Status of Flood Resilience Report (Bi-Annual starting 7/1/23) will Establish a Framework for

- Critical, Human, and Natural Infrastructure Assessment
  - + Impacts Assessment from Major Flood Hazards
- Status of Flood Resilience Planning in the Commonwealth
  - + Flood Resilience Needs Assessment
    - Regions and Localities
    - State Agencies
    - Critical Asset Owners (Public and Private)

# CRMP Phase II – Project Updates

## Current and Potential(+) Investments for Phase II

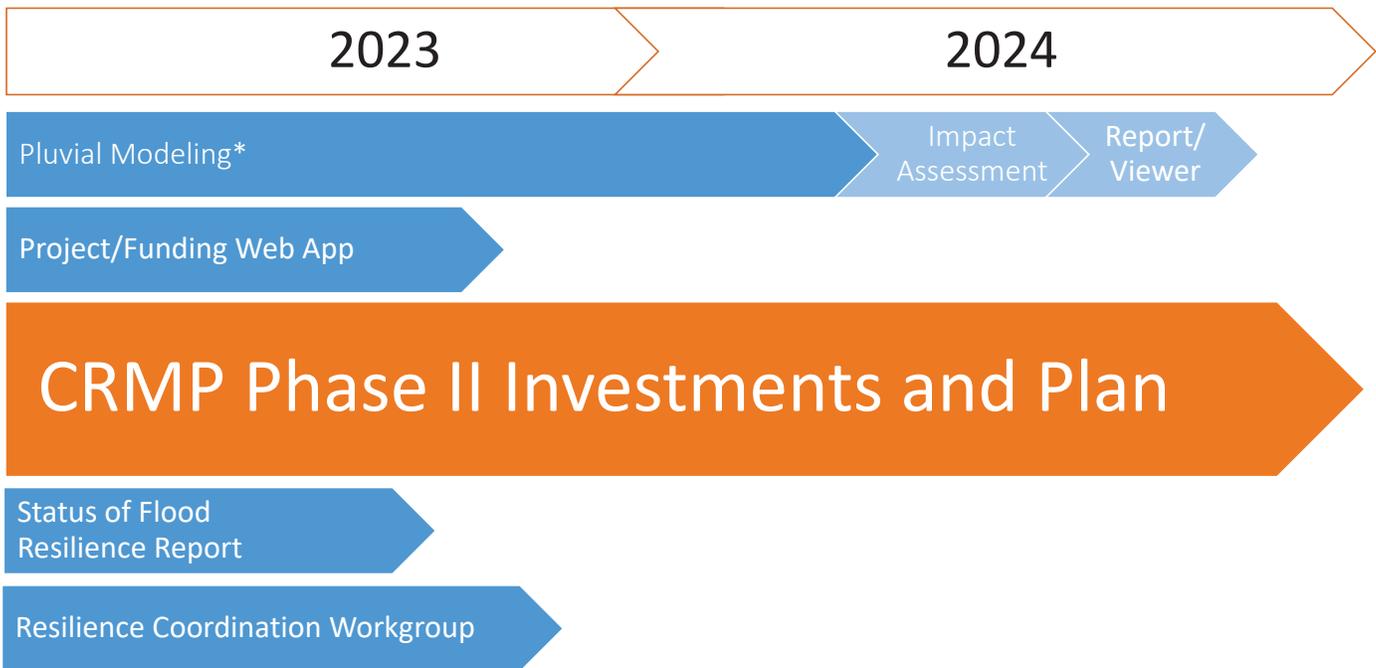
- Project Database Web Application
  - + Outreach and Training
- Additional Projects and Updates
  - + State and Regional HMP Flood Projects
  - + DEQ CZM PDC Grant Projects
  - + CFPF Resilience Plan Projects

# CRMP Phase II – Community Outreach and Engagement

## Current and Potential(+) Investments for Phase II

- + Increase Flood Resilience Education and Awareness
- + Community Centered Public Information
- + Curate Community Lived Experiences and Flooding Challenges
- + Project Development Technical Assistance

## CRMP Phase II - Schedule



## Coastal Resilience Master Plan Objective

### Coastal Resilience Master Planning Framework:

- Virginia needs to...
  - Develop a unified and comprehensive strategy to identify critical assets and areas of concern, and preferred approaches to improve resilience.
  - Decide which areas or projects are most deserving of limited resources, and Virginia must harmonize those projects to ensure that one region's flood control project does not exacerbate flooding in adjacent areas.
  - Create a plan to finance these projects.

# Coastal Resilience Master Plan Objective

## Coastal Resilience Master Planning Framework:

- The Coastal Resilience Master Plan will....
  - be a detailed plan, divided by region.
  - prioritize projects according to state guidelines and local and regional needs.
  - determine state-administered flood preparedness and pre-disaster mitigation funding.
- Coordination through the Governor's office is necessary to ensure that the Commonwealth is able to increase coastal resilience in a cost-effective way that minimizes duplication of effort and unintended consequences.

## CRMP Phase II – The Plan Will Include....

- A Vision for the Future
- Major Flood Hazard Exposure
- Critical Infrastructure Assessment
- Flood Resilience Prioritized Needs
  - Critical Infrastructure
  - Resilience Planning
  - Project Development
  - Project Implementation
- A Plan of Action
  - What will the Commonwealth do to identify and meet the Need (Outreach, Funding, Policy, Guidance, Projects???)
  - What does the Commonwealth recommend/need for/from Others?

# Community Outreach and Engagement Plan Update

## Community Outreach and Engagement Plan

2022 GA HB516/SB551 now [§10.1-659](#)

- The Director of DCR, jointly with the Director of DOI [DEI], and in coordination with the Chief Resilience Officer (CRO) and Special Assistant to the Governor to Coastal Adaptation and Protection (SACAP) shall prepare a Community Outreach and Engagement Plan for updates to the Virginia Coastal Resilience Master Plan and for development and updates to the Virginia Flood Protection Master Plan (the Plans)
- The outreach and engagement plan shall strive for meaningful involvement by ensuring that
  - affected and vulnerable community residents have access and opportunity to participate in the full cycle of the decision-making process about the development of and updates to the Plans, and
  - decision-makers shall seek out and consider such participation, allowing the views and perspectives of community residents to shape and influence decisions.
- Must be prepared no later than Dec 31, 2022

# Community Outreach and Engagement Plan

## Status Update

- **Current Status**
  - Drafted to serve as a framework and living document that can adapt as the CRMP and VFPMP are developed
  - Plan is undergoing Executive Review
- **December 2022**
  - Community Outreach and Engagement Plan prepared for 30-day Public Comment
- **2023**
  - Final Community Outreach and Engagement Plan published
  - External support to refine and implement the Plan

# 2022 CRMP TAC Subcommittee Organization

## Summary of TAC Feedback

# 2022 TAC Subcommittees – Mirror Framework Goals

- Project Prioritization
- Funding
- Research, Data, and Innovation
- Outreach and Coordination
- [Public Policy]

## 2022 TAC Subcommittees

### Project Prioritization

#### Objectives

- Critical built and natural infrastructure inventory
- Develop objective protocols for evaluating and prioritizing identified project needs.
  - State v Regional v Local v Individual Priorities
- Develop objective protocols for evaluating and prioritizing project alternatives.
- Recommend evaluation protocols that balance human, built, and natural infrastructure needs.
- Identify resilience projects that are underway or planned, and identify resilience gaps and potential solutions based on the best scientific, engineering, and socioeconomic information.

# 2022 TAC Subcommittees

## Funding

### Objectives

- Develop a [state?] financing strategy that recommends how [state agencies?] can leverage and align existing resilience revenue streams to maximize impact, and how to create or tap into new revenue or financing sources.
  - Who is the funding strategy for? State, Regions, Localities?
- Recommend a process by which public and private economic development activity in coastal Virginia, including transportation and other infrastructure projects, can be aligned with the principles and goals of the Coastal Resilience Master Plan.
  - What are Virginia's specific desired outcomes that will direct the use of state and federal funds to meet these objectives?
- Identify methods to support local revenue needed to build capacity and implement flood resilience projects.

# 2022 TAC Subcommittees

## Research, Data, and Innovation

### Objectives

- Recommendations to effectively incorporate of climate change projections in state and local programs
  - For what purpose/desired outcome?
- Track ongoing research related to coastal resilience
- Provide recommendations to state and local programs on best available data and practices.
  - What state and local programs and what do you expect these programs to do with the data and practices?
- Innovation through R&D, public-private partnerships, and collaborative research is needed to invent the novel, applied solutions necessary to enhance community resilience, economies, and culture, live with more water, and prepare tomorrow's workforce.

# 2022 TAC Subcommittees

## Outreach and Coordination

### Objectives

- Assist in developing and executing a comprehensive outreach strategy to engage coastal communities that aligns with the goals and objectives of the COEP.
  - Who is to be engaged and for what purpose?
- Strengthen relationships with DOD and other federal facility owners to coordinate and enhance resilience work and accomplish shared goals.
- Strengthen relationships with Tribal Nations to coordinate and enhance resilience work and accomplish shared goals.
  - The roles and responsibilities between Localities and Tribal Nations (especially non-federal) needs to be clarified.

# 2022 TAC Subcommittees

## Next Steps

- TAC Members to serve on at least one subcommittee.
- DCR will send a poll for preference.
- CRO will designate subcommittee chairs and membership.
- CRO will send charge to subcommittees with prioritized objectives.

# QUESTIONS

DCR Contact Information

Resilience Planning

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[Flood.Resilience@dcr.Virginia.gov](mailto:Flood.Resilience@dcr.Virginia.gov)

<https://www.dcr.virginia.gov/crmp/>

<https://www.dcr.virginia.gov/dam-safety-and-floodplains/flood-protection-outreach>