



BUILDING COASTAL RESILIENCE IN VIRGINIA

~ Project Prioritization

Technical Advisory Committee

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Project Evaluation Process

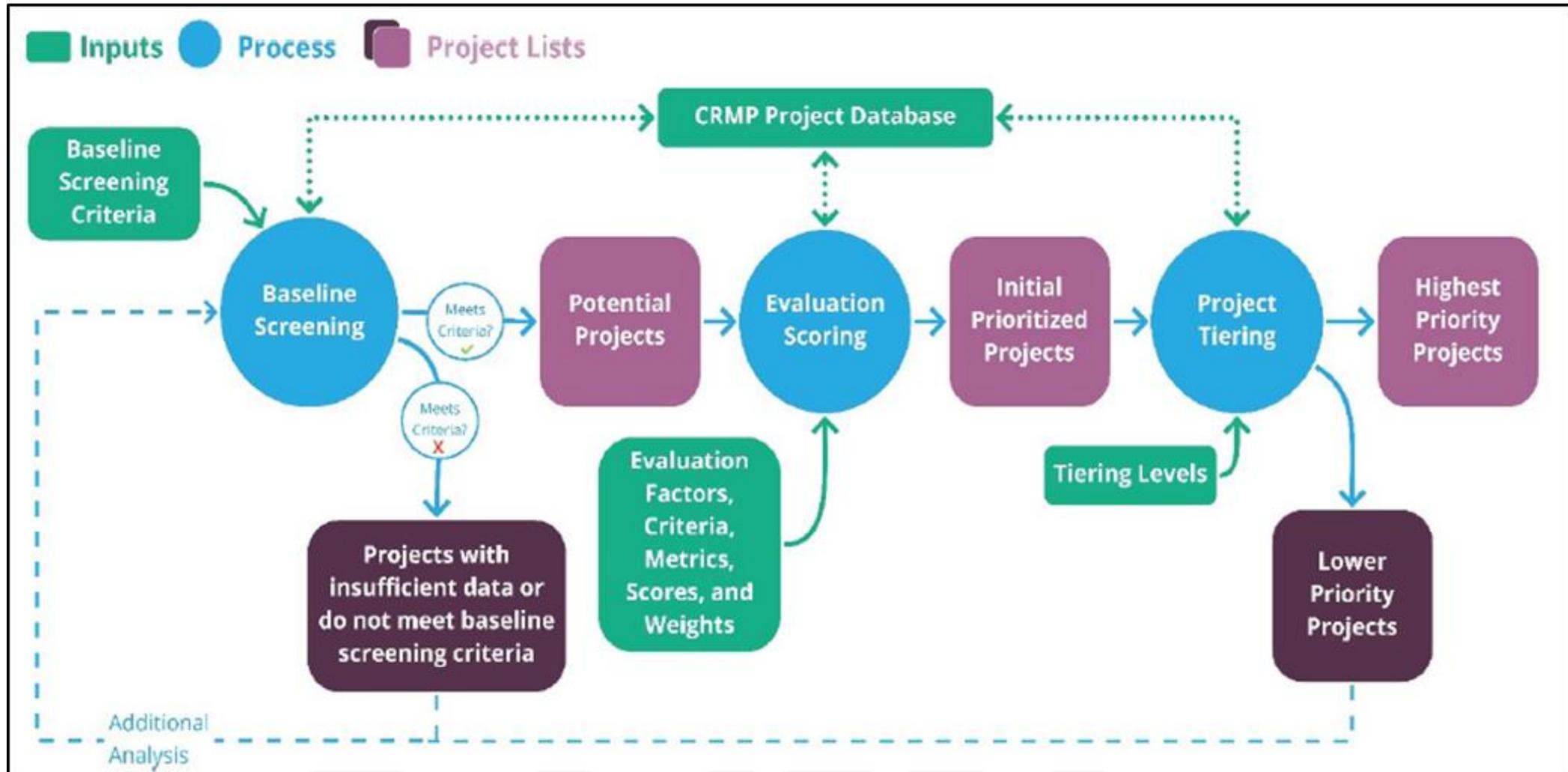
Master Plan Project Prioritization and Outcomes

Capacity Building Needs

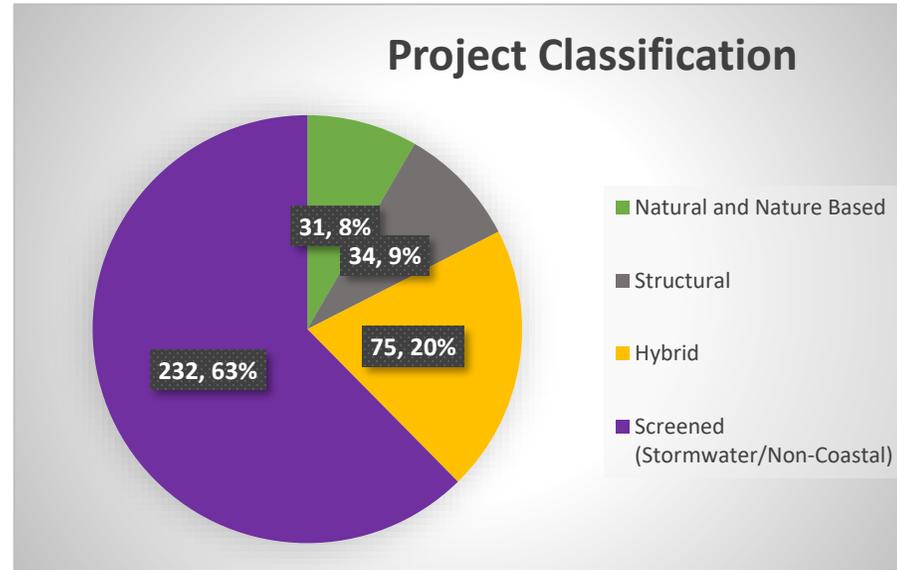
Task 5 : Adaptation Strategies and Prioritization

- **Developed in alignment with the 5 Framework Guiding Principles**
- **Required development of Project definition and Inventory (Consistent with Development of Project and Capacity Building Database and Web Application, part of Task 8, to host both.)**
- **Includes Project Classification Schema (Class, Type, Subtype)**
- **Project Classes:**
 - **Natural and Nature Based**
 - **Hybrid**
 - **Structural**

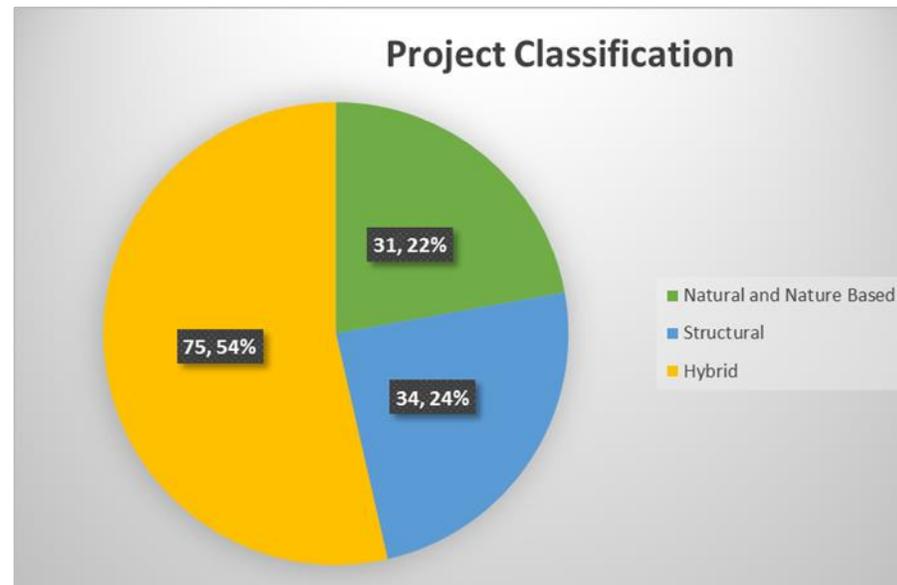
Screening Process Flow



- **Screening Criteria / Scoring Criteria / Weighting Criteria**
 - Adjusted as results reviewed
- **Projects considered based on nine primary screening criteria, and 3 additional secondary criteria**
 - **Baseline Screening**
 - **Primary Screening (9 criteria)**
 - **Secondary Screening (3 criteria)**
 - **Evaluation Scoring**
 - **5 Factors (aligned with Framework Principles) (8 criteria)**
 - **Project Tiering (% ranking. No mandatory threshold for high priority projects.)**
 - **1st Tier (>75%)**
 - **2nd Tier (75%-50%)**
 - **3rd Tier (50%-25%)**
- **Capacity Building not evaluated**



**All
Projects
in
Database**



**Coastal
Projects -
Post
Screening**

Evaluation Criteria Aligned with Framework Guiding Principles

Factors	Evaluation Criteria
 Factor 1: Resilience Planning and Design <i>Relevant CRMP Framework Guiding Principle: #1</i>	<p>Criteria 1a: The project incorporates future conditions scenarios including sea level rise and precipitation.</p> <p>Criteria 1b: The project is needed to address both existing and future coastal flood exposure.</p> <p>Criteria 1c: The project addresses coastal hazards and compounding stressors that exacerbate coastal hazards.</p>
 Factor 2: Equity Considerations <i>Relevant CRMP Framework Guiding Principle: #2</i>	<p>Criteria 2a: The project provides benefits to communities with a lack of economic resources and capacity to address current and future increases in flooding.</p> <p>Criteria 2b: The project has the potential to add resilience to socially vulnerable communities.</p>
 Factor 3: Natural-Based Approaches <i>Relevant CRMP Framework Guiding Principle: #3</i>	<p>Criteria 3: The project recognizes the importance of protecting and enhancing green infrastructure like natural coastal barriers and fish and wildlife habitat by prioritizing nature-based solutions.</p>
 Factor 4: Regional Adaptation Priorities <i>Relevant CRMP Framework Guiding Principle: #4</i>	<p>Criteria 4: The project has potential to benefit regional priority areas for community resources, critical assets, or natural assets that are at risk of flooding.</p>
 Factor 5: Project Benefits <i>Relevant CRMP Framework Guiding Principle: #5</i>	<p>Criteria 5: The project maximizes the benefits it is intended to provide. Benefits depend on the project type:</p> <ul style="list-style-type: none"> • <u>Flood Risk Reduction Structures</u>: The project is expected to reduce existing and future coastal flood risk. • <u>Nature-Based Features and Structural Shoreline Stabilization</u>: The project is expected to reduce shoreline erosion. • <u>Natural Features; Nature-Based Features; Conservation and Adaptation</u>: The project is expected to protect and/or enhance natural systems critical for flood resilience, natural habitat and ecosystem diversity, agriculture and forestry preservation, and water quality improvements. • <u>Community Infrastructure</u>: The project is expected to provide community-scale benefits to the populated area surrounding the project.

The Outcome : Project Database and Screening Criteria Developed!

The Challenges:

- **Natural hazard impact - only coastal flood hazard**
- **Inconsistent Functional results**
- **Project tiering order**
- **Align Capacity building needs**
- **Grouped (Community or locality scale) projects scattered through tiering process**
- **Project maturity varies**
- **Benefit / Cost ??**
- **Project Benefit Area estimated / incomplete**

Comments: Next Steps:

- **Project Eval Subcommittee Considerations**
- **Other Subcommittee Considerations**
- **Considerations / Next Steps ?**
 - Re – categorize prioritization
 - Broaden Tiering groups
 - Consider Capacity Building needs
 - TAC Technical expert review
 - Timeline Considerations
 - Near and Long Term process development milestones

Input/Data considered in Evaluation

Project Data Inputs

User Provided Survey 123 Data

- Project Owner
- Description
- Project Footprint
- Scale of Benefits
- Purpose and Need
- Future Condition Considerations
- Project Subtype(s)
- Project Status
- Total Implementation Costs

Derived Data

- MPR/PDC/RC
- Floodplain
 - MHW, 10-yr, 100-yr
 - 2020, 2040, 2060, 2080
- Fiscal Stress & SoVi Classification
- Avg Erosion Rate
- ConsereVA Layers

Framework Guiding Principles

- **#1:** “Acknowledge climate change and its consequences, and base decision-making on the best available science.”
- **#2:** “Identify and address socioeconomic inequities and work to enhance equity through coastal adaptation and protection efforts.”
- **#3:** “Recognize the importance of protecting and enhancing green infrastructure like natural coastal barriers and fish and wildlife habitat by prioritizing nature-based solutions.”
- **#4:** “Utilize community- and regional-scale planning to the maximum extent possible, seeking region-specific approaches tailored to the needs of individual communities.”
- **#5:** “Understand fiscal realities and focus on the most cost effective solutions for protection and adaptation of our communities, businesses, and critical infrastructure.”

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Project Evaluation Data

Criterion	1a	1b	1c	2a	2b	3a	4a	5a
Description	Resilient Design	Project Need	Project Purpose	Community Resources and Capacity	Social Vulnerability	Nature Based Outcomes	Regional Adaptation Priorities	Project Benefits
Input Data Source	User Input	GIS Data	User Input	GIS Data	GIS Data	User Input	GIS Data	GIS Data
Input Data Types	Project Data Call Entry - Resilience Considerations	Coastal Flood Hazard Floodplains	Project Data Call Entry - Purpose and Need	Fiscal Stress Index (County-Level)	Dewberry SoVi (Grid-Level)	Project Type	Impact Assessment - Community Resources, Critical Sector, Natural Infrastructure Grid Scores (Relative to PDC)	Flood Risk Reduction Structures: Impact Assessment AALs (Grid-Level) Shoreline Stabilization: VIMS Shoreline Change Rates NNBF or Conservation: ConserveVA Layers Community Infrastructure: Population or AADT
	Multiple Options	Project Footprint	Multiple Options	Project Footprint	Project Footprint	Multiple Options	Project Footprint and Project Type	Project Benefit Area (for Flood Risk Reduction Structures and Community Infrastructure) Project Footprint (for Shoreline Stabilization and NNBF)

TASKS

- **Determine Projects of Merit/Priority from Evaluation**
- **Determine Good examples “Exemplary Projects”**
- **Determine path/next Steps to evolve Project Evaluation and Capacity Building Process**

DETAILS : Project Evaluation Subcommittee

– Dr. Hershner Comments

- Project evaluation protocol issues
- Project scoring is largely dependent on applicant characterizations of project type, extent, and benefits. Without objective and critical evaluation this can lead to significant over-valuation of projects.
- The scoring of projects tends to place a premium on those that address current flooding issues. This is not necessarily a strategic use of funds in building long-term resilience.
- There is no basis for evaluating project benefits for precipitation driven flooding in the absence of spatially explicit risk exposure information.
- Natural and nature-based features should be considered critical infrastructure and projects that preserve ecosystem service capacity through coming decades should be ranked highly, regardless of proximity to developed landscapes.
- As currently implemented, the project evaluation protocol is incapable of leading to a strategic increase in coastal flood resilience that reflects the CRMP guiding principles. The population of projects under evaluation is not the product of a comprehensive needs assessment but rather a compilation of independently identified local interests. Even if the protocol was capable of reliable identification of the most impactful proposed projects, it cannot ensure critical needs across the entire coastal zone will be addressed. Absent some well-considered guidance regarding the type and location of projects which will advance the CRMP goals, current evaluation practices will simply result in creative project characterizations to gain funding for a hodgepodge of public works projects.