

VIRGINIA COASTAL RESILIENCE MASTER PLAN

Initial Project Plan

JUNE 21, 2021



INITIAL WORKING DRAFT

PREPARED BY

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SUBMITTED TO

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2. DOCUMENT PURPOSE

This document provides a high-level outline of the project activities for the Virginia Coastal Resilience Master Plan (CRMP). An objective, description of activities, and products are provided for each study task and identified subtasks. Task Managers and key advisors from the Dewberry CRMP team are identified for each task.

It is anticipated that activities will be further defined and may change due to updated understanding through the project progression. Initial changes in understanding from project kickoff, Commonwealth leadership team, and Technical Advisory Committee (TAC) Subcommittee interaction have been captured.

Dates as presented in the Project Task Schedule, Work Breakdown Structure and Schedule may be adjusted as the CRMP progresses. Although this document may be periodically updated as needed to reflect such changes, readers should consult the latest Notice of Schedule Change for the current milestone schedule.

Note: Document revised June 21, 2021 to capture schedule changes.

3. PROJECT TASK SCHEDULE

The below dates reflect initial schedule updates provided by Dewberry to the Commonwealth after project award, documented in the Memorandum of Agreement dated March 22, 2021.

- June 21, 2021: Master Plan Coastal Analysis
- August 27, 2021: Virginia Coastal Resilience Project Database
- September 8, 2021: Virginia Coastal Resilience Master Plan and Planning Process First Draft
- September 29, 2021: Incorporation of Agency feedback into the Plan
- October 27, 2021: Submission of a final draft of the Plan
- November 30, 2021: Finished product and all tasks completed

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4. PROJECT WORK BREAKDOWN STRUCTURE AND SCHEDULE

A high-level graphical summary of the work breakdown structure identified for the CRMP is provided on the following page. A more detailed project schedule is provided as Attachment A.

The reader should note that the initial schedule provided does not fully integrate all TAC/TAC Subcommittee interactions and/or dependencies. These activities will be integrated through the execution of the technical tasks within the schedule constraints. Aspects of identified activities that are not depending on upstream deliverables will begin to progress occur prior to the indicated dates, where possible.

The CRMP approach requires parallel progression of multiple tasks to achieve goals identified by the Commonwealth for the November 30 completion date. Tasks are baselined from the March 17 Notice to Proceed. An outline of each task is provided in the following section.

PERIOD OF PERFORMANCE	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV
CMP Milestone (RFP)		Data Sources		Master Plan Analysis		Database	First Draft	Final Draft	
Study Conceptual Model		Draft Conceptual Model	Final Conceptual Model						
Coastal Flood Hazard Framework			Final Framework	Dynamic Modeling Concept					
Built and Natural Infrastructure Impact Assessment		Data Gathering	Impact Assessment	Summarization					
Adaptation Strategies and Prioritization			Draft Prioritization Framework	Final Prioritization Framework	Project Inventory/ Design Charettes	Prioritized Project List			
Funding Analysis					Database and Analysis		Final Alignments		
Master Plan Document		Initial Outline		50% Draft			Full Draft	Final Draft	Final Document
Outreach, Public Engagement	Stakeholder/Public Outreach and Engagement Will Be Sequenced Across the Study Period								

5. WORK BREAKDOWN STRUCTURE DESCRIPTION

TASK 1: TAC AND STAKEHOLDER ENGAGEMENT

DEWBERRY POINTS OF CONTACT:

- Brian Batten, PhD, CFM (Coordination of Technical Engagement of TAC/TAC Subcommittees)
- Dale Morris (Coordination of The Water Institute of the Gulf participation)
- Ashley Samonisky (Administrative Support of TAC/TAC Subcommittees)

SUBTASK 1: PROJECT COORDINATION MEETINGS WITH CRO/SACAP – ONGOING

- **Objective:**
 - Resolve project issues, maintain schedule, clarify, and monitor scope, maintain coordination and alignment with Commonwealth.
- **Activities:**
 - Ongoing bi-weekly coordination with the Chief Resilience Officer (CRO), Special Assistant to the Governor on Coastal Adaptation (SACAP), and Department of Conservation and Recreation Coastal Resilience Master Plan (CRMP) Program Manager (hereafter referred to as “the Commonwealth leadership team”, or “the Commonwealth”) for the project period of performance.
- **Products:**
 - Meeting Minutes, Action Items.

SUBTASK 2: TECHNICAL ADVISORY COMMITTEE MEETINGS – ONGOING

- **Objective:**
 - Enable coordination with, and feedback from, key Commonwealth-designated stakeholders in the CRMP development process at key study milestones to improve study outcomes.

- **Activities:**
 - Preparation of material and presentation to TAC at up to 7 meetings for review and input at critical project milestones.
 - Administrative support of TAC Meetings, including the collection of agendas and meeting minutes, as well as the collection of presented materials for public posting to the Commonwealth website.
- **Products:**
 - Presentation materials, surveys (when applicable), draft milestone products, meeting minutes.

SUBTASK 3: TECHNICAL ADVISORY SUBCOMMITTEE MEETINGS – ONGOING

- **Objective:**
 - Enable ongoing coordination with, and feedback from key Commonwealth-designated stakeholders on topical issues being examined by the 7 TAC Subcommittees in the CRMP development process to improve study outcomes.
- **Activities:**
 - Up to 2 Dewberry technical representatives will attend up to an estimated total of 49 meetings across the 7 subcommittees.
 - Administrative support of TAC Subcommittee meetings, including the collection of agendas and meeting minutes, as well as the collection of presented materials for public posting to the Commonwealth website.
- **Products:**
 - Presentation materials, surveys (when applicable), draft milestone products, meeting minutes.

TASK 2: STUDY CONCEPTUAL MODEL

DEWBERRY POINTS OF CONTACT:

- Alaurah Moss

SUBTASK 1: DRAFT CONCEPTUAL MODEL – APRIL 12, 2021

- **Objective:**
 - Clarify project workplan with the Commonwealth and TAC, including questions to be answered through study analysis and products, an analytical model to address such questions, and identification of priorities for the November deadline, or for future updates.
- **Activities:**
 - Identify:
 - overarching process framework to achieve CRMP goals
 - analytical steps for each aspect of the framework
 - factors to be examined/questions to be answered
 - open questions to clarify aspects of each factor
 - metrics for each factor
 - needed inputs to resolve questions and deliver metrics
 - linkages of each factor to other study aspects
 - high-level approach for each factor
 - products of each factor
 - initial assessment if factor can be address in November timeframe, or needs deferred to future update
 - Feedback from Commonwealth/TAC.
 - Input from the Commonwealth/TAC on factors, metrics, approach, etc.
 - Prioritization assignments based on Commonwealth/TAC review/feedback. (Prioritization feedback will help focus study resources).
- **Products:**
 - Short technical memorandum with Excel spreadsheet providing draft conceptual model components.

SUBTASK 2: FINAL CONCEPTUAL MODEL – MAY 3, 2021

- **Objective:**
 - Refine Draft Conceptual Model to reflect Commonwealth and TAC feedback, further refinements, and improvements in understanding in study elements.
- **Activities:**
 - Review technical feedback and prioritization from Commonwealth and TAC.
 - Discussion with Commonwealth and/or TAC to resolve outstanding questions or clarify feedback or adjustments to approach.
 - Update factors based on improved understanding in data and analytical processes, relative prioritization.
- **Products:**
 - Updated technical memorandum capturing key input and significant changes, and an Excel spreadsheet reflecting updates.

TASK 3: COASTAL FLOOD HAZARD FRAMEWORK

DEWBERRY POINTS OF CONTACT:

- Siva Sangameswaran, PhD, PE; Joel Plummer CFM; Jeff Gangai, CFM; Minden Chan; Brian Batten, PhD, CFM; Zach Cobell; Hugh Roberts

SUBTASK 1: FINAL COASTAL FLOOD HAZARD FRAMEWORK – MAY 14, 2021

- **Objective:**
 - Define and implement an approach to characterize coastal flood hazards across the frequency space from frequent to rare events, representing 4 time horizons: current conditions, 2040, 2060, and 2080, using publicly-available datasets, at sufficient resolution to inform both risk exposure assessment and risk mitigation strategy development/prioritization.
- **Activities:**
 - Assemble authoritative, existing hazard data sources from the National Oceanic and Atmospheric Administration (NOAA), Federal Emergency Management Agency (NOAA), National Flood Insurance Program Region III storm surge study and coastal flood hazard analyses, and U.S. Army Corps of Engineers (USACE) North Atlantic Comprehensive Coastal Study (NACCS).
 - Secure and evaluate other relevant hazard data for Virginia such as data developed for the Commonwealth Center for Recurrent Flooding Resiliency (CCFRF) Report "FUTURE SEA LEVEL AND RECURRENT FLOODING RISK FOR COASTAL VIRGINIA", and probabilities of nuisance flooding or potential updates from NOAA.
 - Establish the approach for implementation of future sea level rise (SLR) scenarios in compliance with existing state guidance, and in consultation with the Commonwealth, TAC, Virginia Institute of Marine Science (VIMS), and NOAA.
 - Develop seamless, best available topographic surface for the study area.
 - Produce 3D hazard extents for the current and future condition scenarios.
- **Products:**
 - Raster datasets representing tidal, nuisance, and a range of storm surge recurrence intervals over 4 time horizons: current conditions, 2040, 2060,

and 2080.

- Technical Memorandum documenting methodology and results of the approach.

SUBTASK 2: DYNAMIC FUTURE CONDITIONS MODELING APPROACH – JULY 30, 2021

- **Objective:**
 - Conceive and articulate a detailed approach to account for SLR-exacerbated landscape changes in the area of study and their impact on flood hazards through numerical modeling. Dynamically account for land cover change, coastal erosion, dune degradation, and barrier island flattening/breaching.
- **Activities:**
 - Conduct literature review for methodological inputs.
 - Engage Subject Matter Experts with TAC to discuss key components of the modeling approach. Approach will be developed to establish a probabilistic dynamic modeling approach to provide robust capture of future conditions.
 - Considerations will be given to capture/representation of future rainfall and riverine flooding, in conjunction with the Commonwealth.
 - Develop modeling approach document.
- **Products:**
 - Dynamic Future Conditions Modeling Approach Document to inform future updates of the CRMP.

TASK 4: BUILT AND NATURAL INFRASTRUCTURE RISK ASSESSMENT

DEWBERRY POINTS OF CONTACT:

- Mathew Mampara, PE, CFM; Jordan Fischbach, PhD; Brett McMann, PE

SUBTASK 1: DATA GATHERING – APRIL 18, 2021

- **Objective:**
 - Identify, discover, connect to (via Application Programming Interfaces (API) or web feature services), and/or collect data to support characterization of: the socio-demographic landscape; regional economic drivers including building replacement values; current land use; projected land use; major components of the built environment; critical infrastructure that support coastal bioregions, habitat-critical ecosystems and flood and storm mitigating natural infrastructure.
- **Activities:**
 - Discover and catalog relevant data sources for the items listed in the 4.1 Subtask objective.
 - Connect to, via API or Web Feature Service (WFS), and catalog relevant data sources for the items listed in the 4.1 Subtask objective.
 - Develop a list of sensitive or controlled data sources requiring Commonwealth intercession to secure or access.
 - Develop metadata profiles for data transformed, augmented, or produced, to support discoverability and traceability objectives.
- **Products:**
 - Data source catalog.
 - Technical memorandum describing status of data discovery, data connection, and data collection.

SUBTASK 2: IMPACT ASSESSMENT – JUNE 11, 2021

- **Objective:**
 - Apply the coastal hazard framework to the built environment, critical infrastructure sectors (following the Cybersecurity & Infrastructure Security Agency guidance), the socio-demographic landscape, coastal

ecosystems, and natural system features to assess risk, quantitatively where possible, and qualitatively when quantification is limited by data availability.

- **Activities:**

- Develop geographically nested spatial reference system like H3 ([Uber's Hexagonal Hierarchical Spatial Index](#)) on which to project land use, and presence of different infrastructure types or assets.
- Conflate building footprints with Commonwealth tax parcel information to populate key attributes such as occupancy, number of floors, building replacement value, basement presence, foundation type, etc.
- Produce hazard curves representing depth vs. frequency for the 4 time horizons (existing conditions, 2040, 2060, and 2080) at each H3 cell and building footprint.
- Research peer-reviewed literature and Federal guidance document sources to inform the consequence of varying levels of hazard severity (fragility curve) for all asset types (beyond buildings).
- Apply fragility curve approach to critical infrastructure sector components, coastal ecosystems, and natural features that support flood risk reduction, water quality improvement function, and wildlife habitat.
- Conduct quantitative or semi-quantitative risk assessments for all assets, as described in Subtask 4.2 Objectives.

- **Products:**

- Improved building footprint dataset with associated metadata.
- Database of hazard curves and operational consequences.
- Technical Memorandum documenting methodology and results of the approach.

SUBTASK 3: RISK SUMMARIZATION – JUNE 21, 2021

- **Objective:**

- Empower story telling about and well-integrated understanding of the risk landscape, using a nested geographic approach to summarize and present risk.

- **Activities:**

- Produce tabular summaries of vulnerable populations, aggregated socio-demographically, geographically, and jurisdictionally.

- Produce tabular summaries of vulnerable critical infrastructure based on type, geography, and jurisdiction.
- Produce tabular summaries of vulnerable natural infrastructure based on type of natural system, geography, and jurisdiction.
- Develop capability to support dynamic, user-defined summaries and queries of the risk outputs.
- **Products:**
 - Summary tables covering the areas of project focus.
 - Analytic dashboard for data discovery and exploration.

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TASK 5: ADAPTATION STRATEGIES AND PRIORITIZATION

DEWBERRY POINTS OF CONTACT:

- Dan Medina, PhD, PE; Jordan Fischbach, PhD; Brett McMann, PE; Dale Morris; John Paine, PE, PH, CFM; Rahul Parab, PE, D.WRE, CFM; Alaurah Moss

SUBTASK 1: DRAFT PRIORITIZATION FRAMEWORK – MAY 5, 2021

- **Objective:**
 - Establish approach for the prioritization framework based on the CRMP Framework Document, Commonwealth, and TAC input.
- **Activities:**
 - Review the CRMP Framework and identify how values expressed in the guiding principles and desired outcomes shape the prioritization approach.
 - Leverage lessons-learned into a Virginia-specific framework from the Louisiana and Texas Coastal Master Plans to inform approach.
 - Coordinate with Coastal Flood Hazard, Risk Assessment, and Project Inventory Tasks to understand potential data sources for evaluation factors.
 - Engage with the Commonwealth and TAC to gather perspective on approach and incorporate feedback.
- **Products:**
 - Draft Technical Memorandum on Prioritization Approach.

SUBTASK 2: FINAL PRIORITIZATION FRAMEWORK – JUNE 2, 2021

- **Objective:**
 - Finalize approach for the prioritization framework.
- **Activities:**
 - Review feedback from Commonwealth and TAC.
 - Discuss with Commonwealth and/or TAC to resolve outstanding issues.
 - Update approach based on feedback and improved understanding in available data.
 - Provide final draft for additional feedback, make final adjustments, and finalize approach.

- **Products:**
 - Final Technical Memorandum on Prioritization Approach.

SUBTASK 3: PROJECT INVENTORY, IDENTIFICATION, INITIAL PRIORITIZATION – JULY 9, 2021

- **Objective:**
 - Provide an initial prioritized list of projects at the state and Master Planning Regions.
- **Activities:**
 - Coordinate with the Commonwealth and TAC to acquire all existing project databases. Assumed that 80% of the existing projects will be provided by the study stakeholders.
 - Evaluate databases, captured information, and CRMP Framework to establish schema for project evaluation in consultation with Commonwealth and TAC. Schema shall capture project attributes such as owner, location, status (e.g., identified, conceptual, design, in implementation), funding, timeframe, costs, and other relevant features.
 - Organize projects in a database.
 - Identify “New” projects based on review of at-risk assets where an existing strategy is not in place. An initial suitability matrix may be applied that assigns potential project types to “New” project locations. It is anticipated that the majority of “New” projects may be used to address needs for capacity building to build equity across the state.
 - Test prioritization approach to provide an initial list of prioritized projects and review results with Commonwealth and TAC. Adjust approach, as needed, based on feedback from initial testing.
- **Products:**
 - Database populated with projects provided by the Commonwealth Stakeholders and identification of “New” projects.
 - Initial prioritized list of projects.

SUBTASK 4: DESIGN CHARETTES - JULY 23, 2021

- **Objective:**
 - Engage project stakeholders to discuss regional priorities and strategy vision, review project data and initial priorities from the CRMP, gather

feedback and additional information to improve the project database and prioritization process.

- **Activities:**
 - Host one design charette for each Master Planning Region at a public facility; locations to selected in coordination with the CRO, SACAP, TAC, Outreach Subcommittee. It is assumed that the Commonwealth and/or TAC will assist in arranging the logistics for the charettes, including securing the venue and sending invitations. Depending on health advisories at the time, the charettes may need to be virtual.
 - Each meeting will last 1 day (8 hours). We anticipate that the HRPDC Region may be up to 2 days (16 hours) due to large potential number of projects and stakeholders.
 - Document and review information gathered from Commonwealth and/or TAC; integrate into database and update with needed adjustments.
- **Products:**
 - Charettes, and updates to project data (and/or processes) based on stakeholder feedback and Commonwealth direction.

SUBTASK 5: PRIORITIZED PROJECT LIST - AUGUST 27, 2021

- **Objective:**
 - Develop the final prioritized project list for the CRMP.
- **Activities:**
 - Address outstanding data/process gaps/issues.
 - Final application of prioritization criteria to projects.
 - Provide draft final list for review and feedback to the Commonwealth and/or TAC.
 - Integrate feedback and produce final project list for the CRMP.
- **Products:**
 - Final prioritized project list for the CRMP.

TASK 6: FUNDING ANALYSIS

DEWBERRY POINTS OF CONTACT:

- Caroline Whitehead, Jessica Fleck

SUBTASK 1: FUNDING DATABASE AND ANALYSIS – JULY 2, 2021

- **Objective:**
 - Identify, organize, and analyze relevant funding sources for implementing projects to identify opportunities and limitations for project funding.
- **Activities:**
 - Analyze Finance Subcommittee funding research to date.
 - Research additional funding sources and mechanisms.
 - Enhance content and parameters to Finance Subcommittee's Funding Database through additional identification and summary of internal/external funding sources: federal, state streams, public/private, etc.
 - Perform initial alignment of funding sources to projects based on parameters.
 - Engage the TAC Finance Subcommittee and obtain feedback on the database and analysis.
- **Products:**
 - Inventory of funding sources, with information on each program, such as managing office, program information, projects & applicant eligibility, requirements, grant/local value, payback information, matching requirements, timing, level of effort, URLs to each program (where available), success stories, if available, and notes, if applicable.
 - Initial alignment of project inventory against funding sources.

SUBTASK 2: FINAL FUNDING STREAM ALIGNMENTS – SEPTEMBER 8, 2021

- **Objective:**
 - Leverage feedback to improve alignment of funding sources to projects.
- **Activities:**
 - Incorporate feedback from Commonwealth and TAC into framework.

- Finalize evaluation and alignment of project inventory against funding analysis factors.
- **Products:**
 - Final alignment of project inventory against funding sources.

Draft Working Document

TASK 7: MASTER PLAN DOCUMENT

DEWBERRY POINTS OF CONTACT:

- Johanna Greenspan-Johnston

SUBTASK 1: INITIAL PLAN OUTLINE AND STRATEGY – APRIL 21, 2021

- **Objective:**
 - Apply “Beginning with the End in Mind” approach to envision and plan for final deliverables.
- **Activities:**
 - Initial Planning Brainstorm meeting with client to gain common understanding on document audience, objectives, and preferences relating to both content and design.
 - Early coordination with technical task leads to discuss the integration of their work into the overall document.
 - Development of graphic design elements and standards following relevant design guidelines and design preferences.
- **Products:**
 - Miro board capturing input from initial planning brainstorm session.
 - Master Plan Document outline with bullet points describing planned content.
 - Deliverable Approach document describing overall presentation strategy for the Master Plan including theme, language, graphics, layout, and content navigation. May include sample content such as sample layout pages and graphics.

SUBTASK 2: 50% DRAFT DOCUMENT – JUNE 18, 2021

- **Objective:**
 - Begin Master Plan writing and graphics creation to capture available content.
- **Activities:**
 - Coordinate with technical study and outreach teams to draft content and conceptualize graphics.
 - Edit materials provided by team members for clarity and consistency.

- Address concerns related to document outline.
- **Products:**
 - Word document with approximately 50% of draft content completed with draft or placeholder graphics. Content will include, at a minimum, introduction and sections capturing process and output for completed tasks (i.e., hazard framework, impact assessment, prioritization framework).

SUBTASK 3: 90% DRAFT DOCUMENT – SEPTEMBER 8, 2021

- **Objective:**
 - Writing and graphics creation to capture all significant content.
- **Activities:**
 - Continued coordination with technical research and outreach teams to draft content and conceptualize graphics.
 - Edit materials provided by team members for clarity and consistency.
 - Review feedback and incorporate edits from 50% draft submittal.
- **Products:**
 - Word document with approximately 90% of draft content completed with draft or placeholder graphics.

SUBTASK 4: FINAL DRAFT DOCUMENT IN LAYOUT – OCTOBER 27, 2021

- **Objective:**
 - Draft a complete Master Plan document with a polished look and feel that captures all necessary content.
- **Activities:**
 - Review feedback and incorporate edits from 90% draft content submittal.
 - Continue coordination with technical research and outreach teams to ensure all content is accurate and up-to-date.
 - Complete draft of all graphics.
 - Place all content in InDesign layout.
 - Draft Executive Summary.

- **Products:**
 - Full pdf document and executive summary in layout.

SUBTASK 5: FINAL DOCUMENT – NOVEMBER 30, 2021

- **Objective:**
 - Finalize Master Plan deliverables so they are ready for publication.
- **Activities:**
 - Address any necessary edits from previous submittal.
 - Compress and package necessary final formats (e.g., print-optimized, web-optimized, stand-alone executive summary).
 - Package all materials included in the document (e.g., images, font packages, InDesign Templates) to facilitate future edits and updates.
- **Products:**
 - Final compressed pdf documents optimized for print and web viewing.
 - Full InDesign Package to allow for future changes and updates.

TASK 8: PROJECT DATABASE AND GIS WEB SERVICE

DEWBERRY POINTS OF CONTACT:

- Seth Lawler; Mat Mampara, PE

SUBTASK 1: REQUIREMENTS DOCUMENT – APRIL 30, 2021

- **Objective:**
 - Develop a software requirements specification (SRS) document that outlines use cases, functional, and non-functional requirements for a geospatial database and web service.
- **Activities:**
 - Identify use cases to inform the development of a geospatial database and web service.
 - Enumerate functional requirements to ensure all use cases are met in the system design.
 - Enumerate non-functional requirements and design considerations.
- **Products:**
 - Software requirements specification document.

SUBTASK 2: DRAFT WIREFRAME – MAY 7, 2021

- **Objective:**
 - Develop a data model for the geospatial database and a system architecture diagram describing the web service, database, and other software components.
- **Activities:**
 - Identify data types, categories, and relationships for data which will be stored in the database.
 - Create relational and/or non-relational mapping of datasets.
 - Evaluate alternatives for implementing web services.
- **Products:**
 - Draft wireframe documents detailing the database schemas, data model, and system component relationships.

SUBTASK 3: FINAL WIREFRAME – JULY 2, 2021

- **Objective:**
 - Finalize production data model and system architecture document.
- **Activities:**
 - Create development database using the specifications outlined in the draft data model.
 - Execute testing and development activities to validate the data model, and ensure functionality is consistent with use cases.
 - Ensure all functional and non-functional requirements are satisfied.
- **Products:**
 - Final wireframe documents detailing the database schemas, data model, and system component relationships.

SUBTASK 4: DRAFT APPLICATION - JULY 16, 2021

- **Objective:**
 - Create a lightweight application providing access to the database and other services outlined in the requirements document.
- **Activities:**
 - Begin development of application(s) providing access to database (and cloud data if applicable).
 - Iterate as needed during the development process, maintaining documentation and tracking issues.
- **Products:**
 - Alpha version web service application.

SUBTASK 5: FINAL APPLICATION - AUGUST 27, 2021

- **Objective:**
 - Create a fault-tolerant web services application.
- **Activities:**
 - Finalize design alternatives and implement in application code.
 - Stress test application and add error handling as needed.

- **Products:**
 - Web service application and code repository.

SUBTASK 6: DATA MIGRATION – NOVEMBER 30, 2021

- **Objective:**
 - Transfer ownership of database and application to Commonwealth.
- **Activities:**
 - Convey to Commonwealth-designated personnel, key database, data types, system attributes and software components developed for the Coastal Master Plan to inform IT infrastructure provisioning.
 - Identify preferred transfer approach and timeline.
 - Support transfer, testing, and cutover.
- **Products:**
 - Database backup files.
 - Data produced for the project with associated, consistent, and compliant metadata.
 - Access to version-controlled code repository for code developed for this project.

TASK 9: EXTERNAL OUTREACH AND PUBLIC ENGAGEMENT

DEWBERRY POINTS OF CONTACT:

- Deepa Srinivasan, AICP, CFM; Ashley Samonisky; Delceno Miles

- **Objective:**
 - Improve and increase awareness of the CRMP objectives, benefits, and outcomes to stakeholders.

- **Activities:**
 - Coordination with the Commonwealth and TAC/TAC Subcommittee.
 - Meetings with Tier 2 Stakeholders:
 - Responsible for coordinating the invitations and RSVPs for the meeting, distributing materials pre- and post- meeting, attending meetings, and taking meeting minutes. Meetings will be conducted online or in-person (when COVID restrictions for gatherings are lifted). At present, we have included travel time for approximately 16 of the identified meetings.
 - Coastal Planning District Commissions – up to 8 meetings
 - Local Governments – up to 8 meetings
 - Local Businesses/Industries – up to 2 meetings
 - Universities/Military/Institutions – up to 2 meetings
 - Interviews – up to 8 one-on-one interviews with key stakeholders who cannot or prefer not to attend meetings.
 - Meetings with Tier 3 Stakeholders:
 - Local Communities: up to 32 meetings with focus on high risk and/or underserved communities. Eight meetings anticipated for each Master Planning Region.
 - Public Information:
 - Web Content: Assist with the design of up to 3 webpages, and provide relevant content, to be added, including information on: meetings, project schedule, deliverables, draft documents, presentations, maps, etc.
 - Social Media: Provide up to 10 social media posts over the course of the project. The same post may be used across multiple platforms (Facebook, Twitter, etc.).

- Press Release: Develop draft 2 press releases to be distributed to traditional news outlets. These announcements will be made at key milestones during the project at the direction of the CRO or SACAP.
- Blogs: Develop up to 4 blogs for release on Project or Stakeholder website outlets. These blogs may correspond to project milestones or topics.
- Newsletter Articles – Develop up to 4 newsletter articles during the course of the study. The newsletter will include highlights on survey results, risk identification, vulnerabilities, resolution strategies, priorities, and implementation plans. While these articles may follow the same milestones and mimic the content used in the blog posts, they may differ in tone and distribution method.
- Deploy surveys/polls to meetings to capture stakeholder perspectives.
- Tracking Tool:
 - Two (2) tracking tools/mechanisms shall be developed: Participation Tool and an Effectiveness Tool. These will enable us to change course, if necessary, should one avenue or strategy prove unproductive.
 - The Participation Tracking Tool will ensure an appropriate level of public participation in accordance with the project outreach goals.
 - The Effectiveness Tracking Tool will track the outreach efforts effectiveness by identifying degree of participation by geography, avenues of participation, which were most effective, etc.
- **Products:**
 - Products defined in activities.