

Attachment A Scope of Services

Task 1: Community Engagement

Public engagement and participation are critical to the success of the WMP development and implementation. The community engagement efforts to be implemented are listed below.

- Development of a communications strategy for public, industry, landowners, and recreational users (Q&A fact sheets, media plan) - In conjunction with MBNEP's Strategy & Communications Coordinator Herndon Graddick, develop an overall communications strategy and update on an ongoing basis as the project proceeds throughout the 18-month period. Develop Q&A, fact sheet and media release announcing the watershed planning efforts. Update and republish these documents as an ongoing effort.
- Development of a social media plan
- Routine technical website and social media content (meeting notices, minutes, updates) - Coordinate on an ongoing basis with MBNEP's Community Outreach Coordinator Kelley Barfoot and Project Coordinator Madison Blanchard on web page and social media content including the Arc GIS Story Map and survey with downloadable companion based on existing template.
- Development of, and routine updates to, an Arc GIS Story Map
- Development of a survey to solicit feedback from the public
- Development of a steering committee, and participation at meetings - Identify, recruit, and develop a project Steering Committee comprised of a Technical Advisory Committee (TAC) and a Community Advisory Committee (CAC), noting that there may be select participants serving on both. Meetings will be convened to gather input on existing concerns/issues in the watershed, present the current characterization of the watershed, steer the development of the WMP, and assist in the public outreach effort through participating members' networks. Plan, communicate, administrate, and facilitate up to 10 total meetings for the Steering Committee.
- Host and attend up to (2) public meetings - With the advice and direction of the Steering Committee, consider the need to plan, develop and implement up to 2 public meetings, to be located at convenient locations throughout the MTA watershed. If indicated, it is suggested that the first public meeting occur near the beginning of the project to notify the public of the WMP process and timeline, to present the current characterization of the watershed, and to solicit feedback. The second public meeting is suggested to occur near the end of the project to inform the public of proposed project recommendations. Place paid media notices in two newspapers with general circulation at least two weeks in advance of each of the public meetings.
- Development of a draft and final version of the Chapter 3: Community Engagement - Based on input from this last meeting, the project team will prepare the final draft of the WMP that will be posted online with a final opportunity for stakeholders to provide comments online or in writing.
- Identify up to 6 existing stakeholder group or individual meetings where we may present information and take feedback (e.g., industry, agency, or small group associations, etc.)
- Outreach and education to public on current access opportunities and project ideas that would affect their navigation and use of the MTA watershed
- Outreach to major industries/manufacturing stakeholders -Engagement of current public land holders (ADCNR, USACE) on management activities and development of a land management plan - Utilize the Healthy Watersheds "Atlas" database to assist with best targeting and reaching forest landowners.

In parallel with the scope items listed above, but not included within this scope of services, the AFRC will be performing the following additional tasks that will dovetail with this project:

- AFRC will conduct education and outreach to key stakeholders on conservation options (MOU, CE, fee simple)
- AFRC will assist with education activities with key and private landholders on voluntary Best Management Practices (BMPs) for riparian and forestry practices and recommended BMPs.

Steering Committee/Targeted Stakeholder Groups, to include but not be limited to:

- o Federal, State and Municipal Agencies/landowners (including USACE, ADCNR, ALDOT, NRCS, USFWS/Daphne Field Office, Alabama Forestry Commission, Park and Public Access Owners, Archer Center)
- o Industrial Stakeholders (including through PEP, Chambers, and existing Community Advisory Panels)
- o Environmental Advocacy Organizations (e.g., Alabama Wildlife Federation, Mobile County Wildlife, Ducks Unlimited, The Nature Conservancy, Mobile Baykeeper, Alabama Coastal Foundation, etc.)
- o Recreational Fishermen (e.g., BASS Anglers, CCA)
- o Recreational Boaters
- o Forest Landowners and Foresters (e.g., Alabama Forestry Association, County Forestry Planning Committees, Treasure Forest Landowners Association)
- o Water Quality Monitoring and Cleanup Groups (e.g., Alabama Water Watch, PALS)
- o Commercial and Residential Real Estate Developers
- o Maritime Industry (including the Alabama State Port Authority and Propeller Club Members)
- o Property Owners Associations (POAs)
- o Local Churches
- o Businesses (both large retail and small business, through Chambers of Commerce)
- o Utilities
- o Local Schools

Deliverables

As noted per task above, and to include a draft and final Chapter 3: Community Engagement. The final Chapter 3 is to be compiled and submitted under Task 10.

Task 2: Watershed Characterization and Conditions

Task 2 will include a watershed inventory, assessment, and development of a GIS database for existing and pertinent data and information collected during the characterization phase. The task will include the following action items:

- Gather environmental, land use, landowner, water quality and other related data to characterize the watershed, which may include but not be limited to:
 - o Healthy Watersheds database of landowners (AFRC and Conservation Southeast)
 - o Current submerged aquatic vegetation (SAV) mapping (Vittor)
 - o Legacy pollutant assessments, including sediments and studies of mercury and DDT in biota (Vittor)
 - o Peer -review studies, including "Determining the role of headwater wetlands for water quality improvement in coastal Alabama", and "Coastal development in the northern Gulf of Mexico: Linking drainage patterns and tidal creek habitats" (Auburn)
 - o Field and modeling research characterizing the lower Apalachicola delta including river connectivity, salinity, and forested wetland communities (Auburn)
 - o 2010 Forests at the Crossroads (an Assessment of Need compiled for the Alabama Forestry Commission)
 - o State Wildlife Action Plan (SWAP)
- Collect available literature and analyze prior studies pertinent to this WMP, to include but not be limited to:
 - o Mobile Harbor General Reevaluation Report with Supplemental Environmental Impact Statement (GRR/SEIS)
 - o GRR/SEIS base data from the USACE
 - o ADCNR Causeway Study

- o Alabama River Basin Management Plan
- o Tombigbee River Basin Management Plan
- o MTA Watershed Management Plan Scoping, Moffatt & Nichol
- o Restoration Plan and Programmatic Environmental Assessment, and the State Wildlife Action Plan, Alabama Department of Conservation and Natural Resources
- o Ongoing and prior modeling studies (Hydro-Engineering Solutions) Fish Tissue Monitoring Program Annual Report, Alabama Department of Environmental Management
- Gather available GIS datasets, to include but not be limited to:
 - o Watershed boundaries
 - o Waterbodies
 - o Roads
 - o Model features in GIS
 - o Stormwater and sewer asset inventory
 - o LiDAR
 - o Aerial imagery
 - o Parcel database
 - o Pre-identified areas of concern
 - o Land use
 - o Hydrology and Water Quality Data
 - o Floodplains and FEMA Flood Zones
 - o Biological Resources
 - o Political Institutions
 - o Demographics
 - o Areas of Historical and Cultural Significance
 - o Public Access Area

The GIS database will provide an interactive graphical representation of the watershed processes and issues and will serve as the warehouse for collected datasets. This task will develop the foundation of data to be used for understanding and planning the WMP and will include environmental resource information for the MTA watershed complex.

All MBNEP data is stored on the Dauphin Island Sea Lab Data Management Site, which is publicly accessible, and submitted to NOAA NCEI Ocean Archive System. All data gathered, analyzed, and submitted during this project shall follow the MBNEP's Watershed Management Plan data collection and delivery guidelines (Watershed Management Plan Data Plan).

Also, the Team will use its knowledge of local conditions, landowners, and stakeholder input to ground truth (contingent upon access to key parcels) areas within the watershed to verify identified areas of concern and/or areas identified as exhibiting high potential for habitat conservation or management. Geographical areas and points of concern will be mapped, photographed and included in the GIS database. Some of the issues of concern already identified within the watershed for further consideration are below:

- Flow Impediments
- Removal of Natural Levees
- Sedimentation
- Water regime
- Groundwater
- Canal in-filling
- Causeway
- Existing voluntary BMPs
- Urban growth
- Public Access
- Historical/Culture Significance
- Invasive species
- Climate Change
- Restoration of longleaf pines
- Pollutant point and non-point sources
- Legacy pollutants (mercury, DDT)
- Management of coal combustion residuals
- Land conservation

Deliverable

The deliverable for Task 2 will be a draft Chapter 4: Watershed Characterization, a draft Chapter 5: Watershed Conditions, the GIS database developed during watershed characterization and updated during watershed conditions, and pertinent datasets collected. Comments will be addressed and the final Chapters 4 and 5 are to be compiled and submitted under Task 10.

Task 3: Climate Vulnerability Assessment

Due to the habitats (primarily protected lands/existing wetlands), there will be a greater focus on assessment and less emphasis on public education/outreach for this task. The team will include an assessment of vulnerabilities associated with climate change and sea-level rise in the watershed plan through the following steps:

- Partner coordination - to coordinate ongoing efforts and engage the community in discussions regarding vulnerability and preparedness for coastal hazards, including those related to climate change and coastal habitat migration, we will partner with MBNEP and MBNEP's consultants involved in other WMP efforts, and the Northern Gulf of Mexico Sentinel Site Cooperative to share ideas, data, and initiatives as it relates to this task. This task may include conference calls, meetings, data sharing, etc. as necessary to implement the scope.
- Data gathering - the Team will gather data from the following sources and present it in a manner that is meaningful to community stakeholders. Information may include items such as maps, online viewer tools, and presentations. The Team will present the following data, at a minimum:

- o Storm surge plus sea-level rise data from the CDSLRL model
 - o Historic Storm Surge data from SURGEDAT/LSU
 - o Current and future High tide inundation data from NOAA
 - o Marsh migration/habitat impacts from TNC's SLAMM model
 - o Flood Insurance Rate Maps from FEMA
 - o National Climate Assessment 4 data regarding local SLR projections & increases in heavy precipitation events
- Stakeholder-driven Vulnerability Process - the Team will hold a meeting with our stakeholder group to review the data related to current and future vulnerabilities related to storm surge/flooding/SLR and identify associated community vulnerabilities. We may use the Maryland Coast Smart Communities Scorecard to guide a facilitated process where the stakeholders can identify areas of vulnerability, gaps in preparedness, and future potential actions.
 - Community input - the Team will present collected data, Scorecard results, and recommended actions to the Community at an open house meeting, in a multi-media style to encourage engagement from participants. Participants will engage through the following activity stations: interact with the NOAA sea-level rise viewer, work with and mark up various maps, provide direct input on vulnerabilities and gaps in preparedness, and contribute to ideas for potential mitigation actions.
 - Coastal Vulnerability Action Strategy - Based on the feedback received at the stakeholder meeting, our Team will draft a strategy that includes a description of the data presented, a summary of the Scorecard process, and a list of proposed actions and community needs that we identify through the public input process.
 - Data analysis - the Team will focus on the potential impacts related to storm surge/flooding/SLR to critical habitats within the study area. Specifically, the Team will identify potential areas subject to habitat/marsh migration that warrant protection to protect against future vulnerabilities to coastal hazards.

Subsequent tasks will involve further identification and prioritization of potential mitigation strategies.

Deliverable

The deliverable for Task 3 will be draft Chapter 6: Climate Vulnerability Assessment.

Task 4: Identification of Critical Issues and Areas

Based upon the input received from stakeholder groups, information gleaned from the watershed characterization, field verification, and the climate vulnerability assessment, the Team will compile a comprehensive list of critical issues and key areas that will drive the selection of management measures and eventual rehabilitation of the watershed. Under this task, the Team will describe major issues that impact the watershed, its water quality, and habitat, and identify key areas for potential BMP projects and/or habitat conservation/management.

Following the development of this comprehensive list of issues and key focus areas, the Team will meet with the MBNEP and the Steering Committee to determine which of the identified issues/areas will be further evaluated in more detail and considered for potential management measures under Task 5. In determining the areas/issues for further analysis, emphasis will be placed on those areas/issues that have direct alignment with the goals and objectives of the MBNEP and the MTA WMP, while also demonstrating high potential for successful funding opportunities that may allow for future implementation. For budgeting purposes, it is assumed that up to 10 priority areas/issues will be further analyzed under subsequent tasks.

Deliverable

The deliverable for Task 4 will be draft Chapter 7: Identification of Critical Issues and Areas, an updated project GIS database, and pertinent datasets collected.

Task 5: Identification of Management Measures

At the conclusion of Task 4, the Team will have identified the priority issues/areas that warrant further investigation under Task 5. For these priority areas, the Team will develop high-level, conceptual solutions and management measures. This task will include, but may not be limited to:

- Identification of Best Management Practices (BMPs)/Priority Management Measures (structural and non-structural) and/or areas for conservation and management of habitat
- Determination of indicators/targets for land/water resource management
- Alignment of management measures with the MBNEP purpose and the WMP goals and objectives
- Estimation of load reductions desired and received per BMP and/or conservation measure
- Identification of conceptual-level management measures for key areas that demonstrate high potential for habitat management/conservation
- Estimation of high-level cost and schedule to implement the identified priority management measures. Cost and schedule will include additional data collection needs (if any), and conceptual design, permitting, and construction of each selected management measure.
- Recommendations of restoration projects with maps outlining estimated linear feet or acreage restored, pollution reduction estimates, time sensitivities, complexities due to multiple property owners, descriptions of proposed traditional/innovative BMPs or other engineered solutions, and expectations of effectiveness, longevity, and maintenance requirements that may be required.

- Recommendations of actions/projects to improve community resiliency to sea level rise and changing climates.
- Rough order of magnitude cost estimates including planning design/activities , real estate/right-of- way acquisition, construction, outreach, etc.

The Team will investigate up to three (3) alternative conceptual solutions for each of the ten (10) identified priority areas.

Deliverable

The deliverable for Task 5 will be draft Chapter 8: Management Measures, an updated project GIS database, and pertinent datasets collected.

Task 6: Regulatory Review

Utilizing the comprehensive coastal regulatory review, completed in 2018, the Team will conduct a thorough review of applicable federal, state, and local rules, regulations, laws, statutes, and ordinances addressing erosion, sediment containment, stormwater management, Low Impact Development, stream/wetland buffers, etc. Inconsistencies/gaps will be addressed with recommendations for improving/modifying regulations to manage stormwater and natural resources based on a watershed approach.

This task is to be conducted concurrently with the Identification of Management Measures under Task 5.

Deliverable

The deliverable for Task 6 will be draft Chapter 10: Regulatory Review.

Task 7: Develop Implementation Strategies

Once the management measures have been identified and prioritized, the Team will assist the MBNEP with the development of a holistic implementation strategy for the recommendations. The implementation strategy may consist, but not limited to the following:

- Determination of regulatory changes necessary to ensure sustainability of restoration into perpetuity.
- Identification of potential partners for implementation including public, private, and non-profit entities.
- Strategy for engaging federal, state, and local agencies and public in watershed plan implementation, including any training/education that may be required.
- Project rankings for short-term, medium-term, and long-term implementation.
- Potential establishment of a long-term champion for WMP project implementation .
- Recommendations for distributing plan once published.

Deliverable

The deliverable for Task 7 will be draft Chapter 9: Implementation Strategies.

Task 8: Identifying Financing Alternatives

The Team will develop a financing strategy as a part of the WMP that focuses on novel approaches to funding implementation of recommended actions rather than consisting of lists of federal grants. The comprehensive approach to financing will also identify potential local partners (e.g. businesses, NGOs, universities, civic groups, foundations, etc.) that should be recruited to actively participate in the implementation of the WMP.

Deliverable

The final deliverable for Task 8 will be Chapter 11: Financing Alternatives.

Task 9: Monitoring

The Team will utilize the Mobile Bay Subwatershed Restoration Monitoring Framework as a template for the development of a comprehensive monitoring plan. Alabama Water Watch has an existing monitoring program in place. The Team will review the program data to identify data gaps and recommend adjustments to strengthen the program if necessary. The Team will also look for opportunities to suggest expansions to state and federal monitoring station locations. Suggestions of areas for future monitoring activities shall focus on those that may provide benefit for the purpose of invasive species monitoring and monitoring progress of land management practices, among other areas.

Deliverable

The deliverable for Task 9 will be draft Chapter 12: Monitoring, and a map that displays accessible sites for volunteer monitoring activities.

Task 10: Prepare Draft and Final Watershed Management Plan

The Team will prepare a draft WMP and, subsequently a final WMP, based on MBNEP feedback and comments received from the previously identified stakeholders, committees, and groups of interest . The Team will submit an electronic version of the final WMP for posting on the appropriate websites and 10 hardcopies for distribution . This task assumes that one consolidated round of comments (to be compiled and provided by the MBNEP) will be addressed in preparation of the final WMP.

Deliverable

Draft and Final WMP and GIS database. In addition, quarterly progress reports will be submitted to the MBNEP to document the project progress.

The outcome of the WMP will provide a list of recommended projects, associated costs, and a ranking of importance. The Team will provide the MBNEP with a list of recommended projects that cover the entire WMP and as funds become available, projects can be implemented/constructed to meet the plan goals and objectives.

PERIOD OF PERFORMANCE & SCHEDULE:

Work shall commence upon execution of the contract and continue for a period of 18 months for all services related to the preparation of the WMP. Work will be scheduled upon receipt of authorization and will continue until complete.

Table 1: Summary of Project Deliverables & Project Milestones

Task	Deliverable	Schedule Milestone Date
1	Draft Chapter 3: Community Engagement	18 months from contract execution
2	Draft Chapter 4: Watershed Characterization & Draft Chapter 5: Watershed Conditions	7 months from contract execution
3	Draft Chapter 6: Climate Vulnerability Assessment	7 months from contract execution
4	Draft Chapter 7: Identification of Critical Issues and Areas	10 months from contract execution
5	Draft Chapter 8: Identification of Management Measures	14 months from contract execution
6	Draft Chapter 10: Regulatory Review	14 months from contract execution
7	Draft Chapter 9: Implementation Strategies	16 months from contract execution
8	Draft Chapter 11: Financing Alternatives	16 months from contract execution
9	Draft Chapter 12: Monitoring	16 months from contract execution
10	Draft WMP	17 months from contract execution
	Final WMP	18 months from contract execution