OVERVIEW

AGENCY: U.S. Environmental Protection Agency (EPA)

TITLE: Chesapeake Bay Program Office Fiscal Year 2023 Request for Applications for: **Modeling, Monitoring, and Data Analysis Support for the Chesapeake Bay Program Partnership**

ACTION: Request for Applications (RFA)

RFA #: EPA-R3-CBP-23-18

ASSISTANCE LISTING #: 66.466

IMPORTANT DATES

September 15, 2023	Issuance of Request for Applications (RFA)
October 30, 2023	Application submission deadline (see Section IV for more information)
December 1, 2023	Approximate date for EPA to notify applicants of results
December 15, 2023	Approximate date for selected applicant to submit workplan and revised federal cooperative agreement application
January 15, 2024	Approximate date of award/Project start date

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I. FUNDING OPPORTUNITY DESCRIPTION

A. Background

1. About the Chesapeake Bay Program

The Chesapeake Bay is North America's largest and most biologically diverse estuary. A resource of extraordinary productivity, it is worthy of the highest levels of protection and restoration. Authorized by Clean Water Act (CWA) Section 117, 33 USC Section 1267, the Chesapeake Bay Program (CBP) is responsible for supporting the Chesapeake Bay Executive Council (Executive Council) through a number of actions, including the coordination of federal, state, and local efforts to restore and protect living resources and water quality of the Chesapeake Bay and its watershed. CWA Section 117 also authorizes EPA to provide grants to support the goals of the program.

The CBP is a unique regional partnership that has led and directed the restoration of the Chesapeake Bay since 1983. Today, the CBP partners include the states of Delaware, Maryland, New York, Pennsylvania, Virginia, and West Virginia; the District of Columbia; the Chesapeake Bay Commission (a tri-state legislative body); EPA, representing the federal government The partnership's work is guided by the *Chesapeake Bay Watershed Agreement*, which establishes the plan for collaboration across the Bay's political boundaries and establishes goals and outcomes for the restoration of the Bay, its tributaries, and the lands that surround them.

2. About the CBP Partnership

The CBP partnership is guided at the direction of the **Executive Council**, which, through its leadership, establishes the policy direction for the restoration and protection of the Chesapeake Bay and exerts its leadership to rally public support for the Bay effort and approves directives, agreements, and amendments that set goals and guide policy for Chesapeake Bay restoration. The Executive Council is established by CWA Section 117. To ensure implementation of the Executive Council's Chesapeake Bay Agreements, the CBP partnership has several committees, teams, workgroups comprised of participating partners.

The **Principals' Staff Committee** (PSC) acts as the senior policy advisors to the Executive Council, accepting items for their consideration and approval and setting agendas for Executive Council meetings. The PSC translates the restoration vision by setting policy and implementing actions on behalf of the Executive Council. The PSC also provides policy and program direction to the Management Board.

The **Management Board** provides strategic planning, priority setting, and operational guidance through implementation of a comprehensive, coordinated, accountable implementation strategy for the CBP. It directs and coordinates all of the goal teams and workgroups under it.

The **Goal Implementation Teams** (GITs) include federal and non-federal experts from throughout the watershed. Thus, academic experts, advocacy organizations, and others become active members of the broad restoration partnership.

Pursuant to CWA Section 117(b)(2), 33 USC Section 1267(b)(2), the Chesapeake Bay Program Office (CBPO) is the office within EPA charged with providing support to the Executive Council in the

restoration and protection of the Chesapeake Bay. The CBPO and the CBP, mentioned above, are two distinct entities.

For additional background information on the CBP structure, achievements, and commitments, see the CBP partnership's website located at http://www.chesapeakebay.net/.

3. Chesapeake Bay Total Maximum Daily Load and Watershed Implementation Plans

EPA has established the Chesapeake Bay Total Maximum Daily Load (Bay TMDL), a historic and comprehensive "pollution diet" to facilitate implementation of actions to restore clean water to the Chesapeake Bay and the watershed's streams, creeks and rivers.

The Bay TMDL – the largest ever developed by EPA – identifies the levels of nitrogen, phosphorus and sediment across Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia and the District of Columbia that are necessary to meet applicable state water quality standards in the Chesapeake Bay, its tidal tributaries, and embayments. These pollutant limits were further divided by each of the seven Chesapeake Bay watershed jurisdictions and major river basins based on state-of-the-art modeling tools, extensive monitoring data, peer-reviewed science and close interaction with jurisdictional partners.

Watershed Implementation Plans (WIPs) are plans for how each of the Bay jurisdictions, in partnership with federal and local governments, will achieve their respective Bay TMDL allocations and planning targets. The Phase I WIPs were developed in 2010 by the jurisdictions to inform the 2010 Bay TMDL wasteload and load allocations. The Phase II WIPs were developed in 2012 by the jurisdictions to meet nitrogen, phosphorus, and sediment planning targets based on updated information generated through the Partnership's Phase 5.3.2 Chesapeake Bay Watershed Model. The goal of the Chesapeake Bay TMDL and supporting jurisdictional WIP process is to implement by 2025 all nutrient and sediment pollutant load reduction practices needed to fully restore water quality in the Chesapeake Bay and its tidal rivers.

Through the Bay TMDL Midpoint Assessment, the CBP partnership updated and reviewed the latest science, data, models, and decision support tools to be used in estimating progress in nutrient and sediment pollutant load reductions. Phase III WIPs were developed by jurisdictions based on the results of the Midpoint Assessment, the Phase III WIP planning targets, and new information provided by the Phase 6 Chesapeake Bay Watershed Model and related updates of the Chesapeake Bay Airshed Models and the Chesapeake Water Quality and Sediment Transport Model. The Phase III WIPs provide information on actions the seven watershed jurisdictions intend to implement between 2019 and 2025 to meet their respective Bay TMDL goals.

4. CBP Environmental Models

Models of the Chesapeake Bay's airshed, watershed, estuary, and living resources have been developed by the partners and linked together over the past 30 years. The CBP partnership's suite of models assists in understanding the important processes affecting the health of the watershed and the Chesapeake Bay ecosystem. These modeling tools provide the CBP partners with an understanding of the effect of various control strategies on pollutant levels and the level of nutrient and sediment load reductions needed to restore the Chesapeake Bay and achieve the applicable water quality standards for dissolved oxygen, chlorophyll-a, underwater bay grasses and water clarity. By quantifying the management actions necessary to restore Chesapeake Bay habitats and the living resources dependent on those habitats, these integrated CBP partnership models provide guidance to environmental managers and citizens on where the most cost-effective reductions can be made so that controls are equitable and broadly supported.

Through the application of airshed, watershed, estuarine, and living resource modeling activities, the CBP partnership's state and local jurisdictional partners gain access to information that is used directly in decision-making for Chesapeake Bay environmental restoration efforts. Chesapeake Bay environmental models are developed, calibrated, verified, and applied through an expanding cooperative network of state, federal, regional, and local agencies, nongovernmental organizations, and academic institutional partners. These partnership models help set the pace and direction of Chesapeake Bay restoration by providing information on water quality and biological resource responses to different management actions.

The Modeling Workgroup is charged with the responsibility to provide state-of-the-art decision-support modeling tools to the CBP partnership that are developed and applied through community and participatory principles. Modeling Workgroup members are comprised of scientists, engineers, and technical managers from throughout the Chesapeake Bay Partnership.

The responsible planning and management of resources to provide the best available decision-support modeling tools requires the Modeling Workgroup members and participants to adhere to the core values of:

- Integration - Integration of the most recent science and knowledge in air, watershed, and coastal waters to support ecosystem modeling for restoration decision-making.
- Innovation - Embracing creativity and encouraging improvement in the development and support of transparent and robust modeling tools.
- Independence – Making modeling decisions based on the best available evidence and using the most appropriate methods to produce, run, and interpret models, independent of policy considerations.
- Inclusiveness - Commitment to an open and transparent process and the engagement of relevant partners that results in strengthening the Partnership's decision-making tools.

One of the key modeling tools in this effort is the Chesapeake Assessment Scenario Tool (CAST), which is a web-based tool that provides estimates of the nitrogen, phosphorus, and sediment load reductions achieved by different combinations of BMPs in a particular geographical area. CAST also includes information on the cost of implementing various BMPs so that users can select the most cost-effective practices to reduce pollutant loads.

Climate change was recognized in the historic 2010 TMDL as a challenge to be addressed by the Chesapeake 2017 Midpoint Assessment (2017 MPA). During the 2017 MPA, a comprehensive airshed, watershed and estuarine modeling system was successfully developed and applied to address climate change conditions over the 30 years between the base year (1995) and 2025. Consequently, nutrient and sediment target loads were lowered to offset the nonachievement of the Chesapeake's living-resource-based water quality standards that resulted from the 30 years of climate change.

The CBP leadership of the PSC and the EC have now directed the CBP Partnership to prepare to address 2035 climate change conditions with a suite of updated airshed, watershed, and estuarine models to be completed and fully operational in December 2025, reviewed by the CBP in 2026, and applied to CBP management issues in 2027.

Disolved oxygen (DO), chlorophyll, submerged aquatic vegetation (SAV), and water clarity are included as TMDL water quality criteria in Delaware's, the District of Columbia's, Maryland's, and Virginia's water

quality standard regulations. Because the four jurisdictions must achieve each of these water quality criteria to delist their Bay tidal waters, currently listed as impaired, the CBP Partnership's Modeling Workgroup recommended that a state-of-the-science hydrodynamic model, based on an unstructured SCHISM model grid, be coupled to the ICM water quality code. The ICM code has been continually refined and improved by the CBP for three decades and includes key water quality and living resource processes.

5. CBP Monitoring Program

The 2014 Chesapeake Bay Watershed Agreement required additional monitoring, modeling, and analysis to help decision-makers effectively achieve goals and associated outcomes. CBP science activities are coordinated through the Scientific, Technical Assessment, and Reporting (STAR) Team. To address the needs of the Watershed Agreement, STAR is evolving to have more of an ecosystem-based science mission. In addition to modeling, the STAR Team serves the CBP as a science collaboration effort to include water quality monitoring functions.

STAR manages CBP-funded monitoring networks and coordinates with additional science providers to utilize networks to address the 2014 Chesapeake Bay Watershed Agreement. It ensures information quality, management, and access. The STAR Team updates and delivers the status and trends (indicators) of ecosystem conditions and explains ecosystem conditions and changes. Results of its work are synthesized and communicated to support the CBP decision framework being used by the goal teams to develop and implement management strategies for future watershed agreements.

The CBP monitoring programs include the nontidal nutrient and sediment network, tidal water-quality monitoring network, submerged aquatic vegetation (SAV) network, tidal benthic monitoring network, and Citizen Science monitoring network. The Bay Program recognizes that monitoring is foundational to the CBP's ability to assess progress toward its goals and outcomes and to utilize adaptive-management principles.

B. Scope of Work

This RFA is seeking insightful, expert, and cost-effective applications from eligible applicants to provide the Chesapeake Bay Program's non-federal partners with technical analysis and programmatic evaluation support related to water quality modeling and monitoring and spatial systems to manage, analyze, and map environmental data. The project assists the partners in meeting their restoration and protection goals and in increasing the transfer of scientific understanding to the CBP modeling, monitoring, and Geographic Information Systems (GIS) activities.

Project funding will support scientific staff members who will apply various modeling, data analyses, and GIS activities to develop and communicate information used in decision making. The project includes six activities for the Chesapeake Bay Program: 1) Nonpoint Source Data Analysis, 2) Watershed Modeling, 3) Tidal Monitoring Data Analysis, 4) Nontidal Monitoring Data Analysis, 5) Geographic Information Systems Analysis, and 6) Model Operations Support.

The work will primarily support the CBP partnership's STAR Team, the Water Quality Goal Implementation Team (WQGIT) and their workgroups made up of state, regional, local, and non-public stakeholders, building the institutional and programmatic capacity for accelerated implementation of the most cost-effective targeted BMPs and other nutrient and sediment reduction actions for the protection and restoration of the Chesapeake Bay and its watershed.

The recipient will support modeling, monitoring, and GIS programs needed to explain and communicate the health of and changes in the Chesapeake Bay ecosystem. Through STAR and the WQGIT, the successful applicant will support the Chesapeake Bay Program Goal Teams and helps decision-makers effectively achieve goals and associated outcomes related to water quality, the Chesapeake Bay TMDL, and WIPs as well as other ecosystem-based science missions associated with the Chesapeake Bay Watershed Agreement.

While the CBP partnership is comprised of federal and non-federal organizations, any activities funded under this RFA will not directly benefit the federal partners. The recipient of the cooperative agreement awarded under this RFA may work directly with federal agencies, but the nature of that work will result only in direct, significant benefits to the non-federal agencies, partners, and the general public. Any indirect and incidental benefits to EPA are not the purpose of the RFA. The non-federal partners of the CBP will provide programmatic direction to the successful applicant through the WQGIT, STAR, and other GITs.

EPA plans to award one six-year cooperative agreement under this RFA. The total estimated funding under this solicitation is approximately **$5,280,000** overall, with an estimated **$880,000** available for the first year and each year thereafter. However, there is no guarantee of funding throughout this period or beyond. The table below summarizes the estimated funding available for each activity throughout the expected six-year project period.[1]

Activity	Estimated Funding Per Year	Total Estimated Funding for Six Years
Activity 1: CBP Agricultural Watershed Fertilizer Manure Data Scientist	$150,000	$900,000
Activity 2: CBP Watershed Modeler	$145,000	$870,000
Activity 3: CBP Tidal Monitoring Data Analyst	$110,000	$660,000
Activity 4: CBP Nontidal Monitoring Data Analyst	$145,000	$870,000
Activity 5: CBP Geographic Information Systems Analyst	$158,000	$948,000
Activity 6: CBP Model Operations Scientist	$172,000	$1,032,000
TOTAL	**$880,000**	**$5,280,000**

To support these activities, the selected organization may request that staff, for matters of efficiency, be located at the U.S. EPA CBPO located in Annapolis, Maryland. Office space, valued at $9,400 per person per year, may be provided by EPA as in-kind assistance under the cooperative agreement, if requested, and is considered matchable funding. The EPA in-kind funding would be in addition to the $5,280,000 referenced above.

If your organization has an interest and the experience to accomplish the activities described below and is eligible to receive a federal assistance agreement as described in Section III of this announcement, we encourage you to apply. Each eligible application will be evaluated using the criteria described in Section V. The activities are multi-year projects (up to six years), and the application should have a work plan and budget for the first year and a projected work plan and estimated budget detail for Years 2-6.

[1] The funding levels detailed in the chart are intended as estimates only based on the scope of work for each activity. Recipients may propose different funding levels for each activity so long as the application addresses each activity, and the overall funding request does not exceed the maximum limit of $5,280,000 (excluding EPA in-kind).

Applicants must address each Activity below in their application to be considered eligible.

Activity 1: CBP Agricultural Watershed Fertilizer Manure Data Scientist
Estimated Available Funding: $900,000 ($150,000 per year for six years)

The recipient will work closely with the CBP agricultural team to analyze data related to fertilizer and manure management practices in agricultural watersheds. The data scientist will use analytical skills and knowledge of statistical modeling to identify trends and make recommendations to improve fertilizer and manure management practices. The ideal candidate has a strong background in agricultural science, statistical analysis, and data visualization.

The work involves the use of several types of databases, programming languages, analysis software, and data management tools. Assurances of the quality of the data and its management are embedded in the activity's tasks with clear documentation of management processes, QA/QC procedures, and findings from data analyses. In addition, there are expectations that stakeholders have full and open access to the information for their use.

Work performed under this activity will contribute to enhanced multi-partner, consensus-based environmental decision-making in the watershed through the integrated analysis of nonpoint source data used for planning more cost-effective restoration strategies as well as measuring progress toward achieving Chesapeake Bay Program goals.

The following are tasks expected to be included in the workplan. Applicants should address how they will conduct these tasks or describe in detail alternative approaches to providing the requested support.

- Develop and maintain databases related to fertilizer and manure management practices in agricultural watersheds.
- Analyze data using statistical modeling and machine-learning techniques to identify trends and patterns in fertilizer and manure management practices.
- Work with the agricultural team to make recommendations to improve fertilizer and manure management practices based on data analysis.
- Communicate findings to stakeholders, including farmers, policymakers, and the public, through reports, presentations, and other channels.
- Collaborate with other data scientists, engineers, and researchers to develop and implement data-driven solutions to improve agricultural practices.

Activity 2: CBP Watershed Modeler
Estimated Available Funding: $870,000 ($145,000 per year for six years)

The recipient will oversee the development of next-generation watershed models including their calibration, validation, and management application. In addition to modeling, the activity involves 1) the development of quantitative analysis frameworks to help understand the impacts of changing watershed conditions on water quality as estimated by both models and the CBP nontidal monitoring network, and 2) the understanding and improvement of assessments of water quality criteria in Chesapeake Bay tidal waters, which is the endpoint measure of the effect of restoration activities.

Information from the model predictions and monitoring must be interpreted and used to clearly communicate environmental management implications to policymaker and stakeholder audiences through a variety of media and mechanisms.

The work involves the use of several types of databases, programming languages, and analysis software. Assurances of the quality of the data and its management are embedded in the activity's tasks with clear documentation of methods, QA/QC procedures, and findings from model scenarios and data analysis. In addition, there are expectations that stakeholders have full and open access to the information for their use.

Work performed under this activity will contribute to enhanced multi-partner, consensus-based environmental decision-making in the watershed through understanding trends in water quality in the nontidal regions of the watershed as well linked-model applications. Both are used, in part, for planning more cost-effective restoration strategies as well as measuring progress toward achieving Chesapeake Bay Program goals.

The following are tasks expected to be included in the workplan. Applicants should address how they will conduct these tasks or describe in detail alternative approaches to providing the requested support.

- Develop next-generation watershed models to improve Bay Program estimates of the influence of watershed conditions and BMPs on nutrient and sediment load changes.
    - The work specifically includes the continued development of a parsimonious Bayesian model of the Chesapeake Bay watershed used to explore drivers of spatial variability in nutrient loads and as a statistical spatial calibration tool to inform the Phase 7 version of the CBP Watershed Model.
    - Develop a quantitative analysis framework to explore, understand, and ultimately communicate to managers and CBP stakeholders the differences in long- and short-term trends in constituent loads between CAST predictions and WRTDS estimates. The ultimate goal of this analysis is to inform and guide watershed model improvements.
- Analyze nutrient and sediment load trends using data from the nontidal monitoring network to inform calibration of a Bayesian watershed model.
- Advance the development of tools to improve assessments of water quality criteria in Chesapeake Bay tidal waters.
    - Collaborate with CBP stakeholders and CBP office staff to develop a leading-edge 4-D interpolation tool to estimate dissolved oxygen in the Bay and improve criteria assessment.
- Contribute to the advancement of models used to forecast seasonal hypoxia in the Chesapeake Bay each year.
- Operate models and databases using several operating systems, program languages, analysis software, and standard visualization packages.
    - Conduct and document data analyses and visualization using R, Stan, and ArcGIS.
    - Contribute to the transition of CBP Bayesian watershed model code to operation on the Amazon Web Services cloud.
- Assist states, the District of Columbia, and other stakeholder groups with the development of improved numeric measures of progress toward meeting TMDL goals using data from the nontidal monitored network and models.

- Contribute to CBP efforts centered on measuring the effects of climate change on watershed and tidal bay conditions.
- Provide support to the CBP partners through the preparation of reports, program materials, and scenario and model documentation. Disseminate and explain information and study findings through presentations at CBP GIT and workgroup meetings, technical/scientific conferences, and other appropriate venues.
- Contribute to the full documentation of the Phase 7 version of the CBP Watershed Model.

Activity 3: CBP Tidal Monitoring Data Analyst
Estimated Available Funding: $660,000 ($110,000 per year for six years)

This activity involves the development of quantitative analysis frameworks to enhance criteria assessment capabilities in Chesapeake Bay tidal waters and the response of tidal water quality to changes in the watershed, including restoration activities. Information about the status and trends in monitored tidal water quality must be interpreted and used to clearly communicate environmental management implications to policymaker and stakeholder audiences through a variety of media and mechanisms.

The work involves the use of several types of databases, programming languages, and analysis software for testing the predictive abilities of different approaches. Assurances of the quality of the data and its management are embedded in the activity's tasks with clear documentation of methods, QA/QC procedures, and findings from data analyses. In addition, there are expectations that stakeholders have full and open access to the information for their use.

Work performed under this activity will contribute to enhanced multi-partner, consensus-based environmental decision-making in the watershed through the integrated analysis of tidal water quality data. The information is used, in part, for planning more cost-effective restoration strategies as well as measuring progress toward achieving Chesapeake Bay Program goals.

The following are tasks expected to be included in the workplan. Applicants should address how they will conduct these tasks or describe in detail alternative approaches to providing the requested support.

- Oversee the development of new spatial analytical techniques for water quality data analysis.
    - Serve as the technical lead on prototype applications of a space-time dissolved oxygen interpolator tool (i.e., 4D interpolator) to ultimately enhance criteria assessment capabilities in the tidal waters.
- Establish and lead monthly meetings of a 4D interpolator work group to move development forward.
- Develop and modify computer code written in Fortran and SAS programming languages for automating and documenting regular analytical procedures.
    - Develop code for a prototype 4D interpolator, testing model options, variables additions, and predictive abilities of the approach.
- Work with members of STAR, the Tidal Monitoring and Assessment Workgroup (TMAW), and the Nontidal Network Workgroup (NTNWG) to better understand water quality patterns and trends in the Chesapeake Bay and its watershed.

    - Identify integrated analytical efforts to evaluate past and present estuarine water quality and lower trophic level responses to changes in flow, pollutant inputs, population, land uses and other natural anthropogenic factors.
    - Coordinate efforts to simulate future responses within the estuarine ecosystem based on past and planned implementation actions. Possible tasks include:
        - Examinations of nutrient limitation changes in Chesapeake Bay tributaries.
        - Documenting the benefits of synthesis efforts focused on SAV response to management actions.
        - Modeling climate impacts on SAV.
- Provide scientific synthesis support for CBP management issues including:
    - Updates to STAR Logic and Action Plan and Science Needs lists.
    - Lead sessions of the Chesapeake Community Research Symposiums, which bring together tidal and nontidal researchers to share ideas and move scientistic synthesis forward.
- In collaboration with members of the TMAW, investigate procedures for quantifying and communicating status and trends in water quality in the Bay and tidal tributaries and develop plans for updating these deliverables and enhancing their utility with respect to assessing and communicating the effectiveness of management actions.
    - Compile and assure the quality of deliverables from CBP partners to generate bay-wide tidal water quality trend results for annual analyses.
    - Report tidal trend results each year to STAR and the Integrated Trends Analysis Team (ITAT).
    - Incorporate tidal water quality trend results for specific tidal stations into annual trend products.
- Provide technical support to STAR and TMAW including scheduling meetings and work sessions, setting agendas, developing annual work plans, summarizing and tracking follow-up responses to workgroup actions and decisions, and identifying key issues for resolution by the workgroups.
- Provide technical assistance to CBP GITs by identifying and developing analytical syntheses that effectively communicate the status and trends of environmental conditions in the Bay and tidal tributaries.
    - Work includes the development of and updates to CBP Tributary Summaries.
    - Provide detailed tributary trend information to CBP stakeholders when needed.

Activity 4: CBP Nontidal Monitoring Data Analyst
Estimated Available Funding: $870,000 ($145,000 per year for six years)

This activity involves the development of quantitative analysis frameworks to better understand riverine water quality trends and patterns of tidal water quality standards attainment. This includes assessments of the effects of nutrient limitation in the Chesapeake Bay tributaries. All tasks under the activity improve the understanding of factors affecting changes in tidal and nontidal water quality, including changes in watershed conditions and restoration efforts. Information about the status and trends in water quality must be interpreted and used to clearly communicate environmental management implications to policy and stakeholder audiences through a variety of media and mechanisms.

The work involves the use of several types of databases, programming languages, and analysis software for testing the predictive abilities of different approaches. Assurances of the quality of the data and its management are embedded in the activity's tasks with clear documentation of methods, QA/QC procedures, and findings from data analyses. In addition, there are expectations that stakeholders have full and open access to the information for their use.

Work performed under this activity will contribute to enhanced multi-partner, consensus-based environmental decision-making in the watershed through the integrated analysis of water quality data from linked-model applications. The information is used, in part, for planning more cost-effective restoration strategies as well as measuring progress toward achieving Chesapeake Bay Program goals.

The following are tasks expected to be included in the workplan. Applicants should address how they will conduct these tasks or describe in detail alternative approaches to providing the requested support.

- Coordinate and develop new analytical and visualization techniques to interpret data generated through basin-wide monitoring programs and compare the results to measures of restoration.
    - Explore water quality standards attainment patterns of tidal segments using new metrics such as attainment buffer and attainment deficit – visualizing and communicating attainment results using R Shiny APPs.
    - Lead efforts to develop a nontidal TMDL indicator using monitoring and modeling information to inform the progress of reduction of nitrogen and phosphorus from the Bay watershed.
- Collaborate with partners to obtain information on factors affecting changes in water resources' health; evaluate past and present watershed water quality and biological resource responses to changes in flow, pollutant inputs, population, land uses and other natural or anthropogenic factors.
    - Collaborate with scientists at USGS to develop an approach for quantifying riverine water quality trends under different flow conditions.
    - Work toward a better understanding of nutrient limitation in the Bay's major tributaries using the latest monitoring data and statistical tools.
    - Use statistical approaches (i.e., clustering & classification) to understand regional patterns and drivers of total phosphorus variability in the Chesapeake nontidal watershed.
- Assess the effectiveness of management actions and changes in watershed conditions on long-and short-term observed responses within the Chesapeake Bay watershed ecosystem.
    - Update basin summary reports for 12 Chesapeake Bay tidal tributaries using newly available data sets.
    - Integrate data from CBP partners to update water quality indicators for Chesapeake Bay restoration for 1) nitrogen, phosphorus, and suspended solids loads to the Bay and 2) water quality standards criteria attainment. Communicate and publish findings through the Chesapeake Progress website.
- Work with partners to maintain the continuity and stewardship of the current CBP nontidal water quality monitoring networks. Assist with efforts to continue enhancements to the network through the coordination of existing monitoring, prioritizing locations for new stations, and engaging non-traditional monitoring groups' participation in the network, including local water quality monitoring projects.

- Prioritize the management issues for scientific synthesis and lead efforts to engage more academics and other partners to participate in better understanding trends in water quality and what affects those trends. Prepare reports, program materials, and documentation for environmental indicators.
- Educate stakeholders and other interested parties about the status and trends in water qualtiy through publications and clear public presentations. Disseminate and explain information and study findings through presentations at CBP GIT and workgroup meetings, technical/scientific conferences, and other appropriate venues.
- Provide technical support to STAR and its workgroups, including educating members on partner'' subjects of interest, summarizing and tracking follow-up responses to GIT and workgroup actions and decisions, developing annual work plans, and identifying key issues for resolution by the groups. Relevant workgroups and teams include the following:
    - Climate Resiliency Workgroup
    - Criteria Assessment Protocol Workgroup
    - Integrated Monitoring Networks Workgroup
    - Nontidal Network Workgroup
    - Integrated Trends Analysis Team
    - Modeling Workgroup
    - Status and Trends Workgroup
    - Tidal Trends Analysis Team

Activity 5: CBP Geographic Information Systems Analyst
Estimated Available Funding: $948,000 ($158,000 per year for six years)

Chesapeake Bay Program restoration goals and measures of success require sound data analysis and management including quality geo-spatial mapping and its interpretation. Desktop and web-based systems that integrate geographical data for watershed and estuarine ecosystems with other environmental information help to clearly communicate environmental management implications to policy and stakeholder audiences. This activity ensures partners have direct access to the geographic data and information needed to support restoration and protection actions.

The work involves the use of Environmental Systems Research Institute (ESRI)-based GIS software to assess changes in pollutant loads to the Chesapeake Bay, the degree of attainment of water quality criteria in tidal waters as well as a host of other measures related to watershed conditions and targeting restoration activities. Easy access to geographic mapping helps partners visualize areas of concern and success.

Assurances of the quality of the data and its management are embedded in the activity's tasks with clear documentation of methods, QA/QC procedures, and findings from data analyses. In addition, there are expectations that stakeholders have full and open access to the information for their use.

Work performed under this activity will contribute to enhanced multi-partner, consensus-based environmental decision-making in the watershed through the integrated analysis of geographic data. The information is used, in part, for planning more cost-effective restoration strategies as well as measuring progress toward achieving Chesapeake Bay Program goals.

The following are tasks expected to be included in the workplan. Applicants should address how they will conduct these tasks or describe in detail alternative approaches to providing the requested support.

- Analyze, manage, and map geo-spatial data using ESRI-based GIS software, particularly ArcGIS, so that complex environmental and ecosystem process data can be understood – and provide GIS expertise to CBP partners. Projects may include the following:
    - Assessment of water quality criteria in the tidal Chesapeake Bay.
    - Measurements of nutrient and sediment load changes.
    - Targeting of habitat restoration for species of concern.
    - Compilations of seamless watershed-wide derived soils data.
    - The development of a leading-edge 4-D interpolation tool to estimate dissolved oxygen in the Bay and improve criteria assessment.
    - The addition of USGS Science Base data to the CBP Open Data Portal, a collaboration with the USGS.
    - Computations to highlight the hardening status of shorelines of the Chesapeake Bay shoreline in support of the CBP's Fish Habitat Action Team and Forage Action Team.
    - Collaborations with the modeling team including the development of 3-D visualizations of the estuary.
    - Updating legislative district maps based on new redistricting.
- Aid in the development of Bay Program environmental indicators related to the geographic presentation of the information in the Chesapeake Progress website.
    - Update SAV Indicator, Oyster Indicator, and Public Access Indicator map services.
- Integrate geographic data and maps more fully into CBP web sites to provide more of a geographic context. This includes the functionality links on embedded maps.
- Publish maps and data more effectively on CBP web sites for viewing and downloading using CBP map publishing tools. Data layers could include the following:
    - Most Effective Basin layers to the Open Data Portal.
    - Disadvantaged Communities within the Most Effective Basin layers to the Open Data Portal.
    - Maintaining the Open Data Portal Catalog for inventory.
    - Collaborating with Blue Raster on building an ArcGIS Hub Site for accessing data, tools, and documents.
- Help train non-Federal Bay Program staff and partners in ArcGIS software use.
- Represent the Bay Program at both internal and external meetings. Disseminate and explain information through presentations at CBP GIT and workgroup meetings, technical/scientific conferences, and other appropriate venues.
- Coordinate and produce technical documentation, reports, data dictionaries, and metadata, explaining analysis methods used to develop data and conduct geospatial analyses.
- Coordinate with EPA to make CBP geospatial metadata accessible through the EPA Geodata Gateway.

Activity 6: CBP Model Operations Scientist
Estimated Available Funding: $1,032,000 ($172,000 per year for six years)

This activity entails the development of next-generation models for assessing tidal water quality and sediment transport, including their calibration, validation, and management application. Included

among the tasks are assessments of the effects of climate change and the effects on water quality criteria attainment. The CBP Model Operations Scientist supports partner organizations by providing a wealth of information on tidal water parameters with interpretations of cause-and-effect relationships centered on water quality and living resources in the estuary. Information from the model predictions and monitoring must be interpreted and used to clearly communicate environmental management implications to policymaker and stakeholder audiences through a variety of media and mechanisms.

The work involves the use of several types of programming languages, databases, software for analysis and visualization, and supporting estuary models systems on the cloud and super computers. Assurances of the quality of the data and its management are embedded in the activity's tasks with clear documentation of methods, QA/QC procedures, and findings from model scenarios and data analysis. In addition, there are expectations that stakeholders have full and open access to the information for their use.

Work performed under this activity will contribute to enhanced multi-partner, consensus-based environmental decision-making through understanding the effects of changing watershed and estuary conditions on tidal water quality and sediment transport. These cause-and-effect relationships are used, in part, for planning more cost-effective restoration strategies as well as measuring progress toward achieving Chesapeake Bay Program goals.

The following are tasks expected to be included in the workplan. Applicants should address how they will conduct these tasks or describe in detail alternative approaches to providing the requested support.

- Support the development and operation of CBP Water Quality and Sediment Transport Models (WQSTM) Ch3D-ICM and SCHISM-ICM. Applications of the estuarine model could include the following:
    - Assessments of the effects of climate change, including the effects on water quality criteria attainment.
    - Refinements to the estuarine model to simulate the effects of losses of tidal wetlands because of climate change conditions.
    - Refinements to the model to simulate SAV biogeochemical dynamics and the impact on water quality.
    - Coupling between SCHISM and ICM code so that the coupled system can be operated in distributed parallel mode on the EPA cluster computer systems and the Amazon cloud.
- Support partner organizations in their understanding of the effects of changing environmental conditions in the estuary by providing data and explanations from the CBP models. Typical requests for information include model boundary conditions; SAV analyses; CHAMP (Chesapeake Hypoxia Analysis and Modeling Program); water quality parameters like temperature, salinity, DO, and chlorophyll a; tidal impacts of nutrient fluxes from sediment; habitat volumes; striped bass populations; and fish habitat. Organizations supported include state agencies and academic institutions.
- Support Bay model applications by 1) developing, adapting, and operating software systems to analyze CBP estuarine model output to address questions of water quality and living resource response to estuarine inputs and 2) creating and enhancing linkages between CBP partnership's models with other models of the Chesapeake Bay and watershed ecosystems, especially those pertinent to living resource models. Tasks could include the following:

    - Water quality criteria attainment assessments based on observations for a rolling three-year period.
    - Code development for shallow water and chlorophyll a criteria assessments.
    - Algorithm and code development for the effect of nutrient limitation in modeled management scenarios; model selection in R, based on hypoxia volume and nutrient limitation; and benthic algae simulations.
    - Creation of graphics using gri, R, GIS, gnuplot, and python to analyze water quality simulations with CH3D, CE-QUAL-ICM and SCHISM.
    - Implementation of the SCHISM and FVCOM model systems on the Amazon Cloud and the EPA super computer.
    - Development of a method for empirical mode decomposition, spectral analysis, CART analysis, GAM, and tidal harmonic analysis in the Corsica River.
    - Applying the SCHISM-ICM model systems to the Corsica and Patuxent rivers.
    - Grid generation for a Patuxent and Choptank simulation.
- Provide technical support to CBP partners through the preparation of reports, program materials, scenario and model documentation, and peer-reviewed journal articles. Disseminate and explain information and study findings through presentations at CBP GIT, workgroup, and STAR meetings, technical/scientific conferences, and other appropriate venues including the following:
    - Modeling Workgroup
    - Criteria Assessment Protocol Workgroup
    - Climate Resiliency Workgroup
    - Integrated Monitoring Networks Workgroup and the Bay Oxygen Research Group
    - Scientific and Technical Advisory Committee
    - Chesapeake Community Modeling Partnership

C. EPA Strategic Plan Linkage & Anticipated Outcomes and Outputs

Pursuant to Section 6a of EPA Order 5700.7A1, "Environmental Results under EPA Assistance Agreements," EPA must link proposed assistance agreements to the Agency's Strategic Plan.

1. Linkage to EPA's Strategic Plan
The activities to be funded under this solicitation support the FY 2022-2026 EPA Strategic Plan. Awards made under this solicitation will support *Goal 5: Ensure Clean and Safe Water for All Communities*, *Objective 5.2 Protect and Restore Waterbodies and Watersheds* of the Strategic Plan.

EPA Order 5700.7A1 also requires that grant applicants adequately describe environmental outputs and outcomes to be achieved under assistance agreements. Applicants must include specific statements describing the environmental results of the proposed project in terms of well-defined outputs and, to the maximum extent practicable, well-defined outcomes that will demonstrate how the project will contribute to accomplishment of the Activities described above in Section I.B.

2. Outputs
The term "output" means an environmental activity, effort, and/or associated work product related to an environmental goal and objective that will be produced or provided over a period of time or by a specified date. Outputs may be quantitative or qualitative but must be measurable during an assistance

agreement funding period. Examples of potential outputs under the Scope of Work of this announcement may include but are not limited to the following:

Activity 1 Outputs: CBP Agricultural Watershed Fertilizer Manure Data Scientist

- Develop and maintain databases related to fertilizer and manure management practices for the agricultural sector.
- Analyze data using statistical modeling and machine learning techniques to identify trends and patterns in fertilizer and manure management practices.
- Develop and deliver one or two informational reports and/or presentations to communicate findings to stakeholders.

Activity 2 Outputs: CBP Watershed Modeler

- Develop the next-generation "Phase 7" watershed model to improve Bay Program estimates of the influence of watershed conditions and BMPs on nutrient and sediment load changes.
- Analyze nutrient and sediment load trends using data from the nontidal monitoring network to inform calibration of a Bayesian watershed model.
- Develop and deliver one or two informational presentations at CBP GIT and workgroup meetings and/or technical scientific conferences.

Activity 3 Outputs: CBP Tidal Monitoring Data Analyst

- Oversee the development of new spatial analytical techniques for water quality data analysis.
- Work with members of STAR, the Tidal Monitoring and Assessment Workgroup (TMAW), and the Nontidal Network Workgroup (NTNWG) to better understand water quality patterns and trends in the Chesapeake Bay and its watershed.
- Update yearly deliverables for status and trends in water quality in the Bay and tidal tributaries enhancing their utility with respect to assessing and communicating the effectiveness of management actions.

Activity 4 Outputs: CBP Nontidal Monitoring Data Analyst

- Coordinate and develop new analytical and visualization techniques to interpret data generated through basin-wide monitoring programs and compare the results to measures of restoration.
- Evaluate past and present watershed water quality and biological resource responses to changes in flow, pollutant inputs, population, land uses and other natural or anthropogenic factors.
- Assess the effectiveness of management actions and changes in watershed conditions on long- and short-term observed responses within the Chesapeake Bay watershed ecosystem.

Activity 5 Outputs: CBP Geographic Information Systems Analyst

- Analyze, manage, and map geo-spatial data using ESRI-based GIS software so that complex environmental and ecosystem process data can be understood.
- Aid in the development of Bay Program environmental indicators related to the geographic presentation of the information on Chesapeake Progress.
- Make CBP geospatial metadata accessible through the EPA Geodata Gateway.

Activity 6 Outputs: CBP Model Operations Scientist

- Support the development and operation of CBP Water Quality and Sediment Transport Models (WQSTM) Ch3D-ICM and SCHISM-ICM.

- Support partner organizations with their understanding of the effects of changing environmental conditions in the estuary by providing data and explanations from the CBP models.

3. Outcomes

The term "outcome" means the result, effect, or consequence that will occur from carrying out an environmental program or activity that is related to an environmental or programmatic goal or objective. Outcomes may be qualitative and environmental, behavioral, health-related, or programmatic in nature but must also be quantitative. They may not necessarily be achievable within an assistance agreement funding period. Examples of potential outcomes under the Scope of Work of this announcement may include but are not limited to the following:

- Enhanced multi-partner, consensus-based environmental decision making, planning and execution of more cost-effective restoration strategies; and
- Improved accuracy in measuring progress toward achieving CBP goals.

The ultimate objective is meeting water quality standards in the watershed's streams and rivers as well as the estuary. Increased knowledge and strategies improve the local economy and human health and advance environmental goals toward a restored Chesapeake Bay. Particular attention will be paid to improvements that benefit underserved communities and improve responses to future climate change challenges.

Outcomes are specifically achieved through:

1. the integrated analysis of nonpoint source data;
2. understanding trends in water quality in the nontidal regions of the watershed as well linked-model applications;
3. the integrated analysis of tidal water quality data;
4. the analysis of water quality data from linked-model applications;
5. the integrated analysis of geographic data; and
6. understanding the effects of changing watershed and estuary conditions on tidal water quality and sediment transport.

D. Authorizing Statutes and Regulations

This grant is made pursuant to CWA Section 117(d), 33 U.S.C. Section 1267(d), which authorizes EPA to issue grants and cooperative agreements for the purposes of protecting and restoring the Chesapeake Bay's ecosystem. This project is subject to the Office of Management and Budget's (OMB) Uniform Grants Guidance (2 C.F.R. Part 200) and EPA-specific provisions of the Uniform Grants Guidance (2 C.F.R. Part 1500).

E. Minority Serving Institutions:

EPA recognizes that it is important to engage all available minds to address the environmental challenges the nation faces. At the same time, EPA seeks to expand the environmental conversation by including members of communities which may have not previously participated in such dialogues to participate in EPA programs. For this reason, EPA strongly encourages all eligible applicants identified in Section III, including minority serving institutions (MSIs), to apply under this opportunity. For purposes of this solicitation, the following are considered MSIs:

1. Historically Black Colleges and Universities, as defined by the Higher Education Act (20 U.S.C. § 1061(2)). A list of these schools can be found at Historically Black Colleges and Universities;

2. Tribal Colleges and Universities (TCUs), as defined by the Higher Education Act (20 U.S.C. § 1059c(b)(3) and (d)(1)). A list of these schools can be found at American Indian Tribally Controlled Colleges and Universities;

3. Hispanic-Serving Institutions (HSIs), as defined by the Higher Education Act (20 U.S.C. § 1101a(a)(5)). A list of these schools can be found at Hispanic-Serving Institutions;

4. Asian American and Native American Pacific Islander-Serving Institutions; (AANAPISIs), as defined by the Higher Education Act (20 U.S.C. § 1059g(b)(2)). A list of these schools can be found at Asian American and Native American Pacific Islander-Serving Institutions; and

5. Predominately Black Institutions (PBIs), as defined by the Higher Education Act of 2008, 20 U.S.C. 1059e(b)(6). A list of these schools can be found at Predominately Black Institutions.

II. AWARD INFORMATION

A. Funding Amount and Expected Number of Awards

The total estimated federal funding under this solicitation is approximately $5,280,000 for one cooperative agreement. Funding will be awarded incrementally in the amount of $880,000 per year for six years depending on funding availability, satisfactory performance, Agency priorities, and other applicable considerations.

To support this activity, the selected organization may request that staff, for matters of efficiency, be located at the U.S. EPA CBPO located in Annapolis, Maryland. Office space, valued at $9,400 per person per year, may be provided by EPA as in-kind assistance under the cooperative agreement, if requested. The EPA in-kind funding would be in addition to the $5,280,000 referenced above. Applicants must include in-kind funding in the calculation of the cost share for this opportunity and on the SF-424 and SF-424A (see Appendix A).

EPA reserves the right to reject all applications and make no award under this announcement or award less than the estimated funding amounts above. EPA makes no commitment of annual funding amounts for any fiscal year(s), as funds may be limited based on agency considerations.

EPA reserves the right to make additional awards under this announcement, consistent with Agency policy and guidance, if additional funding becomes available after the original selection is made. Any additional selection for awards will be made no later than six months after the original selection decision.

B. Award Type

EPA intends to award one cooperative agreement under this solicitation. Cooperative agreements provide for substantial involvement between the EPA Project Officer and the selected applicant in the performance of the work supported. Although EPA will negotiate precise terms and conditions relating

to substantial involvement as part of the award process, the anticipated substantial federal involvement for these projects may include:

- Close monitoring of the grantee's performance to verify the results reported by the grantee;
- Collaboration during performance of the scope of work;
- A review of proposed procurement in accordance with 2 CFR 200.317 and 2 CFR 200.318;
- Approving qualifications of key personnel; and
- Review and comment on reports prepared under the cooperative agreement.

EPA does not have the authority to select recipient employees, contractors, or subrecipients, and the final decision on the content of reports rests with the recipient.

For this project, federal involvement would typically be in the form of participation with other CBP partners and stakeholders in an advisory capacity to the recipient. The participation is expected to include involvement through the Modeling Workgroup, various CBP GITs, and related committees and workgroups (on which EPA also participates to ensure that all the recommendations for technical work support the CBP partners). All work conducted is to support the *2014 Chesapeake Bay Watershed Agreement* and the Chesapeake Bay TMDL.

C. Partial Funding

In appropriate circumstances, EPA reserves the right to partially fund applications by funding discrete portions or phases of proposed projects. If EPA decides to partially fund a project, it will do so in a manner that does not prejudice the applicant or affect the basis upon which the application or portion thereof was evaluated and selected for award and therefore maintains the integrity of the competition and selection process.

D. Expected Project Period

The expected project period for the cooperative agreement is six years, with funding provided on an annual basis. No commitment of funding can be made beyond the first year. The expected start date for the award resulting from this RFA is **January 15, 2024**.

III. ELIGIBILITY INFORMATION

Note: Additional provisions that apply to this section can be found at EPA Solicitation Clauses.

A. Eligible Applicants

Consistent with Assistance Listing 66.466 and CWA Section 117(d), competition under this solicitation is available for technical and general assistance grants to nonprofit organizations, State, tribal (federally-recognized) and local governments, colleges, universities, and interstate agencies. For-profit organizations are not eligible to submit applications in response to this RFA.

Consistent with the definition of "nonprofit organization" at 2 CFR 200.1, the term nonprofit organization means any corporation, trust, association, cooperative, or other organization that is operated mainly for scientific, educational, service, charitable, or similar purpose in the public interest

and is not organized primarily for profit; and uses net proceeds to maintain, improve, or expand the operation of the organization. The term includes tax-exempt nonprofit neighborhood and labor organizations. Note that 2 CFR 200.1 specifically excludes Institutions of Higher Education from the definition of non-profit organization because they are separately defined in the regulation. While not considered to be a non-profit organization(s) as defined by 2 CFR 200.1, public or nonprofit Institutions of Higher Education are, nevertheless, eligible to submit applications under this RFA. Hospitals operated by state, tribal, or local governments or that meet the definition of nonprofit at 2 CFR 200.1 are also eligible to apply as nonprofits or as instrumentalities of the unit of government depending on the applicable law. For-profit colleges, universities, trade schools, and hospitals are ineligible.

Nonprofit organizations that are not exempt from taxation under section 501 of the Internal Revenue Code must submit other forms of documentation of nonprofit status; such as certificates of incorporation as nonprofit under state or tribal law. Nonprofit organizations exempt from taxation under section 501(c)(4) of the Internal Revenue Code that lobby are not eligible for EPA funding as provided in the Lobbying Disclosure Act, 2 U.S.C. 1611.

B. Cost-Share or Matching Requirements

Pursuant to CWA Section 117(d)(2)(A), 33 USC Section 1267(d)(2)(A), the agency shall determine the cost-share requirements for awards. Assistance Listing 66.466, states that assistance agreement applicants must commit to a cost-share ranging from 5 percent to 50 percent of eligible project costs as determined at the sole discretion of EPA. For this RFA, EPA has determined that an applicant must provide a minimum of 5 percent of the total cost of the project as the non-federal cost-share.

Cost-share may be in the form of cash or in-kind contributions. Involvement from foundations, watershed groups, private sector, eligible governmental, as well as non-conventional partners can help with the match. The match must be met by eligible and allowable costs and is subject to the match provisions in grant regulations. Applications that do not demonstrate how the minimum 5 percent match will be met will be rejected. Selected recipients must comply with 2 CFR 200.306 when meeting a cost share.

C. Threshold Eligibility Criteria

All applications will be reviewed for eligibility and must meet the eligibility requirements described in Sections III.A., B., and C. to be considered eligible. Applicants deemed ineligible for funding will be notified within 15 calendar days of the ineligibility determination.

1. Applications must substantially comply with the application submission instructions and requirements set forth in Section IV of this solicitation or else they will be rejected. However, where a page limit is expressed in Section IV with respect to the application, or parts thereof, pages in excess of the page limitation will not be reviewed. Applicants are advised that readability is of paramount importance and should take precedence in application format, including selecting a legible font type and size for use in the application.

2. In addition, initial applications must be submitted through Grants.gov as stated in Section IV of this solicitation (except in the limited circumstances where another mode of submission is specifically allowed for as explained in Section IV) on or before the application submission deadline published in Section IV of this solicitation. Applicants are responsible for following the

submission instructions in Section IV of this solicitation to ensure that their application is timely submitted. Please note that applicants experiencing technical issues with submission through Grants.gov should follow the instructions provided in Section IV, which include both the requirement to contact Grants.gov and email a full application to EPA prior to the deadline.

3. Applications submitted outside of Grants.gov will be deemed ineligible without further consideration unless the applicant can clearly demonstrate that it was due to EPA mishandling or technical problems associated with Grants.gov or SAM.gov. An applicant's failure to timely submit their application through Grants.gov because they did not timely or properly register in SAM.gov or Grants.gov will not be considered an acceptable reason to consider a submission outside of Grants.gov.

4. Applications must be for projects linked to the strategic goal outlined in Section I.C.1.

5. For an application to be considered eligible for funding, all project-related activities included in the application must directly support the Chesapeake Bay watershed, which includes portions of Delaware, Maryland, New York, Pennsylvania, Virginia, and West Virginia, and all of the District of Columbia.

6. Applications must show how they will meet the 5 percent cost-share requirement of Section III.B. Applications that fail to meet the minimum 5 percent cost-share requirement will be rejected. (See Appendix A for additional information regarding the budget narrative and formula for calculating cost share.)

7. Applications requesting funding for more than the maximum available funding ($5,280,000) will be rejected. [2]

8. If an application is submitted that includes any ineligible tasks or activities, that portion of the application will be ineligible for funding and may, depending on the extent to which it affects the application, render the entire application ineligible.

9. Applications must address Activities 1-6 described in Section I.B. to be considered eligible. Applications that address do not address each Activity will be considered ineligible.

IV. APPLICATION AND SUBMISSION INFORMATION

Note: Additional provisions that apply to this section can be found at EPA Solicitation Clauses.

A. How to Obtain an Application Package

Applicants can download individual grant application forms from the application package available in the Workspace associated with this opportunity on Grants.gov.

[2] The maximum funding limit of $5,280,000 excludes EPA in-kind. For more information on requesting EPA in-kind, see Section II.A.

B. Submission Process

1. Requirement to Submit Through Grants.gov and Limited Exception Procedures

Applicants must apply electronically through Grants.gov under this funding opportunity based on the Grants.gov instructions in this announcement. If your organization has no access to the internet or access is very limited, you may request an exception for the remainder of this calendar year by following the procedures outlined here. Please note that your request must be received at least 15 calendar days before the application due date to allow enough time to negotiate alternative submission methods. Issues with submissions with respect to this opportunity only are addressed in section 3. Technical Issues with Submission below.

2. Submission Instructions

a. SAM.gov (System for Award Management) Registration Instructions

Organizations applying to this funding opportunity must have an active SAM.gov registration. If you have never done business with the Federal Government, you will need to register your organization in SAM.gov. If you do not have a SAM.gov account, then you will create an account using login.gov (1) to complete your SAM.gov registration. SAM.gov registration is FREE. The process for entity registrations includes obtaining Unique Entity ID (UEI), a 12-character alphanumeric ID assigned an entity by SAM.gov, and requires assertions, representations and certifications, and other information about your organization. Please review the Entity Registration Checklist for details on this process.

If you have done business with the Federal Government previously, you can check your entity status using your government issued UEI to determine if your registration is active. SAM.gov requires you renew your registration every 365 days to keep it active.

Please note that SAM.gov registration is different than obtaining a UEI only. Obtaining an UEI only validates your organization's legal business name and address. Please review the Frequently Asked Question on the difference for additional details.

Organizations should ensure that their SAM.gov registration includes a current e-Business (EBiz) point of contact name and email address. The EBiz point of contact is critical for Grants.gov Registration and system functionality.

Contact the Federal Service Desk for help with your SAM.gov account, to resolve technical issues or chat with a help desk agent: (866) 606-8220. The Federal Service desk hours of operation are Monday - Friday 8am - 8pm ET.

b. Grants.gov Registration Instructions

Once your SAM.gov account is active, you must register in Grants.gov. Grants.gov will electronically receive your organization information, such as e-Business (EBiz) point of contact email address and UEI. Organizations applying to this funding opportunity must have an active Grants.gov registration. Grants.gov registration is FREE. If you have never applied for a federal grant before, please review the Grants.gov Applicant Registration instructions. As part of the Grants.gov registration process, the EBiz point of contact is the only person that can affiliate and assign applicant roles to members of an

organization. In addition, at least one person must be assigned as an Authorized Organization Representative (AOR). Only person(s) with the AOR role can submit applications in Grants.gov. Please review the Intro to Grants.gov-Understanding User Roles and Learning Workspace - User Roles and Workspace Actions for details on this important process.

Please note that this process can take a month or more for new registrants. Applicants must ensure that all registration requirements are met in order to apply for this opportunity through Grants.gov and should ensure that all such requirements have been met well in advance of the application submission deadline.

Contact Grants.gov for assistance at 1-800-518-4726 or support@grants.gov to resolve technical issues with Grants.gov. Applicants who are outside the U.S. at the time of submittal and are not able to access the toll-free number may reach a Grants.gov representative by calling 606-545-5035. The Grants.gov Support Center is available 24 hours a day 7 days a week, excluding federal holidays.

c. Application Submission Process

To begin the application process under this grant announcement, go to Grants.gov and click the red "Apply" button at the top of the view grant opportunity page associated with this opportunity.

The electronic submission of your application to this funding opportunity must be made by an official representative of your organization who is registered with Grants.gov and is authorized to sign applications for Federal financial assistance. If the submit button is grayed out, it may be because you do not have the appropriate role to submit in your organization. Contact your organization's EBiz point of contact or contact Grants.gov for assistance at 1-800-518-4726 or support@grants.gov.

Applicants need to ensure that the Authorized Organization Representative (AOR) who submits the application through Grants.gov and whose UEI is listed on the application is an AOR for the applicant listed on the application. Additionally, the UEI listed on the application must be registered to the applicant organization's SAM.gov account. If not, the application may be deemed ineligible.

d. Application Submission Deadline

Your organization's AOR must submit your complete application package electronically to EPA through Grants.gov no later than **October 30, 2023,** 11:59 PM ET. Please allow for enough time to successfully submit your application and allow for unexpected errors that may require you to resubmit.

Applications submitted through Grants.gov will be time and date stamped electronically. Please note that successful submission of your application through Grants.gov does not necessarily mean your application is eligible for award. Any application submitted after the application deadline time and date deadline will be deemed ineligible and not be considered.

3. Technical Issues with Submission

If applicants experience technical issues during the submission of an application that they are unable to resolve, follow these procedures before the application deadline date:

1) Contact Grants.gov Support Center **before** the application deadline date.

2) Document the Grants.gov ticket/case number.
3) Send an email with the RFA number EPA-I-R3-CBP-23-18 in the subject line to Erin Chapman (chapman.erin@epa.gov) **before** the application deadline time and date and **must** include the following:
    a. Grants.gov ticket/case number(s)
    b. Description of the issue
    c. The entire application package in PDF format.

Without this information, EPA may not be able to consider applications submitted outside of Grants.gov. Any application submitted after the application deadline time and date deadline will be deemed ineligible and **not** be considered.

Please note that successful submission through Grants.gov or email does not necessarily mean your application is eligible for award.

EPA will make decisions concerning acceptance of each application submitted outside of Grants.gov on a case-by-case basis. EPA will only consider accepting applications that were unable to submit through Grants.gov due to Grants.gov or relevant SAM.gov system issues or for unforeseen exigent circumstances, such as extreme weather interfering with internet access. Failure of an applicant to submit prior to the application submission deadline date because they did not properly or timely register in SAM.gov or Grants.gov is not an acceptable reason to justify acceptance of an application outside of Grants.gov.

4. Application Materials

The following forms and documents are required under this announcement:

Mandatory Documents:
1) Application for Federal Assistance (SF-424)
2) Budget Information for Non-Construction Programs (SF-424A)
3) EPA Key Contacts Form 5700-54
4) EPA Form 4700-4 Preaward Compliance Review Report (see Tips for Completing EPA Form 4700-4 for guidance)
5) Project Narrative Attachment Form – The project narrative should be prepared as described in Appendix A of the announcement.
6) Budget Narrative Attachment Form – The budget narrative should include a spreadsheet that shows each year's cost for the salaries, fringe benefits, total salaries/wages, travel expenses, equipment, supplies, contractual expenses, other cost, and indirect cost. An optional multi-year budget detail template is available at https://www.epa.gov/restoration-chesapeake-bay/chesapeake-bay-program-grant-guidance. For more information, please refer to RAIN-2019-G02, Interim General Budget Development Guidance for Applicants and Recipients of EPA Financial Assistance.

Optional Documents:
7) Other Attachment Form – The applicant's Indirect Cost Rate Agreement should be included, as applicable. See RAIN-2018-G02-R, Indirect Cost Guidance for Recipients of EPA Assistance Agreements for additional information about indirect costs.

C. Project Narrative Requirements

Content and Form of Project Narrative

Each application will be evaluated using the criteria in Section V.B. of this announcement. All application review criteria in Section V must be addressed in the project narrative. The project narrative shall not exceed **15** pages in length. Pages refer to one side of a single-spaced, typed page. Font size should be no smaller than 10 and the application must be submitted in an 8 ½" x 11"-page size format. **Note that the 15 pages include all supporting materials, including resumes or curriculum vitae**. The 15-page limit does not include documentation of non-profit status, cost-share letters of commitment, letters of support, the SF-424, SF-424A, budget detail, Key Contacts Form and 4700-4 form. If you submit more than 15 pages for the project narrative, the additional pages will be discarded and will not be reviewed. See Appendix A for additional instructions.

D. Other Application Information

1. Intergovernmental Review

Executive Order 12372, Intergovernmental Review of Federal Programs, may be applicable to awards resulting from this announcement. EPA implemented the Executive Order in 40 CFR Part 29. EPA may require applicants selected for funding to provide a copy of their application to their State Point of Contact (SPOC) for review as provided at 40 CFR 29.7 and 40 CFR 29.8. The SPOC list can be found on the webpage below. [3]

Office of Federal Financial Management Resources and Other Information

EPA may require successful applicants from states that do not have a SPOC to provide a copy of their application for review to directly affected state, area-wide, regional and local government entities as provided at 40 CFR 29.7 and 40 CFR 29.8. These reviews are not required before applying. Only applicants that EPA selects for funding under this announcement are subject to the Intergovernmental Review requirement.

2. Funding Restrictions

a. Administrative Cost Cap Requirement under Statutory Authority

Recipients applying for CBP assistance agreements must adhere to the requirements for "Administrative Costs" under the CWA Section 117 (d)(4), 33 U.S.C. Section 1267 (d)(4), where they are defined as "the cost of salaries and fringe benefits incurred in administering" the grant, and which also states that administrative costs shall not exceed 10 percent of the annual grant award, which equals both the federal and recipient shares. *Appendix B: Administrative Cost Cap Worksheet* is provided as an example of a method to calculate the 10-percent limitation. You are not required to submit Appendix B with your application.

[3] Additional information regarding the Intergovernmental Review process can be found on the EPA Region 3 website at https://www.epa.gov/grants/epa-region-3-grants-and-audit-management-branch-intergovernmental-review-process-and-single.

b. Allowable Costs

All costs incurred under this program must be allowable under 2 CFR Part 200 Subpart E. In accordance with applicable law, regulation, and policy, any recipient of funding must agree to comply with restrictions on using assistance funds for unauthorized lobbying, fund-raising, or political activities (i.e., lobbying members of Congress or lobbying for other federal grants, cooperative agreements, or contracts). See e.g. 2 CFR 200.450. Funds generally cannot be used to pay for travel by federal agency staff. Proposed project activities must also comply with all state and federal regulations applicable to the project area. The applicant must also review the solicitation for any other programmatic funding restrictions applicable to this program. If awarded funding, the recipient must refer to the terms and conditions of its award for other funding restrictions applicable to its award. It is the responsibility of the recipient to ensure compliance with these requirements. In addition, please see 2 CFR 200 for information on pre-award costs.

E. Coalition Coverage

Groups of two or more eligible applicants may choose to form a coalition and submit a single application under this RFA; however, one entity must be responsible for the grant. Coalitions must identify which eligible organization will be the recipient of the grant and which eligible organization(s) will be subrecipients of the recipient (the "pass-through entity"). Subawards must be consistent with the definition of that term in 2 CFR 200.1 and comply with EPA's Subaward Policy. The pass-through entity that administers the grant and subawards will be accountable to EPA for proper expenditure of the funds and reporting and will be the point of contact for the coalition. As provided in 2 CFR 200.332, subrecipients are accountable to the pass-through entity for proper use of EPA funding. For-profit organizations are not eligible for subawards under this grant program but may receive procurement contracts. Any contracts for services or products funded with EPA financial assistance must be awarded under the competitive procurement procedures of 2 CFR Part 200 and/or 2 CFR Part 1500, as applicable. The regulations at 2 CFR 1500.10 contain limitations on the extent to which EPA funds may be used to compensate individual consultants. Refer to the Best Practice Guide for Procuring Services, Supplies, and Equipment Under EPA Assistance Agreements for guidance on competitive procurement requirements and consultant compensation. Do not name a procurement contractor (including a consultant) as a "partner" or otherwise in your application unless the contractor has been selected in compliance with competitive procurement requirements.

V. APPLICATION REVIEW INFORMATION

Note: Additional provisions that apply to this section can be found at EPA Solicitation Clauses.

A. Evaluation Process

After EPA reviews applications for threshold eligibility purposes as described in Section III, CBPO will conduct a merit evaluation of each eligible application. Reviews will be performed by a team of professionals from EPA and other CBP partner organizations with a working knowledge of the technical analysis and programmatic evaluation needs of the CBP partnership. All reviewers will sign a conflict-of-interest statement indicating they have no conflict.

B. Evaluation Criteria: Maximum score: 100 points

The evaluation criteria below will be used to review eligible applications submitted under this RFA.

Criteria	Points
1. **Organizational Capability and Program Description:** Under this criterion, reviewers will evaluate the application based on: a. The quality of the application and how it demonstrates the organization's ability to timely and successfully achieve the relevant activities to support the CBP partners as described in Section I.B. **(15 points)** b. How well the applicant demonstrates the organizational capability, resources, and relevant skills, experience, and knowledge to: i. Analyze data related to fertilizer and manure management practices in agricultural watersheds, identify trends, and make recommendations to improve fertilizer and manure management practices. **(5 points)** ii. Develop next-generation watershed models and quantitative analysis frameworks to help understand the impacts of changing watershed conditions on water quality as estimated by models and the CBP nontidal monitoring. Understand and improve assessments of water quality criteria in Chesapeake Bay tidal waters. **(5 points)** iii. Develop quantitative analysis frameworks to enhance criteria assessment capabilities in Chesapeake Bay tidal waters and the response of tidal water quality to changes in the watershed, including restoration activities. **(5 points)** iv. Develop quantitative analysis frameworks to better understand riverine water quality trends and patterns of tidal water quality standards attainment, including assessments of the effects of nutrient limitation in the Chesapeake Bay tributaries. **(5 points)** v. Ensure partners have direct access to the geographic data and information needed to support restoration and protection actions using ESRI-based GIS software to measure watershed conditions and target restoration activities. **(5 points)** vi. Develop next-generation models for assessing tidal water quality and sediment transport, including their calibration, validation, and management application, as well as assessing the effects of climate change on water quality criteria attainment. **(5 points)** Note: Prior to naming a contractor (including consultants) or subrecipient in your application as a "partner", please carefully review Section IV.d, "Contracts and Subawards", of EPA's Solicitation Clauses. In evaluating this criterion, EPA will only consider the experience of any contractor(s), including consultants, if the applicant demonstrates they were selected in compliance with the competitive procurement requirements in 2 CFR 200.319 and 2 CFR 200.320. EPA does not accept justifications for sole-source contracts for services or products available in the commercial marketplace based on a contractor's role in preparing an application.	45

2. **Environmental Results Past Performance:** Under this criterion, reviewers will evaluate the applicant based on their programmatic capability to successfully perform the proposed activity, considering the applicant's: a. Past performance in successfully completing and managing assistance agreements identified in their project narrative. Assistance agreements include federal grants and cooperative agreements (but not federal contracts) similar in size, scope, and relevance to the proposed project within the last five years (preferably EPA agreements). **(10 points)** b. Extent and quality to which applicant adequately documented and/or reported their progress in achieving the expected results (e.g., outcomes and outputs) under federal agency assistance agreements performed within the last five years, and, if such progress was not made, whether the applicant adequately documented and/or reported why not. **(10 points)** c. Demonstrated programmatic skill and experience through citation of specific examples relevant to the complexity of work described. **(5 points)** Note: In evaluating applicants under items a. and b. of this criterion, the Agency will consider the information provided by the applicant and may also consider relevant information from other sources, including agency files and prior/current grantors (e.g., to verify and/or supplement the information supplied by the applicant). If you do not have any relevant or available past performance or past reporting information, please indicate this in the application and you will receive a neutral score for these subfactors (items a. and b. above--a neutral score is half of the total points available in a subset of possible points). If you do not provide any response for these items, you may receive a score of 0 for these factors.	25
3. **Cost-effectiveness:** Under this criterion, reviewers will evaluate each application based on the degree of cost-effectiveness, considering the following factors: organizational overhead, budget breakdown, and ability to control costs for the relevant Activities listed in Section I. **(10 points)**	10
4. **Transferability of Results to Similar Projects and/or Dissemination to the Public:** Under this criterion, reviewers will evaluate the application based on the degree to which the application includes an adequate plan to gather information and lessons learned from the project and transfer that documentation, information, data, results, and recommendations to CBP partners and stakeholders across the Chesapeake Bay watershed in a timely manner. **(5 points)**	5
5. **Timely Expenditure of Grant Funds:** Under this criterion, reviewers will evaluate the application based on the approach, procedures, and controls for ensuring that awarded grant funds will be expended in a timely and efficient manner. **(5 points)**	5
6. **Environmental Results:** Applicants will be evaluated based on their plan and approach for tracking and measuring their progress towards achieving the environmental outputs and outcomes identified in Section I.C of the RFA. **(10 points)**	10
TOTAL	**100**

C. Review and Selection Process

Eligible applications will be evaluated and ranked using the criteria stated in Section V.B. above by a panel of reviewers from EPA and other CBP partner organizations with a working knowledge of the technical analysis and programmatic evaluation needs of the CBP partnership. The review team will then forward the highest-ranked applications to the CBPO Director or Deputy Director for final selection. In making the final funding decision, the selection official may also consider programmatic goals and priorities, including those described in the 2014 *Chesapeake Bay Watershed Agreement* at https://www.chesapeakebay.net/what/what_guides_us/watershed_agreement.

VI. AWARD ADMINISTRATION INFORMATION

Note: Additional provisions that apply to this section can be found at EPA Solicitation Clauses.

A. Award Notices and Instructions for Submission of Final Application

It is expected that the applicant will be notified in writing of funding decisions on or around **December 1, 2023** either via electronic or postal mail. The notification will be sent to the original signer of the application or the project contact listed in the application. This notification, which informs the applicant that its application has been selected and is being recommended for award, is not an authorization to begin work. The official notification of an award will be made by the EPA Region 3 Grants Management Office. Applicants are cautioned that only a grant award official is authorized to bind the government to the expenditure of funds; selection does not guarantee an award will be made. For example, statutory authorization, funding, or other issues discovered during the award process may affect the ability of EPA to make an award to an applicant. The award notice, signed by an EPA grant award official, is the authorizing document and will be provided either via email or U.S. Postal Service.

Notification of selection does not indicate that the applicant can start work on the project. The selected applicant will be asked to submit a full federal assistance agreement application package. A federal project officer assists in the application process and negotiates a work plan, budget, and starting date. Processing for this particular cooperative agreement award is expected to take 60 days.

B. Administrative and National Policy Requirements

If your application is selected for funding, the following information will be helpful in preparing your cooperative agreement application. A listing and description of general EPA regulations applicable to the award of assistance agreements may be viewed at: https://www.epa.gov/grants/epa-policies-and-guidance-grants.

C. Reporting

Progress Report/Final Report Requirements
The awarded applicant will be required to submit semi-annual progress reports (every six months) throughout the duration of the agreement to update the EPA Project Officer on project progress. Semi-annual progress reports are due within 30 days after the end of each reporting period, as detailed in the award terms and conditions. The recipient will also be required to participate in semi-annual calls/meetings with the EPA Project Officer to discuss progress. A final progress report is due to the EPA Project Officer within 120 after the end of the award performance period. The recipient may be

requested to provide progress and informational presentations to the CBP technical and management decision-making groups.

EPA Requirements for Quality Management Plans and Quality Assurance Plans
In accordance with 2 C.F.R. Section 1500.12, projects that include the generation or use of environmental data are required to submit a Quality Management Plan (QMP) and Quality Assurance Project Plan (QAPP).

The QMP must document quality assurance policies and practices that are sufficient to produce data of adequate quality to meet program objectives. The QMP should be prepared in accordance with EPA's Quality Management Plan (QMP) Standard. The recipient's QMP should be reviewed and updated annually as needed. The QMP must be submitted to the EPA project officer at least 45 days prior to the initiation of data collection or data compilation.

The recipient must develop and implement quality assurance and quality control procedures, specifications and documentation that are sufficient to produce data of adequate quality to meet project objectives. The QAPP is the document that provides comprehensive details about the quality assurance/quality control requirements and technical activities that must be implemented to ensure that project objectives are met. The QAPP should be prepared in accordance with the current version of EPA's Quality Assurance Project Plan (QAPP) Standard and EPA QA/G-5: Guidance for Quality Assurance Project Plans. The QAPP must be submitted to the EPA project officer at least 30 days prior to the initiation of data collection or data compilation. A model template and guidance for developing QAPPs can be found at https://www.epa.gov/quality/epa-region-3-quality-assurance-project-plans.

D. Disputes

Assistance agreement competition-related disputes will be resolved in accordance with the dispute resolution procedures published in 70 FR (Federal Register) 3629, 3630 (January 26, 2005) which can be found at Grant Competition Dispute Resolution Procedures. Copies of these procedures may also be requested by contacting the person listed in Section VII of the announcement. Note, that the FR notice references regulations at 40 CFR Parts 30 and 31 that have been superseded by regulations in 2 CFR parts 200 and 1500. Notwithstanding the regulatory changes, the procedures for competition-related disputes remains unchanged from the procedures described at 70 FR 3629, 3630, as indicated in 2 CFR Part 1500, Subpart E.

E. Mandatory Disclosures

As required by 2 CFR § 200.113, non-federal entities or applicants for a Federal award must disclose, in a timely manner, in writing to the Federal awarding agency or pass-through entity all violations of Federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the Federal award. Failure to make required disclosures can result in any of the remedies described in 2 CFR § 200.339 including suspension and debarment.

VII. AGENCY CONTACTS

For administrative and technical issues regarding this RFA, please contact Erin Chapman via email at chapman.erin@epa.gov. All questions must be received in writing via with the reference line referring to

this RFA (Re: RFA EPA-I-R3-CBP-23-18). All questions and answers will be posted on https://www.epa.gov/grants/grants-your-region-information-specific-epa-region-3.

VIII. OTHER INFORMATION

In developing your application, you may find the following documents helpful. Websites for guidance documents are listed here. If you prefer a paper copy, please call 1-800-YOUR BAY.

Boundaries of the Chesapeake Bay Watershed
http://www.chesapeakebay.net/maps

Chesapeake Bay Watershed Agreement
https://www.chesapeakebay.net/what/what_guides_us/watershed_agreement

Chesapeake Bay Program Office Grant and Cooperative Agreement Guidance
https://www.epa.gov/restoration-chesapeake-bay/chesapeake-bay-program-grant-guidance

EPA Requirements for Quality Management Plans and Quality Assurance Plans
https://www.epa.gov/grants/implementation-quality-assurance-requirements-organizations-receiving-epa-financial

Please visit the EPA Grants website (https://www.epa.gov/grants), the EPA Region 3 Grants website (https://www.epa.gov/grants/grants-your-region-information-specific-epa-region-3) or the Chesapeake Bay Program website (https://www.epa.gov/restoration-chesapeake-bay/chesapeake-bay-program-grant-guidance) if you have questions about grant issues such as costs or eligibility.

Further information on CBP committees is located at:
https://www.chesapeakebay.net/who/how_we_are_organized

APPENDIX A. APPLICATION FORMAT
U. S. ENVIRONMENTAL PROTECTION AGENCY, Region III
EPA-I-R3-CBP-23-18

The following information must be provided, or the application may not be considered complete and may not be evaluated.

Project Narrative Format: Use the Project Narrative requirements detailed below to submit this document. Project narratives as described below shall not exceed 15 single-spaced pages in length. The project narrative must be submitted in an 8 ½" x 11"-page size format, and font size should be no smaller than 10. Note that the 15 pages include all supporting materials, including resumes or curriculum vitae. The 15-page limit does not include documentation of non-profit status, cost-share letters of commitment, letters of support, SF-424, SF-424A, budget narrative, Key Contacts Form and 4700-4 form. Applicant's responses should be numbered and submitted according to the format listed below.

1. Name, address (street and email), and contact information of the applicant

2. Background - Include the following in this section:

i) Project title
ii) Brief description of your organization.
iii) Documentation of non-profit status, if applicable.
iv) Brief biographies of applicant lead(s) including resumes and/or curriculum vitae.
v) Funding requested. Specify total cost of the project. Identify funding from other sources, including cost-share or in-kind resources.
vi) UEI number — See Section IV.B

3. Work plan - Include the following in this section:

i) A clear and concise discussion of how your organization will meet the objectives and requirements of each Activity, as described in Section I of the announcement.

ii) Environmental Results – Outputs and Outcomes: Address how the application will meet the expected outputs and outcomes of this project.
- Output: An output is an environmental activity, effort, or work product related to an environmental goal or objective that will be produced within the assistance agreement period. Examples of potential outputs for the activity are provided in Section I.C.2.
- Outcome: An outcome is a result, effect, or consequence that will result from carrying out an environmental program or activity that is related to an environmental programmatic goal or objective. Outcomes are quantitative measures that may not necessarily be achievable within the assistance agreement period. Examples of potential outcomes are included in section I.C.3.

iii) Review Criteria**:**
Address in narrative form each of the review criteria identified in Section V.B of the RFA. Identify by the review criteria number and title followed by your narrative.

With specific respect to the Programmatic Capability Past Performance factor in V.B: Submit a list of federally and/or non-federally funded assistance agreements (assistance agreements include federal grants and cooperative agreements but not federal contracts) that your organization performed within the last five years (no more than five agreements and preferably EPA agreements) and describe (i) whether, and how, you were able to successfully complete and manage those agreements and (ii) your history of meeting the reporting requirements under those agreements, including whether you adequately and timely reported on your progress towards achieving the expected outputs and outcomes of those agreements (and if not, explain why not) and whether you submitted acceptable final technical reports under the agreements.

In evaluating applicants under these factors in Section V, EPA will consider the information provided by the applicant and may also consider relevant information from other sources, including information from EPA files and from current/prior grantors (e.g., to verify and/or supplement the information provided by the applicant). If you do not have any relevant or available past performance or past reporting information, please indicate this in the application and you will receive a neutral score for these factors (a neutral score is half of the total points available in a subset of possible points). If you do not provide any response for these items, you may receive a score of 0 for these factors.

Budget narrative: For the first year and each of the subsequent years, provide a budget narrative breakdown by the major budget categories (i.e., personnel, fringe benefits, travel, equipment, supplies, contractual, construction, other, and indirect). For more information, please refer to EPA's Office of Grants and Debarment's budget guidance at RAIN-2019-G02 and indirect cost guidance located at RAIN-2018-G02-R.

In addition, grantees applying for CBP assistance agreements must adhere to the requirement for "Administrative Costs" under CWA Section 117 (d)(4), 33 U.S.C. Section 1267 (d)(4), which states that administrative costs shall not exceed 10 percent of the annual grant award. Information on how to calculate the 10 percent administration cost cap is located in Appendix B: Chesapeake Bay Program Administrative Cost Cap Worksheet.

In each of the budgets, include the cost-share amount (a minimum of 5 percent for each of the total project costs) and demonstrate how the cost-share will be met, including, if applicable, letters of commitment from any third-party contributors. Please note that subaward costs must be itemized under a separate sub-line item within the "Other" budget cost category. To calculate the minimum cost-share amount, applicants should follow these steps:

1. EPA assistance amount (including in-kind)[4] ÷ 95% = 100% of Total Grant Amount
2. 100% of Total Grant Amount × 5% = Applicant's Minimum Cost-Share Amount[5]

[4] See Section II.A for additional information regarding EPA in-kind. If requested, the recipient must include the EPA-kind in the calculation of the EPA assistance amount. For example, $5,280,000 federal funding + $338,400 in-kind for office space = $5,618,400 EPA assistance amount

[5] Applicants should round upward to the next dollar. Failure to do so may cause the application to fall short of the mandatory 5% cost-share requirement. Applicants are responsible for verifying that the proposed cost-share meets the minimum 5% requirement.

APPENDIX B. BUDGET GUIDANCE
EPA-R3-CBP-23-18

SAMPLE
(DO NOT SUBMIT WORKSHEET WITH APPLICATION)

CHESAPEAKE BAY PROGRAM ADMINISTRATIVE COST CAP WORKSHEET

INSTRUCTIONS: In accordance with Clean Water Act (CWA) Section 117(d)(4) and 117(e)(6), the costs of salaries and fringe benefits incurred in administering a grant under CWA Section 117(d) or 117(e) shall not exceed 10 percent of the annual grant award. The annual grant award is the total costs including Federal and cost share amounts. The worksheet below is provided to assist you in calculating allowable administrative costs. The Budget Narrative of your Application for Federal Assistance (SF-424) should reflect how your administrative costs will comply with the cap. For specific guidance, refer to the next page of this sample "Compliance with CWA Section 117 Requirements Restricting Administrative Costs."

Total Costs	$ _____
Cap %	X .10
Limit on Administrative Costs	$ (a) _____
List Administrative Costs: (Budgeted costs for application)	
_____	$ _____
_____	_____
_____	_____
_____	_____
Total	$ (b) _____

Line (b) cannot exceed Line (a).

COMPLIANCE WITH CWA SECTION 117
RESTRICTING ADMINISTRATIVE COSTS

Statutory Authority

Under statutory authority, applicants applying for Chesapeake Bay Program grants/cooperative agreements under Clean Water Act (CWA) Section 117 (d) or (e) must adhere to the requirement on administrative costs as follows:

- Under CWA Section 117(a)(1) Administrative Cost - The term "administrative cost" means the cost of salaries and fringe benefits incurred in administering a grant under this section.
- Under CWA Section 117(d)(4) - Administrative Costs. - Administrative costs shall not exceed 10 percent of the annual grant award.
- Under CWA Section 117(e)(6) - Administrative Costs. -Administrative costs shall not exceed 10 percent of the annual grant award.

Guidance for Determining Administrative Costs

As determined by EPA/CBPO, the following provides guidance in determining administrative costs for grants/cooperative agreements under CWA Section 117 (d) and (e).

1. Administrative Costs

Salaries and fringe benefits charged against the project or program element for the sole purpose of administering the grant/cooperative agreements shall not exceed 10% of the annual grant **award (Federal and cost share)**. 100% of the salaries and fringe benefits related to these functions are considered administrative costs. Examples of administrative costs include, but are not limited to, preparation and submission of grant applications, fiscal tracking of grants funds, maintaining project files, and collection and submission of deliverables.

2. Non-administrative Costs

Salaries and fringe benefits related to the implementation of the project or program element of the grant/cooperative agreement are not considered administrative costs. None of the salaries and fringe benefit costs related to these functions shall be considered administrative costs. Example:

- The salaries and fringe benefits for technical staff to conduct work to accomplish specific Bay Program goals as outlined in the program or project elements are not administrative costs.

3. Calculation of Administrative Costs

In order to ensure compliance with this requirement, use the format above or a similar format to calculate the costs and include in the Budget Detail of your Application for Federal Assistance (SF-424).

4. Questions Regarding Administrative Costs

The recipients shall direct questions to the EPA Project Officer who will determine what costs should be included as administrative costs on a case-by-case basis.