

Welcome!

- Today's session will be recorded and posted on EPA's Region 3 grants [website](#).
- Live captions can be turned on in the Settings.
- All audience video and microphones have been turned off to reserve bandwidth.
- Questions can be submitted through the chat or via email to: R3_CBPO_GRANTS@epa.gov at this [link](#)
- Questions and answers will be posted on the EPA Region 3 grants [website](#).



Landscape Characterization and Monitoring in the Chesapeake Bay Watershed


US EPA

Chesapeake Bay Program Office

Erin Chapman & Kaylyn Gootman

Agenda

- Funding Opportunity Overview
- Eligibility
- Application Materials
- Evaluating Applications
- Resources
- Q&A



Funding Opportunity Overview

Notice of Funding Opportunity (NOFO)

- NOFO and more information on [Region 3 grants webpage](#)
- Currently accepting applications in Grants.gov at this [link](#)
- Application deadline: **July 19, 2024, at 11:59pm ET**
- EPA anticipates awarding 1 cooperative agreement for 5 years
- Estimated start date: October 1, 2024

Funding Available

- Total Estimated Funding for 5 Years: \$6,500,000
- Cost Share: 5% Minimum

Activity	Estimated Funding Per Year	Total Estimated Funding for Five Years
Activity 1: High-Resolution Land Cover Characterization and Monitoring	\$500,000	\$2,500,000
Activity 2: Hyper-Temporal Spectral Indices	\$100,000	\$500,000
Activity 3: High-Resolution Land Use Characterization, Monitoring, and BMP verification	\$500,000	\$2,500,000
Activity 4: Stream Corridor Characterization	\$200,000	\$1,000,000
TOTAL	\$1,300,000	\$6,500,000

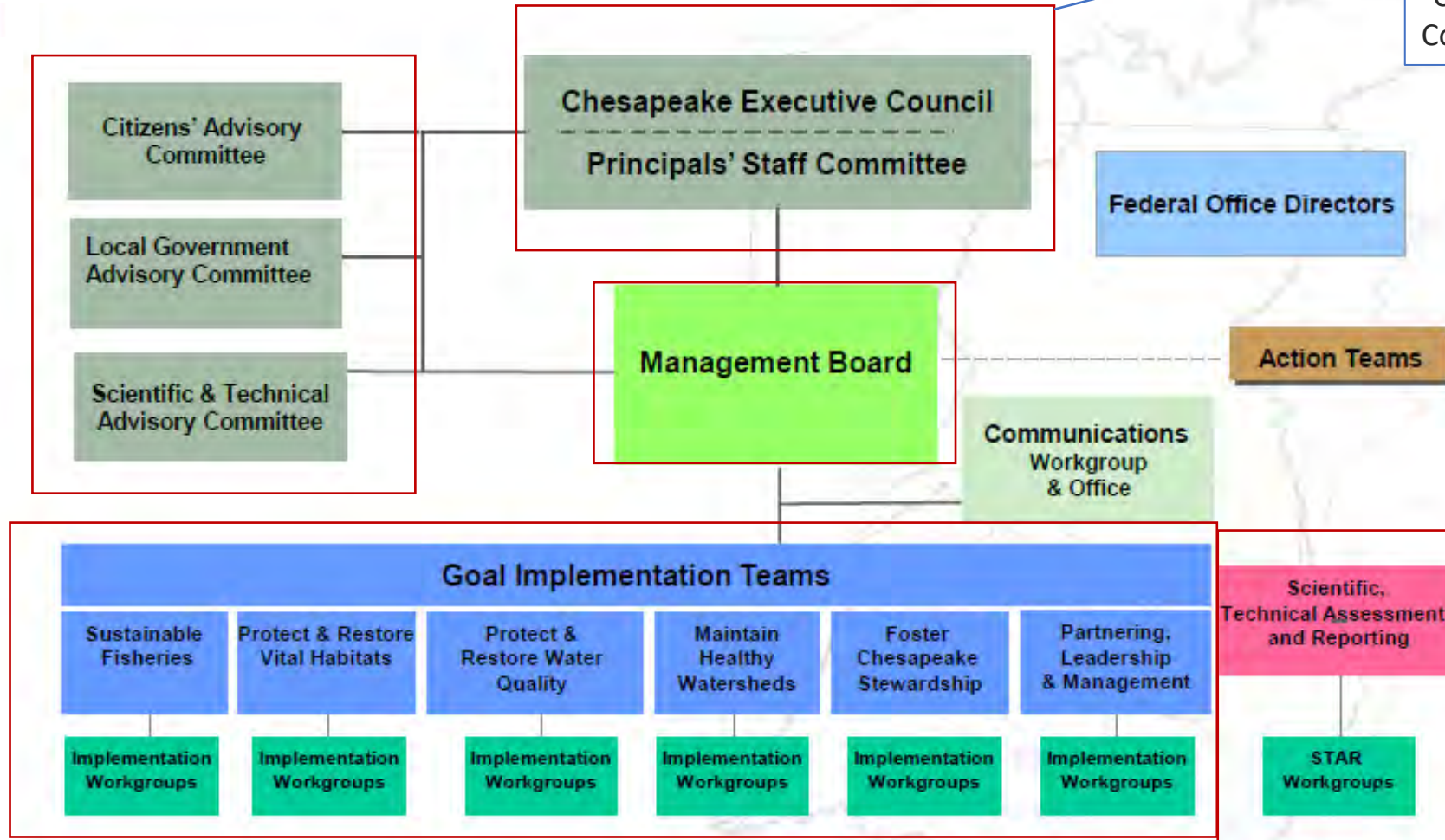
Chesapeake Bay Program Overview

- The [Chesapeake Bay Program \(CBP\)](#) is a regional partnership devoted to restoring and protecting the Chesapeake Bay and its watershed
 - ~40 agencies and programs in Delaware, District of Columbia, Maryland, New York, Pennsylvania, Virginia, and West Virginia
 - 19 federal agencies
 - ~1,800 local governments, represented through the Local Government Advisory Committee
 - 20+ academic institutions, represented through the Scientific and Technical Advisory Committee
 - 60+ non-governmental organizations, including businesses, non-profits and advocacy groups



Chesapeake Bay Program Structure

- Signatories as of 2014:
- Governors of MD, PA, VA, WV, NY, & DE
 - Mayor of DC
 - EPA Administrator
 - Chair of Chesapeake Bay Commission



Why Land Use/Land Cover (LULC) Data?



- Accurate LULC data are critical for informing the CBP Watershed Model and tracking changes in the watershed
- Changes in LULC influence more than half of the 31 outcomes detailed in the 2014 Chesapeake Bay Agreement

Scope of Work

- The purpose of this NOFO is to provide the CBP's non-federal partners with:
 - Updated LULC data
 - Enhanced river corridor data
 - Landscape metrics and communication products associated with these data
- Activities support multiple outcomes of the [2014 Chesapeake Bay Watershed Agreement](#)
- Programmatic direction will be through the [Land Use Workgroup](#) and [Water Quality Goal Implementation Team](#) and coordination with the Land Data Team
- The Chesapeake Bay Program Office (CBPO) Data Center will be involved in any data, code, technologies, applications, and products developed

Activities Overview

Activity 1

- High-Resolution Land Cover Characterization and Monitoring

Activity 2

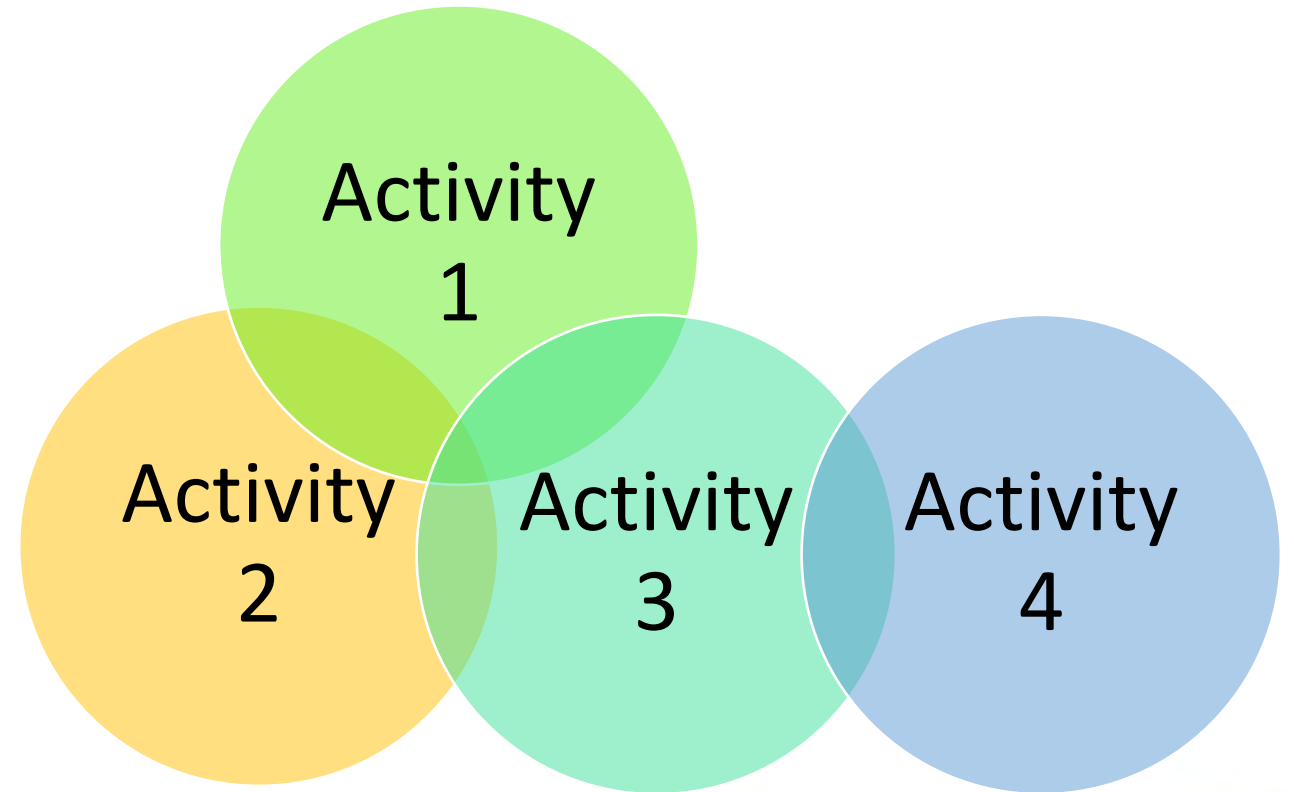
- Hyper-Temporal Spectral Indices

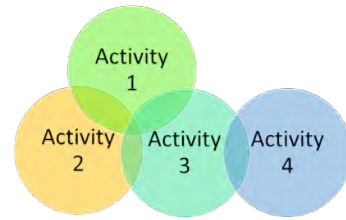
Activity 3

- High-Resolution Land Use Characterization, Monitoring, and BMP verification

Activity 4

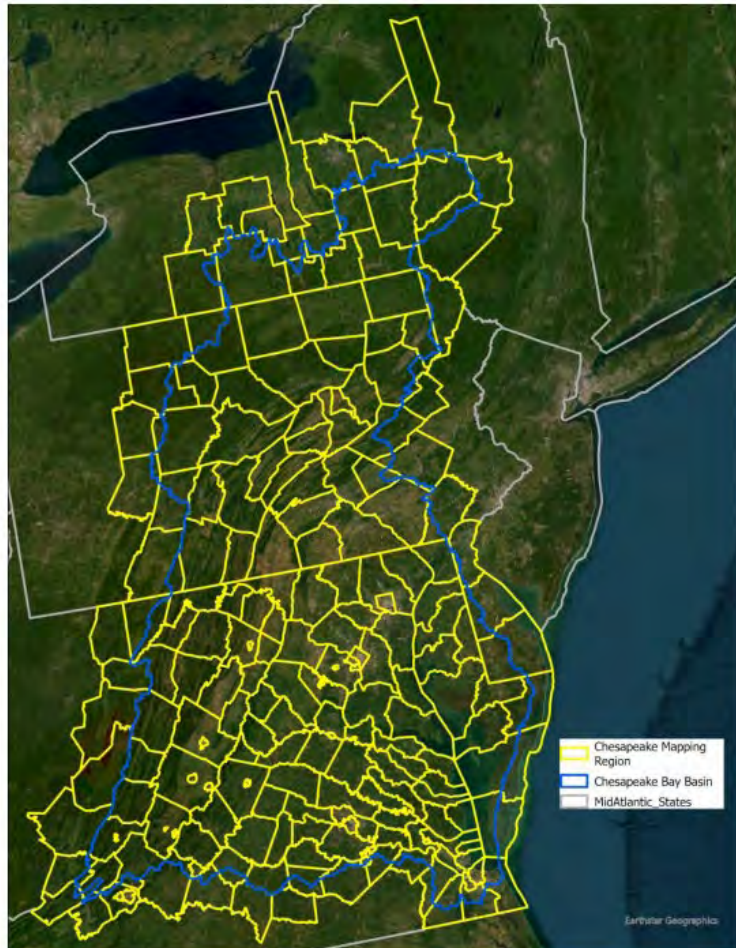
- Stream Corridor Characterization





Activity 1: High-Resolution Land Cover Characterization and Monitoring

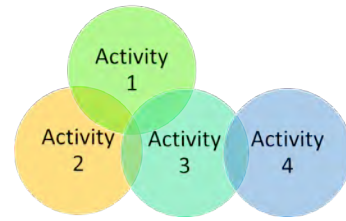
APPENDIX E. CHESAPEAKE BAY LULC MAPPING AREA



- Produce high spatial-resolution land cover for the Chesapeake Bay region (i.e., 206 counties) for specific years
- Innovations in AI and machine learning methods to improve the efficiency/accuracy of the land cover data are encouraged
- Activity 1 must be closely coordinated with Activities 2 and 3

Activity 1: Example Outputs

- Develop nine-class, 1-meter spatial resolution land cover raster data in cloud-optimized format for the year 2025/26 coordinated with the CBPO Data Center
- Develop land cover change from 2021/22 to 2025/26 with consistent bias compared to land cover changes mapped for 2013/14 to 2017/18 to 2021/22
 - Important Note: This may require remapping 2013/14 and 2017/18.
- Develop a state-stratified accuracy assessment of land cover change from 2021/22 to 2025/26 for all change class combinations composing up to 95% of observed change

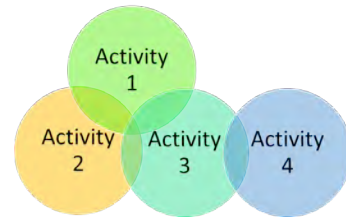


Activity 2: Hyper-Temporal Spectral Indices

- Produce hyper-temporal spectral indices from 1985-2028
 - Represents change in landscape condition, including vegetation and surface moisture/water estimates
 - Produced at monthly, bimonthly, seasonal, and annual intervals
- Activity 2 needs to be closely coordinated with Activities 1 and 3

Activity 2: Example Outputs

- Generate cloud-optimized raster datasets representing computed monthly, bimonthly, seasonal, and annual spectral at 30-meter and 10-meter resolution
- Prepare a complete computation of and algorithms for filtering noise and for assessing spatial temporal trends and detecting changes in spectral indices over time
- Utilize code and workflows to update the spectral indices

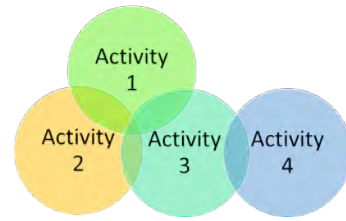


Activity 3: High-Resolution Land Use Characterization, Monitoring, and BMP Verification

- Produce high spatial-resolution land use for the years 2025/26 while ensuring consistent and accurate estimates of land use change since 2013/14
- Leverage machine learning to identify BMP presence/absence
- Provide public access and visualization of the LULC data
- Activity 3 must be closely coordinated with Activities 1, 2, and 4, and the CBP's Land Data Team

Activity 3: Example Outputs

- Generate a sixty-two class, 1-meter spatial resolution LULC raster data in cloud-optimized format for the year 2025/26 coordinated with the CBPO Data Center
- Improve BMP opportunity mapping and verification with LULC data
- Assess and document LULC change from 2021/22 to 2025/26
- Generate a comparison of bias in land cover change detection between the data for 2013/14 to 2017/18 to 2021/22 with the 2021/22 to 2025/26 change data



Activity 4: Stream Corridor Characterization

- Characterize stream corridors to enhance the utility & application of hyper-resolution hydrography data
- Include participatory science component monitoring and reporting on stream flow conditions at different times of year
- Activity 4 must be closely coordinated with Activity 3 and CBP's Land Data Team

Activity 4: Example Outputs

- Assign flow regime, channel, and floodplain attributes associated with each reach in the CBP hyper-resolution Hydrography dataset
- Integrate the hyper-resolution hydrography data into the Phase 7 model and stream health, brook trout, and watershed health outcomes
- Prepare and deliver communication products for hydrography data and the development of derivative data products to inform various CBP outcomes

Coordination and Communication

- Detailed action plans will be required at the start of the grant period
- Coordination and communication with multiple CBP Goal Implementation Teams, workgroups, and teams, including the CBP's Land Data Team is required
- Programmatic direction will be through the Land Use Workgroup and Water Quality Goal Implementation Team
- The CBPO Data Center will be involved in any data, code, technologies, applications, and products developed

Coordination and Communication

- The successful applicant will host webinars and training sessions as well as post and promote materials online
- End users will include state/local flood managers, hazard mitigation planners, land use and urban planners, residential community leaders, state/local water agencies, emergency response agencies, etc.

Eligibility

Eligible Applicants

- Entities eligible to apply:
 - Nonprofit organizations
 - State, tribal (federally-recognized) and local governments
 - Colleges and universities
 - Interstate agencies
- Entities not eligible:
 - For-profit organizations (including for-profit colleges, universities, trade schools, and hospitals)

Reference: Land Use NOFO page 14-15

Threshold Eligibility

1. Comply with the application submission instructions and requirements set forth in Section IV.
2. Submit application through Grants.gov on or before the deadline (July 19, 2024 at 11:59pm ET).
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.
4. Applications must be for projects linked to the strategic goal within the FY 2022-2026 EPA Strategic Plan.
5. All project-related activities must directly support the Chesapeake Bay watershed
6. Applications must show how they will meet the 5 percent cost share requirement.
7. Applications requesting funding for more than the maximum available funding (\$6,500,000) will be rejected.
8. Applications must not include any ineligible tasks or activities.
9. Applications must address Activities 1-4.

Application Materials

Application Materials

Mandatory:

- 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 Preaward Compliance Review Report Form [4700-4](#)
 - (see [Tips for Completing EPA Form 4700-4](#) for guidance)
- 5) Project Narrative Attachment Form: see Appendix A for details
- 6) Budget Narrative Attachment Form: see Appendix B for details

Optional:

- 7) Other Attachment Form: Include the Indirect Cost Rate Agreement, if applicable.

Reference: Land Use NOFO page 17

Project Narrative

Section A: Executive Summary

- Lead Organization
- Contact info
- Project title
- \$ funding request
- Cost share amount and funding sources
- Organization description
- Biographies

Section B: Project Plan

- Project Overview: A clear and concise discussion of how the objectives and requirements of each Activity will be met.
- Review Criteria: Address in narrative form each of the review criteria identified in Section V.B.

Budget Narrative

- Include a budget breakdown by detailing proposed costs for each of the major budget categories including personnel, fringe benefits, travel, equipment, supplies, contractual costs, construction, other costs, and indirect costs.
- Must address the total estimated project funding, including both the federal share and cost share.
- Cost Share: 5% minimum
 1. $\$6,500,000$ (EPA funding request) \div 95% = $\$6,842,105.26$
 2. $\$6,842,105.26 \times 5\%$ = $\$342,105.26$, which rounds upward to **$\$342,106$ (minimum cost share)**
- Administrative Cost Cap of 10%
- All budget information should be presented in whole dollar format (no cents).
- An optional multi-year budget template and additional budget guidance is available within the attachments to the [Chesapeake Bay Program Grant Guidance](#)

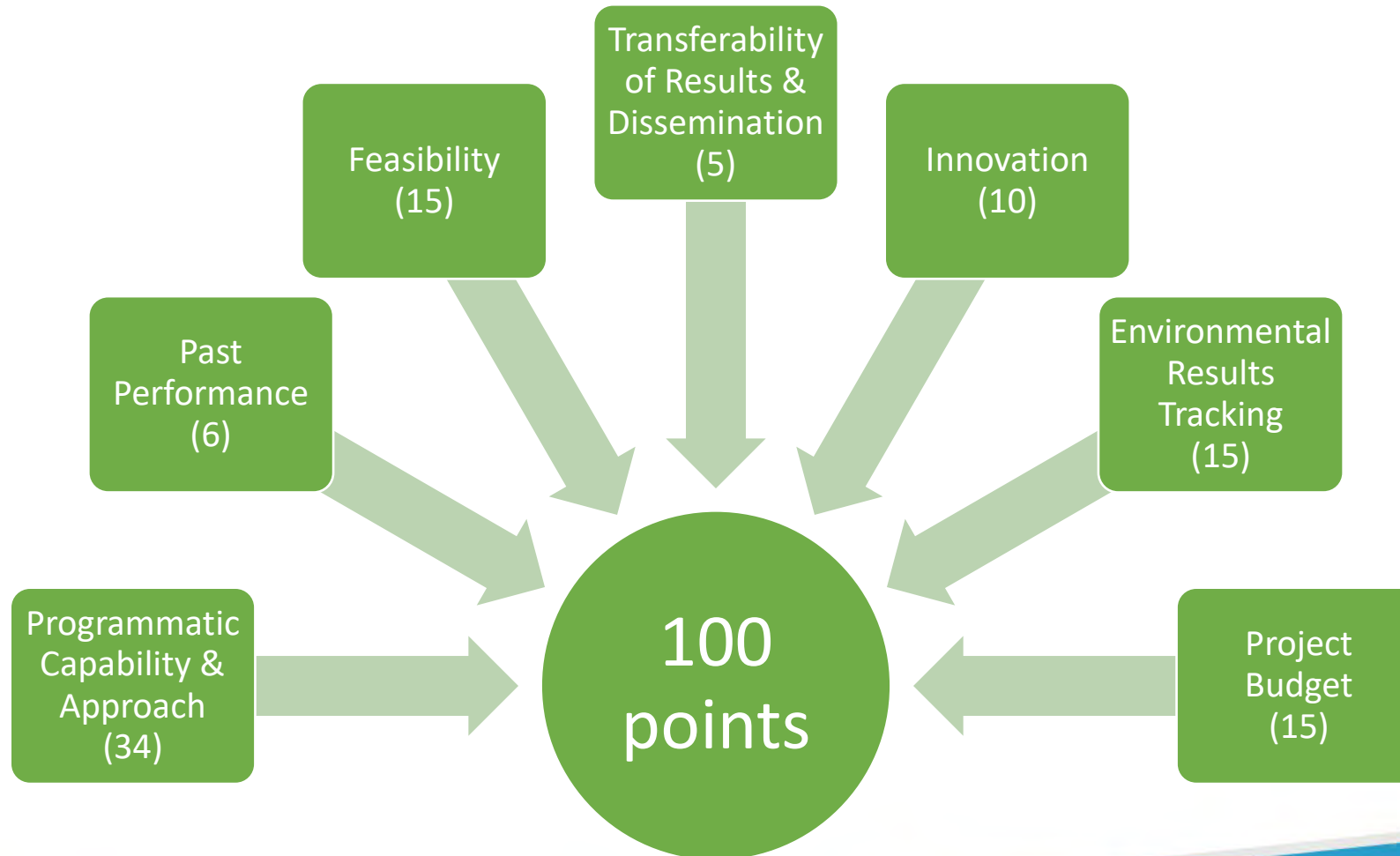


Evaluating Applications

Evaluation Process

- CBPO will conduct a merit evaluation of each eligible application
- Evaluations will be performed by a team of professionals with a working knowledge of the technical and programmatic needs of the CBP partnership
 - Review teams will be assembled from the EPA and other CBP partner organizations
 - All reviewers will sign a conflict-of-interest statement
- The evaluation criteria will be used to review eligible applications for a total of 100 possible points

Evaluation Criteria Weighting

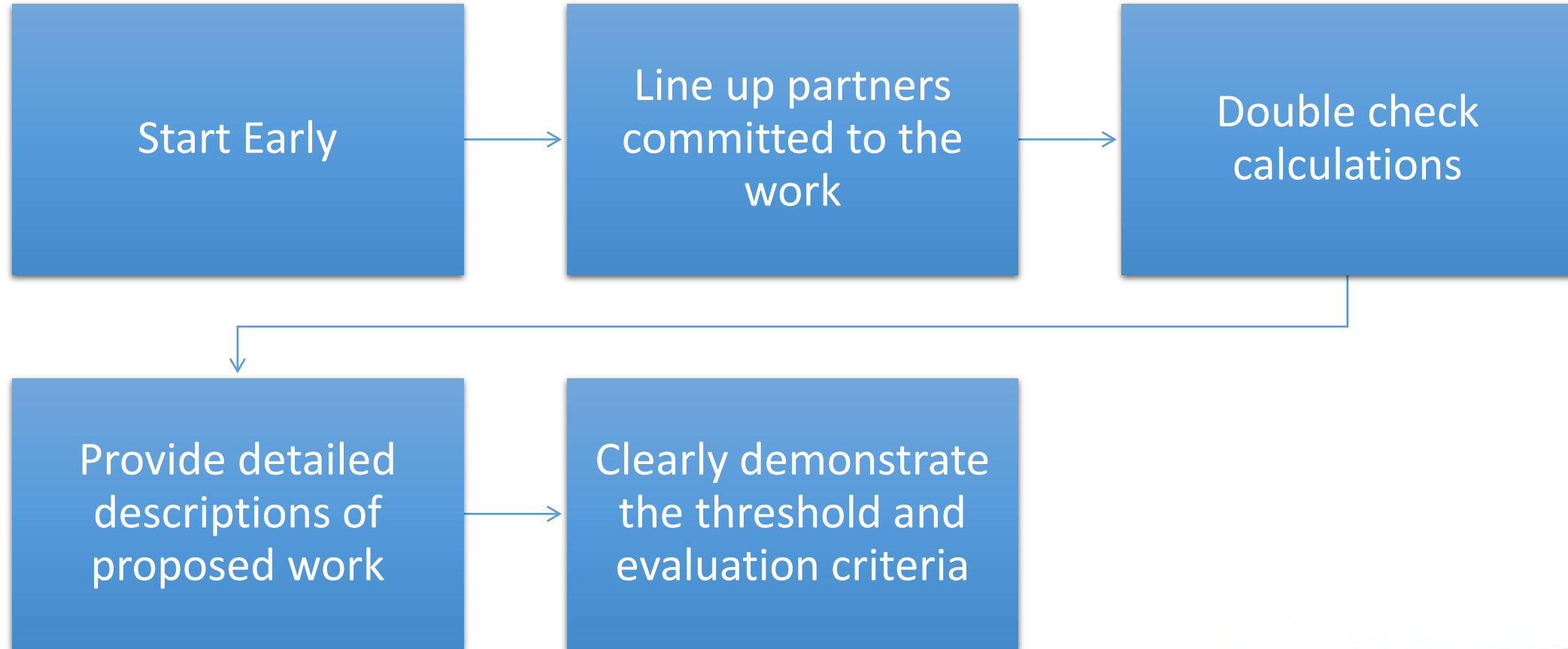


Resources

General EPA Grant Requirements

- Register NOW on SAM.gov!
- Must have an active SAM registration in www.SAM.gov to apply
- Once your SAM.gov account is active, you must register in www.Grants.gov

Tips for Preparing an Application



Useful Links

- [Region 3 grants webpage](#)
- To apply in Grants.gov use this [link](#)

- [Chesapeake Bay Program website](#)
- [2014 Chesapeake Bay Watershed Agreement](#)
- [Land Use Workgroup](#)
- [Water Quality Goal Implementation Team](#)



Thank you!

Questions?

Contact Info: R3_CBPO_GRANTS@epa.gov