



Chesapeake Conservation and Climate Corps Capstone Abstract Examples

To restore the organization's kid's garden to its former glory so it can be effectively used to introduce inner-city kids to their native environment and showcase how their food is processed and prepared before it reaches them in stores.
To conduct a companion cropping at Double Oak aimed at reducing weeds while improving the structure of the crops and soil.
To designate a stream on the southern side of the Parkers Creek watershed as a tier II stream. This will include conducting macroinvertebrate surveys, as well as forage surveys, which entail using minnow traps to catch small fish and invertebrates as a measure of fish species diversity in streams.
To develop an Anacostia activity book for use engaging with children and their families who already recreate in the watershed, making their recreation more meaningful.
To create a 10-15 minute educational video about the Anacostia River. Content of the video itself would encompass an abridged overview of the river's history, from pre-colonization to today.
To install a small stand of native fruit bearing/edible trees and perennials that are to be utilized by the community as part of a Community Food Forest.
To organize a paddle trash clean-up event to increase access to and awareness of Anne Arundel County's local waterways.
To plant a pollinator meadow in the C&O Canal National Historical Park that can be used to host educational activities and visits with the public.
To conduct a scientific study exploring the correlation between measured turbidity and soil type within water samples through looking at the changes in turbidity over time with various soil particle sizes and turbidity ranges in measured samples.
To gain insight into the environmental and economic consequences associated with the adoption of regenerative farming practices.
To develop a docuseries that highlights and celebrates effective conservation efforts and provides a platform to share insights into successful strategies, community engagement, and environmental impact.
To revamp a food forest by removing all the invasive species and weeds in the area and planting more edible and native plants in the food forest.
To create a suite of marketing and informational materials for the electrification program focused on heat pumps.
To define the property's forest edges and horticultural zone by creating a management plan for the forest edges incorporating forest restoration practices, that increases biodiversity through installing of a variety of native plants and removing invasive plants.
To create a sustainable strategy for the host organization's front facing engagements that increases capacity and integration in community.
To organize and plan a calendar of monthly events for the organization and simultaneously coordinate and lead each event.
To conduct research on how to properly develop an ecosystem report card through communicating with experts at UMCES, collecting sample site data from DNR, MBSS, and the Deep Creek Watershed Foundation, and visualizing the information in GIS.
To create a promotional video that can be used to get more people to sign up, spread the word of the host organization, and explain more about the program.

To improve the habitat quality of the existing meadow and planning the next phase of the meadow installment at Belmont Manor in Elkridge.
To create easy access to resources for members of the community that can help reduce the amount of waste that they produce, specifically during events, and energy that they use within their household. This would be done through a: guidebook with best practices for waste reduction.
To conduct a survey of herpetofauna at one or more of the Maryland Coastal Bays Program's (MCBP's) properties. Goal of the survey is to determine which species of reptile and amphibian are present on the property, which is currently unknown.
To create several image libraries of common HAB species in Maryland to be used with our FlowCam. This project will help create image libraries using cultures and running samples counted by traditional microscopy by a trained phytoplankton taxonomist
To propagate mussels as part of efforts to restock recovered habitats and inform the public about freshwater mussels with the goal of increasing community buy-in.
To educate residents in Western Maryland and Baltimore City on the implications of winter salt overapplication and promote smart salting practices by using existing salt boxes and developing an MDE winter salt outreach calendar.
To conduct a quantitative and qualitative cost benefit analysis of living shorelines and hardened structures as management methods for shoreline erosion issues including the economic, ecological, and social impacts and developing a summary report and outreach materials.
To conduct a tree planting project in an underserved and urban Maryland community to contribute to Maryland's 5 Million Tree Initiative and will potentially include partnership with another Corps Member/Host Organization.
To develop and carry out a study to identify if the host organization's current communication strategy is adequate, how landowners would best like to be contacted, the best contact methods, and if the various publications DNR and MET have available are useful to them or if they would be interested in them.
To develop and produce a series of short videos focused on showcasing the initiatives of black-led environmental organizations in Baltimore.
To install a "Green" House which will serve as a centerpiece of MDA's community garden and will be used as a demonstration space and will improve garden workshops.
To create a protocol for taking water quality measurements using a YSI and secchi disk at sampling locations in and around the new Harbor Wetland exhibit to create a protocol for taking water quality measurements using a YSI and secchi disk at sampling locations in and around the new Harbor Wetland exhibit currently being installed at the National Aquarium.
To bolster sustainable urban agriculture by creating an online hub for farmers who are eager to learn about and implement pollinator habitat best management practices on their farms which you will share with Baltimore urban farmers at a workshop in Spring 2024.
To support invasive removal and management at your Host Organization by developing an ArcGIS Map that tracks invasive species types, frequency, and removal efforts across Nature Forward's Woodend Nature Sanctuary.
To identify safer and more effective strategies and methods for data collection whether through daily procedures, buoy design, buoy/sensor maintenance, or Quality Control methods for your host organization, NOAA.
To support the development and hosting of an annual SAV Community Science Monitoring Event where participants will be trained to identify and sample SAV in the morning and collect data on SAV density and species abundance in Mallows Bay.

To broaden the host organization's outreach with the local Latino community by utilizing Spanish language-focused environmental stewardship events, in particular, leading the host organization in either hosting their own Latino Conservation Day event or as a significant partner in the National Aquarium's event.
To create a physical catalog of all of RNC's historical artifacts by researching and writing interpretive guides for the artifacts with information about the items and how they should be used in programs and creating a plan for how to keep the catalog up-to-date in the future.
To create a GIS map and story map of the data collected through the Operation Osprey program with the goal of providing SRA with a record of osprey populations (an important bioindicator) and a resource to give volunteers interested in participating in the program.
To plan and lead a one-day youth outreach guided paddle tour on Tuckahoe Creek that aims to connect Eastern Shore high school students to their local waterways, increase their environmental awareness, and empower them to take actions in their communities that improve water quality.
To develop, coordinate, and run an internship program for high school students from Baltimore city and Baltimore County with the goal of building, expanding, and increasing the participants' STEM knowledge and encouraging them to become environmental leaders in their communities.
To conduct a survey of mussels in the St. Mary's River Watershed with the goals of building on the scientific knowledge about mussels in the Chesapeake watershed and increasing community knowledge and engagement.
To develop and implement a community garden with partnership organizations and create and host an accompanying series of workshops.
To support the host organization's volunteer program through expanding volunteer opportunities and partnerships, identifying opportunities for volunteer appreciation and recognition, and creating a Standard Operating Procedures for volunteer onboarding.
To continue the work of a previous Corps Member by monitoring species composition as well as abiotic factors (available sunlight, salinity, soil C/N content) before and after a burn at Robinson Neck, updating the protocols that they developed, and scheduling future monitoring.
To host a bilingual green fair and pet fest that will incorporate activities, exhibits, and workshops to raise awareness about environmental issues and pet ownership while promoting sustainability to attendees who speak both English and Spanish.
To engage community members in learning about, and participating hands-on in, planting native pollinator species in containers at Masonville Cove.
To complete the milestones of the Climate Friendly Parks program for Fort McHenry and Hampton to be considered member parks.
To address the lack of capacity on campus to manage invasive plant species and to provide a recurring on-campus activity where students can network and connect through planning an invasive removal and native planting event.
To support invasive (wavyleaf basketgrass) management and removal efforts at the Patuxent Research Refuge by surveying the refuge for the invasive, creating an ArcGIS Map of the survey results, and beginning treatment of the impacted areas.
To conduct a study of <i>S. hirundo</i> on the "Tern Raft" and develop a publication sharing and analyzing the resulting data with the goals of raising awareness about the status of these birds in the region, information sharing with other ecologists about this type of conservation effort, and potential project transferability.
To reduce stigma surrounding the health of the Baltimore Harbor through public outreach, education, and events through social media posts, development of a GIS StoryMap, youth kayaking opportunities, and the Harbor Splash event.

To develop a one-year plan for Double Oak Food Forest which will outline the community engagement, food production, and permaculture design plans that will take place from 2025-2026.
To survey different tick species along the host organization's trails and how these densities may differ based on habitat type.
To conduct a study on what motivates individuals to engage in environmental conservation efforts.
To engage the local community in environmental restoration through a one-day "Habitat Blast" volunteer event at Mayo Beach Park.
To identify and compile a list of potential sites for community green spaces and potential steps towards restoring the sites.
To enhance city agencies' engagement with and understanding of the Baltimore City Climate Action Plan (CAP) by developing educational materials and strengthening inter-agency collaboration.
To develop a single-issue literary magazine called "BTT LitMag" to increase tree awareness, invite citizens to engage creatively with green space, and produce a concrete collection of accounts detailing the relationship between Baltimore's people and nature.
To create a community storytelling event called "Bike Stories" which will connect community members in solidarity with one another around the development of safer streets for Baltimoreans who use alternative and sustainable modes of transit.
To remove invasive bamboo and replace it with native plant species.
To create a prioritized list of potential stormwater retrofits and stream restoration opportunities for the Lake Linganore Association and Frederick County to consider implementing through site visits, digitization of opportunity sites, and development of an ArcGIS StoryMap.
To support stewardship and stakeholder engagement initiatives by reconnecting communication between five preserved green spaces managed by Charm City Land Trust.
To use ArcGIS and community connections to determine areas of southern Maryland where there are gaps in the Chesapeake Bay Foundation's oyster restoration outreach, identify constituent bases that otherwise may not have opportunities to engage with the Bay, and establish a public oyster garden where community members can "adopt" oyster cages.
To develop a report that compiles data regarding state and federal program funding directed towards permanent land conservation in all six states around the Chesapeake Bay Watershed.
To restore Stuart Armstrong Park into a Pollinator Arboretum and develop educational materials and relationships to further environmental education in the park.
To conduct an extensive study of the Urban Tree Canopy in Columbia and its change over time.
To create an interpretive guide to Cylburn's forests and trails to help the public engage with Cylburn's woodlands and with nature as a whole, in a more mindful and meaningful way.
To conduct experimental research to test whether different types of source water and additives can prevent early stage larval crashes and/or increase early larval development and health.
To support the Thurmont Library LED lighting upgrade by helping develop the Maryland Smart Energy Community (MSEC) grant in order to lower the energy consumption of the building and thus the GHG emissions.
To create a collection of SOPs for the host organization's reforestation program that will clarify reforestation practices and provide a training aid for future employees and volunteers.
To coordinate an opportunity for fellow Corps Members to share about their work with presentations and during a poster session at HdGMM's annual Chesapeake Festival and Green Expo.
To remove invasive species and establish native ground covers in a central garden bed called the Dell Hillside by installing over 150 native shrubs, grasses, and perennials.
To create a guide for homeowners to help them become more self-sufficient at managing their trees after planting events occur.

To quantify greenhouse gas emissions reductions of currently underrepresented Nature-Based Climate Solutions practices and create standard quantification methods for future analysis to support the accuracy and comprehensiveness of the Howard County Climate Action Plan progress assessments.
To conduct an investigation of solar EV chargers, a relatively new and possible alternative, that will include a cost-benefit analysis, GIS analysis, comparison with traditional EV chargers, and recommendations.
To support the development of the State of Creation Care Report which will highlight the role of faith communities in environmental stewardship.
To create training programs for volunteers and staff that will serve to improve digital data storage methods, complete analyses for selected JBWS Citizen Science projects, share Citizen Science data into public repositories such as eBird, and allow volunteers and staff to be able to train new participants ensuring the longevity of these programs.
To design and construct a shed for Little Portion Farm to store soil and important tools.
To support the development of Maryland Clean Energy Center's (MCEC) Clean Energy Climate Action Plan (CECAP) Toolkit which will empower Maryland communities to develop a CECAP that outlines the mitigation and adaptation goals necessary to reduce greenhouse gas emissions and prepare for climate-related challenges.
To further integrate the FlowCam into MDE's workflow through the creation of two filters for the FlowCam to use in assessing a water sample's composition, and the creation and use of accuracy assessments to evaluate the filters.
To conduct an analysis of a stream restoration project at Little Gunpowder Falls following year two of post-restoration monitoring and develop a final report with updated biological and water quality monitoring data.
To conduct a pilot for the state of Maryland's consumption-based emissions inventory (CBEI) by learning the necessary methodology, identifying a sector of interest, piloting the calculations and analysis for that sector, and offering next steps to further build out the CBEI.
To develop a synthesis report on the success of wetland and stream restoration after temporary wetland disturbance.
To create an accessible and easy to use database for finding books and articles in the Natural History Society of Maryland's internal library.
To develop an invasive species field guide that can be used to identify species common to the coastal plain that includes descriptions and suggested methods for management
To move forward Mobilize Frederick's efforts regarding the Climate Response and Resilience Report recommendation #26, to facilitate the enhancement and protection of regional biodiversity.
To create a curriculum for Montgomery County Public Schools participating in Nature Forward's Tree-cosystems Community Greening Initiative.
To perform a comparison of water quality data before and after oyster restoration efforts were implemented in the Choptank River, a NOAA habitat focus area.
To create a Beginner Grower's Resource guide that compiles video, audio, and written information about native and edible plants and how to identify them.
To host an event that educates Lexington Park residents about the benefits of cycling as a transportation alternative, particularly in terms of reducing carbon emissions.
To develop a Community Hub Model that empowers local communities to spearhead their own cleanup initiatives at locations of their choosing, with the Conservancy providing essential resources and support.
To plan, design, develop, implement, and maintain an agroforest on the grounds of New Hope Community Outreach Services in Waldorf, Maryland.

To identify and implement new animal enrichment strategies with the goal of improving the well-being of the animals at Robinson.
To plan and lead a successful Bioblitz community engagement/citizen science event in Spring 2025 at Bacon Ridge Natural Area.
To plan and lead a two-day overnight Student Leader Retreat, empowering students ages 15-18 to help coordinate and provide creative insights for the 4th annual Upper Shore Youth Environmental Action Summit.
To extend educators' and students' understanding of data visualization to include data art by creating Data Art lesson plans for educators.
To engage with implementation partners in Baltimore, MD to develop a plan for socio ecological stream data collection to support the goals of the Science and Faith project and gain a better picture of ongoing stream monitoring and restoration work in Baltimore.
To establish an Environmental Exploratorium at the host's property that will provide an opportunity for community members of all ages to explore the intersection of faith and science.
To create a framework for the host organization to establish a farmer's market so the Oliver neighborhood has access to buy fresh produce, meat, and dairy products.
To create a data science teacher professional development lesson plan for teachers to learn how to make water quality data relevant to students' lives.
To evaluate textile sustainability in the National Park Service.
To create a Children's Nature Resource Library that provides equipment, lesson plans, and materials for the use of formal and informal educators in Maryland.