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NORTH CAROLINA
Environmental Quality

Principles and Guidelines for Financial Support of Coastal Resiliency Projects

These principles and guidelines are intended to promote a consistent approach to project funding across organizations that provide grants or make direct investments in resilience projects in coastal North Carolina. Funding programs should consider incorporating these principles and project guidelines into Requests for Proposals and scoring criteria used in project selection. These principles should also guide programs in providing technical assistance, pre-application support, and other advice to local, private, and other participating entities, when applicable. Programs are also encouraged to reach out to the NC Department of Environmental Quality's Division of Coastal Management for early feedback on federal and state permitting requirements and any potential regulatory concerns.

Coastal resiliency projects should include methods that provide both community and ecosystem resilience benefits, with the overall goal of measurably decreasing a community's or region's vulnerability to social, economic, and environmental disruptions caused by acute and chronic natural hazards, particularly those exacerbated by climate trends and weather extremes. Public investments in coastal resiliency projects should provide the greatest possible environmental and public benefits. In many cases, public investments can promote long-term resilience by relying on natural features and processes to protect a community's built and natural environments. Natural habitats can help to mitigate the impacts of natural hazards on communities, including impacts amplified by climate change impacts such as sea-level rise, flooding, frequency and intensity of storms, and other environmental stressors.

Principles for Coastal Resilience Funding Programs

The highest prioritized projects should be those that:

- A. *have been identified through a local or regional long-term resilience planning process that included a vulnerability assessment for current and future conditions, robust stakeholder engagement, prioritized projects, and long-term strategies for addressing coastal storms, flooding, sea level rise, and other environmental changes;*
- B. *ensure equitable consideration of socially vulnerable and historically disadvantaged and underserved populations (e.g., low-income and minority) in investment decisions;*
- C. *utilize natural or nature-based components as the preferred approach. Applicants should document why natural or nature-based strategies are/are not proposed in a project's design;*



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- D. *avoid adverse impacts to the environment or that exacerbate flood risk, and that meet or exceed land use and environmental regulations, permitting programs, best management practices and engineering and design standards; and*
- E. *provide multiple benefits that increase the resiliency of natural ecosystems, residents, and the built environment, accounting for environmental conditions and cost-effectiveness throughout the project's life cycle.*

Project-Specific Guidelines for Natural and Nature-Based Strategies

1. Shoreline stabilization proposals should document erosion trends and threatened infrastructure or habitats. "Living shorelines" using biodegradable, natural, and inert materials and vegetation should be prioritized over gray (hard) approaches (bulkheads, revetments, breakwaters) where they can be successfully used given site conditions.
2. Where practical, flood control projects should prioritize nature-based strategies that protect, restore, or replicate the natural capacity of the landscape to store and treat flood waters.
3. Stormwater control projects should focus on reducing the volume and rate of runoff caused by land uses by providing for natural infiltration and other best management practices that restore, enhance, or replicate natural hydrology. Projects may include strategic land or easement acquisition to provide space for wetland restoration or creation, riparian buffer protection or restoration, and redirection of runoff to green space or natural infiltration areas; as well as the use of stormwater management measures (as outlined in the DEQ Stormwater Manual), such as disconnecting impervious surfaces, rain gardens, bioswales; vegetation, stormwater wetlands and permeable pavement.
4. Coastal wetland and oyster reef restoration projects should analyze habitat trade-offs that may result (e.g., conversion of existing shallow-bottom habitat), and document historical deterioration or loss of wetland or oyster habitats. Proposed oyster reef restoration projects should document early coordination with the NC Division of Marine Fisheries with respect to site selection and materials.
5. Beneficial use of dredged materials proposals should document early coordination with federal and state regulatory agencies, describe any seasonal restrictions that may be required to limit impacts to sensitive coastal and marine resources, and evaluate the compatibility and suitability of the dredged materials for the proposed use. The disposal of dredged materials on coastal wetlands will require more intensive regulatory reviews, and likely would require a Variance from the NC Coastal Resources Commission.
6. Land acquisition proposals should reference and align with existing coastal land conservation, local or regional resilience, and/or watershed management plans. Priority should be given to proposals that provide tangible long-term resilience benefits; for example, those that allow for upland migration of coastal wetlands over time, provide infiltration areas for stormwater or floodwaters, or provide natural protection of public or private infrastructure.
7. All projects proposed on (or impacting) federal, state, local, or private lands should include participation or written support of the relevant management or ownership entity.



Resources for Coastal Resilience Funding Programs

These resources may be used to help organizations prioritize project selection and help applicants assess how a project will address the principles and guidelines listed above. For example, resources can help identify areas where various methods (i.e., restoration, protection, conservation) will have the greatest impact for community and ecosystem resilience.

Please note — this is not meant to be an exhaustive list of resources.

- DCM Coastal Adaptation and Resiliency Guide (<https://deq.nc.gov/about/divisions/coastal-management/coastal-adaptation-and-resiliency>)
- NC Coastal Habitat Protection Plan Amendment 2021 (<https://deq.nc.gov/about/divisions/marine-fisheries/habitat-information/coastal-habitat-protection-plan>)
- NC Climate Risk Assessment and Resilience Plan 2020 (<https://deq.nc.gov/energy-climate/climate-change/nc-climate-change-interagency-council/climate-change-clean-energy-plans-and-progress/nc-climate-risk-assessment-and-resilience-plan>)
- NC DEQ's Community Mapping System and Environmental Justice Tool (<https://deq.nc.gov/outreach-education/environmental-justice/deq-north-carolina-community-mapping-system>)
- NC Natural and Working Lands Action Plan 2020 (<https://files.nc.gov/ncdeq/climate-change/natural-working-lands/NWL-Action-Plan-FINAL---Copy.pdf>)
- Action Plan for Nature-based Stormwater Strategies: Promoting Natural Designs that Reduce Flooding and Improve Water Quality 2021 (<https://www.nccoast.org/project/nbss/>)
- Oyster Restoration and Protection Plan for NC: A Blueprint for Action 2021-2025 (<https://www.nccoast.org/wp-content/uploads/2021/04/Oyster-Blueprint-Strategy-Summary-2021-2025-web-1.pdf>)
- NC State Water Infrastructure Authority Annual Report 2020 (<https://deq.nc.gov/about/divisions/water-infrastructure/state-water-infrastructure-authority/authority-reports>)
- NC DEQ Stormwater Design Manual (<https://deq.nc.gov/about/divisions/energy-mineral-and-land-resources/stormwater/stormwater-program/stormwater-design>)

