COMMUNITY RESILIENCE PLANNING IN COASTAL NORTH CAROLINA

A Joint Project of FEMA and EPA to Provide Local Technical Assistance

Project Description

The U.S. Environmental Protection Agency (EPA) and the Federal Emergency Management Agency (FEMA) are partnering to explore the intersection of climate change adaptation and local planning in North Carolina through technical assistance to two coastal communities facing impacts from sea level rise, more intense coastal storms, and changes in precipitation. This project will work to implement the Memorandum of Agreement between EPA and FEMA,[1] which aims to improve community resilience to natural hazards while also improving quality of life, creating long-term economic prosperity, and protecting the environment. A resilient community is one that can anticipate, prepare for, respond to, and recover from multiple hazards with minimal damage to social well-being, the economy, and the environment.

This project is designed to help communities use the best available data to determine how climate change might impact local land use and infrastructure investments, and to develop strategies that reduce vulnerability to known hazards, build long-term community resilience, and provide economic, environmental, and social benefits. The climate change impacts that will be explored in this project will emphasize sea level rise, more intense coastal storms, and changes in precipitation because of the availability of data that can be used to determine vulnerabilities based on these risks. Secondary impacts from sea level rise, coastal storms, and changing precipitation might include increased damage from floods and storms, coastal erosion, and changes in drinking water supplies and stormwater flows. EPA will be the lead agency on this project.

EPA and partners will provide assistance to one large and one small coastal community in North Carolina facing impacts from sea level rise, more intense coastal storms, and changes in precipitation. The assistance will focus on a specific infrastructure investment, built project, or other planning effort that is being developed at the local level. This specific project or investment should include major decision points which could incorporate improved data on the risks to the project posed by sea level rise and related impacts. Example projects might include planned investments in transportation, water or wastewater infrastructure, protection of open space, or new development or redevelopment. The project will be evaluated to determine its vulnerabilities to sea level rise, more intense coastal storms, and changes in precipitation, and this assessment will be used to develop revisions or changes to the project plan that will increase its long-term resiliency. Project-specific revisions may also lead to support for broader citywide actions, such as changes to local plans, codes, and ordinances that improve the community's resilience to sea level rise and related impacts while offering other social, environmental, and economic benefits.

[1] http://epa.gov/smartgrowth/fema_moa.htm.

The description of pilot activities at this stage is designed to be general to provide flexibility to respond to the needs of selected communities. EPA and other project stakeholders will draft a more detailed work plan with selected communities based on their identified needs.

Project Process

EPA expects that the pilot projects will occur over a 12 month period, starting in December 2011. The process is intended to be flexible and to meet the needs of the pilot communities. To that point, EPA will work with the community to write a scope of work that will be used to identify and hire appropriate contractor support. Contractors may include national experts in smart growth and climate change adaptation so that communities can explore methodologies, tools, plans, and local policies that build resilience to climate change effects. The project team would include EPA, FEMA, land use planning and infrastructure experts, state government staff, local government staff, and other stakeholders.

The project is intended to both benefit the local communities and provide important lessons for state and federal agencies on the development of a replicable approach for supporting local efforts to improve resilience to impacts from sea level rise, more intense coastal storms, and changes in precipitation. There are four primary project goals:

1. **Pilot North Carolina's iRisk tool for Hazard Mitigation Planning to help communities understand risks from sea level rise, more intense coastal storms, and changes in precipitation, and subsequent vulnerabilities for a specific project.** This process will use an approach that can work for different community sizes and types, including those that lack climate experts, GIS staff, and similar capacity. The team will also consider supplementing iRisk with additional data or data input tools to provide broader information on relevant impacts where necessary. A community-wide assessment of vulnerabilities may be conducted if desired or determined relevant.

2. **Identify revisions to a specific planning or infrastructure project based on assessed vulnerabilities.** The pilots will use climate science to improve both short- and long-term investment and planning decisions, such as for transportation investments, water infrastructure, or new building projects as described above. The goal is to identify potential changes to the project based on best available information about current and future vulnerabilities.

3. **Identify changes to local plans, ordinances, and other codes that support project goals, reduce vulnerability to the impacts of sea level rise, and provide other social, environmental, and economic benefits.** Analysis of vulnerabilities related to the project may also raise larger issues that the community may choose to address through broader policy reforms. The project team will work with the community to explore how local plans, ordinances, and codes might support project implementation, and where appropriate, reduce vulnerability more broadly. These policy options may be selected based on their ability to reduce project-specific and community-

wide vulnerabilities to current and future hazards and to provide other near-term and long-term benefits for the local community, economy, and environment.

4. **Work with local leaders and stakeholders to develop a set of next steps that prioritizes resilience-building actions based on near-term project needs and long-term community goals.** The project team will work with policy makers, planners, and elected officials to support a stakeholder process to prioritize among identified strategies and to develop a set of near-term steps. These steps could provide the groundwork for a long-term plan for addressing impacts from sea level rise, more intense coastal storms, and changes in precipitation.

In addition to providing direct assistance to two communities, EPA, FEMA, and other partners engaged in this project are interested in understanding the role that different policies or planning requirements play in a community's effort to improve resilience to sea level rise, more intense coastal storms, and changes in precipitation. These key policies may include, but are not limited to:

- Local comprehensive plans, codes, ordinances, and laws;
- State planning requirements, such as North Carolina's Coastal Area Management Act;
- Federal planning programs, such as FEMA's Hazard Mitigation Planning Program.

<u>Project Deliverables</u>

Final deliverables from this project may include:

1. Training modules that could be used by local, state, and federal officials interested in replicating this approach;
2. A report to each community with:
    a. an assessment of their vulnerabilities related to sea level rise within both a specific project and for community-wide planning if relevant;
    b. a menu of project-specific strategies and supporting policy changes based on assessed vulnerabilities;
    c. a set of prioritized strategies among the menu of options; and
    d. potential identification of local, state, and/or federal funding for 1-2 priority projects.
3. Depending on the findings of this pilot, the partners could develop a white paper or report on how various policies, programs, and plans, including those dictated by federal, state, and local governments, either support or create barriers for effective adaptation.

<u>Selecting Communities</u>

EPA and FEMA will work with partners in North Carolina to identify possible communities interested in working with the team as one of the two pilot communities. Communities are invited to submit a simple letter to express interest in serving as a pilot community. Based on these letters of interest and possible follow-up conversations, EPA and its partners will select two communities to work with on the project by the end of October 2011.

Preparing the Letter of Interest

The review team will evaluate letters of interest based on the criteria listed below. Letters should be no more than 3 pages. Supplemental materials such as maps and site plans can also be submitted, but are not to exceed 3 pages. The total package should be no more than 6 pages. These letters of interest and supplemental materials should be submitted via email to Abby Hall (hall.abby@epa.gov) with EPA's Office of Sustainable Communities by October 7, 2011. Letters of interest should include the following:

1. **Project Contact.** List name, title, phone, email, and address of the person who will be the main project contact. This person will be responsible for working with EPA staff and other partners throughout the project and should have a comprehensive understanding of the content and work involved in the assistance project.

2. **Willingness and interest to work on improving local resilience to the impacts of sea level rise, more intense coastal storms, and changes in precipitation.** Communities should describe any work or thinking that has been done so far to address local vulnerabilities related to sea level rise, more intense coastal storms, and changes in precipitation. This does not have to include major investments, local expertise, or commitments in local plans or ordinances. The project team wants to ensure that partner communities are interested to improve local land use and infrastructure planning with better information about future risks from natural hazards, specifically sea level rise, more intense coastal storms, and changes in precipitation. Impacts on coastal communities might include increased damage from floods and storms, coastal erosion, loss of wetlands and inundation of low-lying areas, and changes in drinking water supplies and stormwater flows. Communities should discuss problems experienced in relation to such impacts and efforts to address them, if any.

3. **Description of local project.** Communities should describe a local project, whether an infrastructure investment, long-term utility or infrastructure plan, or specific built project that is beginning or ongoing and has the potential to incorporate new risk and vulnerability information that would shape the eventual plan or project outcome. The description should include realistic, achievable goals for project implementation following the completion of this assistance. Example projects or plans may include:

- Transportation or street plan or project;
- Water infrastructure or utility investments;
- New development or redevelopment of housing, commercial, office, or other buildings.

4. **Political and Public Support.** Communities should identify persons and/or organizations that support the project and will work toward its implementation. Please include at least one letter of reference from a person or group providing political support. Any letters of reference or support will not count against the 6 page limit. In addition, please include a list of references for other political and community supporters:

    - Political Support: references can include mayors, city council members, or other local decision makers.
    - Public or Community Support: references can include neighborhood coalitions, community development groups, local business organizations, and other similar citizens' organizations.

Resources

For information on prior technical assistance provided by EPA and FEMA, please visit: http://epa.gov/smartgrowth/iowa_techasst.htm.

For information on EPA and NOAA's partnership to help coastal communities, please visit: http://epa.gov/smartgrowth/noaamoa.html.

More information on Coastal and Waterfront Smart Growth: http://coastalsmartgrowth.noaa.gov/.