

Two Rivers, One Future

New Jersey Fostering Regional Adaptation through Municipal Economic Scenarios (FRAMES)

The NJ FRAMES project is a regional and collaborative planning effort in the Two Rivers region of Monmouth County, New Jersey, that addresses future flood vulnerability. The resulting long-term Regional Resilience Plan will identify ways our communities can reduce coastal flood risks and impacts together.

Project Update



Members of the project team review risk assessment information during a meeting with community representatives and regional stakeholders in Red Bank on August 28.

The project team this summer finalized a risk assessment of the region. This task provided an understanding of the region's current risk to flooding and how this risk may change over time. By developing a detailed overview of what areas of the region will get wet, the projected timeline and the associated impacts, the region will be able to better understand where action is needed to build resilience to increasing coastal hazards, such as sea-level rise and future storms.

To conduct the risk assessment, the project team followed a methodology outlined in "[What Will Adaptation Cost? An Economic Framework for Coastal Community Infrastructure](#)" published by NOAA in June 2013 and used data provided in "[Assessing New Jersey's Exposure to Sea-Level Rise and Coastal Storms: Report of the New Jersey Climate Adaptation Alliance Science and Technical Advisory Panel](#)" published by Rutgers University in October 2016. The risk assessment also employs localized data, which was collected through meetings with

government agencies, local nonprofit organizations and residents during the [#MapWhatMatters](#) campaign, as well as projections for inundation and population using long-term planning horizons.

A presentation of the high-level takeaways from the risk assessment can be found on the project website [here](#) (starting at slide 21). Included is an overview of the quantified impacts, such as socioeconomic losses or incurred costs due to power outages, and monetized impacts due to building losses. To measure risk, the assessment looked at both probability and impact of three total water levels: 3, 7 and 12 feet above mean higher high water (MHHW). One key finding is that the flooding we experience today in the region will become more frequent in the future. For example, a 3-foot flood event that occurs once every few years is expected to occur several times each year by 2050. The coastal flooding on Thanksgiving weekend 2018 will happen much more frequently in decades to come. Memos detailing the risk assessment methodology and findings will be finalized in the coming months.



The project team held an internal charrette on October 16 to discuss how to develop the response scenarios for the Two Rivers region.

Following the development of the risk assessment, the project team met in October to start conceptualizing response scenarios. A total of three response scenarios will be developed for the region and will include actions that the region and communities can take to reduce the impacts of flooding. To draft these scenarios, the project team applied a charrette-style approach. A charrette is a common practice in planning processes where an interdisciplinary team comes together to collaboratively



approach challenges through hands-on brainstorming. This technique enabled the team to have a productive discussion, round up ideas and discuss feedback gathered from recent stakeholder meetings.

What is Scenario Planning?

Scenario planning is a tool used to develop a suite of options, or scenarios, for communities to consider when planning for their future. The American Planning Association defines scenario planning as “a process to support decision-making that helps planners navigate the uncertainty of the future in the short- and long-term.” This process often begins by defining present-day conditions, collecting information about possible future conditions and concluding with a presentation of various future outcomes. When reviewing these options, planners may then develop a series of projects or policies to support part or all of the presented scenarios. More technical planning scenarios may also include indicators for evaluation, such as the likelihood of a scenario becoming reality or how it addresses regional goals, which can help guide communities in the decision-making process of selecting a preferred scenario or future to work towards.

In the NJ FRAMES project, the three-response scenarios developed will be specific to the Two Rivers region and include regional and municipal actions for flood risk reduction that responds to the region’s overall resilience goals. In upcoming meetings with advisory groups and later with the public, the project team will present different planning scenarios for consideration. These scenarios will incorporate the “total water” planning levels used to assess flood conditions in the region and illustrate potential adaptation and resiliency measures to respond to those conditions.

Initial feedback was received in August on the preference for various adaptation strategies when the Steering Committee, Constituency and Technical Advisory Groups met in two separate half-day meetings. The adaptation strategies consisted of structural and nature-based measures; education and incentive programs; and local policy, regulations and plans, bringing the total array of options to 47 measures for evaluation. Strategies ranged from dune management to moveable buildings, to open space preservation and digitizing community knowledge of past storms.

To help stakeholders prioritize favorable measures, attendees were given green, yellow and red dots to indicate their preference on each individual measure. Green was to show their support and approval, yellow was meant to request more information, and red was to show that they did not want to see that measure used. By gathering this feedback, the project team aims to incorporate favored measures in the response scenarios and provide further information or justification for strategies that would require additional consideration by

the region. The top eight preferred adaptation strategies include coastal habitat conservation, urban forest and urban tree management, wetland restoration, dune management, living breakwaters, living shorelines, beach nourishment, and stormwater management ordinances. These strategies received the highest number of green dots out of all the strategies presented.



Members of the Steering Committee, Constituency and Technical Advisory Groups express preferences for different adaptation strategies during a meeting on August 28 in Red Bank.

What's Next?

Look for opportunities to learn more about the scenarios being developed. In early January 2019, the project team will hold an initial meeting with the advisory groups to get feedback on the draft scenarios, which will include different strategies to reduce risk in higher risk areas and the larger region. Subsequent meetings in the coming months will be held to further build out and refine these scenarios. Once the scenarios are finalized later in the winter, an analysis will be conducted to determine the costs and benefits of implementing the three scenarios along with public and stakeholder outreach in the spring to get feedback on these approaches. This information will help local decision-makers and the region weigh the benefits of implementing these strategies with the costs associated with not taking action. Ultimately, the planning process will facilitate selecting a preferred response scenario for which a plan and implementation strategy will be developed for the region.

For More Information:

To contact us, to learn more about the project and our partners or to see project documents:

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