

Leveraging University Resources to Integrate Climate Adaptation and Hazard Mitigation in the Eno–Haw Region

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Hazard mitigation planning is an opportunity to identify local impacts of climate change and explore potential adaptation strategies. Emergency managers, however, may not have the time, money, or technical capacity to address climate change during the hazard mitigation planning process. In this presentation, I will discuss an undergraduate course at the University of North Carolina at Chapel Hill (UNC–CH) that examined how climate change may affect the Eno–Haw region and recommended adaptation strategies to be incorporated into future hazard mitigation plans.

Hazard mitigation shares many of the same characteristics of climate adaptation. Both are forward looking and focus on reducing vulnerability, in fact, many of the strategies in hazard mitigation and climate adaptation are the same. State hazard mitigation plans are now required to address climate change, and FEMA’s “Hazard Mitigation Planning Handbook” also encourages local communities to consider climate change in their planning process. Hazard mitigation planning often occurs at the county or regional scale, a scale many view as particularly important to advance climate adaptation. By collaborating in regional partnerships, communities can share resources to create economies of scale and coordinate adaptation activities to ensure they are not working at cross–purposes.

When Alamance, Durham, and Orange Counties partnered to create the first Eno–Haw Regional Hazard Mitigation Plan in 2014 they hoped to address climate change in the planning process. Due to limitations in funding, however, they were unable to complete a full analysis of how climate change may affect region. The final plan, released in 2015, lists climate change as a hazard but provides no additional information on the local consequences of climate change or potential adaption strategies.

During the spring semester of 2016, a capstone course at UNC–CH partnered with the Orange County Emergency Services to address how climate change could be incorporated into the multi–jurisdictional hazard mitigation plan. Capstones are project–based classes in which undergraduate students conduct team–based research to help find solutions to the issues faced by community clients. Over the course of the semester, students in the course reviewed existing literature on climate change, familiarized themselves with existing plans in the region, and analyzed adaptation plans from across the country. Based on this work, they developed a report that outlines how climate change may affect the Eno–Haw Region and recommends additional strategies to adapt to these impacts. At the end of the semester, they presented these results to the Eno–Haw Hazard Mitigation Planning Team.

Admittedly, there are limitations to this type of approach and much more work must be done to incorporate the students’ findings into future hazard mitigation plans. This type of model, however, is an opportunity to advance community efforts to adapt to climate change. It is also an opportunity for students to learn about climate change, how it can be addressed locally, and planning more generally, important lessons to create a public more engaged with and supportive of climate adaptation. By sharing the structure, outcomes, and lessons from this course this presentation is intended to help shape similar partnerships.