

# SCIENCE IMPACT COLLABORATIVE PROJECT UPDATES

*(cont'd from previous page)*

## **Massachusetts Climate Adaptation Project by Jenna Kay**

Last year, the Massachusetts Climate Adaptation Project, part of the MIT Science Impact Collaborative produced the report “Managing Risk: Helping Cities in Massachusetts Adapt to Climate Change” (<http://web.mit.edu/dusp/epp/music/>). This report featured case studies on climate adaptation efforts in Massachusetts cities and concluded that most cities in the Commonwealth have created climate action plans focusing on the mitigation of greenhouse gases, but few have made plans that address adapting to the inevitable impacts of climate change (such as sea level rise, storm intensification and an increase in the number of hot summer days).

To help fill this gap in adaptation planning, The Science Impact Collaborative created role-play simulations for public officials, city business and environmental leaders and concerned citizens learn more about managing the risks associated with climate change impacts. This fall, we pilot-tested one of its simulations in Gloucester, MA, where a group of public officials and city leaders were presented with the following scenario:

You live in Evantown, Massachusetts, a post-industrial town located along the banks of the Foltz River. The Riverview Development project, a multi-use residential and commercial complex, was about to receive a permit to build along the city's waterfront when the national flood bureau published new flood maps taking climate change into account. According to the old maps, the Riverview Development project was located outside of the 100-year floodplain, but the new maps place it within this higher-risk zone. The mayor has invited you and several other stakeholders to decide what to do about the development project given the new maps and other predictions about climate change impacts on Evantown.

The goal of the Science Impact Collaborative is to develop research tools to measure the effectiveness of the simulations at promoting adaptation efforts and tested these with the Gloucester participants. The data indicated that the simulation increased some participants' sense of urgency to address climate change and sparked discussions between the participants and with other community members not present at the simulation about the types of climate impacts that may affect Gloucester and how the city could begin to address these issues.

This spring, the Collaborative created additional simulations that integrate scenario planning into them. In these simulations, participants are asked to make a typical municipal planning decision, such as whether the Riverview Development project should receive a building permit or not, given a range of possible future climate and economic scenarios.

We plan to use these simulations with several cities next year and will eventually turn the simulations into a free, downloadable tool that any city in the United States can use.

The MIT Science Impact Collaborative (<http://web.mit.edu/dusp/epp/music/>) is lead by Professor Lawrence Susskind. It trains students to work at the intersection of science, policy and politics in the natural resource management field. MCP students Tyler Corson-Rikert and Jenna Kay and undergraduate Jessica Agatstein worked on the Massachusetts Climate Adaptation Project this year.