



FLORIDA ATLANTIC UNIVERSITY  
DIVISION OF RESEARCH

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# OWL RESEARCH & INNOVATION

Hunter Beebe, managing principal, Healthcare Real Estate Capital, addresses incubator participants, including FAU faculty and local government officials.

## Incubating Solutions to Community Challenges

Local communities challenged by the effects of climate change and aging neighborhoods are getting expert input thanks to FAU's new Incubator for Sustainable & Resilient Communities.

The incubator is a forum for developing action plans to address complex land use and infrastructure problems. It links the Center for Urban & Environmental Solutions, directed by John Renne, Ph.D., and the Florida Center for Environmental Studies, headed by Colin Polsky, Ph.D.

The stakes are high: Florida's 8,436-mile coastline hosts a population of 14.4 million. Coastal hazards cost the state \$43 billion from 1980 to 2016, according to the National Oceanic and Atmospheric Administration Office for Coastal Management.

West Palm Beach and Hollywood city officials, resource experts, and FAU faculty and staff recently gathered to conduct site visits and brainstorm short- and long-term solutions.

### **Revitalization Advice**

In West Palm Beach, economic revitalization is the focus. Experts discussed the developing Warehouse District's nexus of industry, entertainment and food vendors, and ways to ensure the project's success.

According to West Palm Beach Mayor Jeri Muoio, one possibility is an innovation zone for experimenting with mixed-use land development. City officials are considering a mixed-use area akin to an innovation zone or pink zone "where



you can experiment with doing something very creative, but not be held back by the zoning code," she says.

Muoio praised the assistance provided by the Incubator for Sustainable & Resilient Communities, saying the discussions "gave us an opportunity to look at an area of our city with exciting potential beginning to be developed and to present that to experts who help us think about what we should or shouldn't do moving forward."

### **Preparing for Sea Level Rise**

In Hollywood, participants and city officials discussed updating aging infrastructure to mitigate sea level rise and flooding. "Tidal flooding is impacting several of the city's coastal areas and is increasing in frequency and area," said Hollywood Mayor Josh Levy.

There also are storm water flooding and septic drainage field concerns as the groundwater rises, potentially increasing negative impacts to critical infrastructure.

"Building sea walls and levies are important short-term solutions in addressing climate change effects," said Renne. "But, they will not mitigate the long-term problem because water will eventually infiltrate underneath those structures."

He cites one incubator expert who pointed out how some homeowners will be the last to occupy houses in areas that may not be climate-viable in

the future. Renne believes the challenge is not only protecting the existing population, but where to locate future residents.

"Resilience bonds are gaining traction as an option for encouraging land development in potentially risky areas," said Polsky. "Other financing options may include taxes and private-public partnerships." The private market will drive solutions. Some Hollywood homes worth \$1 million or more are experiencing sea level rise flooding on their front doorstep more than 40 days a year.

"That could mean the loss of private insurance and a decrease in market value and tax revenues," said Renne. "Municipalities might consider creating special benefits districts to finance the improvements necessary to protect the home values."

Another option would be for a city to sell coastal space for business development such as a marina, mandating the private developer make the necessary flood improvements.

As officials consider financing options and conduct a vulnerability assessment, "the worst case scenario projections assume that we do nothing," notes Levy. "Taking steps to mitigate our contribution to the underlying causes of sea level rise and proactively adapting to the effects, we can reduce the severity of the impact on our community." ♦

