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Emily Steinhilber Column: Virginia's Leadership in Flood Resilience

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This fall, Hurricane Matthew offered Virginians the latest reminder of the ongoing importance of flood resilience.

Even with federal support, including $120 million awarded to Virginia in the National Disaster Resilience Competition, strong local and state leadership remains the key to keeping Virginia's citizens safe and businesses operating in the face of flooding.

The Commonwealth Center for Recurrent Flooding Resiliency represents the most recent example of the value of teamwork in responding to a critical threat.

With the leadership of Gov. Terry McAuliffe and Del. Chris Stolle, chairman of the General Assembly's Joint Subcommittee on Coastal Flooding, and strong bipartisan support, the center was established in July.

It represents a partnership between Old Dominion University, the Virginia Institute of Marine Science (VIMS) and William & Mary Law School's Virginia Coastal Policy Center.

The center's role is to provide technical and scientific support for flooding resiliency planning to localities, agencies and citizens across Virginia. This work will increase the strength and vibrancy of our communities as they adapt to living with water.

Since ODU, VIMS and William & Mary are all in the natural flood-prone test-bed of Hampton Roads, no new facilities were needed.
In its first year, the center has hit the ground running on shorter-term projects and is laying the groundwork for longer-term initiatives to put tools, information and resources in the hands of a variety of public and private stakeholders.

Because the center exists independently of political subdivisions, the data, tools and lessons learned by one entity can easily be shared with others.

The Commonwealth Center for Recurrent Flooding Resiliency leverages the strengths of faculty researchers from the three institutions, who often work together. These are just a few examples:

- Law students from William & Mary and researchers from Old Dominion are working with the tourism industry to assess policies and strategies to improve resilience in that vital sector.
- Recognizing that this phenomenon goes beyond Hampton Roads, Old Dominion faculty will also identify flood hazards and vulnerabilities in parts of western Virginia that are subject to flash flooding.
- VIMS has compiled state-of-the-art street-level storm-surge and water-level modeling data. This will be coupled with ODU's stakeholder and communications expertise to develop risk communication and alert strategies, which will be used in concert with apps like Waze and Google Maps for extreme events like Hurricane Matthew as well as everyday occurrences of nuisance flooding.
- VIMS faculty are coordinating with many partners, including Old Dominion, to develop comprehensive web tools for localities and citizens.

The center also is partnering with NASA to support research that will provide Hampton Roads localities with the first comprehensive localized data since the 1970s on subsidence, or the sinking of land, which is the other major contributor to recurrent flooding in the region. These spatial high-resolution estimates, based on satellite data, will pinpoint areas as small as 20 meters. They will allow decision-makers to fill critical gaps in knowledge and better inform planning.

The center builds on Old Dominion's efforts, under President John R. Broderick's initiative, to focus on flooding and sea level rise since 2010. Its creation provides a strong foundation for our proposal, supported by U.S. Sen. Tim Kaine and U.S. Rep. Scott Rigell, to create the National Center for Sea Level Rise, the first center of its kind in the country.

Meanwhile, we are committed to partnering with our leaders in Richmond and local partners throughout the commonwealth to build flood resilience and establish Virginia as a leader in the field.

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