

“The city of Norfolk is sinking slowly into the water at the same time the sea level is rising, and so we are getting more and more water into the city every year.”

Norfolk Mayor Paul Fraim, August 25, 2010

“We must ensure our Navy is fully mission-capable and ready to meet national requirements in the future. That responsibility includes anticipating the impact of changing climatic conditions on mission requirements, force structure and infrastructure.”

Rear Adm. Dave Titley, Director of Task Force Climate Change and Oceanographer of the Navy



**Dr. Larry P. Atkinson** is the Samuel and Fay Slover Professor of Oceanography in the Department of Ocean, Earth and Atmospheric Sciences at Old Dominion University. He is a member of the Oceanography Society, the American Meteorological Society, the Marine Technology Society and the American Association for the Advancement of Science (AAAS). He is a Fellow of the AAAS. Currently Atkinson is coordinating the ODU Climate Change and Sea Level Rise Initiative.

**Website** <http://www.odu.edu/ao/research/ccslri/>

**Expertise List –**

<http://www.odu.edu/ao/research/ccslri/pdfs/expguide.pdf>

**For more information contact:**

**Larry P. Atkinson**  
**Center for Coastal Physical Oceanography**  
**Old Dominion University**  
**4111 Monarch Way, Third Floor**  
**Norfolk, VA 23529**  
**757-683-4926**  
**latkinso@odu.edu**

## *Climate Change and Sea Level Rise Initiative (CCSLRI)*

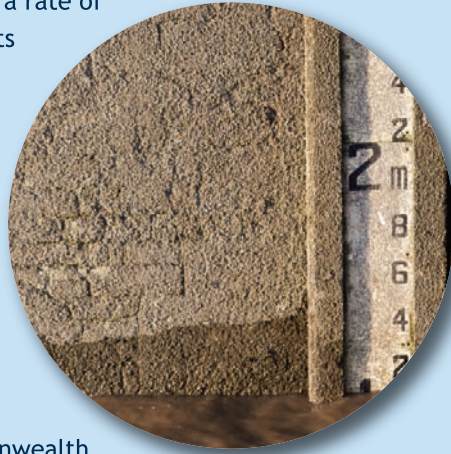


## Local Sea Level Rise – The Facts

Sea level in Hampton Roads is rising at a rate of 1.46 feet per century since measurements began in 1928. This is because:

- Land ice is melting into the ocean.
- The ocean is warming, and as it warms it expands. This has been going on for thousands of years.
- The land is sinking because of a process called glacial subsidence.

There is strong evidence that the rate of sea level rise will increase. Federal agencies such as the U.S. Army Corps of Engineers, the U.S. Navy and the commonwealth of Virginia assume, for planning coastal construction, that sea level will rise around 3 feet by 2100.



## Action at Old Dominion

- Faculty research
- Student engagement
- Community outreach



“Climate change has the potential to have large impacts on the Hampton Roads economy, but it may also provide some opportunities for the region.”

HRPDC, Climate Change Report, 2010

“This initiative is an effort to identify the multifaceted impact that climate change and rising sea levels will have on our region. The project will pull together the university’s and region’s foremost experts to find solutions to the anticipated effects on our economy, housing, ports and infrastructure.”

John R. Broderick, President of Old Dominion University

## Old Dominion University Expertise Related to Sea Level Rise and Climate Change

### Public Policy

- Economics
- Risk perception
- Insurance
- Disparate impacts
- Public opinion
- Social justice
- Special populations
- Decision procedures

### Engineering

- Infrastructure
- Transportation
- Land use
- Recreation and tourism
- Renewable energy

### Public Health

- Diseases
- Insects and other vectors
- Oppressive heat days

### Sciences

- Extreme weather
- Climate change science
- Coastal landscape changes (erosion)
- Ecosystems (fisheries, wetlands, grasses, water quality, invasive species)
- Agriculture
- Human factors psychology

### Education

- Communicating climate change and sea level rise
- STEM education
- Social marketing
- Special education
- Community leadership development
- Community education



*Cynthia Tomovic, professor of STEM education and professional studies; Michael McShane, assistant professor in finance, focusing on insurance and risk management; Poornima Madhavan, assistant professor of psychology, focusing on decision making in complex environments; and Ariel Pinto, associate professor of engineering management, focusing on risk management.*