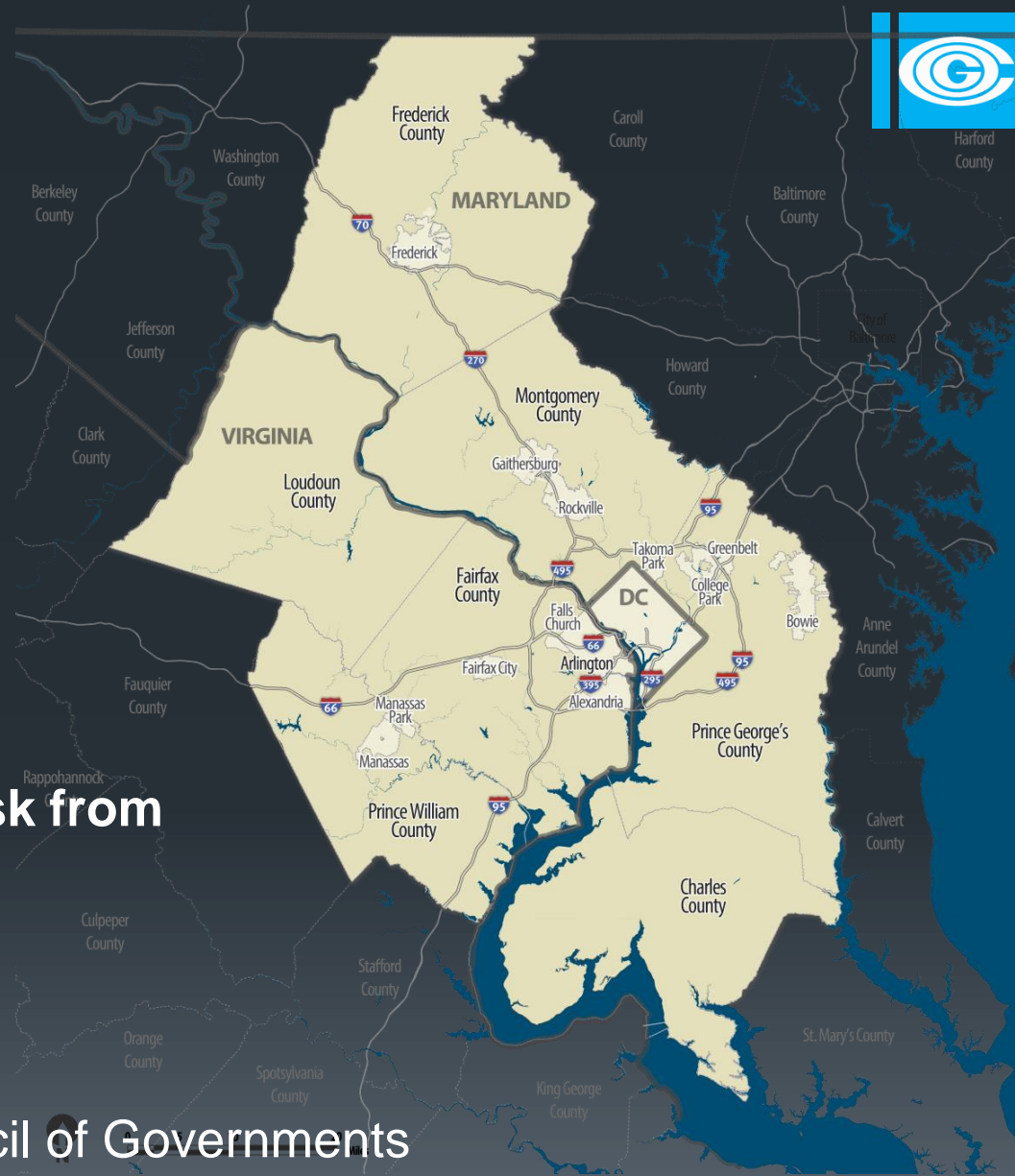


# Climate Resilience in the MWCOG Region

**Quantifying Infrastructure Risk from Climate Change Workshop**  
December 12, 2014

Amanda Campbell  
Metropolitan Washington Council of Governments  
[acampbell@mwkog.org](mailto:acampbell@mwkog.org)





# Resiliency Planning: Top Down

## NOAA Road Vulnerability Assessment Process

### CLIMATE II

A WORKSHOP FOCUS OF POTENTIAL CHANGE IN SEA LEVEL RISE IN THE M



Gettin



## SMART GROWTH CHANGE IN THE

You're Invited

### BUILDING SECTOR STAKEHOLDER MEETING

THURSDAY, SEPTEMBER 8, 2011, 10:30 AM TO NOON

If interested, please contact Jeannine Altavilla ([jaltavilla@mwcoq.org](mailto:jaltavilla@mwcoq.org), 202/962.3245) to register.

## Summary of Potential Vulnerabilities in the Metro

*A synopsis of lessons learned from Governments' climate ad*

METROPOLITAN W  
777 North Capitol  
Phone

Compiled by Mais Davis and Amanda special thanks to: Donald Boesch, PH Jessica Grannis; Julia Koster, AICP; R Members of the Climate Energy & En COG's climate impacts and adaptati

For resources and information about <http://www.mwcoq.org/environment>



November 2013  
[www.epa.gov/smartgrowth](http://www.epa.gov/smartgrowth)



## USING SMART GROWTH STRATEGIES TO CREATE MORE RESILIENT COMMUNITIES IN THE WASHINGTON, D.C., REGION

Office of Sustainable Communities  
Smart Growth Program

# Resiliency Planning: Bottom-Up




## Building a Climate Resilient National Capital Region

### Preparing for Climate Change Regional Coordination

Climate change is already affecting the Washington, DC area with more frequent extreme weather events, rising sea levels, and heavier downpours. Climate scientists expect these trends to continue. People, property, and natural resources are being affected and potentially disrupting the way we live. Further, this area holds federal headquarters and nationally significant monuments and lands for future generations.

Through a series of webinars and workshops, federal, regional, and local organizations shared their climate adaptation strategies for the National Capital Region (NCR). Participants recognized that the region's resources requires coordinating expertise with others.



Tree and power lines down in Bethesda, MD following a Derecho storm, in which over 2.6 million customers in DC, and Virginia.

### Agencies and Organizations Address Their Vulnerabilities

In 2013, the series of information-sharing activities began with a focus on built systems, workforce, communities, and natural resources. The goal was to assist agency climate adaptation, regional coordination. NCP, GSA, NASA, Smithsonian Institution, and USGCRP sponsored invitation-only webinars and workshops.


Built System	Climate Variable	Risk Level
a) My Office Building, 1600 DC Road, DC	Gradual	
b) 12 stories tall; office space with street level stores; footprint 20,000 square feet; underground parking; utilities located in basement; built in 1940	Sea level rise	Major risk
	Precipitation variability	Moderate risk
	Higher average temperature	Minor risk
c) Houses personnel necessary to perform mission critical functions for my organization. They must be located in DC.	Extreme Events	
	SLR + storm surge	Major risk
	Heavy precipitation	Moderate risk
	Heat waves	Minor risk

Example #1 HW #1 HW #2 HW #3

## Building a Climate Resilient National Capital Region

Federal and community agencies working together on climate preparedness and resilience.

Summary of Climate Change Vulnerability and Adaptation Workshop Results  
 Built Systems: September – December 2013  
 Workforce, Community and Natural Systems: February - April 2014



Logos at the bottom: National Capital Planning Commission, NASA, United States Global Change Research Program, GSA, Council of Governments.

# Precipitation



***Bloomington***- 3 times in 10 days-  
July 2012

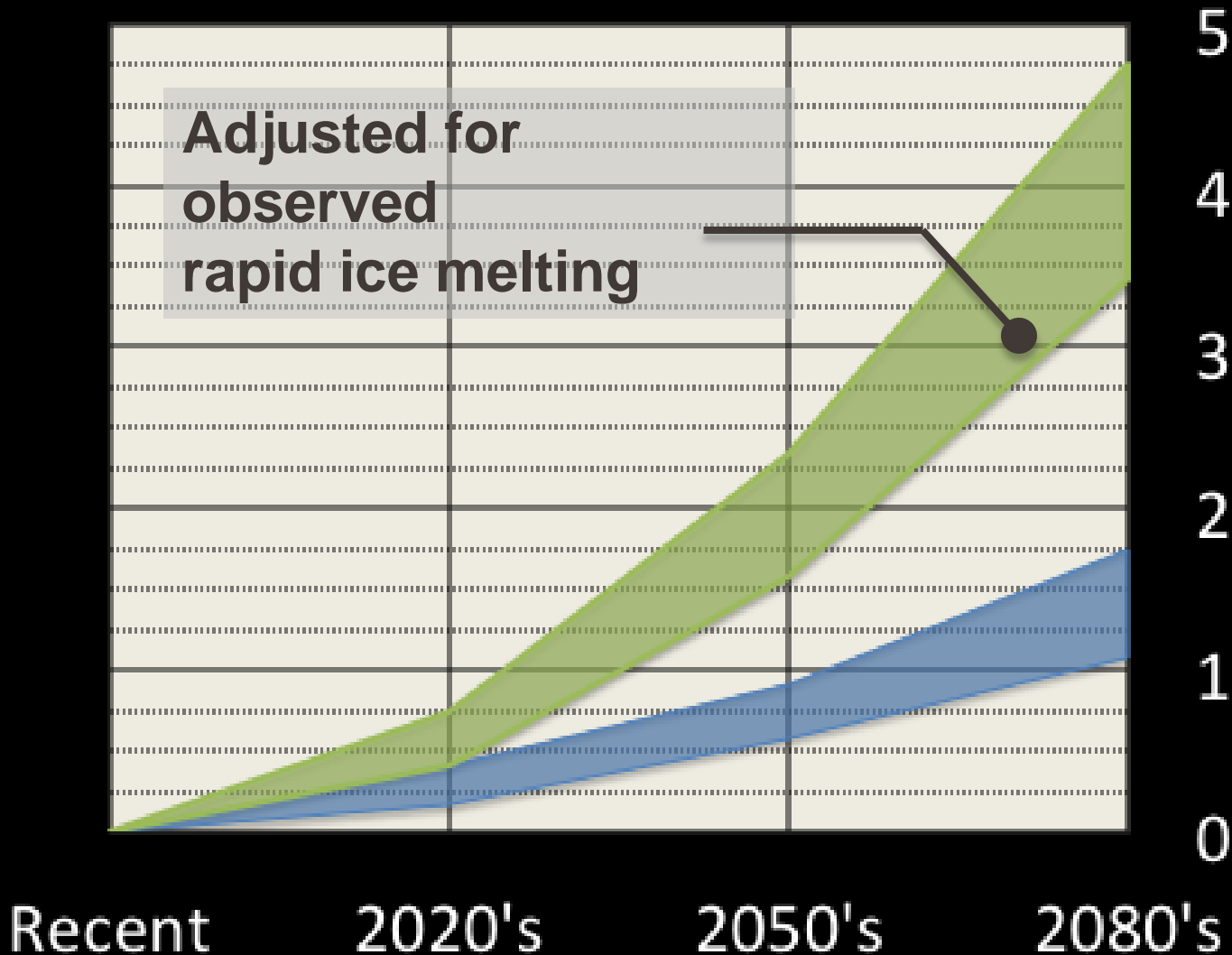


**Federal Triangle Flood 2006**

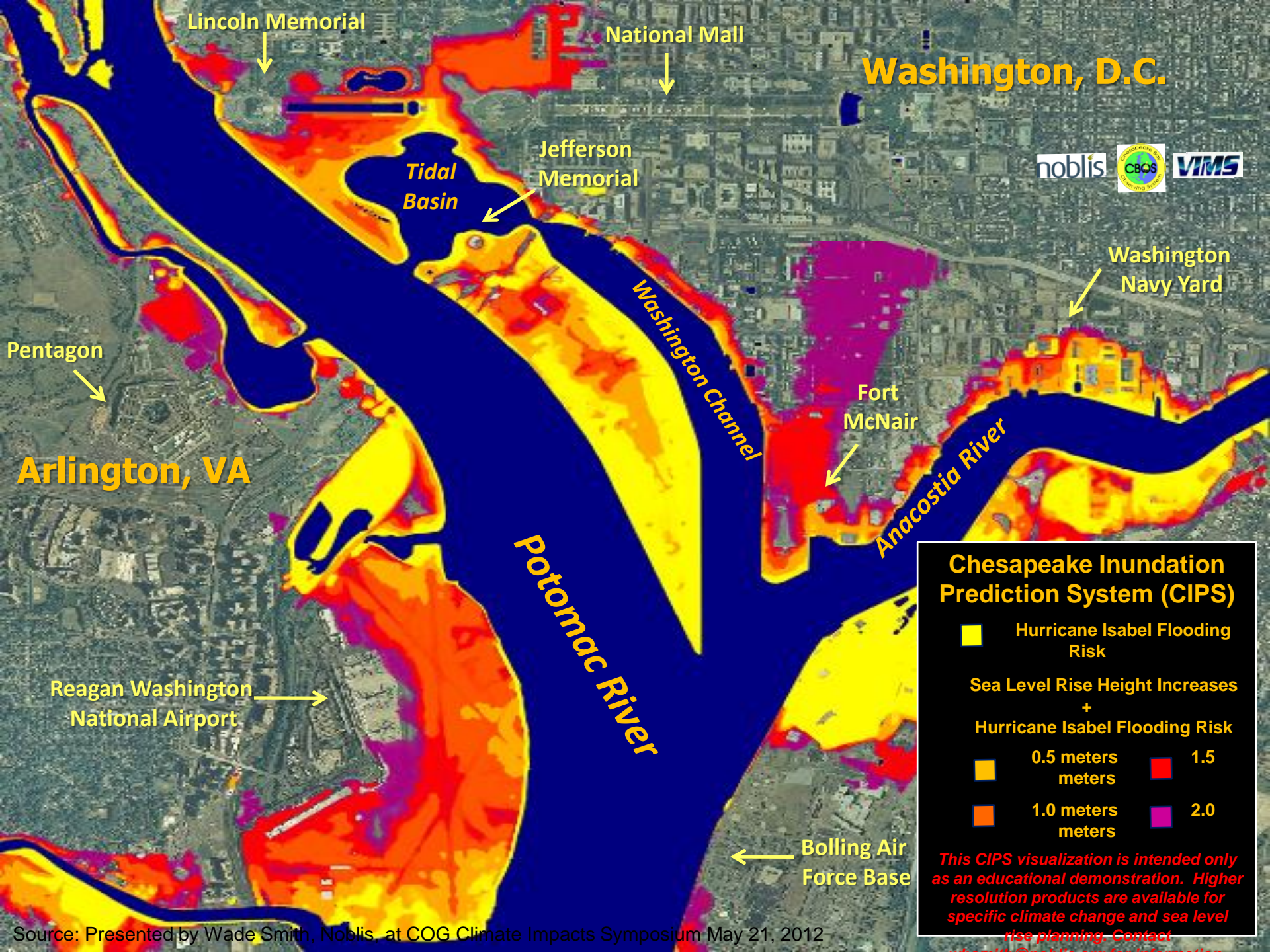
# What is projected locally?

## Average Sea Level (feet)

6



*Sea level rise is projected to accelerate this century*



# Washington, D.C.



Lincoln Memorial

National Mall

Jefferson Memorial

Tidal Basin

Washington Channel

Potomac River

Anacostia River

Washington Navy Yard

Fort McNair

# Arlington, VA

Pentagon

Reagan Washington National Airport

Bolling Air Force Base

## Chesapeake Inundation Prediction System (CIPS)

- Hurricane Isabel Flooding Risk
- Sea Level Rise Height Increases + Hurricane Isabel Flooding Risk
- 0.5 meters
- 1.0 meters
- 1.5 meters
- 2.0 meters

*This CIPS visualization is intended only as an educational demonstration. Higher resolution products are available for specific climate change and sea level rise planning. Contact [redacted]*

# Flooding in the Washington Metropolitan Area



Source: Presented by Wade Smith, Noblis, at COG Climate Impacts Symposium May 21, 2010





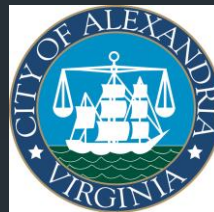
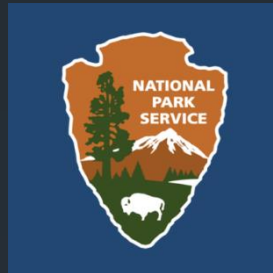
# Adding up the challenges

Climate Change

Regular Weather

Increased  
Development

Aging Infrastructure



Climate Action Champion: MWCOG



# Thank you



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Maia Davis  
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