

## Building a Climate Resilient National Capital Region

### Preparing for Climate Change Requires Regional Coordination

The Washington, DC area is already experiencing the effects of climate change, including more frequent extreme weather events, rising temperatures, and recurring flooding. Climate scientists predict that these changes will continue. Impacts will affect residents and workers, real estate assets, business, government, and institutional operations, and natural resources. Further, this area holds a unique concentration of federal buildings, irreplaceable cultural and historic treasures, nationally significant monuments and landscapes, and diverse communities.

Federal, regional, and local organizations have an opportunity to work together, share technical information, and collaborate on climate adaptation strategies tailored to the National Capital Region. Stewardship of the region's resources requires coordinating policy, tools, information, and expertise with others. Many federal, regional, and local agencies are individually exploring climate adaptation strategies for their buildings, infrastructure, workforce, and landscapes. However, no single entity can address all its climate change risks without working with other area organizations.

### Help Your Agency or Organization Prepare: Attend Upcoming Webinars and Workshops

Continuing the information-sharing and partnership-building activities that started in the autumn of 2013 and focused on built systems, NCPIC, GSA, NASA, MIVCOG, the Smithsonian Institution, and USCIBP are sponsoring a second series of free invitation-only webinars and workshops. The 2014 activities are focused on workforce, communities, and natural systems and are intended to assist your agency's climate adaptation planning and improve regional coordination.

#### Series 1: Built Systems (continued) (2/12)

#### Series 2: Workforce, Communities, & Natural Systems

##### Webinars

- Orientation on scope, activities, and expectations (2/12/2014)
- Climate science & projected impacts (2/13/2014)
- Characterizing Climate Risks & Vulnerabilities (2/19/2014)

##### Collaborative Workshops

- Shared Risks & Vulnerabilities (4/1/2014)
- Adapting Workforce, Communities & Natural Systems (4/29/2014)

##### Participants will be equipped to:

- Understand what climate trends and risks to expect
- Assess organizational impacts
- Explore a range of adaptation response/actions
- Prioritize appropriate action and develop adaptation strategies
- Incorporate climate criteria into existing plans

##### Participants will also:

- Learn from and ask questions of climate experts
- Gather best practices in climate adaptation strategies
- Learn how other organizations' climate adaptation efforts relate to their own
- Help identify needed information and available resources
- Develop partnerships for addressing shared risks

*"We've got to build smarter, more resilient infrastructure that can protect our homes and businesses, and withstand more powerful storms..."*

*We'll partner with communities seeking help to prepare for stronger and floods...*

*And we'll also open our climate data and NASA climate imagery to the public..."*

*President Barack Obama, speech on climate change at Georgetown University, June 25, 2013*



*Tree and power lines down at Bethesda, MD (above) following June 29, 2012 derecho storm in which over 2.5 million customers lost power in Maryland, DC, and Virginia. Tree down in heavy snow at Dupont Circle (below) during February 2013 'Snowmageddon,' in which Washington DC declared a snow emergency and the federal government shut down for 4.5 days.*



*(Photo by Mikayla [Unidentified Comment])*

For more information, visit [mivco.org/mivcochina/climate/resiliency.asp](http://mivco.org/mivcochina/climate/resiliency.asp)

# Risks and Vulnerabilities – Workforce, Communities, and Natural Systems

February 19, 2014



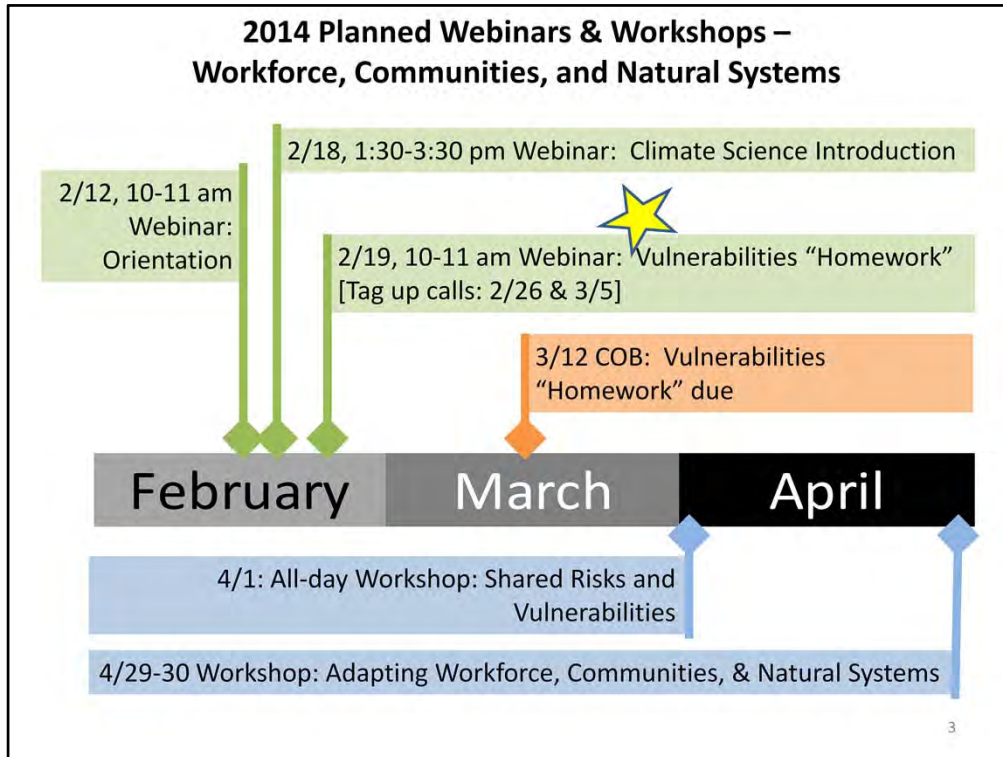
This webinar sets the context for how we'll use input ('homework') from all the participating agencies and organizations to focus discussions in the April 1 and April 29-30 workshops on climate change topics of common concern. This series of workshops focuses specifically on issues relating to the National Capital Region's Workforce, Community, and Natural Systems.

## Today's Agenda

- Webinar context
- Homework assignment for Workforce, Communities, and Natural Systems:
  - Setting the stage
  - What do I need to provide?
  - When it is due? To whom?
  - Who can I turn to with questions?
- Answer questions

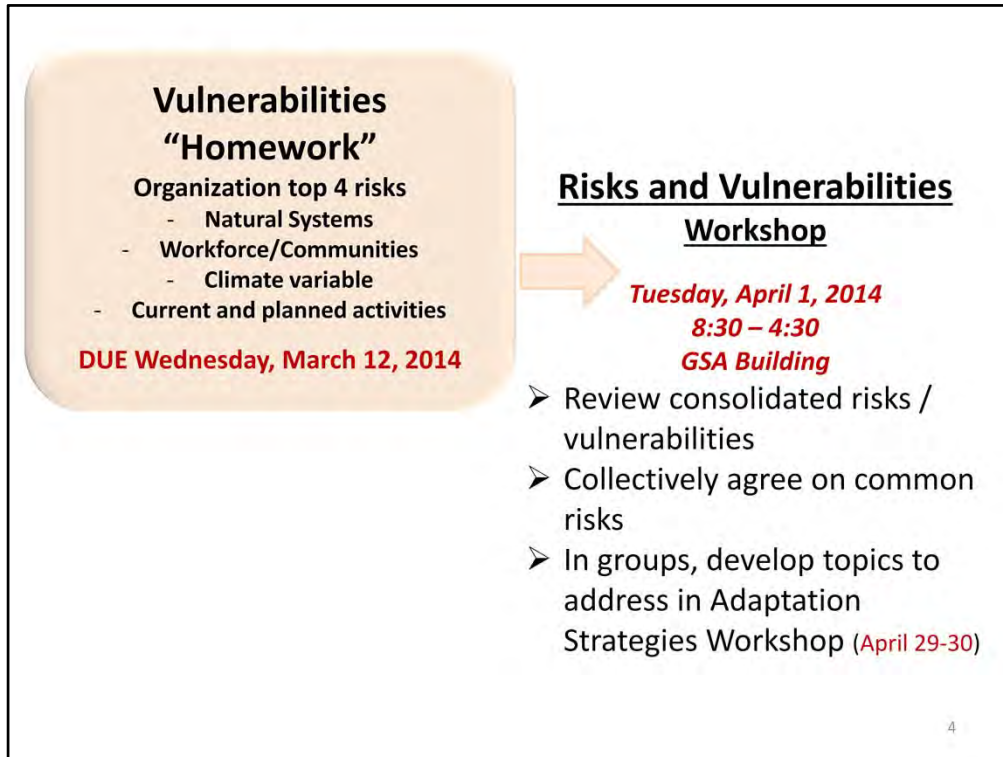
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- Webinar context – Orientation Webinar presentation in pdf was sent to Webinar attendees.
- Description of homework assignment due 3/12
- Answer questions



#### Spring Break Schedules

- DCPS 4/14 thru 4/21
- Private schools – 3/14-24; and 4/16-4/21
- We are posting all this information on the MWCOG website. You can still submit climate science questions via the MWCOG website.



Homework directly feeds into the April 1<sup>st</sup> workshop, where we'll review our common risks and settle on what we want to work on (the topics) in the April 29<sup>th</sup>- 30<sup>th</sup> workshop.

**Adapting Natural Systems, and**  
**Workforce/Communities**  
**Workshop**

***2 days – April 29 - 30, 2014***

***GSA Building***

**Focus: Topics identified by groups at April 1**  
**Risks & Vulnerabilities Workshop**

- What are adaptation strategies for long-term sustainability?
- How can we invest wisely together?
- What are the priority activities that should take place:
  - immediately?
  - by the end of 2016?
  - by the end of 2030?Both for your agency/org and with the other participant orgs?

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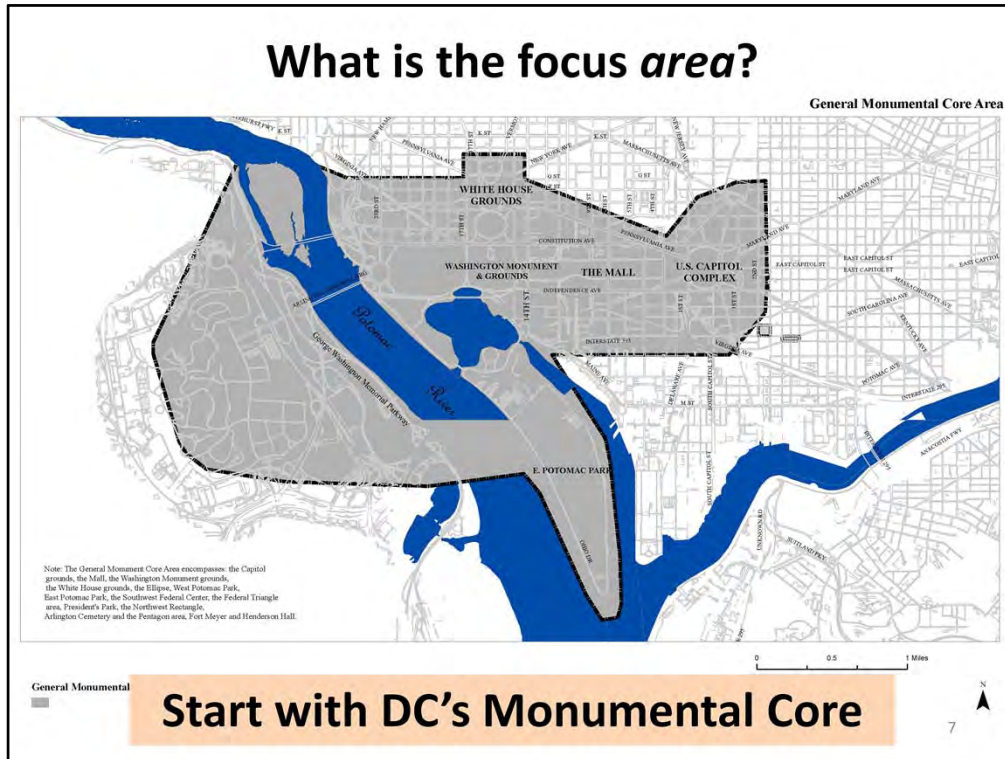
## Homework Assignment - Setting the Stage

- What is the focus *area*?
- What's the *scope*?
- What *level* of risk or vulnerability assessment are we expected to do?
- What *climate variables* are we looking at?

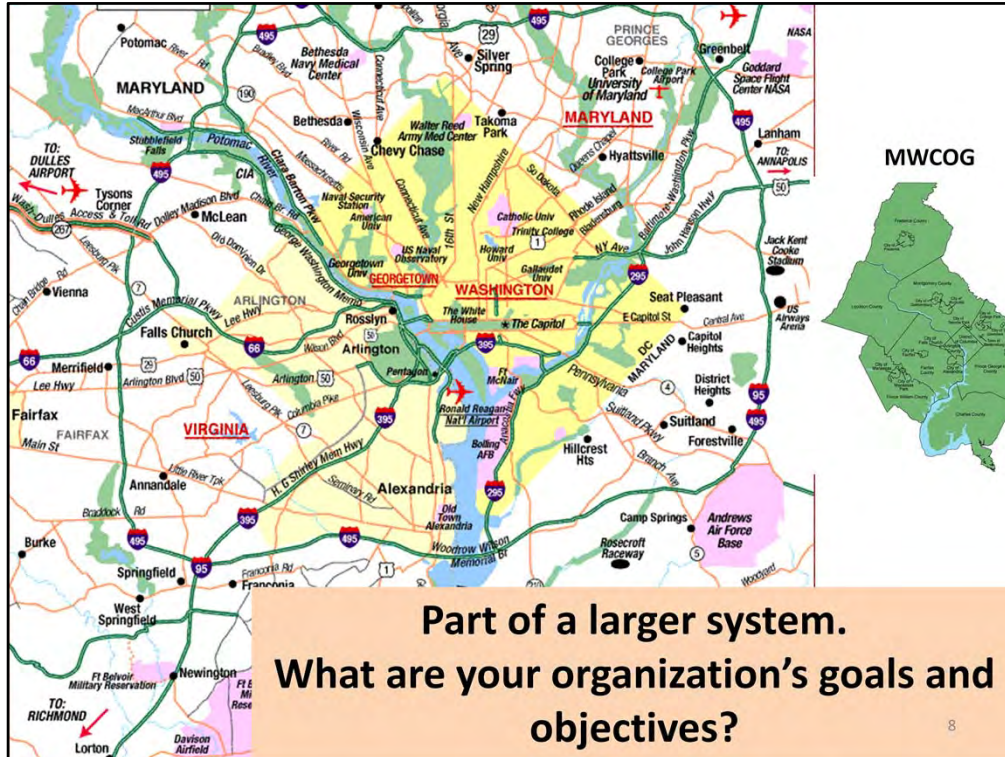
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- These are the questions we're addressing relative to the homework

# What is the focus *area*?

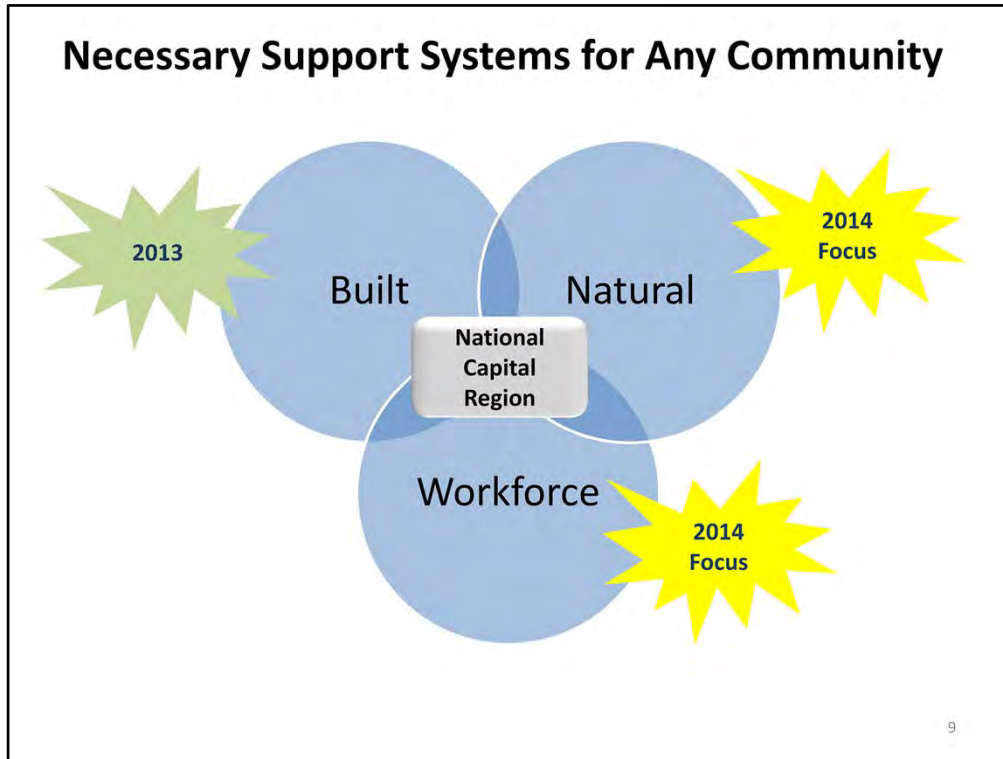


- Focus area can start with the Monumental Core pictured on this map. It's not a neat little rectangle.
- This monumental core is part of a larger context – see next slide.



- Here's a graphic of the larger system, of which the Monumental Core is a part.
- Note that the MWCOC area goes well beyond.
- Important to keep in mind ---- you understand your organization's goals and objectives -- -- which of the natural resource, workforce or community systems your organization needs or relies upon might be affected by climate?





Completed series of webinars and workshops in 2013 focused on Built Systems. 2014 is time to focus on natural, workforce, community systems. We expect the 2014 series to be very different from the 2013 series, which focused on the more tangible Built Assets in the National Capital Region.

## Natural Systems Examples

- **Ecosystems**
  - Urban trees
  - Landscaped areas
  - Natural areas
  - Agriculture
  - Fisheries
  - Parks & trails
  - Riparian buffers
  - Plants & wildlife
  - Invasive species
  - Pest species
- **Air Quality**
  - Ozone
  - Permits
- **Water Resources**
  - Drinking water supply
  - Water quality
  - Erosion
  - Green roofs
  - Stormwater swales

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Here are examples of things we like to have – nice landscaped areas, good air quality, good water quality. Climate change may affect these AND may affect how these systems impact your organization’s ability to do its work.

## Workforce/Community Examples

- **Employees**
  - Telecommuting policies
  - Staffing capabilities/recruitment
  - Occupational health
  - Fitness and well-being
  - Unions
  - Employee assistance programs
- **Emergency Response**
  - Safety
  - Continuity of Operations
  - Fire protection
  - Employee emergency notification
  - Emergency recovery
  - Security
- **Public Health**
  - Air quality/ozone
  - Infectious diseases
  - Heat stress
  - Allergies & asthma
- **Community Systems**
  - Daycare, eldercare, or shelters
  - Economic vigor of the region, including adequate workforce

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These are some aspects of workforce and community systems that may be affected by a changing climate.

It's important to consider the economic vigor of this area. We have smart, competitive people here. How do we ensure that DC keeps its competitive advantage?

**What *level* of risk or vulnerability assessment are we expected to do?**



➤ Screening level?

➤ More detailed level?

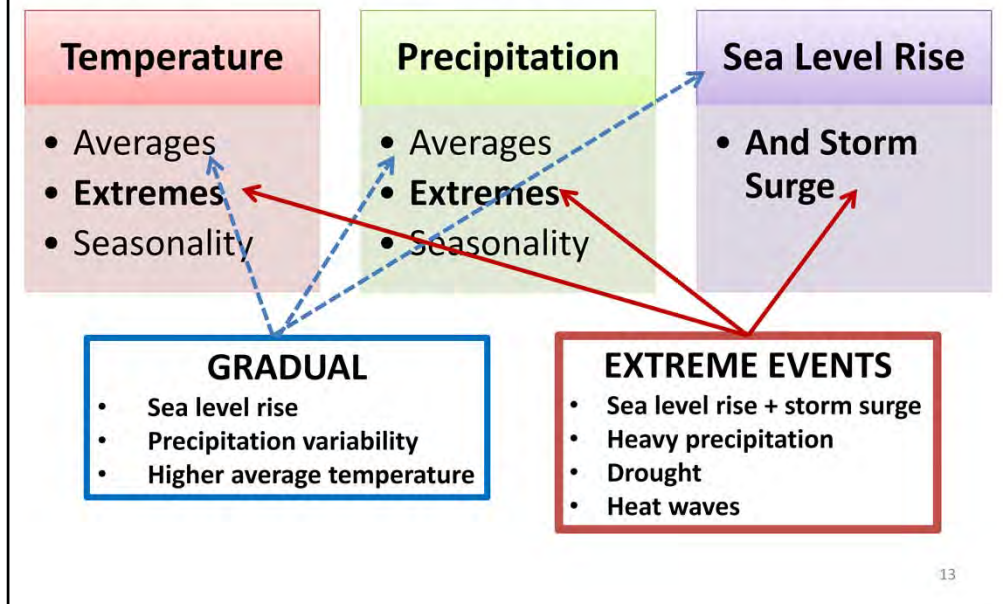
**Reminder: Objectives of the Resilient National Capital Effort**

- 1. Build capacity, capability and confidence**
- 2. Create networks and partnerships**
- 3. Encourage proactive adaptation planning**

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- Looking for a screening level vulnerability assessment.
- Need to remember the three goals for this effort
- We are in the Nation's Capital, which has rich cultural and economic value.
- Let's figure out how we can work together to start adaptation planning. We're not going to get everything figured out, but let's figure out how we can work on this together.
- Some of you may already have more detailed assessments for various assets – that's great; others may have less information – that's fine too.

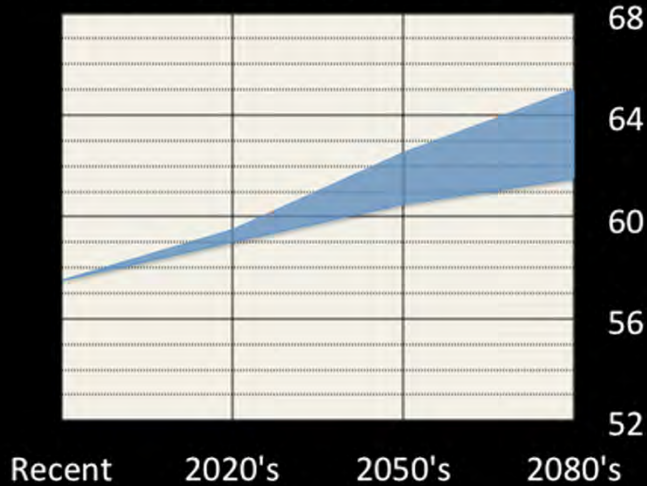
## What *climate variables* are we looking at?



- We're looking at 3 climate variables during this process – temperature, precipitation and sea level rise (combined with storm surge)
- Information about Temperature and Precipitation often comes in 3 forms – annual averages; likelihood of extreme events; and seasonal changes. [The current NASA climate information handout contains all but seasonal change information.]
- We're requesting information in the Homework Assignment relative to the impacts on workforce, community and natural systems from Gradual changes:
  - Sea level rise
  - Increased precipitation
  - Higher average temperature
- We're also requesting information in the Homework Assignment relative to the impacts on workforce, community and natural systems of Extreme Events (See Slide 24):
  - SLR + storm surge (18.1' is the storm surge height to use for this exercise)
  - Heavy precipitation (precipitation in any form)
  - Drought
  - Heat waves

## What is projected locally?

### Average Annual Temperature (°F)



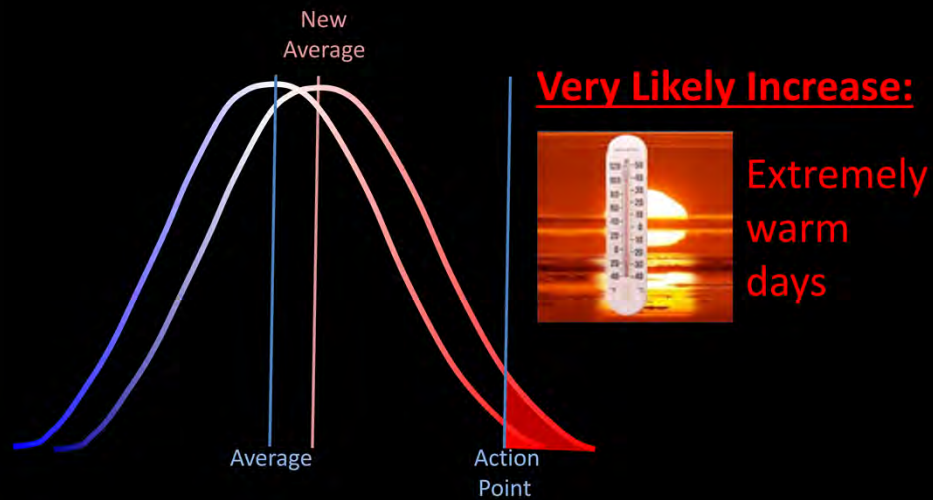
*Average temperatures are projected to rise*

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From Climate Science Introduction Webinar (9/20/13 and 2/18/14). Information is in the NASA Washington Metro Area Climate Change Information Handout (<http://www.ncpc.gov/climate/>)

- Average annual temperature projections indicate a faster rise than in the twentieth century.
- Based on 16 Global Climate Models (GCMs) and 3 emissions scenarios. Data is for the Reagan National Airport, Washington DC. Based on the middle 67% of values from model-based probabilities.
- Source: NASA projections for the Washington DC area using a format inspired by a 10 September 2012 NY Times article.
- A NASA Climate Adaptation Mobile App with this information will be released sometime in 2014, and will be updated as new science becomes available.

## What can a few degrees warmer do?



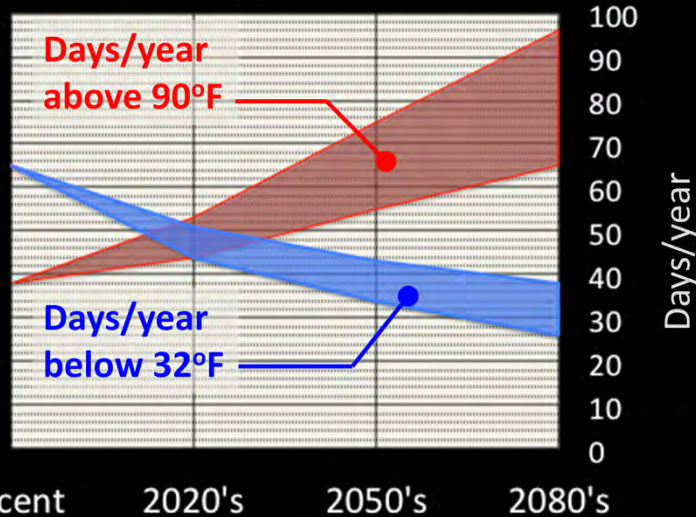
*A small average change can mean a big effect on extremes*

From Climate Science Introduction Webinar (9/20/13 and 2/18/14). Information is in the NASA Washington Metro Area Climate Change Information Handout (<http://www.ncpc.gov/climate/>)

- A modest change in average temperature might not seem very important to institutional stewards, but the change may result in a big change on the number of days above or below extreme temperatures.
- The term “action point” ties to how an organization operates. One example action point is the temperature at which outdoor work is curtailed; another is the point at which air conditioning or heating is needed.
- Maybe the action point is when tracks start to buckle, when planes get stuck on the tarmac. Point at which you cannot work outside.
- A NASA Climate Adaptation Mobile App with this information will be released sometime in 2014, and will be updated as new science becomes available.

# What can a few degrees warmer do?

## Extreme Temperature Events



*Extremes can change much faster than averages.*

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From Climate Science Introduction Webinar (9/20/13) and 2/18/14. Information is in the NASA Washington Metro Area Climate Change Information Handout (<http://www.ncpc.gov/climate/>)

- Compared with recent averages, the number of days over 90 degrees is projected to roughly double by the 2080's.
- On the other hand, the number of days it freezes is projected to be reduced by half in that same timeframe.
- Based on 16GCMs and 3 emissions scenarios. Data is from BCSD dataset.
- Source: NASA projections for the Washington DC area projections using a format inspired by a 10 September 2012 NYTimes article.
- A NASA Climate Adaptation Mobile App with this information will be released sometime in 2014, and will be updated as new science becomes available.



# Intense Rainfall is Likely to Increase

## Likely Increase



Intense  
rainfall  
events

## Likely Decrease



Snowfall  
frequency  
& amount

## More likely than not

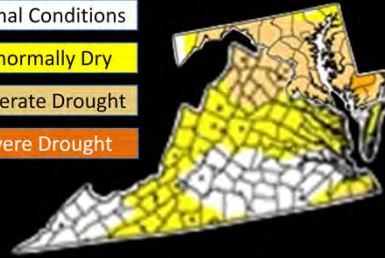
Increases in  
drought events

Normal Conditions

Abnormally Dry

Moderate Drought

Severe Drought

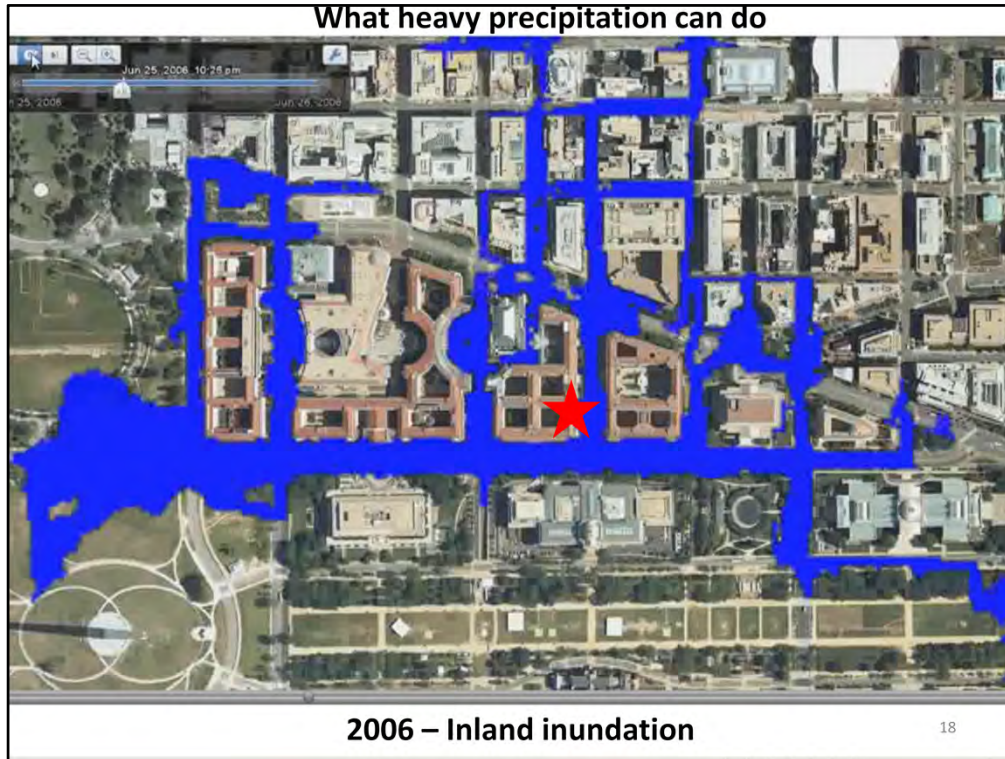


*There's more to consider than averages*

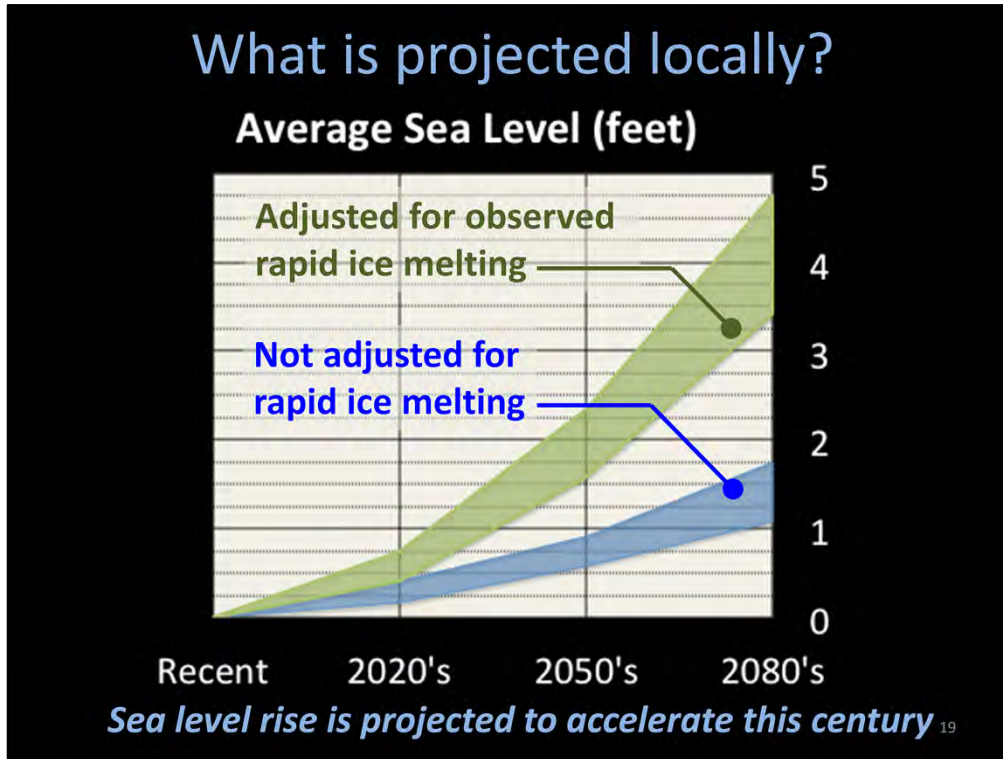
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From Climate Science Introduction Webinar (9/20/13 and 2/18/14). Information is in the NASA Washington Metro Area Climate Change Information Handout (<http://www.ncpc.gov/climate/>)

- This slide rounds out the qualitative projections in order of likelihood.
- Droughts and floods likely in the future.
- A NASA Climate Adaptation Mobile App with this information will be released sometime in 2014, and will be updated as new science becomes available.



- This is a depiction of what flooding due to precipitation (not storm surge) can cause – from 2006. map based upon flooding levels as shown on planters.
- While important, this area of the DC was studied at great length after this event (See Slide 18 for some examples)



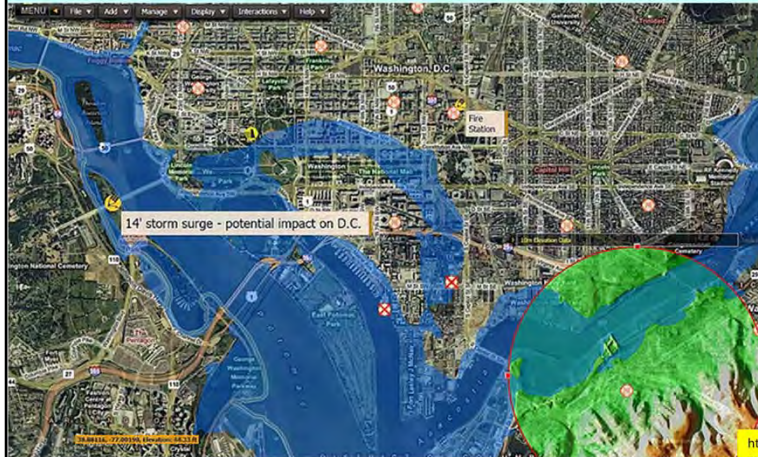
From Climate Science Introduction Webinar (9/20/13 and 2/18/14) Information is in the NASA Washington Metro Area Climate Change Information Handout (<http://www.ncpc.gov/climate/>)

- Sea level rise is expected to continue. Observations of polar ice melting indicate a faster rate of sea level rise, so it's wise to consider this possibility when evaluating impacts.
- Based on 7 GCMs and 3 emissions scenarios. Baseline (recent) is 2000 to 2004. Rapid ice-melt scenario is based on acceleration of recent rates of ice melt in the Greenland and West Antarctic ice sheets and paleoclimate studies. Projections based on the Washington Ship Channel tide gage.
- Note: NASA's internal planning guidance is to plan for the Rapid Ice Melt lower range. In this case, the 3-3.5 feet level.
- Source: NASA projections for the Washington DC area projected sea levels using a format inspired by a 10 September 2012 NYTimes article.
- A NASA Climate Adaptation Mobile App with this information will be released sometime in 2014, and will be updated as new science becomes available.

## What about Storm Surge?

For the purposes of this effort,  
using the Category III level: 18.1 feet (see Slide 22)

Historical 1933 storm surge 11.3 feet; 100-year floodplain 13.5 feet



<http://www.flickr.com/photos/depictionimages/3789318227/in/photostream/>

### Washington, DC Storm Surge

In 1933, the Chesapeake-Potomac Hurricane sent a 11.3-foot storm surge into the heart of Washington, DC. If a 14-foot surge were to happen today, this is what it could look like.

See page 302;  
[http://www.nps.gov/nationalmallplan/Documents/FEIS/Volume%201/5\\_The\\_Affected\\_Environment.pdf](http://www.nps.gov/nationalmallplan/Documents/FEIS/Volume%201/5_The_Affected_Environment.pdf)

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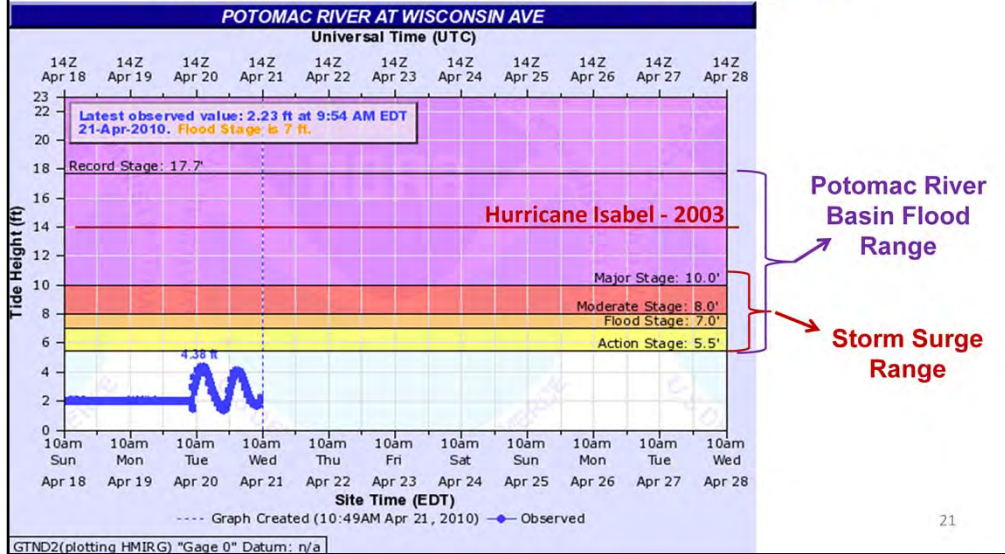
Lots of information relative to storm surge (page 1 of 3).

- This is info from National Park Service EIS and depicts impact of 14' on DC.
- Historical storm – 1933: storm surge 11.3 feet

## Additional Information on Storm Surge

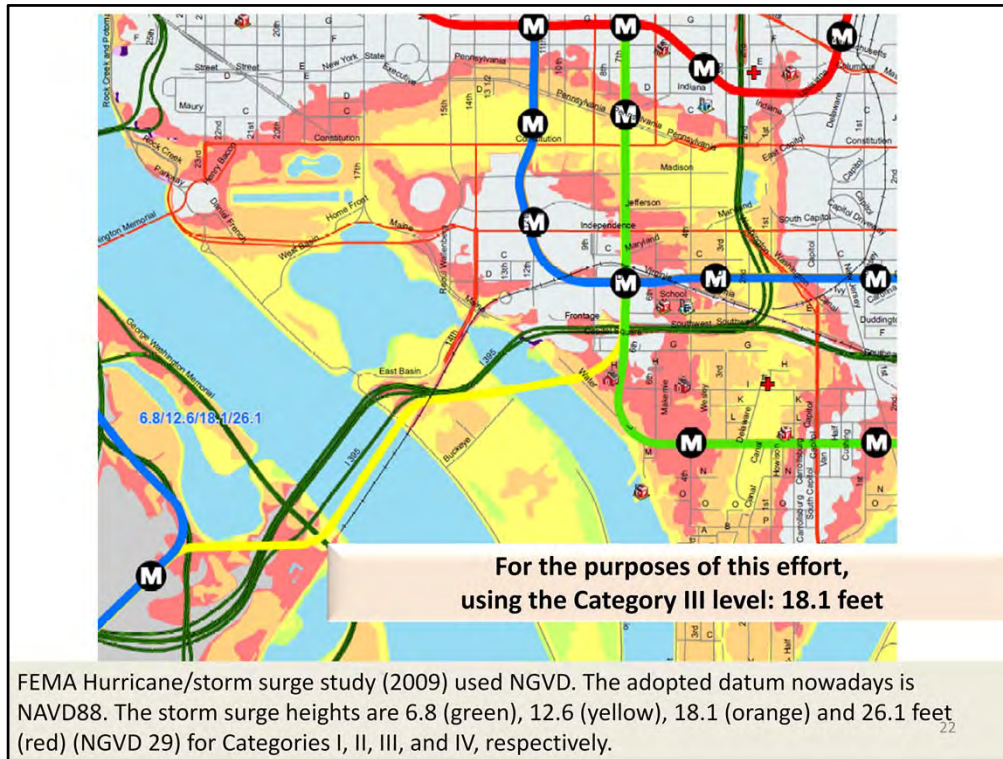
For the purposes of this effort,  
using the Category III level: 18.1 feet (see Slide 27)

### Range of Peak Water Level Events at Georgetown



Lots of information relative to storm surge (page 2 of 3).

- Depicts height of Hurricane Isabel in 2003 in Georgetown – about 11 feet



Lots of information relative to storm surge (page 3 of 3).

- This is a 2009 FEMA Hurricane/storm surge study with 3 different storm surge heights.
- For the purposes of this effort, we are going to use the Category III level: 18.1 feet (orange level shown on the map.)
- Let's explore our vulnerabilities for planning purposes at this level.
- Comment during the call: DC is designing their seawall at 17 feet. 14 flood plus 3 feet SLR.

# For more information...

National Aeronautics and Space Administration

Main Page: <http://www.mwco.org/environment/climate/resilience.asp/>  
 References and Documents – [http://www.mwco.org/committee/committee/documents.asp?COMMITTEE\\_ID=252](http://www.mwco.org/committee/committee/documents.asp?COMMITTEE_ID=252)

### What we're seeing now

Weather and climate are changing. Over 100 years of data collected from the area tell the story: the average annual temperature has risen about 4°, an increase in Bethesda, MD. Sea level, measured in the District of Columbia, has risen about 15 inches over the past 60 years.

**Observed Temperature**  
 Scientists project that these trends will continue, and even accelerate, this century. Furthermore, the warming is driving changes in the frequency and intensity of extreme weather events. Changes in extreme events include more downpours, more drought, and more heat waves. At facilities vulnerable to coastal storms, rising sea levels magnify the effect of intense storms, producing serious potential impacts from storm surge and flooding.

### What scientists project

Climate scientists from NASA's Goddard Institute of Space Studies used site-specific climate data from the DC area, combined with climate model outputs, to generate temperature and sea level rise projections for the area. The projections indicate warmer air temperatures and sea levels in the area. Sea levels may rise considerably faster if sea level rise is based on more recent, more aggressive projections.

Washington, DC has experienced several extreme weather events in recent years, with three days of intense tropical downpours in June 2006 exceeding the downtown. A cluster of tornadoes in April 2011 cut the city on edge. Hurricane Lee in September 2011 produced 7 inches of rain in 24 hours in some parts of the region. A string of days over 100 degrees in July 2012 broke the tracks of a Metro rail, leaving many commuters stranded. And DC residents learned a new word this year – *dencho* – a widespread and long-lived wind storm that accompanies rapidly moving showers and thunderstorms. The June 20<sup>th</sup> dencho caused massive tree damage and flooding in the area, power outages across the District disrupted life for several days.

### What might the Metro DC area's future look like?

**Sea Level Rise**

0 to +10% (Recent), 0 to +15% (2020s), 0 to +15% (2050s), 0 to +15% (2080s)

**Change in Average Annual Precipitation**

0.7 to 2.7 (Recent), 1.5 to 2.5 (2020s), 3.0 to 5.0 (2050s), 4.0 to 7.0 (2080s)

**Change in Average Annual Temperature**

Temperatures and precipitation projections reflect a 20-year average centered on the specific decadal sea levels are averages for the specific decade. Temperatures are projected to the nearest half degree, precipitation projections to the nearest 5%, and sea level rise to the nearest inch. Shown are the central range (middle 67% of values) across the Global Climate Models and greenhouse gas emissions scenarios.

**Sea Level Rise Projections (ft)**

2020s: 2 to 5 (Rapid Ice Melt Scenario: 5 to 9)  
 2050s: 7 to 11  
 2080s: 13 to 21 (41 to 57)

**Extreme Event Changes This Century**

Event	Direction of Change	Likelihood
Heat Waves	↑	Very Likely
Threatening and Severe Thunderstorms	↑	Likely
Extreme Precipitation Events	↑	Likely
Drought	↓	More Likely than Not
Sea Level Rises	↑	More Likely than Not

**Hot/Cold Days**

Recent (2010s): 1 (Hot), 10 (Hot), 38 (Hot), 66 (Hot)  
 2020s: 2 to 4 (Hot), 14 to 20 (Hot), 44 to 53 (Hot), 44 to 51 (Hot)  
 2050s: 4 to 9 (Hot), 22 to 36 (Hot), 55 to 75 (Hot)  
 2080s: 7 to 24 (Hot), 34 to 43 (Hot), 29 to 55 (Hot), 28 to 35 (Hot)

**Day/yr with max temperature at or above...**

- 100° F: 1
- 90° F: 2
- 90° F: 3

**Day/yr with min temperature at or below...**

- 32° F: 1
- 32° F: 2

From Climate Science Introduction Webinar (9/20/13 and 2/18/14).

- Cover of NASA handout and core science info

<http://www.mwco.org/environment/climate/resilience.asp>

## What do I need to Provide?

### Your Org's Top 4 Risks – Natural Resource, Workforce, or Community Systems

- Name or type of asset / system
- Scale of impact
- Current and planned responses (work-arounds)
- Any other information you feel would be useful for 4/1 Workshop

Microsoft Excel template

**DUE: Wednesday, March 12<sup>th</sup>**

**TO:** Sarah Lynagh, Leidos

#### Direct Questions:

- Christina Hudson, Leidos
- Kimberly Gotwals, Leidos

Climate Variable	Timeframe / Scale of Impact		
	Today	2020s	2050s
<b>Gradual</b>			
Sea level rise	minor	minor	minor
Precipitation variability	minor	moderate	moderate
Higher average temperature	major	major	major
<b>Extreme Events</b>			
SLR + storm surge			
Heavy precipitation			
Heat waves			
Drought			

Major risk  
Moderate risk  
minor risk

Derived from: NYC Special Initiative for Rebuilding and Resiliency (SIRR) <http://www.nyc.gov/html/sirr/html/home/home.shtml>

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What the Homework really is

- A description of the top 4 most climate-vulnerable workforce, community and natural systems that are critical to carrying out your organization's goals and objectives; how they are impacted; and current and planned responses.

Questions:

- How are your organization's goals & objectives vulnerable in a light of a changing climate?
- Which 4 workforce, community, natural resource systems are most at risk of impeding your goals and objectives now and in the future?
- Information:
  - Name or type of system
  - Your organization's current and planned responses (or work-arounds)
  - Any other information you feel would be useful for those at 4/1/14 Risks & Vulnerabilities – Workforce, Community and Natural Systems - Workshop
- For each of the top 4 risks, what is the scale of the impact relative to the Gradual and Extreme Events categories listed in the example – today, in the 2020s and the 2050s. Label each minor, moderate or major. The color-coding is automatic.
- We'll send info to help you capture the information about your top risks.
- Given security sensitivities, you don't need to provide a specific address, you can provide a TYPE of system.
- Contact information: located on last 2 slides.



## Important to remember...providing information for the next stage

### Vulnerabilities “Homework”

- Organization top 4 risks
- Natural Systems
  - Workforce/Communities
  - Climate variable
  - Current and planned activities

**DUE Wednesday, March 12, 2014**

### Risks and Vulnerabilities Workshop

**Tuesday, April 1, 2014**

**8:30 – 4:30**

**GSA Building**

- Review consolidated risks / vulnerabilities
- Collectively agree on common risks
- In groups, develop topics to address in Adaptation Strategies Workshop (April 29-30)

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We're expecting 4 sheets on your spreadsheet describing your 4 top risks. We hope to post a completed Natural Resource spreadsheet so you can follow that as an example.

## **Our Assumptions – Range of Possibilities**

- Your organization has already identified a number of DC-based risks – you need to choose Top 4 risks for **Workforce, Communities, and Natural Systems**
- Your organization has not done this
  - We can provide a Workbook similar to one NASA and GSA have used
  - Don't have to have all the answers to do this
- We don't need to know how you chose the Top 4
- By listing in Top 4, we know they are important to your organization

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Core Planning Team recognizes that there are a range of possibilities facing the organizations invited to this effort:

- Some may be faced with the challenge of naming only four out of the many you have already identified.
- Some may not have had the opportunity to think about your organization in the face of a changing climate. Now's your chance!
- Your organization may already have a process for identifying vulnerabilities and risks that you wish to use.
- We will post a Reference Document, "Resilience & Adaptation to Climate Risks Workbook," that some might find useful should their organization not have an existing method of identifying vulnerabilities and risks. The Workbook outlines the 8-step process utilized by both NASA and GSA during their respective workshop activities, which can be executed outside of a formal workshop setting.

The Workbook comprises several documents:

- PDF containing:
  - A. Characterize Risk of Climate Variables on Systems / Assets / Capabilities section
  - B. Develop Potential Adaptation Strategies section
  - C. Integration & Implementation Approaches section
  - D. Excel Spreadsheet used to document information from Section A – Characterize Risk
  - E. Example - completed Characterize Risk spreadsheet

- F. Excel Spreadsheet used to document information from Section B – Adaptation Strategies
- G. Example - completed Adaptation Strategies spreadsheet
- H. Word document used to document information from Section C – Integration
- I. Examples – completed Integration documents
- Excel spreadsheets for Sections A and B
- Word document for Section C

## Some Questions to Consider

How do climate concerns affect:

- your organization's mission or goals/objectives?

OR

- the way your organization carries out its mission?

For example, will more high heat days affect the services you provide or the way you do your work? If your work is to provide health services, your workload may increase as you have more responses to heat stress incidents. If you have outside workers, their work days may be limited.

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Changing climate conditions may change:

1. Your organization's mission or goals/objectives
2. The WAY you carry out your current goals/objectives

## More Examples

- If you are in charge of **HR policies** - Will more days of inclement weather affect your workforce's ability to get to work or work productively?
- If you are in charge of **urban trees** – Will gradually increasing annual temperatures affect the health of existing trees?
- If you are in charge of designing **green stormwater infrastructure** – Will increased incidences of downpours (or higher temps) affect your design and maintenance requirements?

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Here are more examples of what you might want to consider in developing your spreadsheets of top risks.

## **“Definition of Biggest Risk”?**

- Up to each organization or agency
- Can be based:
  - on a time issue (something you’re facing right now)
  - serious catastrophic failure sometime in the future,
  - some particular mission-critical asset
  - cultural / historical significance

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Recognition that Top 4 risks from each organization will reflect their perspective and that there are no right or wrong answers

## Biggest “Risk” Examples

You might identify something as a priority for your organization because:

- the impact is occurring now or very soon, and you need a fix
- the impact is in the future, but it is *critical* to your organization

Example: if you are in charge of landscape maintenance, you may have noted that precipitation variability is causing your water irrigation bills to be higher, but you’ve adjusted (so NOT a top concern); future changes in precipitation may seriously impact your ability to maintain the landscape (so IS a top concern)

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Climate conditions that you’ve adjusted to for now may pose a greater risk in the future. In other words, you may use work-arounds for now, but at some point, given the projections for the future, those work-arounds may not be sufficient.

## What's going to happen next?

### Core Planning Team

- Send and post
  - Webinar briefing with notes
  - Excel Homework template
  - Reference Workbook

Remember – Focus now is  
**Workforce, Communities, and  
Natural Systems**

- Hold tag ups on Wed – 2/26 & 3/5, 10-11 am

### Organization and Agency Points of Contact

- Complete the Homework templates by COB Wed, **3/12**, and submit to Sarah Lynagh [sarah.b.lynagh@leidos.com](mailto:sarah.b.lynagh@leidos.com)
- Based upon your Top 4 risks, identify 2-3 participants for **4/1** Workshop (room capacity = 90)
- Submit **4/1** Workshop participant names to Sarah Lynagh, [sarah.b.lynagh@leidos.com](mailto:sarah.b.lynagh@leidos.com) by **3/24**
- Save the date notice will be sent as Outlook Invite
- Put Workshop dates on your calendar, if you should attend

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We are posting information to the MWCOG website for you to access. Please be thinking about the people from your organization who should attend the April 1 and April 29-30 workshops. We will need their expertise to make this effort successful!



## 2014 Planned Webinars & Workshops – Workforce, Communities, and Natural Systems

2/12, 10-11 am  
Webinar:  
Orientation

2/13, 1:30-3:30 pm Webinar: Climate Science Introduction

2/19, 10-11 am Webinar: Vulnerabilities “Homework”

**QUESTIONS?**

3/12 COB: Vulnerabilities  
“Homework” due

February

March

April

4/1: All-day Workshop: Shared Risks and  
Vulnerabilities

4/29-30 Workshop: Adapting Workforce, Communities & Natural Systems

## Core Planning Team – Contact Info

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