

Building a Climate Resilient National Capital Region

Vulnerabilities Homework (due 10/30/13)

For Risks & Vulnerabilities – Built Systems – Workshop

(New date: Thursday, 11/14/13)

Product: A description of the top 4 most climate-vulnerable built 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 built systems are most at risk of impeding your goals and objectives now and in the future?

Complete one Homework Spreadsheet tab for each of your 4 most climate-vulnerable built systems. Note: You may not have all the information needed to fully characterize potential risks to your built assets; for now, use your best judgment.

- Name (address) and/or type of built system necessary to meet your organization's mission/goals/objectives (could include services)*
- Brief description of the built system and why it is one of your organization's top 4 (How does it enable you to operate?)
- What is the scale of the impact relative to the Gradual and Extreme Events categories listed below, over several timeframes – today, in the 2020s and the 2050s? [Reference quantitative and qualitative data in the Climate Information Handout and Characterize Risks Webinar slides – referenced below.]

Gradual changes:

- Sea level rise
- Precipitation variability
- Higher average temperature

Extreme events:

- Sea level rise plus storm surge**
- Heavy precipitation
- Drought
- Heat Waves

- Classify the impact as minor, moderate or major
- Identify the system's critical threshold - Document whether there is a critical point at which the system or asset is directly or indirectly affected by changes in climate variable (e.g., particular temperature or elevation threshold (e.g., physical factors, design standards, operational capacity, levee height, etc.)
- Describe the impact on the built system
- Describe the impact on your organization's goals and objectives
- Describe your organization's current and planned responses (or work-arounds)
- Provide any other information you feel would be useful for those participating in Risks & Vulnerabilities – Built Systems - Workshop on 11/14/13 (e.g., links to useful documents, ability to provide studies/maps)

References and Documents – http://www.mwcog.org/committee/committee/documents.asp?COMMITTEE_ID=252

- Characterize Risks Webinar slides (with notes) (9/26/13)
- Homework instructions and homework spreadsheet
- NASA Washington Metro Area Climate Information Handout
- Climate Science Information Webinar – Slides and Recording (9/20/13)
- Resilience & Adaptation to Climate Risks Workbook (and Word and Excel documents)
- Orientation Webinar slides (9/12/13)

Questions: Christina Hudson, Leidos, 571-282-8896, christina.c.hudson@leidos.com

Submit Completed Forms to: Sarah Lynagh, 703-676-5645, sarah.b.lynagh@leidos.com

* If you have security sensitivities, provide a TYPE of built system rather than specifics.

**Storm surge height for this exercise – 18.1 feet (Hurricane Category III level; 2009 FEMA Hurricane/storm surge study)

Main Webpage for this effort: <http://www.mwcog.org/environment/climate/resilience.asp>