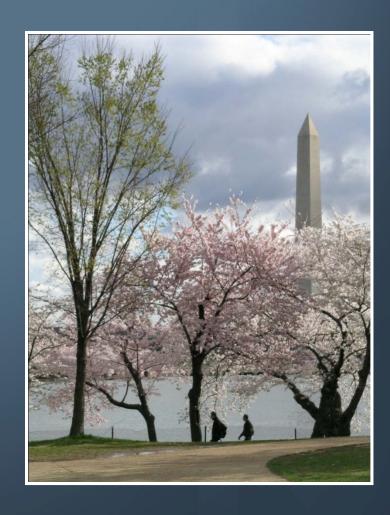






- ☐ The federal government's central planning agency in the capital region
- ☐ Review federal development proposals
- ☐ Comprehensive plan policies
- Special initiatives







- Agency Strategic Sustainability Performance Plans
- CEQ guidance on federal agency climate change -March 2011
- ☐ Agency Climate Change Adaptation Plans due June 2012

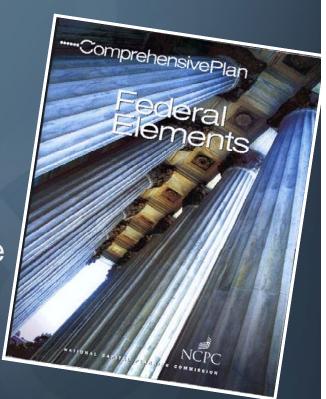


- Comprehensive Plan updates
- □ SW Ecodistrict
- □ Levee on the National Mall
- □ Federal Triangle Flood Study





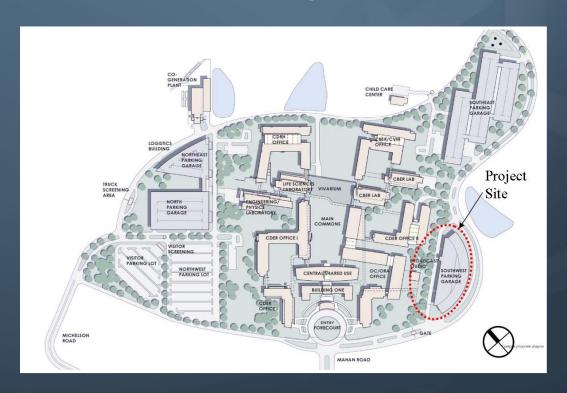
- Updating the Comprehensive Plan for the National Capital: Federal Elements
- Climate adaptation policies included for the first time
- □ Closely following EO 13514 guidance
- □ June 2012 public draft release





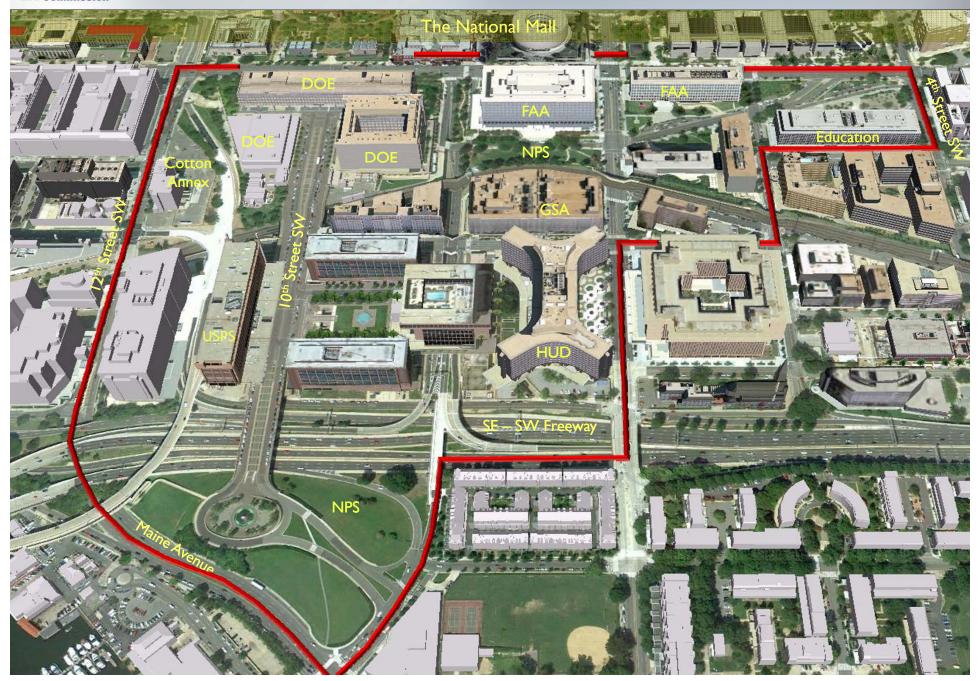
Impact:

Comp Plan policies are the primary tool NCPC uses to review federal development projects and master plans.





SW Ecodistrict Initiative



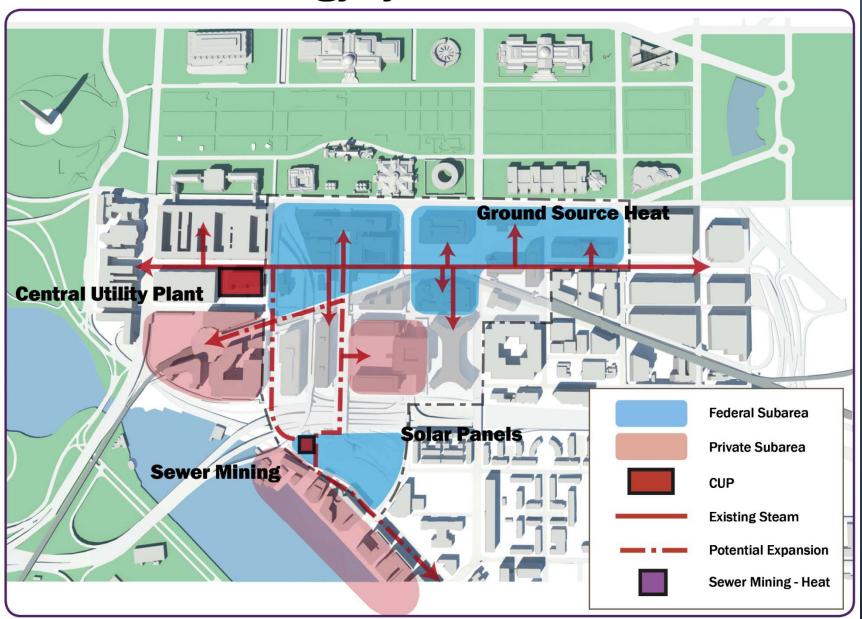


SW Ecodistrict Initiative





District-scale energy systems





Energy, Water and Waste Targets

- □ Capture and reuse all rainwater in the Ecodistrict
- □ Reduce potable water use by 70%
- Reduce the Ecodistrict's greenhouse gas emissions by 51%
- □ Increase the amount of waste diverted from landfills from 35 to 80%



Understand flood risks and flood management in Washington, DC











- Downtown is the bottom of the topographic bowl
- □ At confluence of two major rivers
- □ Three buried streams and a high water table
- Development in floodplains
- Sewer system is old and has limited capacity
- □ Sea level rise and climate change affect risk, damage



Understanding Flood Risks in Washington, DC



1889 - first flood of record

- Overbank flooding: river-caused
- □ Tidal flooding: storm surge-caused
- Urban drainage flooding: sewer capacity-caused









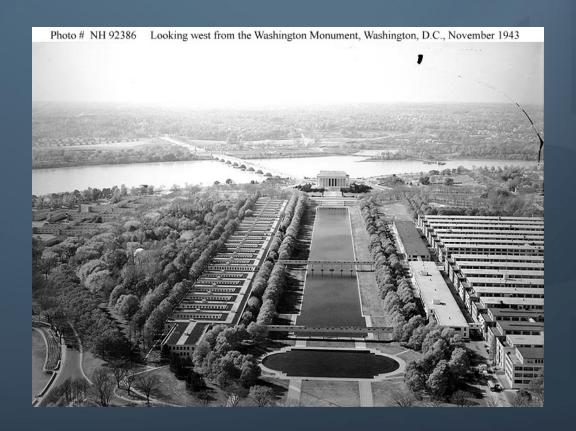




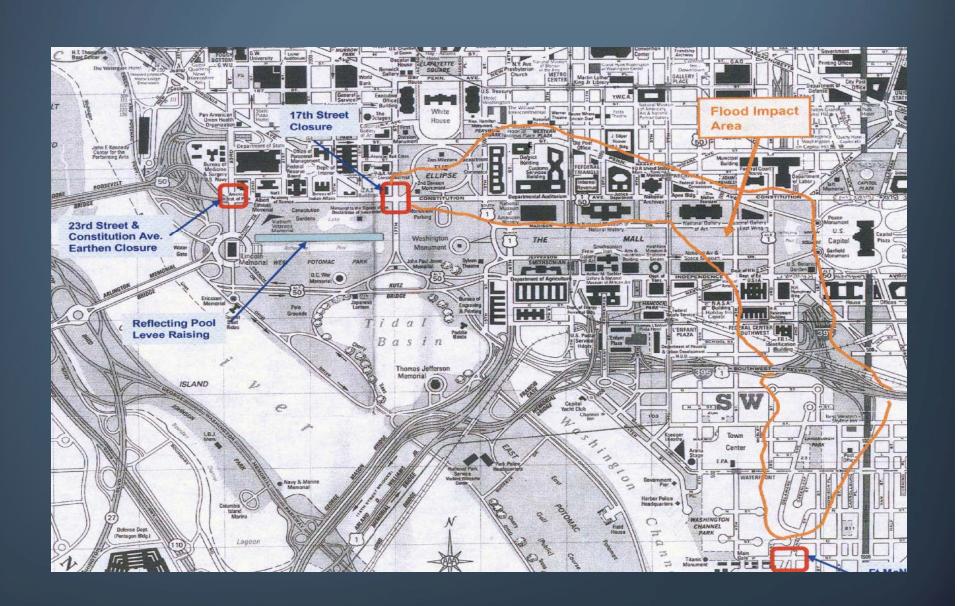




- Protects against Potomac overbank flooding
- Authorized in 1936 after the Great Flood
- □ Operational by 1940









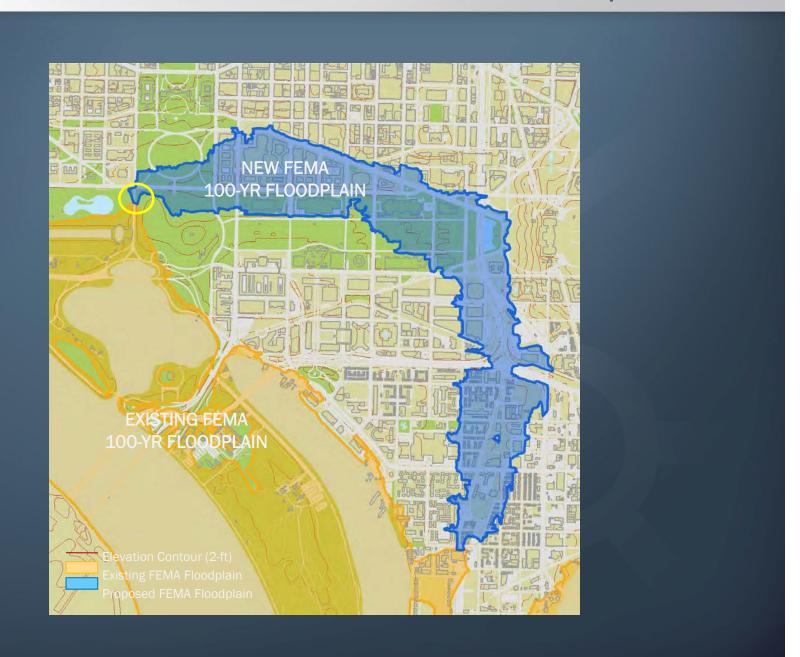
Three temporary closures

- □ 23rd Street, NW
- □ 17th Street, NW
- □ Fort McNair





Critical Role of 17th Street Levee Improvements





Critical Role of 17th Street Levee Improvements



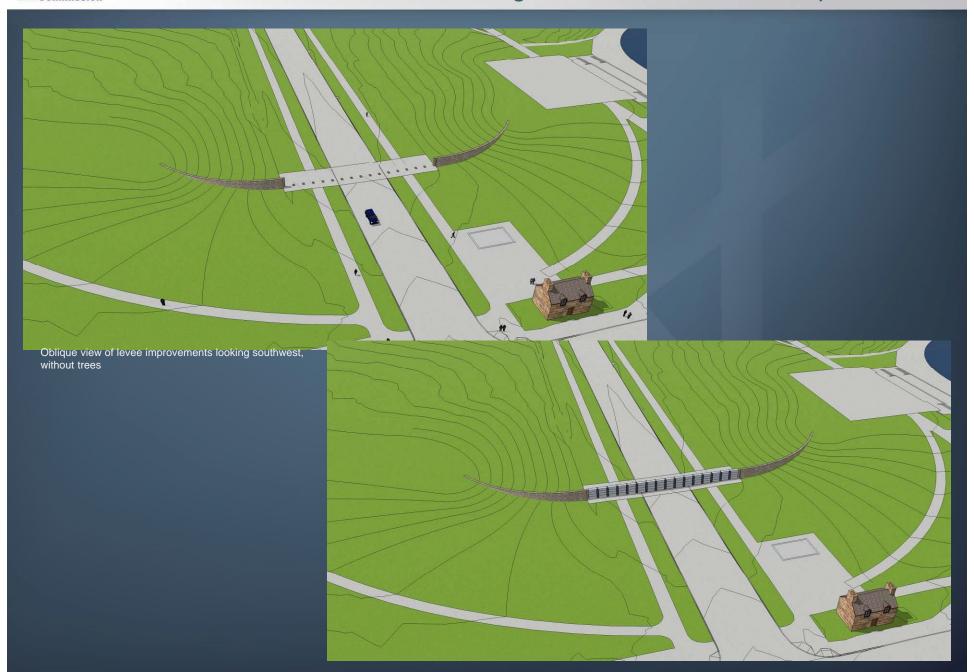


Design of 17th Street Levee Improvements





Design of 17th Street Levee Improvements

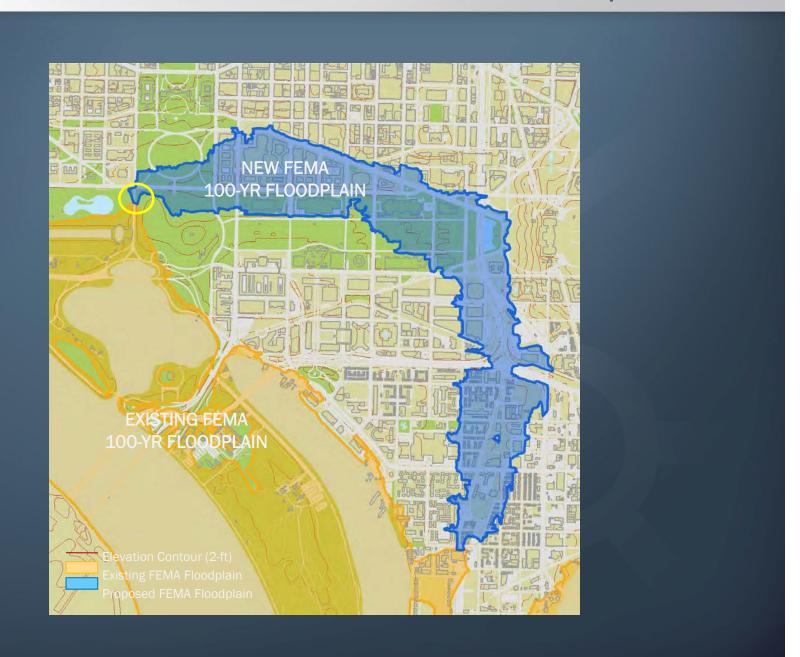




- ☐ Major river floods have occurred in downtown Washington
- ☐ The levee system protects important federal assets, private sector buildings and neighborhoods
- ☐ Authorized flood protection is for 185 year flood event, offering higher than typical protection levels
- ☐ Complex property management, regulatory and funding roles require partnerships and persistence

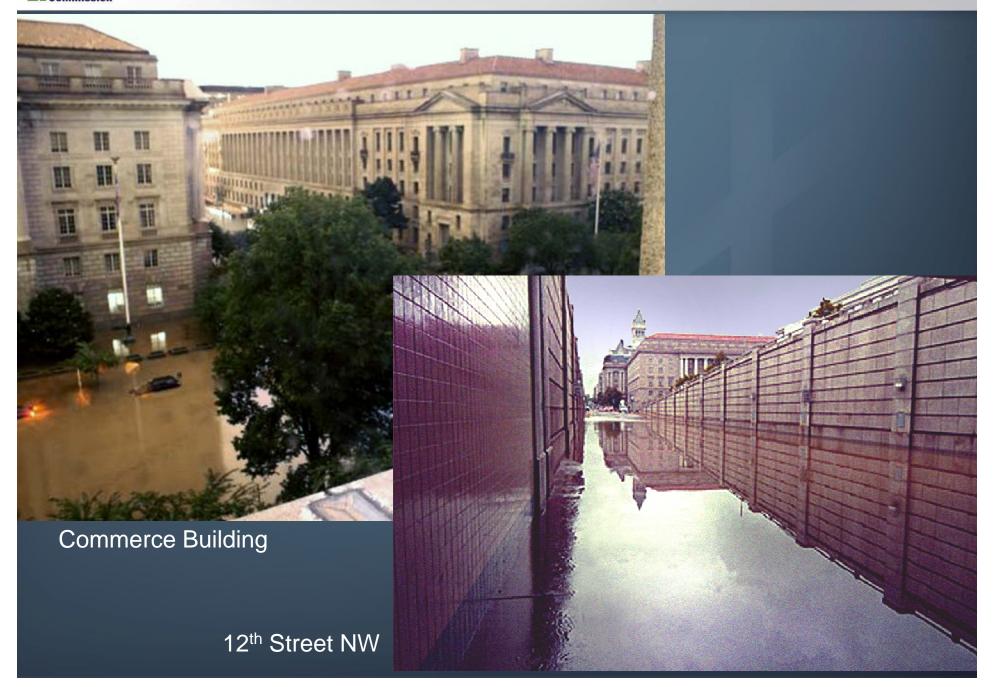


Critical Role of 17th Street Levee Improvements





June 2006 Flood







▲ Map of the Federal Triangle Study Area





Flooded Federal Facilities

 National Archives, IRS HQ, Justice, Commerce, Smithsonian, National Gallery

Study Results

- □ Rainfall > 200-year event in 6-hour period
- □ Started earlier than expected
- □ Rivers did not exceed flood stage

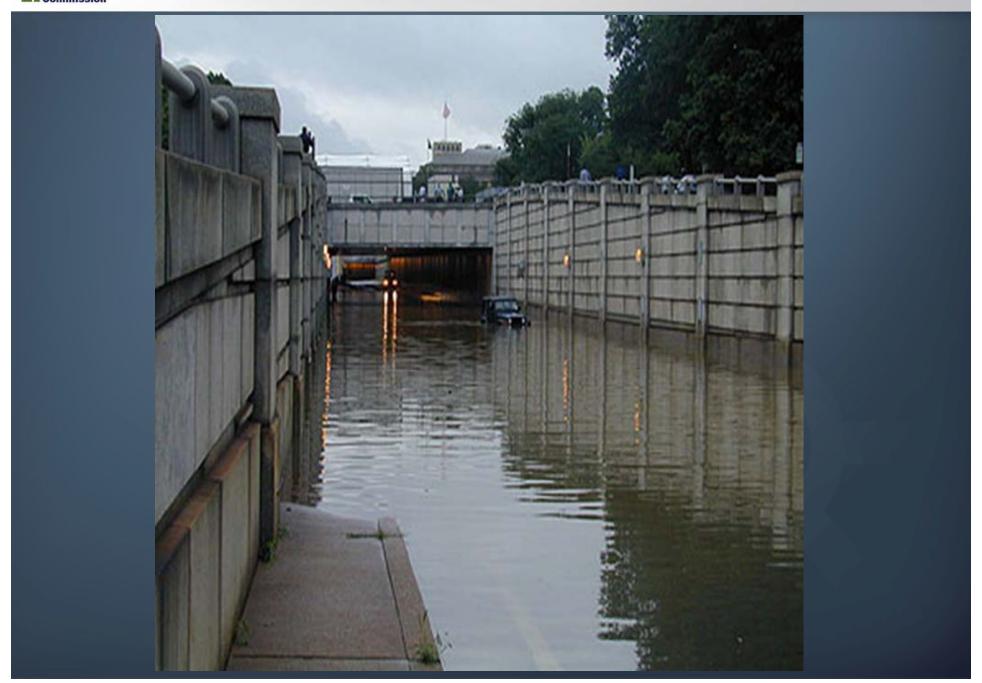




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Partner Agencies

GSA, Smithsonian, DCOP, DC Water, DDOE, FEMA and NCPC

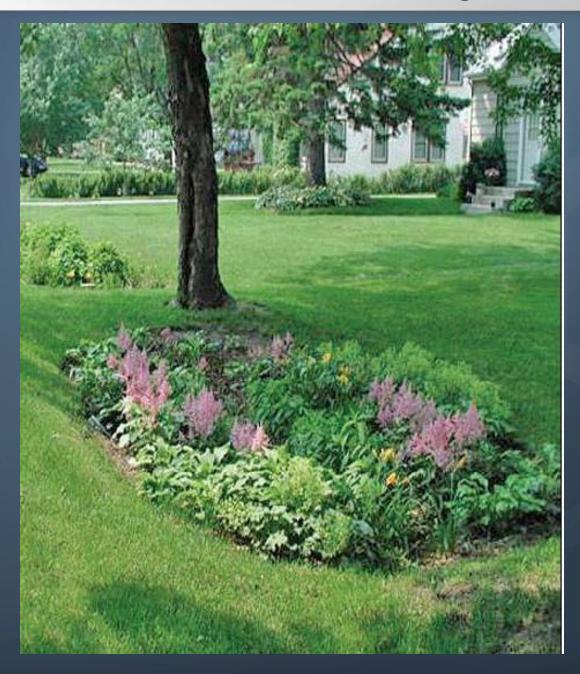
With WMATA, NPS, Archives, National Gallery of Art



Six Strategies Considered

- 1. Low Impact Development
- 2. Store Upstream
- 3. Condensate Line
- 4. Store Under Mall
- 5. Mall Pumping Station
- 6. New Sewer Tunnel

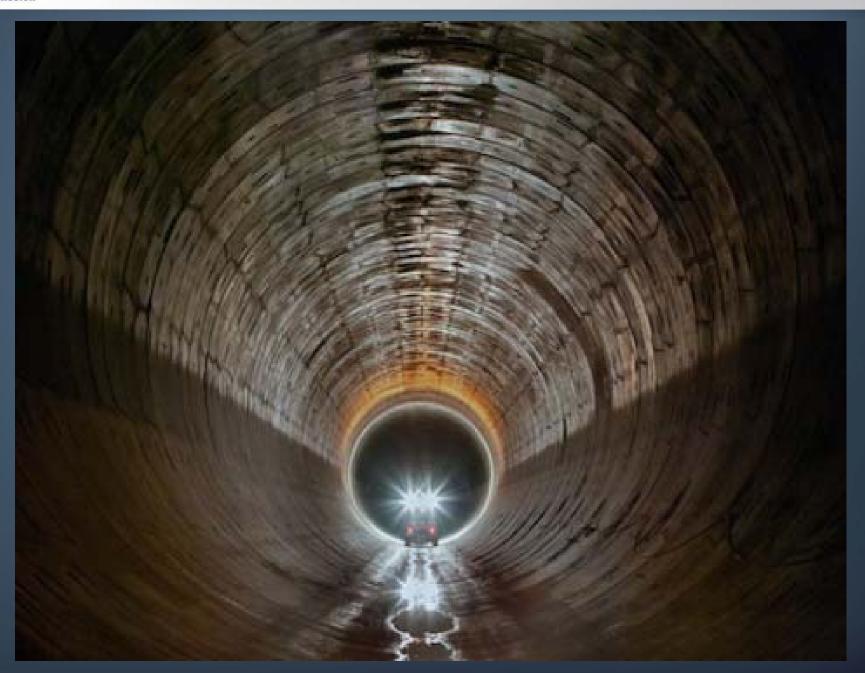




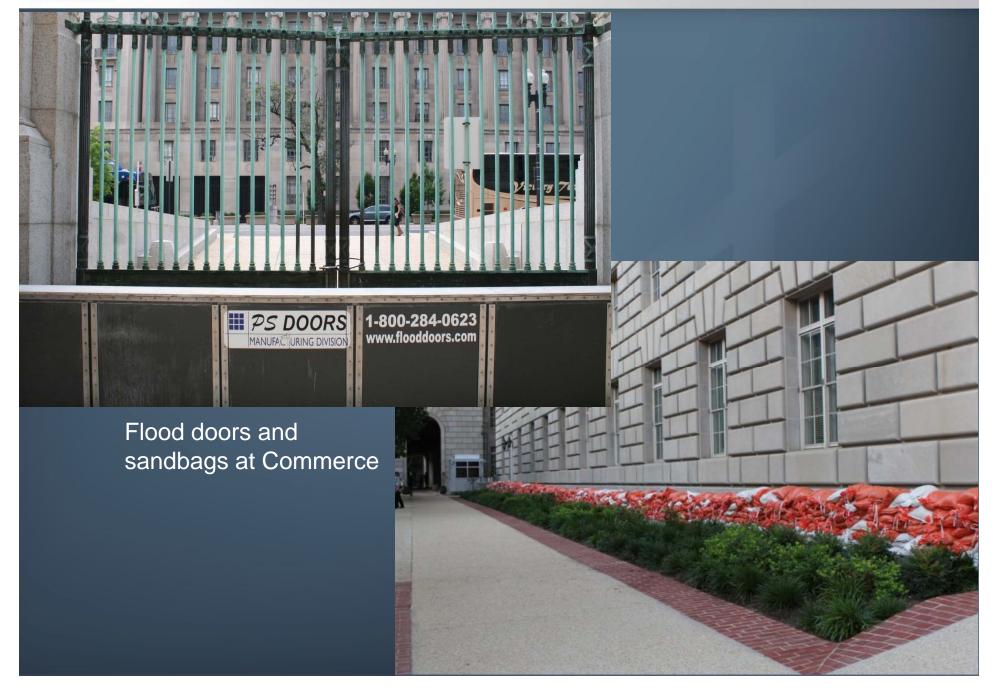








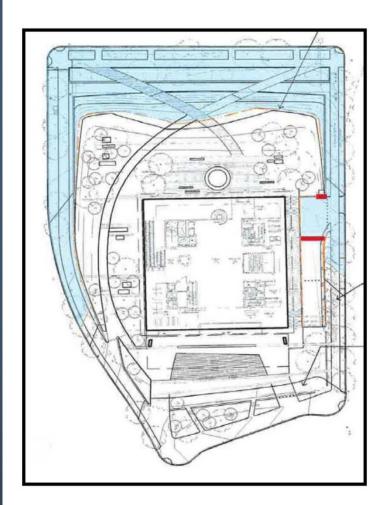




NMAAHC Multi-Hazard Design

100 Year Flood

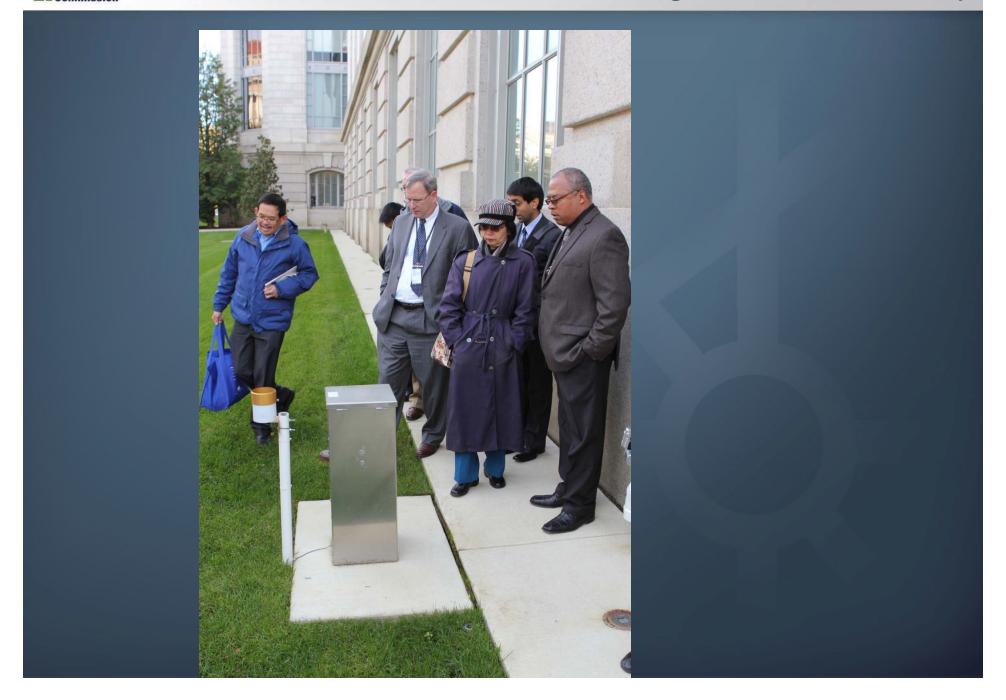
Security integrated with landscape





Flood protection integrated with perimeter security











Federal Triangle Stormwater Drainage Study





☐ Flooding happens in several ways ☐ Consider interior drainage flooding in adaptation planning ☐ Good information is critical for good decisions ☐ Model and design for more extreme events ☐ Even if area-wide solutions aren't possible, area-wide planning makes individual decisions more effective ☐ Structural solutions can be expensive and may not protect against 'worst case' events given variability. ☐ 'Green' solutions, such as LID, may not protect against major flood events. ☐ Partnerships are critical to develop effective solutions.



