

Potomac & Anacostia Rivers Flood Inundation Mapping Tool

Washington, D.C., and Vicinity

Webinar

Moderator: Nick Bonard, National Capital
Planning Commission
November 29, 2016



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Agenda

- ❑ **Overview of Flood Inundation Mapping Tool Project**

Stacey Underwood, Silver Jackets Coordinator and Project Manager, U.S. Army Corps of Engineers

- ❑ **Demonstration of Flood Inundation Mapping Tool**

Jason Elliott, Senior Service Hydrologist, National Weather Service

- ❑ **Question & Answer**



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Please use chat box for questions!

The screenshot shows a web browser window displaying a conference page. The main content area features an agenda slide with the following items:

- Agenda**
- Overview of Flood Inundation Mapping Tool Project**
Stacey Underwood, Silver Jackets Coordinator and Project Manager, U.S. Army Corps of Engineers
- Demonstration of Flood Inundation Mapping Tool**
Jason Elliott, Senior Service Hydrologist, National Weather Service
- Question & Answer**

At the bottom of the slide is the Silver Jackets logo and the text "SILVER JACKETS Many Agencies One Solution".

On the right side of the browser window, there is a chat box. The chat history shows two messages:

- ATT Studio says test note
- ATT Studio says test note

Below the chat history is a "To:" dropdown menu with the text "-- Select recipient --". A red arrow points to this dropdown menu, and a red circle highlights it. Below the dropdown menu is a "Send" button.

At the bottom right of the browser window, the text "Conference ID: 3581508 | AT&T Connect" is visible.

On dropdown,
send to:

“All Moderators”

Potomac & Anacostia Rivers FIM Overview

Presented by Stacey Underwood, Silver Jackets Coordinator and Project Manager,
U.S. Army Corps of Engineers, Baltimore District



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Who Are The Silver Jackets?

Interagency teams typically comprised of state, Federal, regional and local agencies that work together to reduce flood risks. In June 2014, D.C. became the 43rd team, joining 42 other state Silver Jackets teams.

The name Silver Jackets is symbolic and showcases the common mission of diverse agencies during flood-disaster response, as agencies generally wear different colored jackets while responding.



District of Columbia Silver Jackets

Vision Statement

Establish and strengthen intergovernmental Federal and District partnerships as a catalyst in developing and implementing comprehensive, resilient, and sustainable solutions to the District's flood-hazard challenges.

Leveraging Resources to Identify and Implement Solutions to Reduce Flood Risk in D.C.

Goals

- Ensure continuous collaboration before, during, and after a flood.
- Identify and quantify flood risk.
- Provide assistance in implementing projects.
- Improve outreach on flood risk.

Flooding in D.C.

There are three types of flooding that can impact low areas of the city: 1) river, 2) coastal storm surge, 3) interior.

D.C. Silver Jackets Task Groups

To aid in fulfilling the team's goals, the following sub-groups have been formed:

- Flood Inundation Mapping
- Flood Emergency Planning
- Levee Certification and Accreditation
- Communication

Major Potomac River floods occurred in 1889, 1936, 1942, 1972 and twice in 1996. An inland flood in 2006 inundated Constitution Avenue and many buildings in the Federal Triangle.



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DC FIM Project Partners

- Project conducted by members of DC Silver Jackets Team:



- Local

- District of Columbia; Led by DOEE
- City of Alexandria; Fairfax and Arlington counties, VA
- Prince George's County, MD



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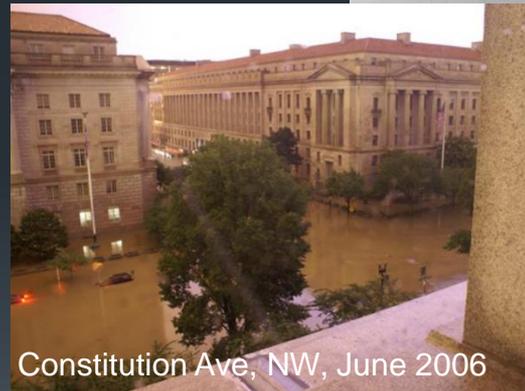
DC Flood History

- There are three types of flooding that can impact low areas of the city: 1) *riverine* 2) *tidal/coastal storm surge* 3) *interior flooding*

- Major riverine floods have occurred in 1936, 1937, 1942 and two in 1996
- Major tidal floods have occurred in 1933, 1972 (Agnes), and 2003 (Isabel)
- Most notable interior flooding was June 2006



Washington Navy Yard, 1936



Constitution Ave, NW, June 2006



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DC FIM Project Overview

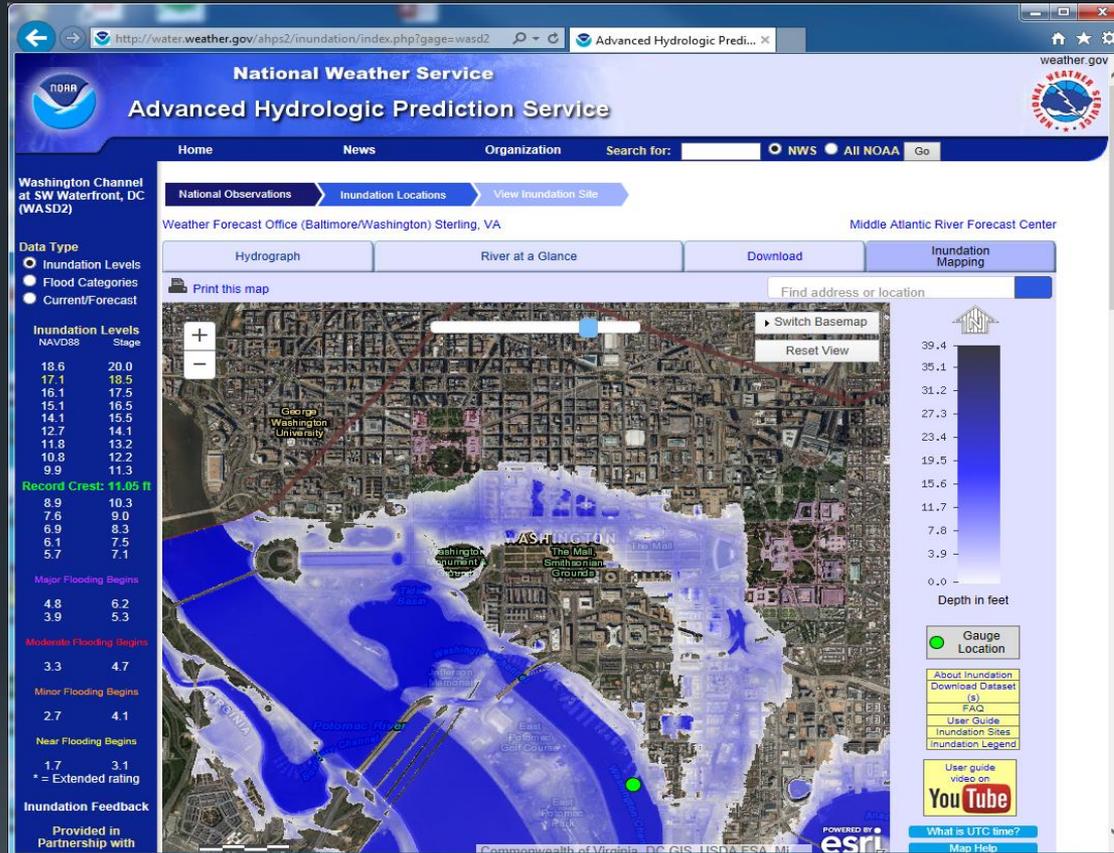
- New on-line maps allow government leaders, emergency managers, and the public to view the extent and depth of expected **riverine or tidal** flooding based on NWS forecasts
- NWS projects the flood levels at USGS water gauges and the Corps' hydrologic and hydraulic models and maps display where the flooding could occur and how deep it may be



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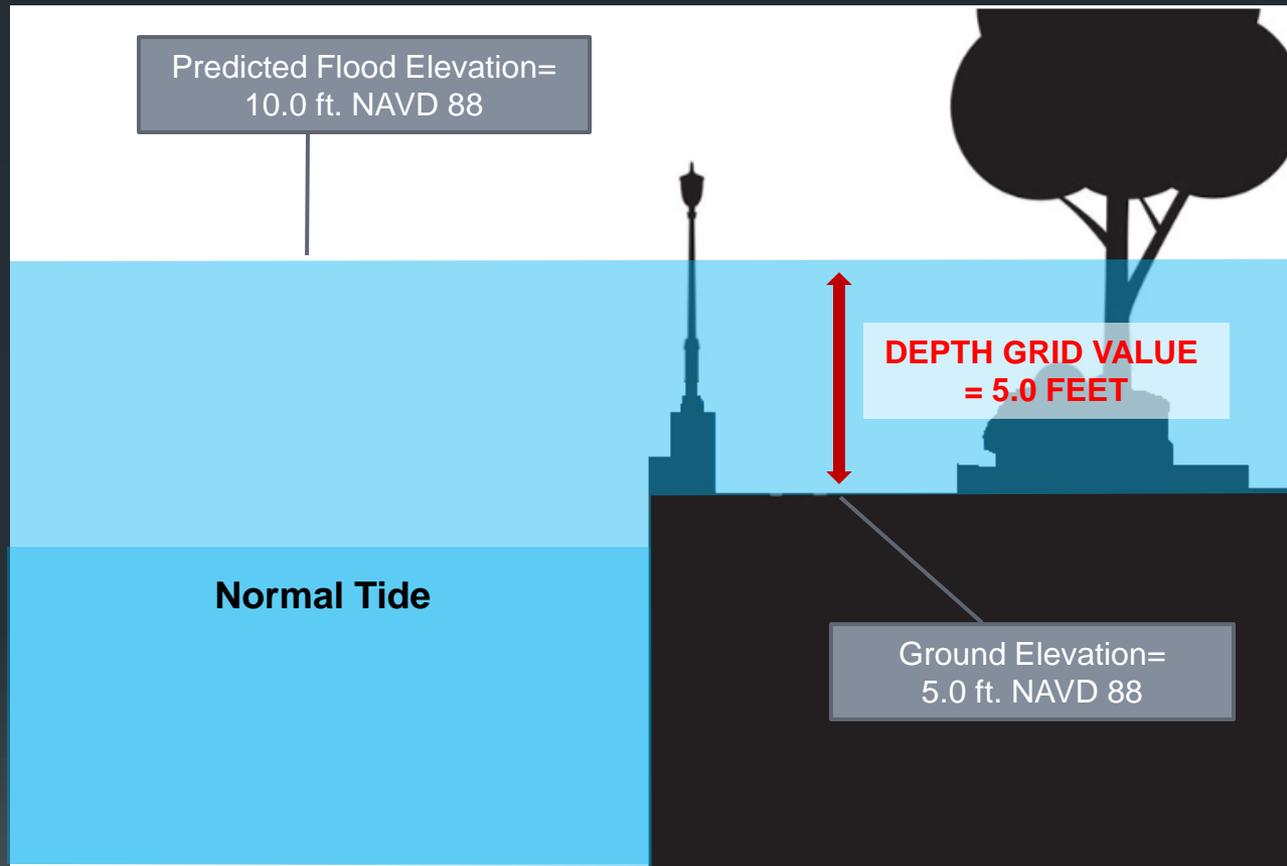
DC FIM Project Overview



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DC FIM Technical Aspects



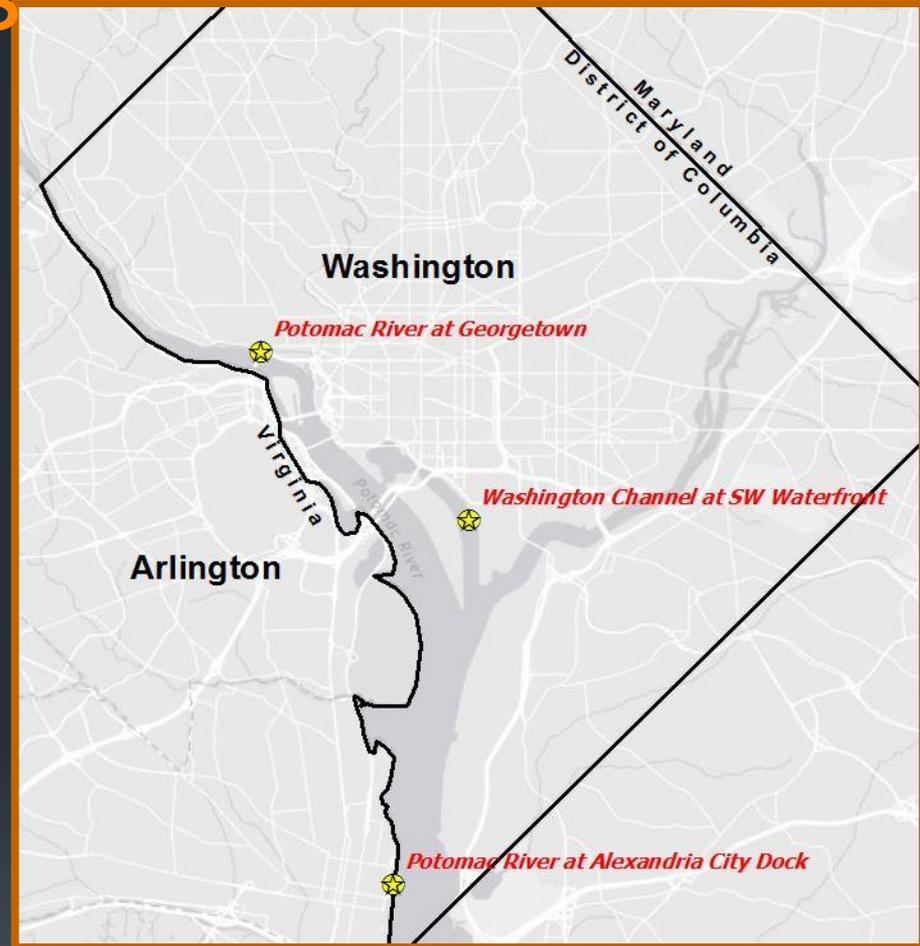
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DC Area Gauges

Forecast Points:

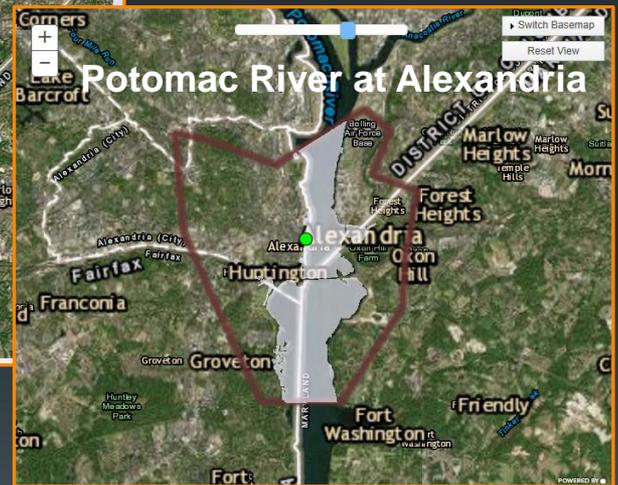
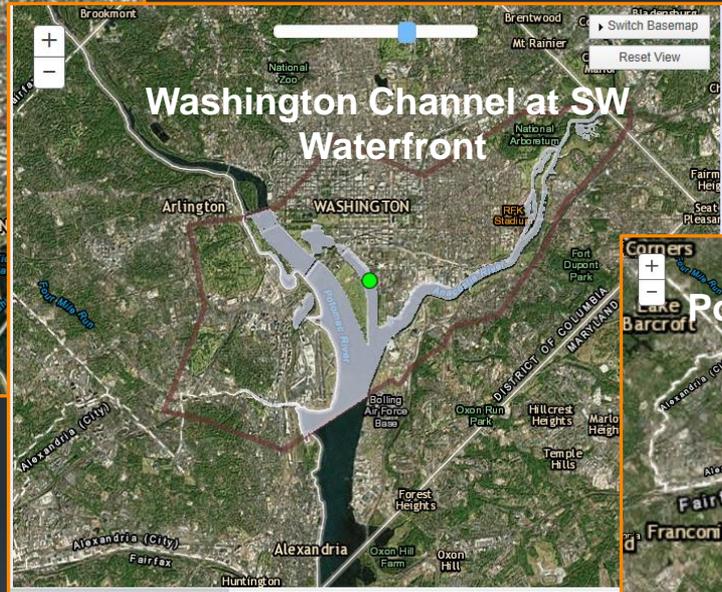
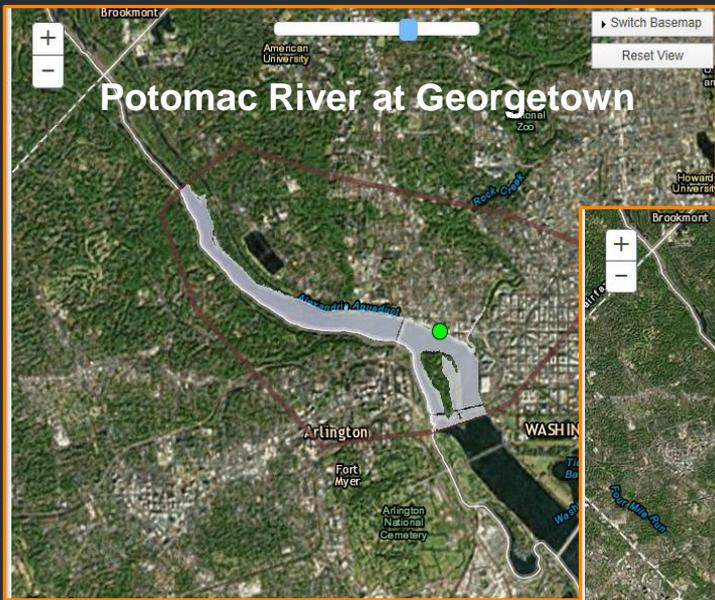
- Potomac River at Georgetown
- Washington Channel at SW Waterfront
- Potomac River at Alexandria



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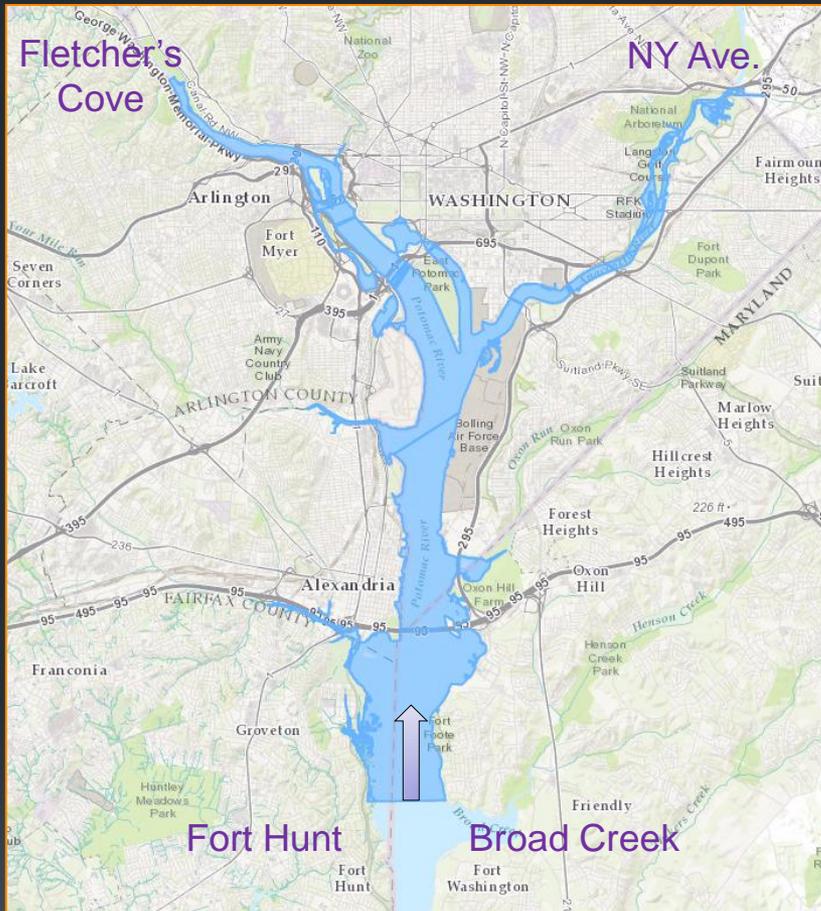
Flood Inundation Areas for 3 Gauges



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DC FIM Technical Aspects



TIDAL/STORM SURGE

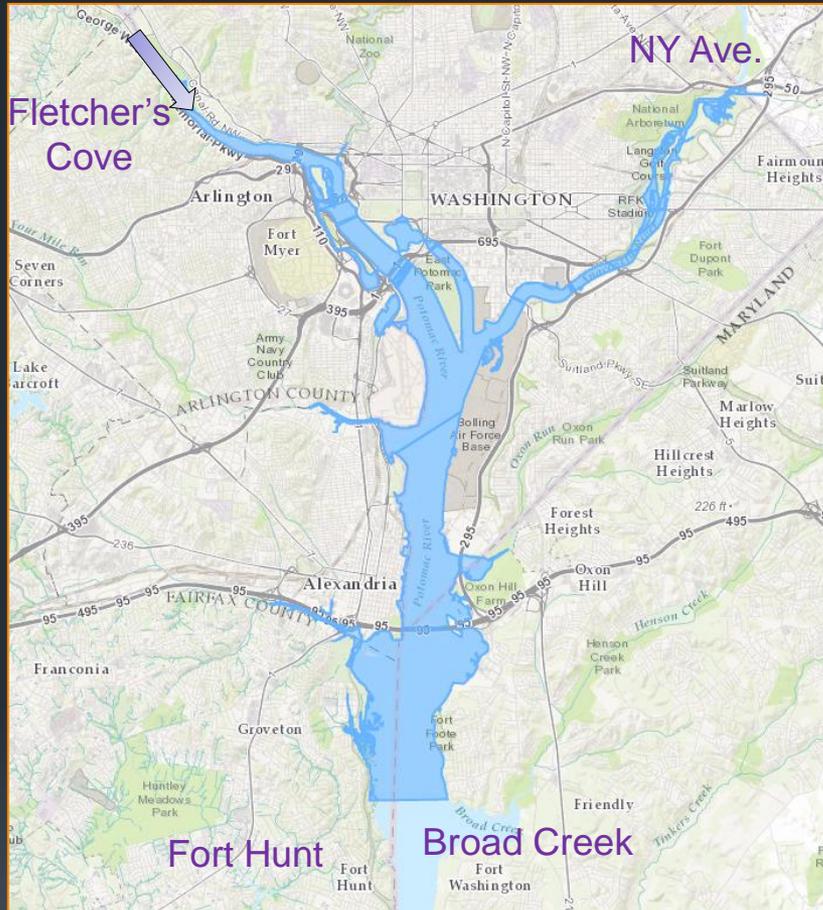
- 14 miles along Potomac River
- 10 miles along Anacostia River
- Flood maps extend up tributaries such as Four Mile Run, Cameron Run and Oxon Run



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DC FIM Technical Aspects



RIVERINE

- Same flood map areas as tidal maps
- Maps show riverine flooding down the Potomac River and water backing up the Anacostia River and other tributaries



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DC FIM – Benefits

- Decisions on evacuations, road closures, power grid shut down, implementing flood risk management measures, moving vehicles to higher ground, moving valuables to higher levels, etc.
- To view various flood levels and see impact to region



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DC FIM – Considerations/Limitations

- Do not depict interior flooding
- Assume high tide for riverine flooding
- Maps include Potomac Park Levee System. Other local and federal flood risk management systems not shown - (Blue Plains, Georgetown Waterfront, Joint Base Anacostia Bolling, etc.)
- Used ground elevation below elevated roadways as basis - elevated roadways may be shown as flooded when they are not
- Maps do not reflect concurrent significant riverine and storm surge flooding, but this is a highly rare and unusual occurrence



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Demonstration of Mapping Tool by Jason Elliott

<http://www.weather.gov/washington/PotomacInundationMaps>



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