

Summary: FEMA Floodplains & Mapping in the COG Region

Factsheet for WRTC Meeting (9/13/12)

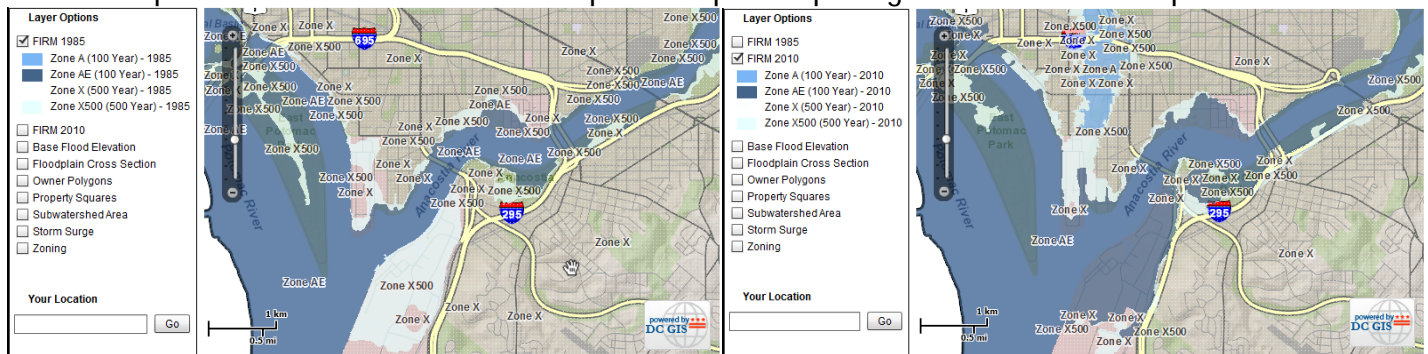
Research Questions: Flooding has been identified in recent workshops as a regional issue that may be impacted or exacerbated by climate changes. What is the status of updates to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs)? And to what extent do they reflect current or future flood risks?

Background

- The national flood insurance program produces studies and maps that delineate the 1% annual chance (100-yr) and 0.2% annual chance (500-yr) flood boundaries and base flood elevations to determine insurance requirements, applicability of floodplain regulations, building codes, and other purposes.
- Maps are used by local agencies to help with floodplain management and land use.
- All COG jurisdictions participate in the National Flood Insurance Program, with the exception of a few towns within COG member counties.

Updates

- All COG member jurisdictions have either recently completed map updates (since 2004 or later) or plan to in the next three years for part or all of their area. See Table 1 and Table 2, and map, attached.
- Example: District of Columbia floodplain maps comparing 1985 and 2010 maps¹



Source: <http://ddoe.dc.gov/floodplainmap>

- Floodplain maps are created with a host of information based on past and current inputs
- Data analyzed includes:
 - elevation data
 - past floods
 - community input
 - hydrologic and hydraulic historic data and modeling
 - surface conditions

¹ Zone A—subject to the 1% (100yr) annual chance flood; base flood elevation undetermined
Zone AE—subject to the 1% (100yr) annual chance flood; base flood elevation determined
Zone X—outside the limit of the 0.2% (500yr) annual chance flood
Zone X500—area between the 1% and 0.2% annual chance flood zones

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Criticisms of the NFIP

- Future projections of the impacts of climate change or future development on the floodplain have not been considered
- Long term financial viability; ability to effectively reduce and manage at-risk development
- The National Flood Insurance Program commissioned a study to determine whether or not the NFIP maps should incorporate growth patterns and climate change². The report is final but not yet published.
 - Unofficially, the report concluded that floodplains *should* incorporate the impacts of future climate change and future development
 - According to the NY Times blog ClimateWire, the report found that flood-prone land is likely to increase by 40 to 45% over the next 90 years³. **The report estimated that climate change is responsible for 70 percent of the flood plain increase. The remaining 30 percent stems from increased development.**

Response: Recent congressional action to improve the NFIP

- Under MAP 21⁴, the transportation bill, Congress reauthorized the NFIP to 2017, with some changes including:
 - Creating a Technical Mapping Advisory Council to recommend :
 - Measures to improve map quality and ease of use
 - Measures to improve interagency and intergovernmental coordination on flood mapping and flood risk determination
 - A funding strategy to leverage and coordinate budgets and expenditures across Federal agencies
 - Methods to consider the impact of future development and sea level rise on flood risk
 - The bill improves the fiscal outlook by barring second homes and commercial homes from receiving subsidized rates. In addition, it raises the cap on annual premium increases from 10 to 20%
 - Map updates shall include “future changes in sea levels, precipitation, and intensity of hurricanes”

Other flooding facts

- Anyone can be financially vulnerable to floods. People outside of high-risk areas file over 20% of NFIP claims and receive one-third of disaster assistance for flooding.

Suggestions for COG Next Steps

- Explore how flooding might or might not impact communities outside of floodplains - particularly in upland regions
- Monitor changes in the NFIP as directed by Congress
- Examine flood plain revisions in COG region for trends
- Examine location of WWTPs and WTPs and other key water infrastructure in relation to floodplains

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² http://www.aecom.com/What+We+Do/Government/_projectsList/FEMA+Climate+Change+%26+Coastal+Studies.

³ <http://www.nytimes.com/cwire/2011/07/22/22climatewire-flood-prone-land-likely-to-increase-by-45-a-19117.html?pagewanted=all>

⁴ <http://www.fhwa.dot.gov/map21/>

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COG Region FIRM Updates

Several COG jurisdictions are conducting map updates in the next few years (Table 1). All other jurisdictions have recently completed FIRM updates (Table 2). The effective map dates (or expected effective map dates) are shown on Map 1 on the next page, alongside wastewater treatment plants and water treatment plants.

Table 1. COG Jurisdictions Undergoing FIRM Updates (Effective 2012 - 2015)

COG County Jurisdiction	Current Effective Map Date	Spatial Area	FIRM Update Prelim Date	FIRM Update Effective Date
Charles Co. Indian Head La Plata Port Tobacco	1985 1985 1985 1985	Countywide	12-30-2012	6-9-2014
Frederick Co.		City of Mount Airy	6-4-2010	6-3-2013
Prince George's Co. (Including Takoma Park, College Park, Greenbelt, Bowie) Laurel Cheverly	1996 1985 1985	Countywide	9-30-2010	8-19-2013
Arlington Co.	1982	3 panels (not entire county)	9-23-2009	4-16-2013
Loudoun Co.	2001	Countywide (Hillsboro, Lovettsville not participating in NFIP)	12-30-2014	2015 est.
Prince William Co. Manassas Manassas Park	1995 1995 1995	Countywide	7-30-2013	12-16-2014

Table 2. COG Jurisdictions with Recently Updated FIRMS (Effective 2004 - 2011)

COG County Jurisdiction	Current Effective Map Date	Spatial Area
District of Columbia	2010	District-wide
Montgomery Co. (Including Rockville, Gaithersburg)	2006	Countywide (Friendship Heights, Laytonville & N Chevy Chase not participating in NFIP)
Frederick Co. City of Frederick	2007 2007	Countywide City of Frederick
Alexandria	2011	Citywide
Fairfax Co. City of Fairfax City of Falls Church	2010 2006 2004	13 panels (not entire county)

From: <http://www.fema.gov/national-flood-insurance-program/national-flood-insurance-program-community-status-book>

And <https://agents.floodsmart.gov/manageagent/flood-map-updates/map-update-schedule>

And FEMA Status of mapping projects <https://www.rampp-team.com/public.htm>

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Map 1

MWCOG Region Flood Insurance Rate Map Updates: Date Effective

