# Northern Virginia Coastal Storm Risk Management Study





## **Study Process**

- Assess the study area's coastal flooding problems, opportunities and what the future conditions would look like without a project (incorporating sea level rise and climate change predictions);
- Assess the feasibility of implementing system-wide or site-specific coastal storm risk management solutions: structural, non-structural, and natural and nature-based features;
- Provide study partner COG with
- Release a draft report for public comment (late summer 2020);
- proceed with recommendation in final report (early 2022) and will request Congressional authorization and funding to implement a project.

### coastal storm risk management recommendations;

# between the Corps and COG

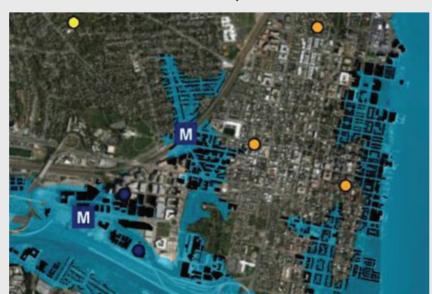
• \$3.5 million study cost shared evenly

- · If COG and partners want to it's in the federal interest, Corps

## **Products from Study**

- Flood inundation mapping (where flooding is to occur and how deep, based on various storms)
- Structural damage assessment (what could be damaged during a storm and at what estimated cost)
- Vulnerability assessment of critical infrastructure at risk (transportation systems, water treatment plants, etc.)
- Evaluation and recommendations for flood risk management options

- Environmental Impact Statement (anticipated effects on environment of recommendations)
- Feasibility Study Report (including conceptual designs and costs for recommendations)



Alexandria Structural Damage Assessment Snapshot

# **Economic Evaluation**

#### **Primarily considers:**

**Authority and** 

Works (May 23, 2001)

high tides

summer 2019

• Potomac River and Tributaries -

Resolution of the Committee on

Coastal storm risk feasibility study

Environment and Public Works (July 6,

Committee on Environment and Public

stemming from results of North Atlantic

Coast Comprehensive Study (2015)

Study is authorized to focus on coastal

storm risk flooding, not flooding from

Federal Cost Share Agreement with

of Governments (COG) signed July

17, 2017; partner funding secured in

Metropolitan Washington Council

heavy localized rainfall, stormwater or

1959); and resolution of the U.S. Senate

**Economics** 

- Reductions in damages to structures (buildings and other infrastructure)
- Benefits from reduced flood emergency costs
- How existing flood risk management systems would perform in the future

The team is using an economic model (G2CRM), which incorporates structure inventories and hydrologic data (storms, waves) to help calculate economic costs and benefits.

The annual benefits of the recommended project must be compared to the annual costs to construct and maintain the recommended project (Benefit to Cost ratio).