

Northern Virginia Coastal Storm Risk Management Study



Metropolitan Washington Council of Governments



Authority and Economics

- Potomac River and Tributaries - Resolution of the Committee on Environment and Public Works (July 6, 1959); and resolution of the U.S. Senate Committee on Environment and Public Works (May 23, 2001)
- Coastal storm risk feasibility study stemming from results of North Atlantic Coast Comprehensive Study (2015)
- Study is authorized to focus on coastal storm risk flooding, not flooding from heavy localized rainfall, stormwater or high tides
- Federal Cost Share Agreement with Metropolitan Washington Council of Governments (COG) signed July 17, 2017; partner funding secured in summer 2019
- \$3.5 million study cost shared evenly between the Corps and COG

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 coastal storm risk management recommendations;
- Release a draft report for public comment (late summer 2020);
- If COG and partners want to proceed with recommendation in final report (early 2022) and it's in the federal interest, Corps will request Congressional authorization and funding to implement a project.

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:

- 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).