

# Action Plan

## Category #5 - Flood Infrastructure

### Action 5.1 – Develop a list of capital projects to reduce flood risk



## Overview and Implementation Strategy:

The District government and associated federal, regional, and local partners have assembled a list of key projects that will be critical for mitigating flooding and flood risk to residents. These capital projects, taken as a whole, will strengthen the resilience of the District to flooding.

While each agency has many projects that pertain to flood resilience, a comprehensive list has never been assembled nor evaluated for cost, timeline, and ownership. During the Flood Task Force process in 2021-22, agencies pulled together a list of current and proposed projects, along with their rough cost, lead agency, and broad timeline.

This Action Plan serves as the collection of the key capital projects. The next step, once approved, will be to (a) Prioritize these projects based on agreed-upon criteria (including geography, cost, timeline, and equity considerations) and (b) Determine funding sources to implement each project.

**Impacted City Ward/ANC:** Capital projects span all Wards across DC

**Lead Agency:** DOEE will be responsible for leading (minimum) once annually inter-agency project prioritization and infrastructure list management. This process will be held in coordination with Flood Task Force agencies. Project ownership will vary based on each project's scope.

**Supporting Agencies, Roles/Commitments:** DDOT, DPR, OP, DCHA, HSEMA, DC Water, NPS, WMATA, and USACE will all support DOEE in keeping the infrastructure project list up to date annually with projects, costs, and timelines.

## Background:

### Impact of this Effort on Task Force Goal:

- This action is critical to ensuring that the physical infrastructure in the District is able to withstand major floods, protecting both the infrastructure itself and those located in at-risk areas during flooding. These projects will save lives and prevent millions of dollars in damage, while also shoring up important infrastructure assets owned by a variety of agencies across the District. They form the core of the District's physical resilience strategy, and will be shared across agencies, organizations, and levels of government.

### Historical Context:

- The District of Columbia has a long history of flooding, dating back to the 19th century, including riverine, tidal/coastal storm surge, and interior flooding. District agencies and organizations have for decades worked to implement key large-scale infrastructure projects that support flood resilience to (both standalone and as part of other projects). Some of these projects can be seen through the District government's [Capital Improvement Plans](#) and DC Water's [Capital Improvement Dashboard](#). These projects have proven critical in minimizing lives lost and property damaged. However, there is extensive work acknowledged to remain, particularly as we see greater frequency and severity of floods in the future with climate change.

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To that end, the Flood Task Force determined the need to assemble a comprehensive, aligned, and quantified effort to implement flood resilience infrastructure at scale via large capital projects.

## Equity

**How does this action assist vulnerable communities?** Many of the District’s lowest-income areas are in the 100- or 500-year floodplains, putting those with the least ability to withstand economic shocks at the highest risk of being flooded. This action will prioritize using DC’s infrastructure dollars on communities vulnerable to flooding by protecting their resources and space. Additionally, it will allow critical resources (such as food, water, and energy) and emergency response to still access these communities when they are flooded, minimizing their disproportionate risk of catastrophic flooding emergencies.

## Project Overview and Timeline:

See more detailed list of all projects [here](#).

(1) Below are local-led projects that will be key in making DC flood resilient:

\*Project is partially funded;

Infrastructure Project	Lead Agency	Earliest Construction Start	Cost Estimate	Funding Source
Northeast Boundary Tunnel**	DC Water	2017	>\$100M	DC Water / Ratepayers
Canal Road Culvert (159-C) Replacement**	DDOT	2023	< \$10M	FHWA / Local
Cleveland Park Drainage and Stormwater Improvement*	DDOT	2025	\$10-25M	Federal / Local
SW Buzzard Point Flood Resilience Infrastructure (Landsburgh/King Greenleaf Park)*	DOEE	2024	\$50-75M	FEMA / Local
Blue Plains Floodwall Segments A, B and D*	DC Water	2024	\$10-25M	FEMA BRIC / DC Water

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East Capitol St underpass at 295	DDOT	Monitoring	\$10-25M	Federal / Local
Ivy City interior flooding at Mount Olivet and West VA Ave and improvement of Lewis Crowe Park	DDOT, DPR, and DCHA	2024	\$10-25M	FEMA BRIC/Local
Oxon Run Stream and Wetland Restoration*	DOEE	2025	\$10-25M	Local / DC Water / FEMA
Watts Branch Blue-Green Infrastructure*	DOEE	2026	\$50-75M	Local / FEMA
SW/Buzzard Point Living Shoreline	DDOT	2027	>\$100M	FEMA /Federal/ Local/TBD
Kenilworth Park/Watts Branch Environmental Study	DOEE	2028	\$50-75M	Local / FEMA
Stormwater Improvements in Palisades (Potomac Ave and MacArthur Blvd)	DDOT	2030	\$10-25M	Local
DC Water Headquarters and Main & O Pump Station	DC Water	TBD	<\$10M	Local / FEMA
Greenleaf Gardens Flood Retrofits	DCHA	TBD	TBD	Local / FEMA
I-295 and Chesapeake St SW	DDOT	Monitoring	< \$10M	TBD
Nannie Helen Burroughs underpass of I-295	DDOT	Monitoring	< \$10M	TBD
Rhode Island Metro underpass (additional flood control beyond 15-year storm managed by NEBT)	DDOT	TBD	TBD	Local
South Capitol and Malcom X	DC Water	TBD	TBD	TBD

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(2) Below are citywide infrastructure projects that will be key in making DC flood resilient:

\*Project is partially funded

Infrastructure Project	Lead Agency	Earliest Construction Start	Cost Estimate	Funding Source
<b>Right-of-Way Citywide Stormwater Management Improvements (roads, highways, alleys, drainage, etc)*</b>	DDOT	Ongoing	\$10-25M	Federal / Local
<b>Sewer System Rehabilitation CIP (identify which ones include flood reduction)</b> *	DC Water	Ongoing	TBD	Federal / Local
<b>Metro Stations and Infrastructure Flooding protection</b>	WMATA	TBD	TBD	TBD
<b>Flood Mitigation in Parks and Open Space citywide</b>	DPR, DGS & OP	TBD	\$50-75M	Local / FEMA
<b>District buildings and facilities flood protection</b>	DGS	TBD	\$10-25M	Local / FEMA
<b>Citywide Resilience Focus Areas (RFA) studies (areas not already studied)</b>	DOEE and federal	2026	\$10-25M	Local / FEMA
<b>Resilience Focus Area: Georgetown/Foggy Bottom</b>	DOEE	2028	\$10-25M	Local / FEMA
<b>Resilience Focus Area: Oxon Run</b>	DOEE	2028	\$10-25M	Local / FEMA
<b>Resilience Focus Area: Navy Yard</b>	DOEE	2028	\$10-25M	Local / FEMA

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(3) Federal-led projects that will additionally be key in making DC flood resilient:

Infrastructure Project	Lead Agency	Earliest Construction Start	Cost Estimate	Funding Source
DC Potomac Park Levee System Modifications (Permanent 23rd St. closure, berm modifications)	USACE	2024	< \$10M	USACE / IIJA funds
Potomac Park Seawalls & Tidal Basin	NPS	2024	TBD	TBD
Joint Base Anacostia Bolling and NRL	Federal	2024	\$25-50M	Federal / Military
Fort McNair	Federal	2028	\$10-25M	Federal / Military
National Mall/Federal Triangle Pump Station	Federal	2028	>\$100M	Federal

### Budget and Timeline:

#### Total Estimated Cost:

\$415M-\$705M+ for locally-led projects and \$135M-\$170M+ for federally-led projects starting between now and 2030, with an additional uncalculated cost for projects with unclear construction timelines and/or cost estimates.

#### Cost Breakdown by Phase / Action (for known projects only):

- \$10M-\$25M for locally-led ongoing projects (plus \$100M+ for DC Water’s 2017 project)
- Up to \$20M for locally-led projects starting as early as 2023
- \$40M-\$100M+ for locally-led projects and up to \$10M for federally-led projects starting as early as 2024
- \$20M-\$50M for locally-led projects and \$25-50M for federally-led projects starting as early as 2025
- \$70M-\$125M for locally-led projects starting as early as 2026
- \$100M+ for locally-led projects starting as early as 2027
- \$165M-\$350M+ for locally-led projects and \$110M+ for federally-led projects starting as early as 2028
- \$10M-\$25M for locally-led projects starting as early as 2030

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**Long Term Budget Requirements:** Will require continued investment of anywhere from \$10M-\$200M+ per year. Funding sources may include, but are not limited to: local dollars, federal grants (formula and competitive, including money from the Bipartisan Infrastructure Law) with the majority coming from FEMA, and DC Water budget / ratepayer funding. A detailed project list with estimated budget, timeline, and funding source is available [here](#).

**Updates Timeline:** Inter-agency team led by DOEE and DC Water will meet annually in July / August timeframe in order to (a) Update the Infrastructure Projects list, including the timeline, cost estimates, and funding sources; (b) Highlight updates from the upcoming fiscal year; and (c) Prepare budget requests for the following fiscal year.

## Public Outreach and Input:

### Public outreach & engagement approach/actions:

Outreach to develop the infrastructure project list was limited to agencies' and organizations' existing and planned project portfolios. The scope of this outreach was therefore limited to agencies represented on or engaging with the Flood Task Force, including DMOI, DDOT, DOEE, DPR, OP, DCHA, DGS, DC Water USACE, NPS, and WMATA. Public outreach was conducted only to the extent that (a) The public had the opportunity to comment on individual projects during those projects' comment periods / input processes, and (b) The public was able to participate in Flood Task Force meetings and comment on action plans.

Public outreach will be conducted for each project as the project is developed and continues through planning, design, and construction. Outreach will be conducted by the project lead agency.

### What were the Public Comments of relevance to this Action?

- N/A