

Action Plan

Category 3 – Flood Proofing Individual Homes and Facilities

Action 3.1 – FloodSmart Homes



Overview and Implementation Strategy:

The goal of this action is to make all residential structures in flood prone areas more flood resilient through home upgrades via a program called “FloodSmart Homes.” The program will be open to all homes with flood risk, including the approximately 1,000 residential structures in the District’s 100-year and 500-year floodplains, as well structures with interior flood risk that are not currently mapped into FEMA floodplains. Because of limitations associated with FEMA grant funds being used to cover a portion of the cost of FloodSmart Homes, initial priority will be given to homes in the 100-year floodplain. Long-term, the goal is to make all structures that have flood risk (including multifamily housing and businesses) more flood resilient.

As there is a wide variation in the existing level of flood protection at each home, the immediate goal is to provide free resilience assessments of these homes to determine which retrofit measures are most needed and would be most cost-effective. Measures that will be considered as part of the assessments include low-complexity interventions (i.e. replacing standard electrical outlets with GFCI models), moderate-complexity interventions (i.e. elevating electrical panels, HVAC equipment), and high-complexity interventions (i.e. whole-home elevation). Options such as voluntary property acquisition will also be considered. Ultimately, the assessment results can be leveraged to support applications for FEMA Hazard Mitigation Assistance grants that would provide additional funding for retrofit work, in addition to local funds that can be used to pay for recommended resilience upgrades.

Impacted City Ward/ANC:

- Wards 2, 3, 4, 6, 7, 8 all have homes in a floodplain, but the initial focus will be on Wards 7 and 8 as 98% of single-family homes in the 100-year floodplain are located in those two wards.
- All wards that have experienced interior flooding will also benefit as homes with recent floods will be eligible to participate, including in Ward 5 which saw significant interior flooding during recent events.
- In future years, after the Integrated Flood Model develops maps showing areas with interior flooding risk, DOEE can target outreach to those areas to ensure they are aware of their eligibility for FloodSmart Homes.

Lead Agency:

- DOEE

Supporting Agencies, Roles/Commitments:

- HSEMA – FEMA Hazard Mitigation Assistance (HMA) grant coordination
- DCRA – Permit review.
- ServeDC – Program Managers for Certified Emergency Response Team (CERT)

Action Plan

Category 3 – Flood Proofing Individual Homes and Facilities

Action 3.1 – FloodSmart Homes



Background:

Impact of this Effort on Task Force Goal:

- The effort will directly support the flood proofing of individual homes.

Historical Context:

- Residents expressed concerns about the cost of flood protection retrofit measures during outreach events regarding the proposed updated Flood Hazard Rules in summer 2021. Many asked if the District government had funding available to assist with protecting their homes from flooding.
- DOEE has commissioned three research reports from the Cadmus Group regarding case studies of similar retrofit programs, the costs and benefits of retrofit measures, and the social equity implications of flood risk in the District to inform which retrofit measures should be focused on and the relative cost as well as equity and income factors to consider in program design.
- The FloodSmart Homes concept is informed by the retroFIT program in Charlotte/Mecklenburg County, NC, the FloodHelp NY program in New York City, and the Cook County, IL Residential Resiliency Program.
- It is also informed by DOEE's successful RiverSmart Homes program, which offers incentives to District of Columbia homeowners interested in reducing stormwater pollution from their properties.

Equity

How does this action prioritize equity and residents who are most impacted?

Equity is about improving outcomes for all, while prioritizing resources to those most impacted by an issue. Keeping in mind the goal of this program is to make every home with flood risk more resilient, initial funding of this program will prioritize those that are most at risk of flooding, and those living in historically disinvested communities, two groups that often overlap.

- Wards 7 and 8 contain approximately 98% of all the single-family homes in DC's 100-year floodplain.
- Approximately 66% of housing units in Census tracts that include the flood-prone areas of Wards 7 and 8 are rented, and over 55% of the households in those areas are paying rent that exceeds the 30% of gross household income that HUD defines as affordable housing.
- Data from the American Community survey indicates that in Wards 7 and 8 the average adjusted family income is \$62,281 and \$52,422, respectively--compared to the entire District's average of \$139,260.
- Over 90% of the residents in these wards are Black, compared to fewer than 50% of District residents overall. Within Wards 7 and 8, the highest concentration of people living in the floodplain are disproportionately located in Census Tracts with the greatest density of people of color.

Action Plan

Category 3 – Flood Proofing Individual Homes and Facilities

Action 3.1 – FloodSmart Homes



- Each of the Census tracts bordering the Watts Branch floodplain in Ward 7 and the Oxon Run floodplain in Ward 8 is ranked as having a high or moderate-to-high level of vulnerability to disasters by the Centers for Disease Control and Prevention (CDC) Social Vulnerability Index (SVI). The median SVI Score of Census tracts in Wards 7 and 8 intersecting 100-year floodplains is 0.829, while the District as a whole has a median SVI of 0.5029.
- The program should ensure that renters in structures owned by landlords (who may not reside in the building) can still benefit from increased flood resilience offered by this program.
- The program should ensure that many forms of outreach are used to spread the word, as not all DC residents can be reached via email and other digital tools.

Action Plan

Category 3 – Flood Proofing Individual Homes and Facilities

Action 3.1 – FloodSmart Homes



Timeline:

Fiscal Year	Responsible Agency	Action
2022	DOEE	Use FEMA funds to hire a contractor to do initial resilience assessments; Prepare an RFP/RFA so that physical upgrades can begin in FY23.
	HSEMA	Apply for Hazard Mitigation Assistance grant funding.
2023 thru 2031	DOEE	Sign a contract/grant that will install retrofits at residential structures. Supervise grant/contract work.
	HSEMA	Apply for Hazard Mitigation Assistance grant funding.
	DCRA	Review permits for retrofit work.

Action Plan

Category 3 – Flood Proofing Individual Homes and Facilities

Action 3.1 – FloodSmart Homes



Budget:

Total Estimated Cost: \$31,000,000 over 10 years (\$3.1 million per year)

Cost Breakdown per Retrofit:

Description of Retrofit	Per Home	Total (50 Homes a year)
Home Resilience Assessments	\$3,670	\$183,500
Whole Home Elevation (25% Local Match for FEMA Grant)*	\$250,000	\$250,000
GFCI Outlets	\$45	\$2,250
Weather Radios	\$55	\$2,750
Water Alarms	\$15	\$750
Elevation Certificates	\$500	\$25,000
Sump Pumps	\$2,500	\$125,000
Wet Floodproofing (Flood Vents)	\$3,300	\$165,000
Fill Basement/Cellar	\$9,700	\$485,000
Wet Floodproofing (Overall)	\$11,100	\$555,000
Elevation of Electrical Equipment	\$12,100	\$605,000
Grantee Administration Costs	N/A	\$560,882
Staff Salary	N/A	\$121,769
TOTAL		\$3,081,901

Action Plan

Category 3 – Flood Proofing Individual Homes and Facilities

Action 3.1 – FloodSmart Homes



Long Term Budget Requirements: The cost per home for various upgrades are shown above, as well as an estimated yearly program cost of ~\$3.1 million. This plan provides sufficient funding to accomplish each measure at 50 homes in the District every year, but in reality not all homes will need every retrofit. It is likely that the yearly allotment of funds could help more than 100 homes each year. DOEE will be better able to estimate future funding requirements after completing the first year of work in FY23.

Fiscal Year	Responsible Agency	Funding Source	Amount to be Requested	Description
2022	DOEE	Federal (CAP/CTP)	\$63,000	Home resilience assessments
2023 thru 2027	DOEE	Local	\$2.6 million	Home resilience assessments and minor to moderate retrofits
	DOEE	Federal (CAP/CTP)	\$63,000	Federal Grants to pay for home resilience assessments
	HSEMA	Federal (HMA)	\$300,000	Federal Grants to pay for home resilience assessments
	HSEMA	Federal (HMA)	\$400,000	Federal Grants to pay for major home retrofits (elevation and mitigation reconstruction).

Public Outreach and Input:

Public outreach & engagement approach/actions:

DOEE has hosted a number of events over the past few years around flood risk reduction where the topic for making homes more flood resilient has come up.

- Outreach letter with survey prompt – December 2021
 - Nearly 50 residents with homes in the 100-year floodplain have indicated interest in resilience assessments.
- Faunteroy Community Enrichment Center Resilience Workshops - held on the second Tuesday of each month since October 2021

Action Plan

Category 3 – Flood Proofing Individual Homes and Facilities

Action 3.1 – FloodSmart Homes



- Three public outreach meetings re. proposed updated Flood Hazard Rules – July and August 2021
- DC Flood Task Force Public Listening Sessions – March 2022

What were the Public Comments of relevance to this Action?

Proposed Updated Flood Hazard Rules Workshops

- “... I don't know if we can fight the waters of this tributary but I do know the District can afford to shuffle some of that money from development/condo incentives to homeowners who need to RAISE UP THEIR HOUSE.” - Ward 7 Resident
- “Why isn't this [retrofitting homes] the responsibility of the city?” – Rev. Gilbert, Ward 7 Resident
- “Honestly, it sounds like DC Water and the city acknowledge that infrastructure is aging and climate change is increasing and yet have made no significant moves to help long-time residents EOTR [East of the River] ...” – Ward 7 Resident

DC Flood Task Force Public Listening Sessions

- “If the govt. could provide resources...to help with the flooding, that would be helpful. Also could the govt. give people \$500 to help with flood issues or at least provide long-term no interest loans to help people with the financial impacts?”
- “Can you discuss what happened to the expired Flood Assistance Fund Program mentioned by CM McDuffie in the past Flood and Climate Resilience hearing? Any chances of that being rekindled?”
- “Will the city help seniors on fixed incomes to cover the installation of those measures...?”
- “There needs to be a community response team specifically aimed at flooding in neighborhoods, and I think the priority area where 87% of homeowners [in the floodplain are located] should get priority attention.”

Public Comments on this Action Plan from July/Aug 2022

- From the DC Commission on Climate Change and Resilience: The Commission supports the goal of retrofitting homes for flood resilience located in the 100-year and 500-year floodplains. In select individual cases, it may be more prudent to offer voluntary property acquisition as an eligible use of the program funding, with similar programs in the State of New Jersey and North Carolina serving as models. Additionally, the program should be designed to safeguard against subsidizing investor-owned rental properties and target owner-occupied homes in a manner that is equitable to residents of the District of Columbia.
- From the Sierra Club: Concerning Flood Proofing Individual Homes and Facilities; Action 3.1 – FloodSmart Homes, the stated long-term goal is to make all residential structures that have flood risk (including areas with interior flood risk that are not

Action Plan

Category 3 – Flood Proofing Individual Homes and Facilities

Action 3.1 – FloodSmart Homes



currently mapped into FEMA floodplains) more flood resilient. This action does not specify how outreach about flood risk reduction measures can be tailored to landlords who may not reside in the home or building they rent out. How can this action be refined to aid renters and encourage landlords to prioritize and adopt nonstructural flood proofing if they do not otherwise take advantage of the program?

Sierra Club accepts that this plan for “FloodSmart Homes” is targeted to floodplains for 100 and 500 year floods. However, the nature of 100 and 500 year floods means that they present both a lower and probability of occurring than interior flooding, which has a higher risk of occurring, is more pervasive, and presents an overall greater risk to a higher number of residents. Recent flooding resulted from the effects of what were characterized as 10 and 25 year storms. For this reason, interior flooding of neighborhoods, homes and businesses should be a high priority plan. Reports are that DOEE is collecting data and modeling causes of interior flooding, but that no findings are expected before 2024. When interior flooding is occurring now, annually, it does not seem a prudent decision to be first planning for sea level rise and increased flooding to occur in the 100 and 500 year time horizon. DOEE should be prioritizing and expediting its flood planning for the interior.

- There were two comments from residents who expressed urgency in needing floodproofing work done at their house and their inability to pay for the work that needs to be done without government assistance. One resident also expressed that the District must do a better job of outreach to neighborhoods where internet access is not a given.