

Action Plan

Category 4. – Sewer Line Backups and Backwater Valve Installation

Action 4.3 – Require Backwater Valve Installation in Codes



Overview and Implementation Strategy:

The long-term goal of this Action is to ensure that residences within the District of Columbia who are subject to flooding via reverse flow from sewers in a storm install Backwater Valves (BWV) on new construction as well as retrofits.

Beginning in 1999 the District of Columbia adopted the 1996 International Mechanical Code and 1995 International Plumbing Code (IPC). Prior to this date, the District followed the BOCA Code for Plumbing.

The 1995 IPC required the use of sumps and ejectors where building drains were below sewer level but did not account for surcharged sewers.

The 2000 version of the IPC was the first version to recognize that if the plumbing fixture is below the upstream manhole rim, the fixtures need to be protected by a backwater valve.

DCRA completed adoption of the 2000 IPC Codes in 2003 and enhanced them with specific provisions that enhance their application that are re-adopted as each revision of the IPC is incorporated through Rulemaking.

This Action Plan confirms the need to continue readoption of these modifications.

Impacted City Ward/ANC:

- All Wards in the City

Lead Agency:

- DCRA

Supporting Agencies, Roles/Commitments:

- FEMA – Review and approval of proposed regulations for National Flood Insurance Program (NFIP) compliance.
- Construction Codes Coordinating Board (CCCCB) Flood Hazard Technical Advisory Group (TAG) – Review of proposed Construction Code amendments for alignment with proposed updated Flood Hazard Rules.
- DOEE and DC Water – Advise on changes and ensure consistency with DCMR Flood Hazard Rules

Background:

Impact of this Effort on Task Force Goal:

- The effort supports regulation requiring installation of backwater valves where applicable in homes built or retrofitted in accordance with code requirement for BWV, thereby directly supporting individual homes from being flooded through reverse flow from sewers if they are surcharged during a storm.

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Historical Context:

- Homes built or substantially retrofitted prior to 2003 were not required to install Backwater Valves or other devices to prevent reverse flow from the sewers when they are surcharged.
- The International Building Code (and its subset – International Plumbing Code), on which DC Construction Codes are based, do include requirements to install backflow prevention devices (also known as backwater valves).
- The current DC Construction codes are the 2017 District of Columbia Construction Codes, which were adopted and became effective on May 29, 2020. The 2017 DC Construction Codes consist of the 2015 International Code Council (ICC) family of model codes, the 2014 National Electrical Code, and 2013 ASHRAE 90.1, as amended by the District of Columbia Municipal Regulations (DCMR) Title 12, Sections A through M.
DCRA and the CCCB routinely update the DC Construction Codes every few years to adopt the latest International Building Codes, as well as any amendments, specific to the District of Columbia that the District wishes to include. The CCCB commenced a new code development cycle in early 2021 based on the 2021 ICC model codes, ASHRAE 90.1-2019 and the 2020 National Electrical Code
- As part of this process to update the DC Construction Codes, the CCCB has approved an amendment to the International Building Codes to require the installation of backwater valves by amending section 712.3.5 and section 715 in the International Plumbing Code
- The updates described above are tentatively scheduled to go into effect in 2023.

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Equity

How does this action assist vulnerable communities?

Equity is about improving outcomes for all, while prioritizing resources to those most impacted by an issue. Backwater flooding is something that can happen anywhere in the District, but when it does occur, it will have greater impacts for low-income residents who are least able to handle the costs of repair and clean up. By requiring all new construction and substantial improvement to include backwater valves, we are ensuring that the residents will be protected from this type of flooding – including future residents who are low-income.

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Timeline:

Fiscal Year	Responsible Agency	Action
2023	DCRA	Adopt the 2021 Construction Codes and amendments, which include requirements for backwater valve installation.
2024 and beyond	DCRA	The Plumbing Technical Advisory Group in charge of submitting proposals and amendments for code adoption to the CCCB Construction Code Coordination Board, stays current on the need to update the change with every review cycle.

Budget:

Total Estimated Cost: \$0.00

None – DCRA expects any costs associated with implementation of this Action will be absorbed by staff time.

Long Term Budget Requirements: None anticipated

Public Outreach and Input:

Public outreach & engagement approach/actions:

Updating the Construction Codes requires a lengthy public input process via Technical Advisory Groups and formal meetings of the CCCB. More information on that process, which is already underway can be found here: <https://dcra.dc.gov/service/construction-codes-coordinating-board>.

Once proposed changes are made, a final version will be released for public comment in the DC Register.

What were the Public Comments of relevance to this Action?

Multiple residents in Task Force Listening Session and other public meetings described their experience with backwater flooding, causing thousands of dollars in damage, and environmental hazards. This type of flooding could easily have been prevented if the homes had a backwater valve installed.