



# Waycroft-Woodlawn Civic Association Meeting October 28, 2020

# Agenda\*

\*Based on WWHA Questions sent prior to this meeting. (Copied and Pasted here.)

## **General Questions about overall watershed:**

1. What do we know?
2. What work is underway?
3. Next Steps
4. What is planned for Lubber Run for Bond Referendum (\$750K)
5. Proposed funding for WWCA portion of Lubber Run watershed?

## **Specific Questions about overall watershed:**

1. Mapping and Reporting of flooding/runoff issues?
2. N Buchanan St.?
3. Floodproofing Assistance?
4. Inundation Maps?
5. Overland Relief, Acquisitions and Detention locations?

## **Near Term Measures**

## **Long Term Policy Questions**

## **FEMA Preliminary FIRM**

# General Questions:

## ▶ What do we know?

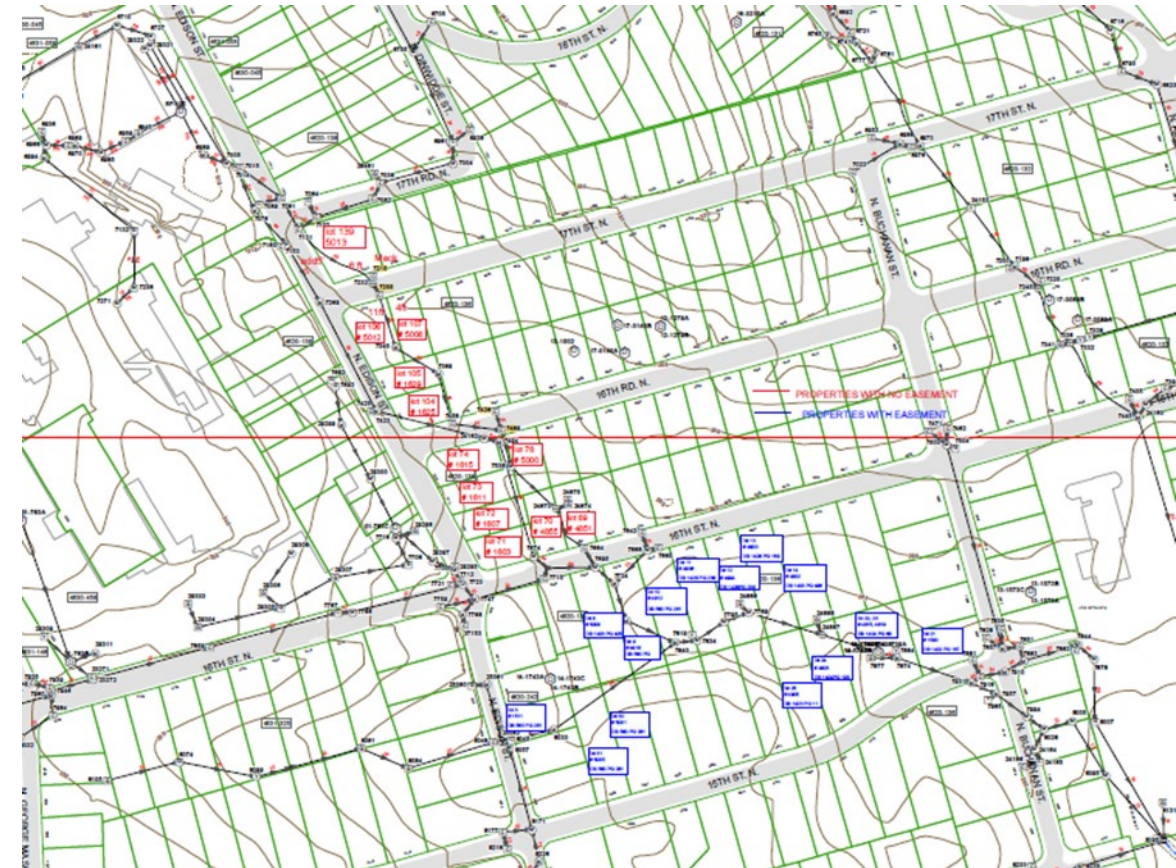
- Area is one of 5 Critical Watersheds that experienced severe flooding
- System has capacity issues identified in Capacity Study and SW Masterplan

## ▶ What work is underway?

- Conceptual Engineering Analysis of Watershed
  - Easement/ROW searches
    - ❖ Gaps in easement/row appears to be problematic
  - Identification of possible distributed detention options
    - ❖ Currently appears to be limited
- Evaluation of pipe upgrade options

## ▶ Next Steps:

- Reach out to residents regarding easement gaps
- Continue Engineering Analysis and surveys
- Secure Funding and staff resources



# General Questions:

- ▶ What is planned for Lubber Run for Bond Referendum (\$750,000)?
  - ▶ Watershed scale conceptual Engineering and Planning
  - ▶ Easement Acquisitions (surveys, plats, etc.)
- ▶ Proposed funding for WWCA portion of Lubber Run watershed? (Not broken out by Civic Associations – but major areas are located within WWCA)

## Capacity Improvement Projects

Goal: Reduce flooding to protect public safety, reduce likelihood of damaged buildings or homes; enhance safe and timely transportation of people, goods and services.

Project Name	Description	FY 2021	FY 2022	Total Cost Estimate
Spout Run Watershed	FY 2021 funding for design and land acquisition. Funding required through FY 2025 for construction	\$1.4	\$4.5	\$29.9
Torreyson Run Watershed	FY 2021-22 funding for design and capacity project at new Reed School. Funding required through FY 2030 to complete construction.	0.7	1.7	15.7
Lubber Run Watershed	FY 2021 funding for design. Funding require through FY 2030 to complete construction	0.3	1.0	15.2
Flood Risk Reduction & Capacity Improvements	Drainage improvement projects on a sub-watershed scale, as well as installation of tertiary system assets, to address localized repetitive flooding.	3.0	2.0	33.7
Land acquisition	Funding for strategic opportunities in watershed high risk flood areas to provide critical overland relief	2.4	2.4	26.2
<b>Total</b>		<b>\$7.8</b>	<b>\$11.6</b>	<b>\$120.8</b>

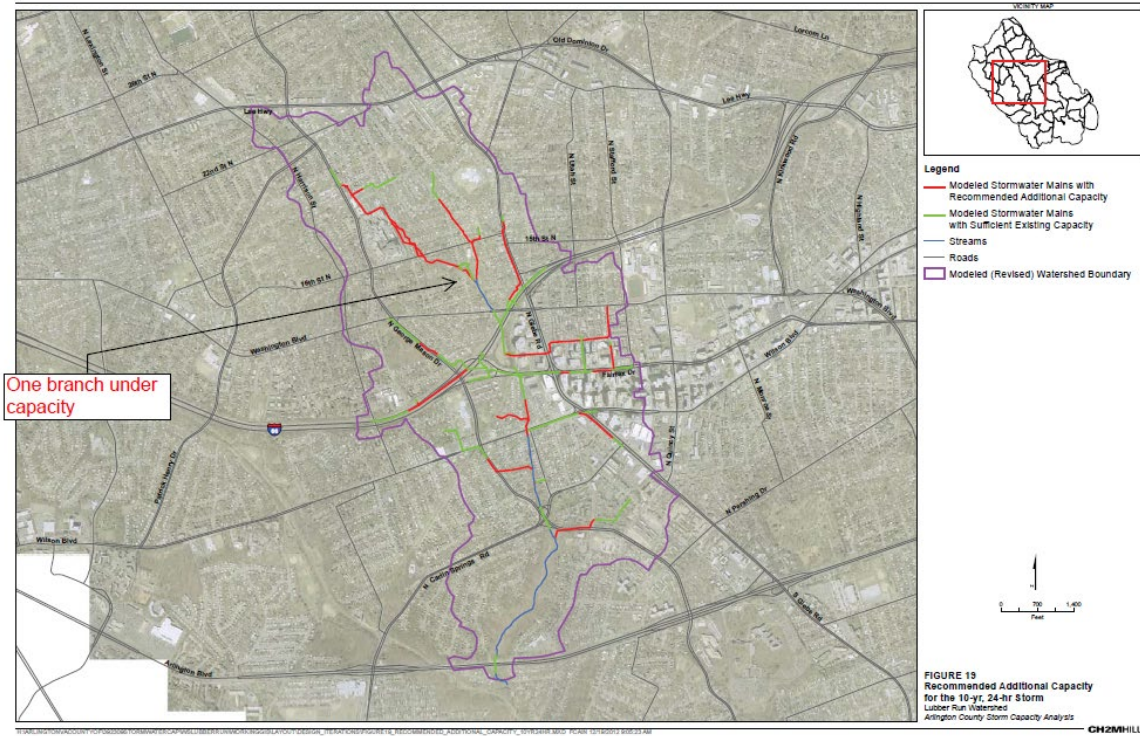


FIGURE 19  
Recommended Additional Capacity  
for the 10-yr, 24-hr Storm  
Lubber Run Watershed  
Arlington County Storm Capacity Analysis  
CH2MHILL

## Specific Questions:

---

- List/map of properties with stormwater issues
- How report new or recurring issues?
  - Email:

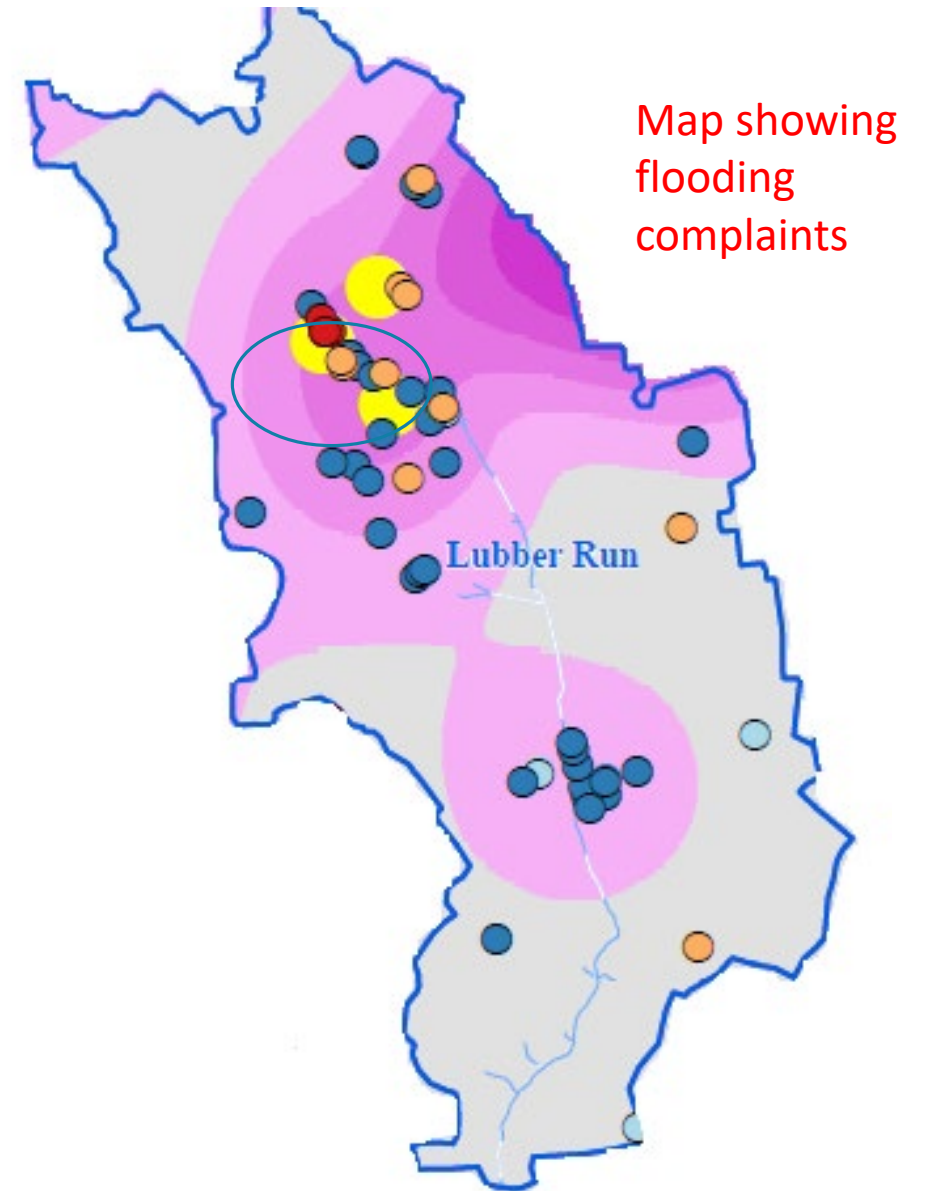
[Ethurber@arlingtonva.us](mailto:Ethurber@arlingtonva.us)

- Website:

<https://environment.arlingtonva.us/flood-insurance-rate-maps/reducing-your-risk-of-flooding/>

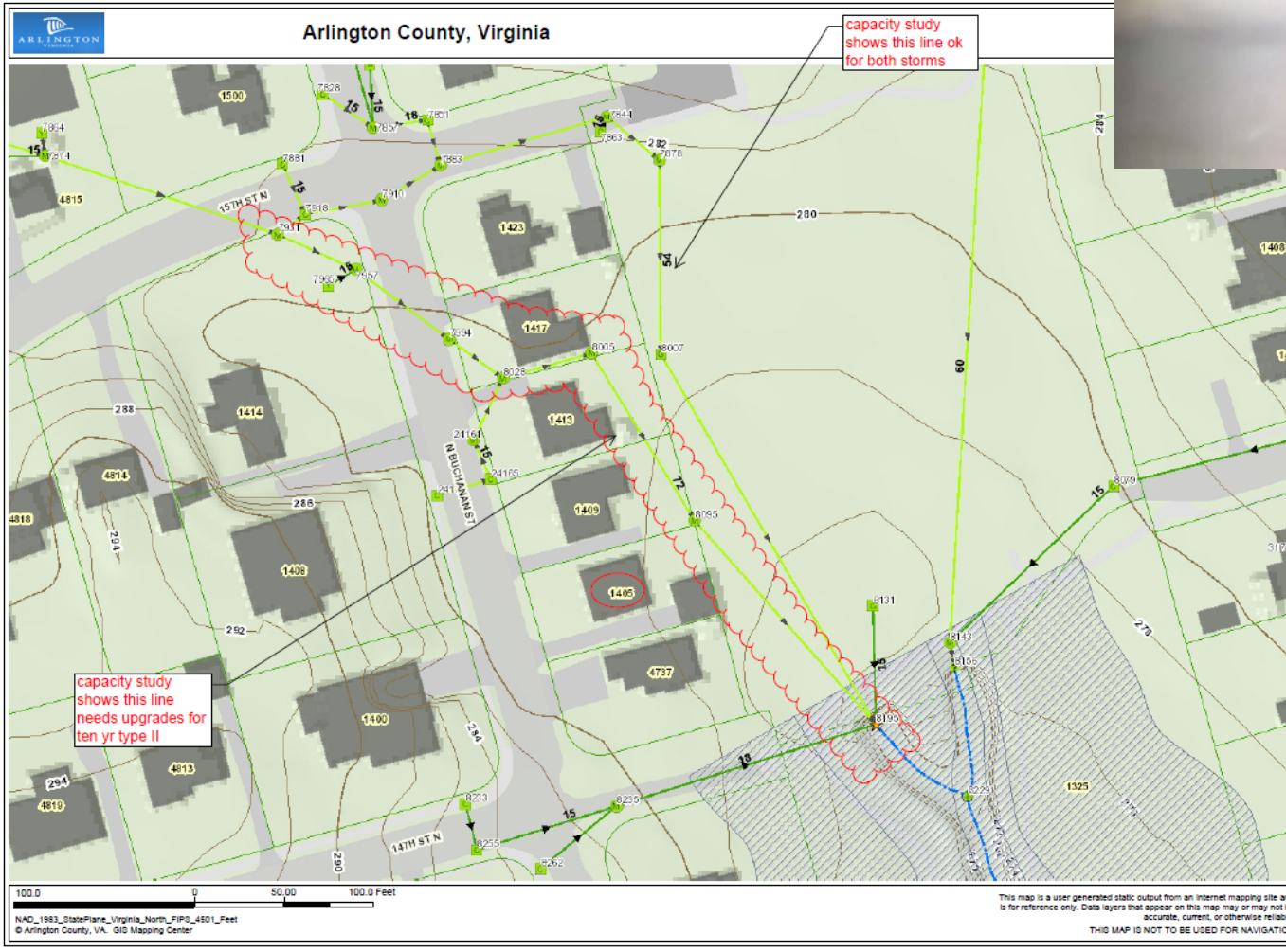
<https://environment.arlingtonva.us/report-a-drainage-issue/>

**Dial 911 for emergencies**



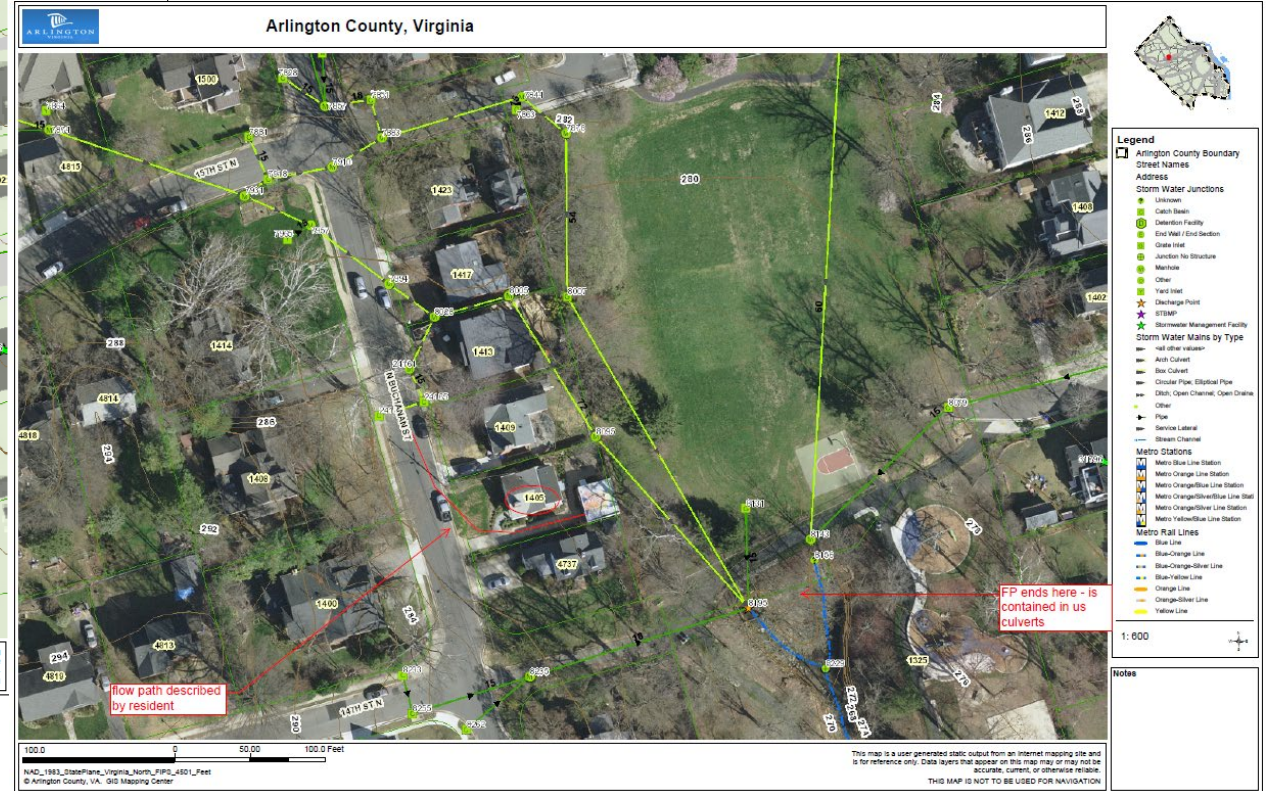
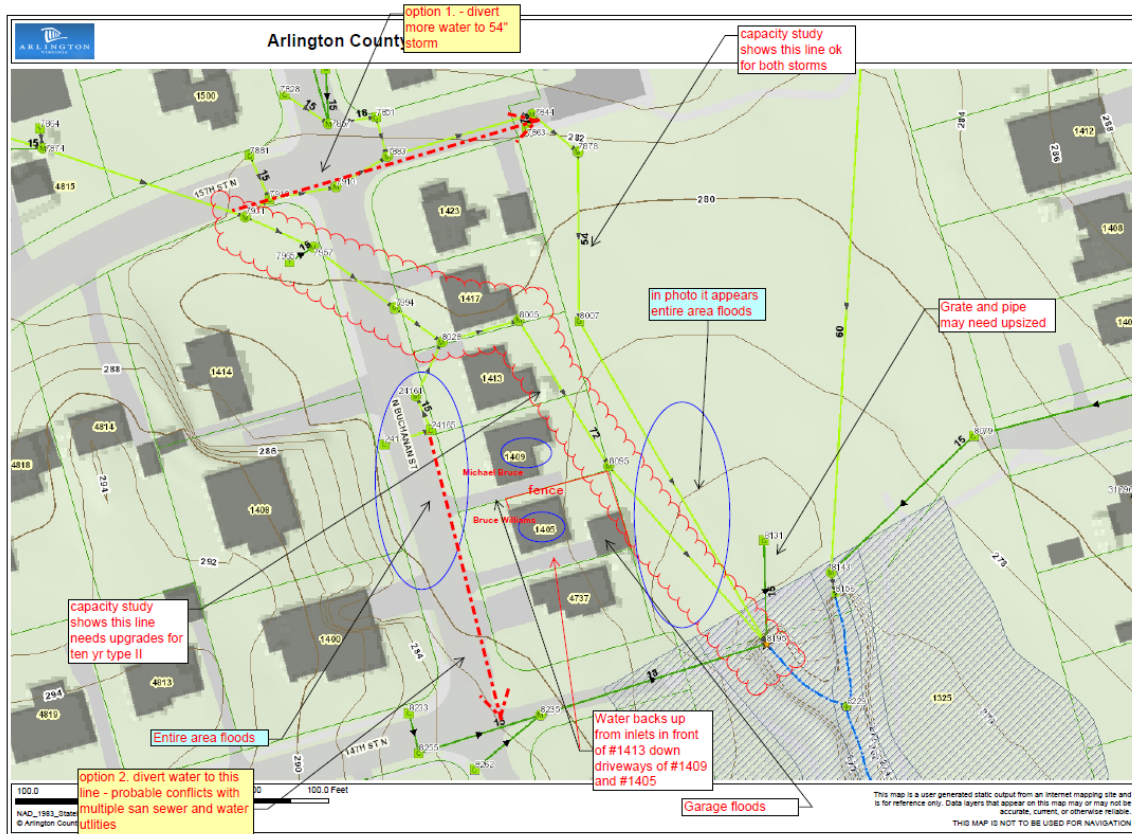
# Specific Questions:

- What can be done in short term for N Buchanan St?



# Specific Questions:

- N Buchanan St. Continued

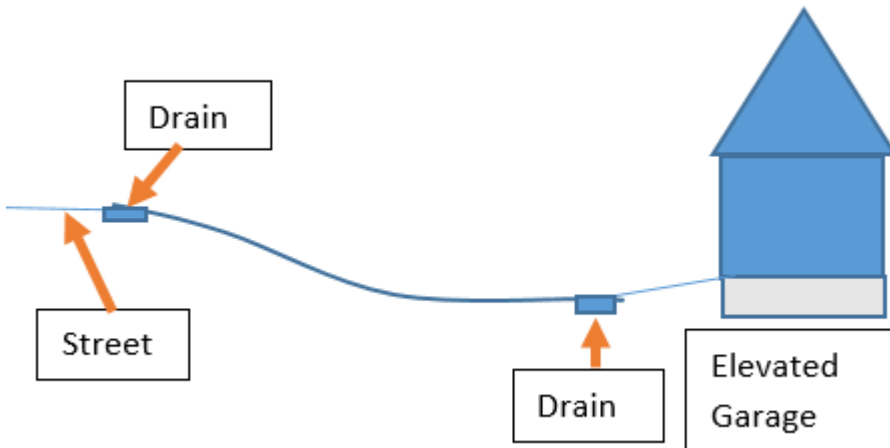


## Specific Questions:

- Is there a program to help residents floodproof homes?
  - Flood Resilient Arlington is a partnership for private and public cooperation
  - See the Home Flood and Moisture Prevention Checklist on website.
    - <https://arlingtonva.s3.amazonaws.com/wp-content/uploads/sites/13/2019/02/HOME-FLOOD-AND-MOISTURE-PREVENTION-CHECKLIST.pdf>
  - Other materials also available on County web site: <https://www.arlingtonva.us/flooding/>

### Floodproofing Examples

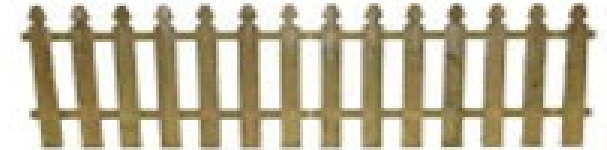
1. Elevate Garage Entrances



2. Protect windows and other openings



3. Do not block water flow paths





## Near term Measures:

---

What actions can residents take in conjunction with working with county staff to alleviate storm water issues?

### **Floodproof your home:**

<https://environment.arlingtonva.us/flood-insurance-rate-maps/reducing-your-risk-of-flooding/>

<https://environment.arlingtonva.us/report-a-drainage-issue/>

What flexibilities will staff entertain while more permanent solutions are identified?

- Staff is happy to discuss/review floodproofing ideas.
- Permitting and other requirements still must be met.

## **Specific Questions:**

- Are there neighborhood-wide concepts learned from floodproofing site visits?
  - Yes, many homes in Arlington would benefit from floodproofing measures – these would be private investments in private property – see checklist
  - Many properties have obstructions to the flow of water – fences, sheds, encroachment upon pipes

Are there updated inundation maps for areas outside of FEMA floodplains? If not is there a plan to do so?

- Ongoing Engineering analysis and the RAMP will address this – see slide further in presentation.

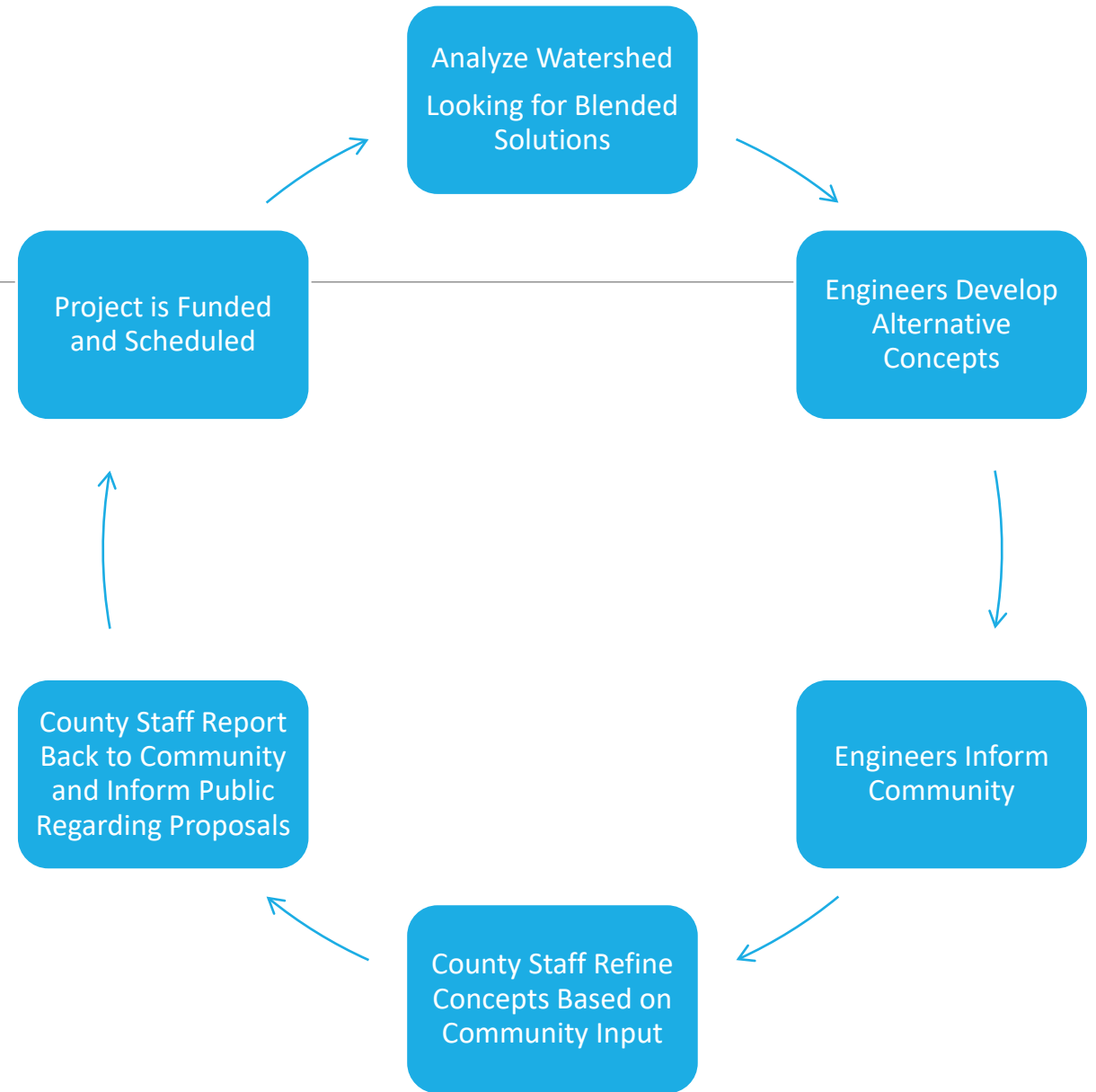
## **Specific Questions:**

---

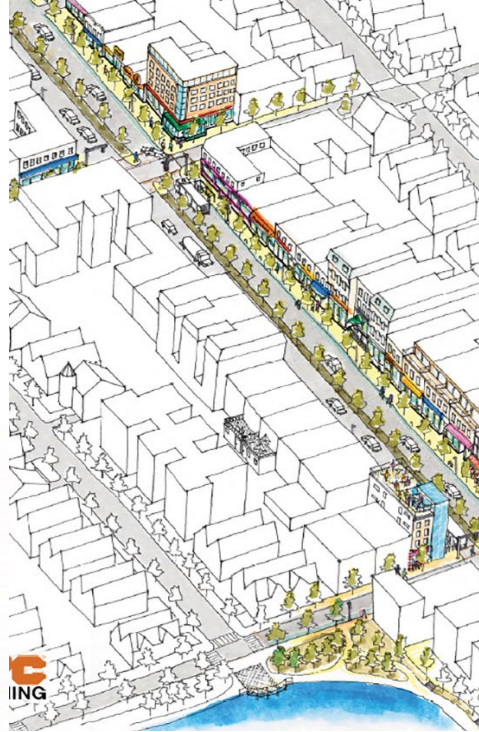
- Are there plans for overland relief property acquisition?
  - Not at this time; it is too early in the evaluation process.
- What public properties might be used for detention in WWCA
  - Still under evaluation and Engineering Analysis

## Near term Measures:

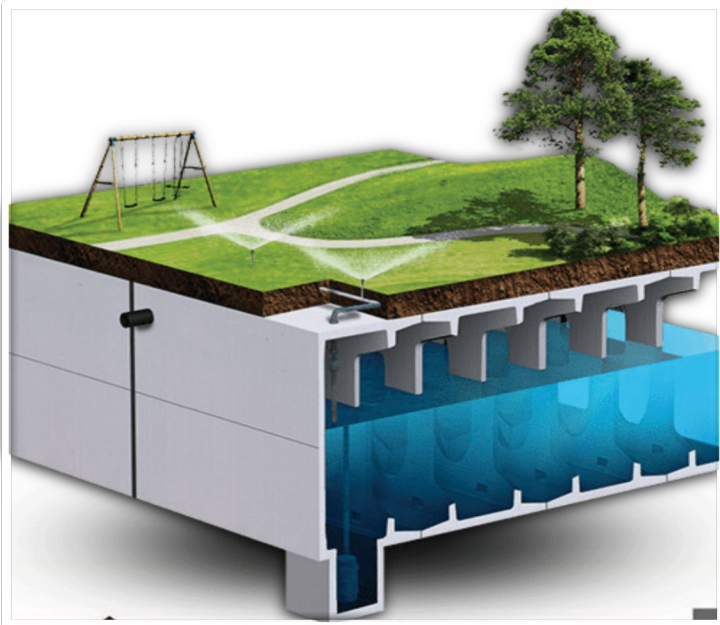
**What approaches are being used** in affected areas - including design-thinking sessions where residents, staff and engineers may collaboratively review and model solutions in real time - to identify solutions/solution alternatives in a timely manner.



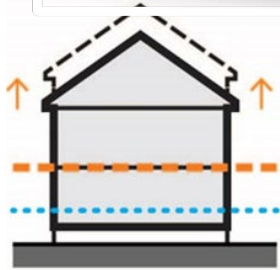
TOTAL CLIMATE RESILIENCY  
**SILENT RETAIL**



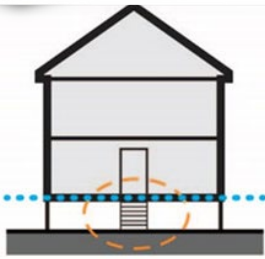
ENGINEERING



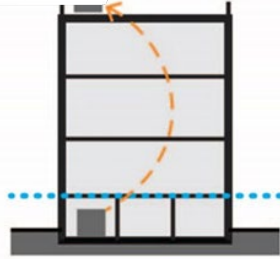
# New Stormwater Strategy, Policy and Planning Initiatives



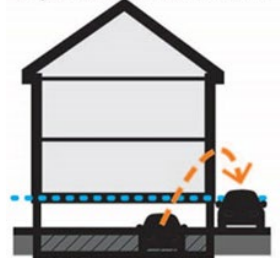
**Height**  
 must recognize elevation requirements in flood zones



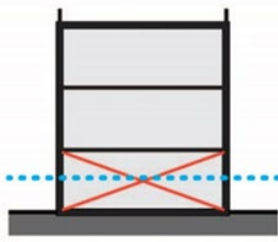
**Access**  
 need for stairs/ramps requires imaginative solutions



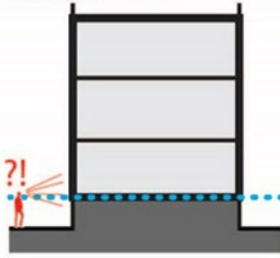
**Mechanical Systems**  
 must allow relocation out of flood-prone areas



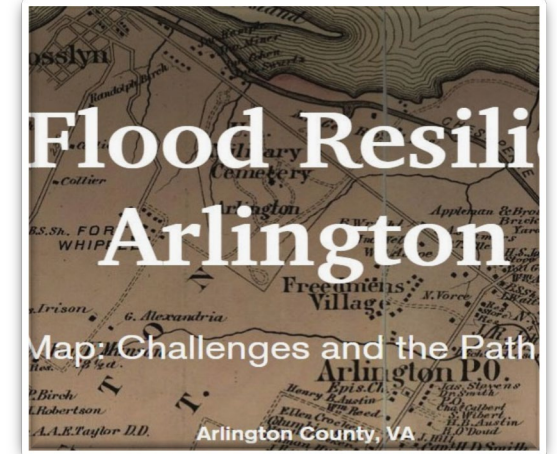
**Parking**  
 may not be possible below ground



**Ground Floor Use**  
 buildings may be allowed only limited use of ground floors



**Streetscape**  
 limit negative effect of blank walls on streetscape



# Infrastructure Investment – Mitigation Objectives

## Public Safety

- Dangerous flooding of homes
- Flooding of businesses
- Water rescues
- Power outages

## Building Integrity

- Homes
- Businesses
- Commercial business functionality
- Operational infrastructure

## Environment Impacts

- Sanitary sewer back-flows
- Volume and rapid transportation of non-point source pollution
- Stream impacts

## Economic

- Transportation (safe, reliable)
- Business districts
- Property valuation
- Bankability and insurability
- Future growth
- Increased capital / maintenance costs

# Priority Initiatives

---

**Stormwater Interdepartmental Working Group** (formed Nov 2019), to inform Emergency Planning/Response, Enhanced Communications, Strategic Engineering and Capital Programming, and Policy Innovations for Re/Development.

**Risk Assessment and Management Plan, or RAMP** (2021 Q1) provides updated climate projections (2040 and 2070) and new capacity studies to identify system gaps. The RAMP maps critical community facilities in all sectors, to support vulnerability and risk assessments. The result is multi-resource asset for resiliency planning, high-performance blended engineering solutions, and measuring the “cost of inaction”.

**Land Disturbance Activity Permit Program – LDA 2.0** Updating the policy to streamline processes, provide standard engineering templates, expand developer options, and to impose new water **quantity** standards and water **quantity** measures

**NEW:** **FEMA Update to Countywide Flood Insurance Rate Maps (FIRMS)**. Estimated schedule for draft maps, October 2020.

# WWCA Policy Questions

---

## Clarifying the Issues

- Authority to regulate development is limited by Virginia law.
- Accessory dwelling interest is actually quite small. Fences and sheds are far more problematic
- In most cases, the ability of new development to tie-into system either does not exist or is not practical or advisable from an engineering perspective.

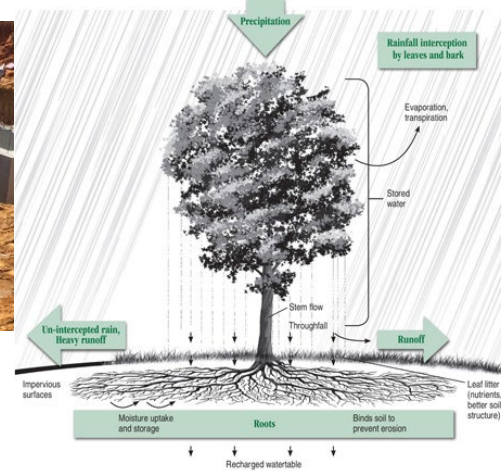
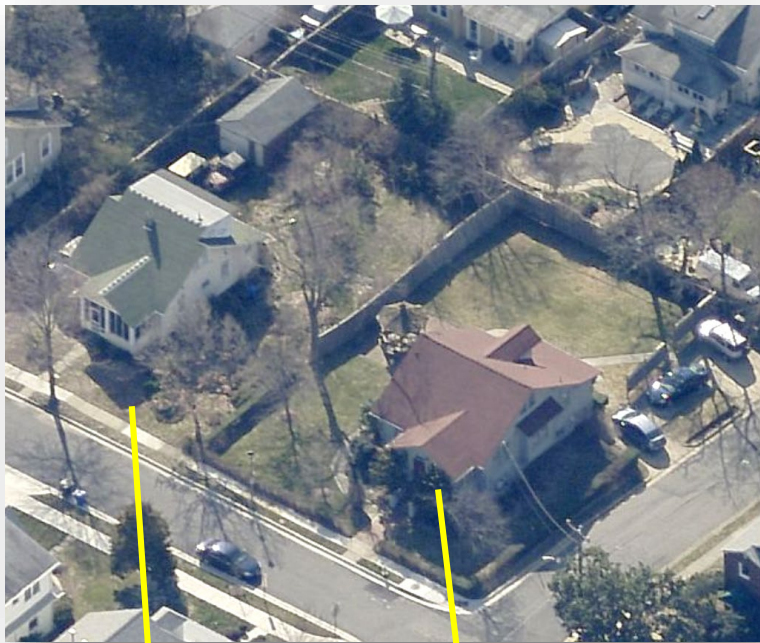
## Distinguish “Runoff” from “Flooding”

- Development on a parcel scale is responsible to manage stormwater onsite to prevent/mitigate **runoff**
- This has an incremental impact on **flooding**, in the full aggregate, but does not, on a parcel-basis, impact **flooding**
- **Flooding** is a “system” challenge and must look to infrastructure upgrades and diversification to increase system capacity

## Current Initiatives Regarding Policy

- Stormwater Inter-Departmental Working Group / Policy Innovation Committee
- LDA 2.0 – An updated version of the Land Disturbance Activity Permit Program. Proposed changes include new water **quantity** measures, in addition to existing water **quality** measures.





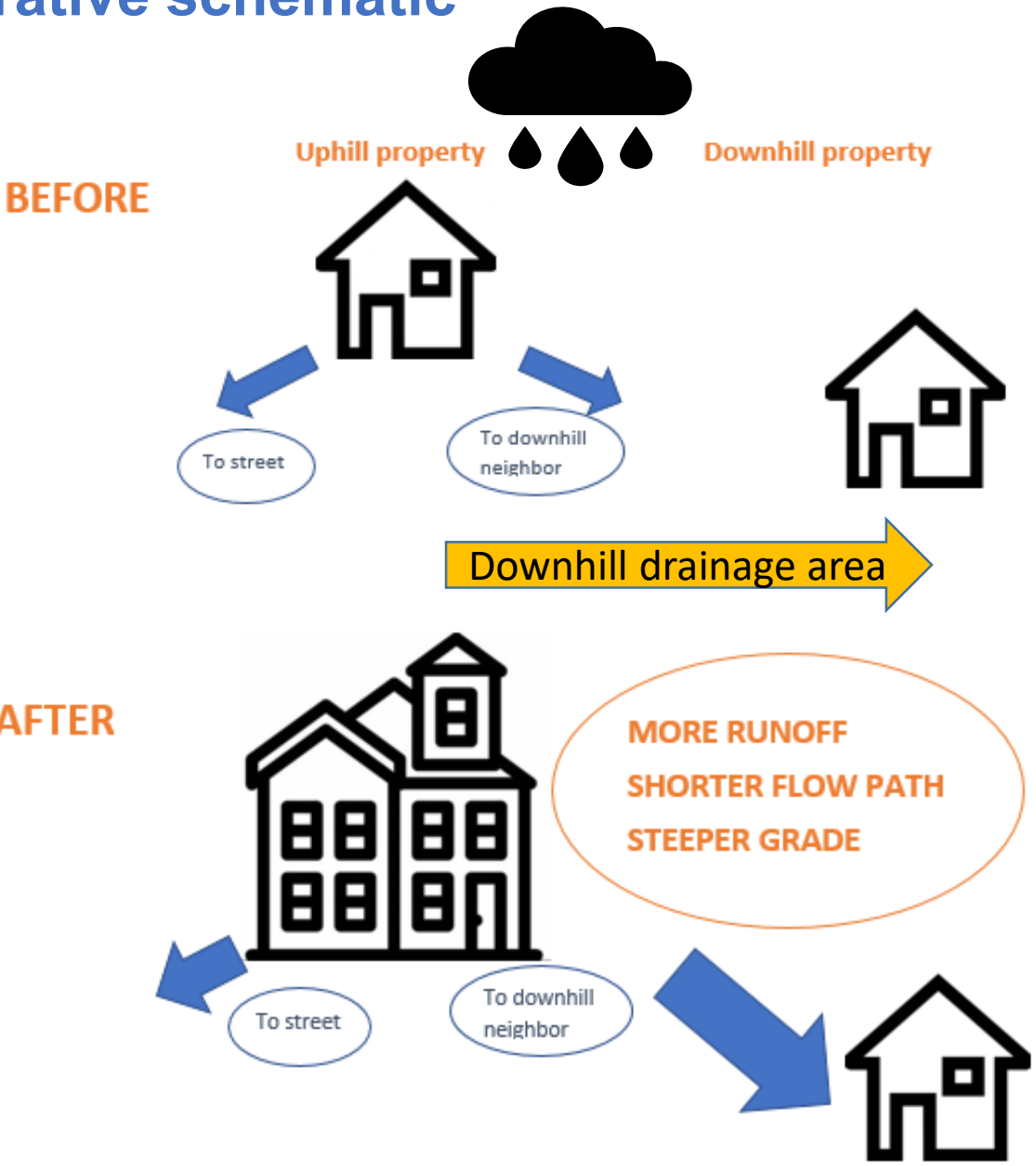
# LDA 2.0

# Primary Goal of LDA 2.0

*Recalibrate the program to improve mitigation of off-lot stormwater impacts from new single-family homes in response to a more demanding development and precipitation environment*

- Place greater emphasis on managing stormwater runoff quantity (volume and flow) over regulatory stormwater quality credit, while not putting the County at a compliance disadvantage for its MS4 permit obligations
- Improve plan preparation and review efficiency
- Maintain feasibility for builders to construct and homeowners to operate and maintain stormwater facilities on their properties.

# Illustrative schematic



Alternative compliance option provides stronger, targeted, and more reliable downhill property protection

**“Slow it down, soak in”**

- Detention of runoff from increased impervious area for the LOT and DOWNHILL drainage areas
- New detention tank tool in DOWNHILL drainage area to manage range of rainfall intensities and release slowly

*Less official water quality credit in exchange for increased detention performance and reliability*

# RAMP – Application(s)

---



- ❑ Map County’s “urban” floodplains (outside FEMA floodplains)
- ❑ Measures both Flooding and Sea Level Rise / Storm Surge Risks
- ❑ Update IDF Curves and inundation maps
- ❑ Define and value risks from flooding
- ❑ Measure true value(s) of stormwater investments
- ❑ Support cross-sector (e.g., transportation) climate adaptation planning
- ❑ Drive innovations in engineering and policy solutions
- ❑ Informs flood resilient design and construction standards
- ❑ Expands communications platform

# Flood Insurance Rate Map (FIRM) Update

A FIRM shows the areas in a community that are subject to flooding and the risk associated with these flood hazards.

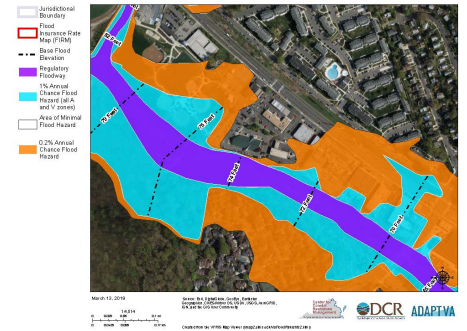
FEMA periodically re-studies community flood zones and updates the Flood Insurance Rate Maps

Arlington County's FIRM was last updated in 2013. Each update takes approximately 2-3 years. FEMA is starting to do more frequent FIRM updates in more developed areas.

New maps reflect current flood risk based on the latest development data and more accurate topography, and give property owners up-to-date information about flood risk.

<https://environment.arlingtonva.us/flood-insurance-rate-maps/>

<https://msc.fema.gov/portal/search#searchresultsanchor>



# Flood Insurance Rate Map Update Schedule

---

9/18/20: Preliminary maps released

October 2020: County will notify affected property owners via letter

11/18/20: Online public meeting will be held. Email Aileen Winquist ([awinquist@arlingtonva.us](mailto:awinquist@arlingtonva.us)) to register for the meeting

11/19 -12/19/20: 30 day general comment period begins after public meeting

Summer 2021 (approx.): 90 day technical appeal period. Property owner can submit data or technical information to appeal or revise floodplain designation.

Spring 2022 (approx.): FEMA will issue letter of final determination

Fall 2022 (approx.): New FIRMS will be effective

# What does it mean if your property is in the floodplain?

---

If you have a mortgage from a federally regulated lender, you are required by Federal law to carry flood insurance when these maps become effective.

Contact your insurance agent to get the best rate and learn about options offered by the National Flood Insurance Program (NFIP) for properties being mapped into higher risk areas for the first time.

If you do not have a mortgage, you are still strongly recommended to purchase flood insurance. Over the life of a 30-year loan, you are about three times more likely to have a flood in your home than a fire, and most homeowners' insurance policies do not provide coverage for damage due to flooding.

# Questions?

---

**Demetra McBride**

**Bureau Chief, Office of Sustainability and  
Environmental Management**

**703-228-3612**

**[dmcbride@arlingtonva.us](mailto:dmcbride@arlingtonva.us)**

**Elizabeth Thurber, P.E.**

**Stormwater Infrastructure Program Manger**

**571-289-2498**

**[Ethurber@arlingtonva.us](mailto:Ethurber@arlingtonva.us)**

**Aileen Winqvist**

**Stormwater Outreach Manager**

**703-228-3610**

**[awinqvist@arlingtonva.us](mailto:awinqvist@arlingtonva.us)**