



FEMA Floodplain Changes in Alexandria

PRELIMINARY Map Revisions Available

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FOUR MILE RUN – May 19th, 2021



FEMA Floodplain Changes in Alexandria

City outreach meetings:

- May 19, 2021 – Four Mile Run
- May 24, 2021 - Potomac River / Old Town
- June 4, 2021 - Hooff's Run
- June 7, 20201 - Cameron Run, Backlick Run, Strawberry Run, Taylor Run
- June 15, 2021 - Holmes Run



National Flood Insurance Program

Quick Facts:

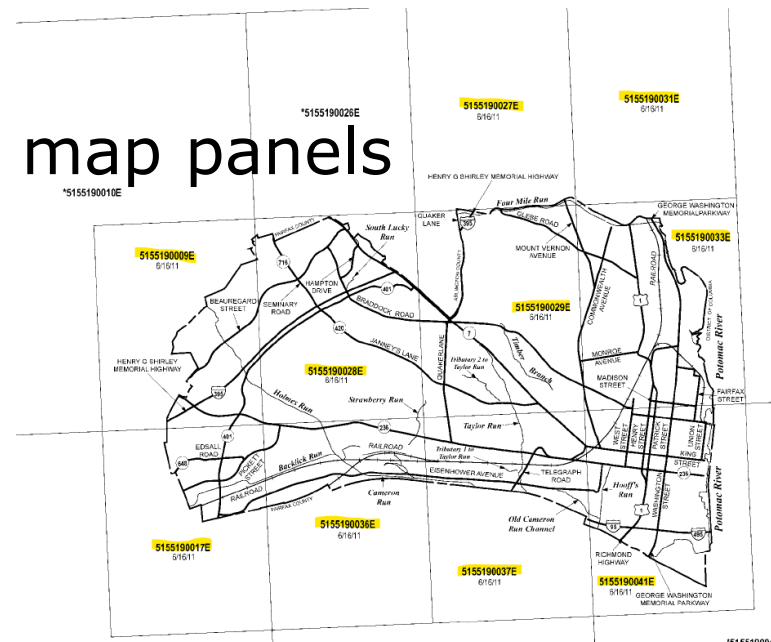
- Established in 1968
- Alexandria began participation in 1969
- Alexandria's first Flood Insurance Rate Map (FIRM) was published in 1969
- Mandatory Flood Insurance began in 1973
- Alexandria began participation in the Community Rating System (CRS) in 1992 (Flood Insurance discounts)
- Last update to Alexandria's maps became effective on June 16, 2011

What are the FEMA Flood Maps?

The regulatory FEMA floodplain, is officially shown on FEMA's published maps, also known as:

FLOOD INSURANCE RATE MAPS (FIRMs)

Alexandria has 10 FEMA map panels





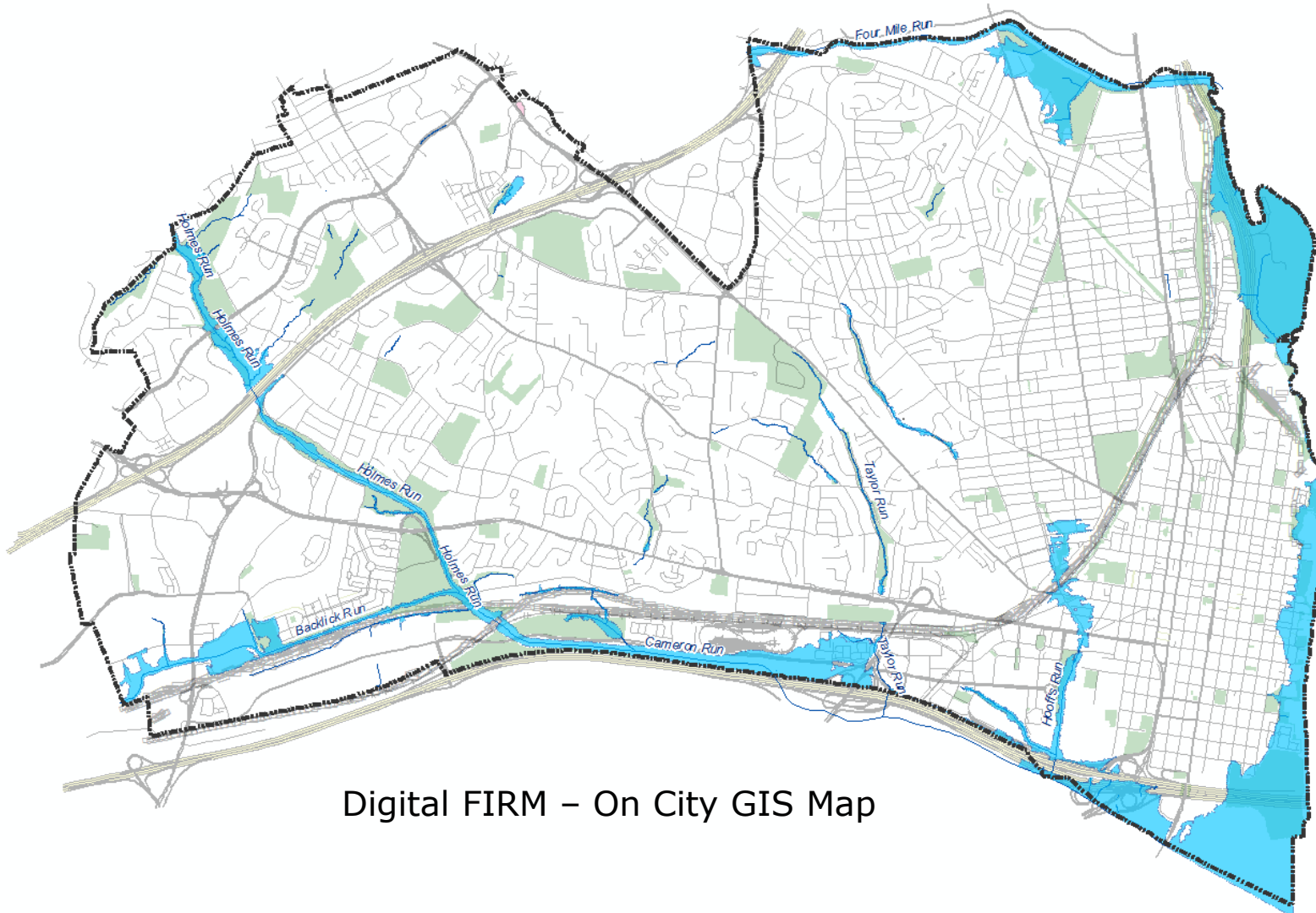
What is the FEMA Floodplain?

The regulatory FEMA floodplain, as shown on the maps, is known as:

Zone AE: An area inundated by 1% annual chance flood, for which Base Flood Elevations (BFEs) have been determined by detailed methods (H&H). Other zones defined by flooding source.

AKA: Special Flood Hazard Area (SFHA), 100-year floodplain.

Alexandria's Floodplains Effective June 16, 2011



Digital FIRM – On City GIS Map



Alexandria's Floodplain Administration by Ordinance

- Alexandria's Floodplain District
 - Zoning Ordinance: **ARTICLE VI – SPECIAL AND OVERLAY ZONES, Section 6-300 Floodplain District**
- Regulation of Development
 - Development:

“Any man-made change to improved or unimproved real estate, including, but not limited to, the construction of buildings or other structures, the placement of manufactured homes, the construction of streets, the installation of utilities and other activities or operations involving paving, filling, grading, excavating, mining, dredging or drilling, the storage of equipment or materials.”

Regulation of Development

When does the Ordinance apply?

- **New Construction in Floodplain**
 - Always
- **Existing Buildings in Floodplain**
 - Substantial Improvement:
 - Any repair, reconstruction, rehabilitation, addition or other improvement of a building or structure, the cost of which equals or exceeds 50% of the market value of the building or structure.
 - Any improvements to Substantially Damaged buildings or structures.
 - Historic buildings are exempt.

Regulation of Development

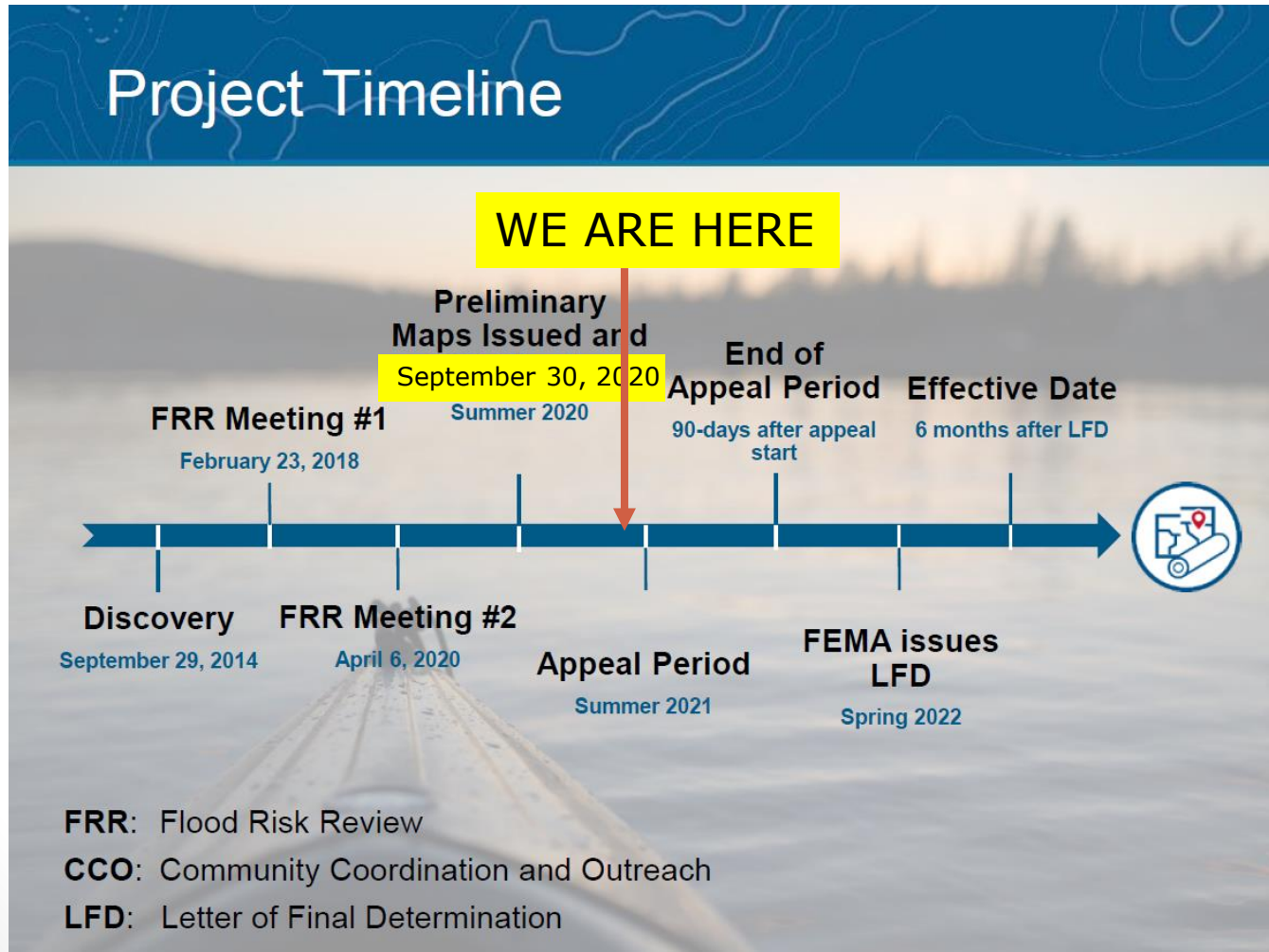
- Three Major Uses:
 - **Residential Building**
 - Any single-family dwelling, two-family dwelling, row or townhouse dwelling, or multi-family dwelling, and any accessory building or structure. Floodproofing underground spaces (basement/parking) is not permitted.
 - **Nonresidential Building**
 - Any building or structure which is not a residential building or a mixed-use building. Floodproofing underground spaces (basement/parking) is permitted.
 - **Mixed-Use Building**
 - Any building or structure that is used or intended for use in a mixture of nonresidential and residential uses in the same building or structure. For floodplain management purposes, **a mixed-use building is subject to the same rules and conditions as a residential building** unless all of the provisions set forth more specifically in Section 6-305(K) are met. Floodproofing is conditional.

How often are the maps updated?

- **Depends!** Alexandria's maps were last updated in June 2011.
- Previous map dates:
 - 1991
 - 1983
 - 1981
 - First mapped in 1969

NEW MAPS ARE COMING

Schedule:



Citywide Impacts

- Based on PRELIMINARY maps (FEMA)

Significant Impacts

City of Alexandria, VA – Citywide

FEMA's Risk Mapping, Assessment, and Planning (Risk MAP) Program helps strengthen communities by identifying actions they can take now to reduce their hazard risk, enhance local planning, improve outreach through risk communications, and increase local resilience to natural hazards. Below is an overview of some key items identified during the Changes Since Last FIRM¹ impact assessment.

The information presented below are estimates as of March 2020.

<p>Flood insurance is available to the entire City</p> <p>The city participates in the Community Rating System (CRS), receiving flood insurance savings of up to twenty percent</p>	<p>5% Of the population is in the draft flood high hazard area</p>	<p>\$6.5M Total paid losses²</p> <p>362 Total paid claims²</p>	<p>201 Paid claims outside of the effective flood high hazard area²</p>	<p>1,174 Flood Insurance policies in force</p> <p>947 For Single Family Residential Structures</p>	<p>33,700 Estimated structures³ in the community</p> <p>1,140 Estimated structures³ in the draft flood high hazard area</p>				
<p>17 Flood-related presidential disaster declarations</p>	<p>4 levees a</p>	<p>\$1,180 Average premium</p> <p>38% Higher than the national average</p>	<p>\$2M Repetitive Loss (RL) paid losses²</p> <p>14 RL properties²</p>	<p>337 Policies in the effective flood high hazard area</p>	<table border="1"> <tr> <td>Estimated structures³ newly mapped in</td> <td>Estimated structures³ newly mapped out</td> </tr> <tr> <td>+350</td> <td>-30</td> </tr> </table>	Estimated structures ³ newly mapped in	Estimated structures ³ newly mapped out	+350	-30
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+350	-30								

Property Impacts

Properties New to the Floodplain:

- Insurance is mandatory for government backed mortgages.
 - Average annual premium in Alexandria is \$1,180/yr.
- Elevation certificates may be required by mortgage holders.
 - \$400-\$600 One-time expense.
- Any development of property (including additions, interior work) now subject to Substantial Improvement floodplain regulations.
- Nonresidential redevelopment may dry-floodproof.
- Won't be impacted until maps become Effective in Fall 2022.

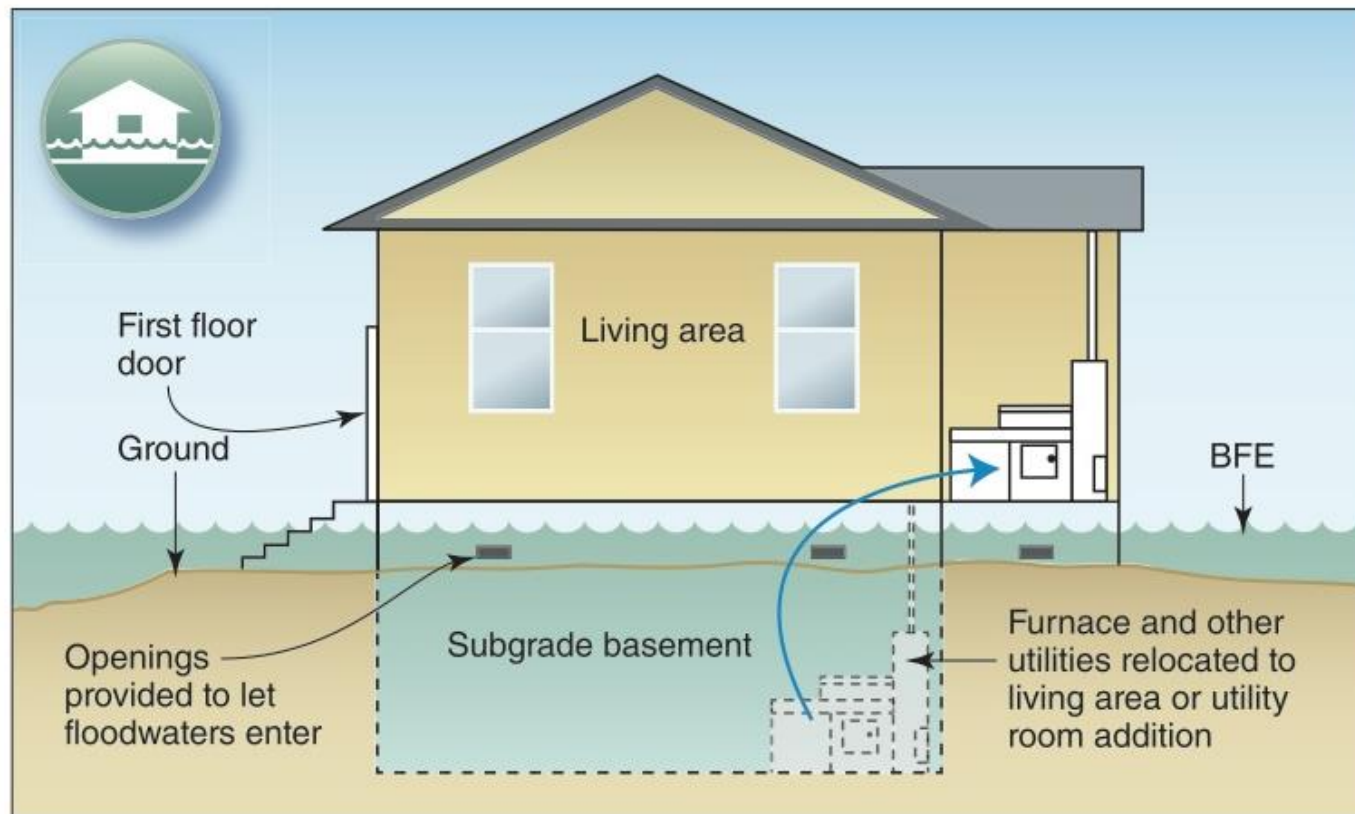
Property Impacts

Basic Floodplain Regulations:

- All New and Substantially Improved buildings must have the lowest floor (including basements) at least 1-ft above the Base Flood Elevation (BFE).
- Substantial Improvement means any improvement to a building, the cost of which is 50% or greater than the Value of the building. (city uses tax assessed data)

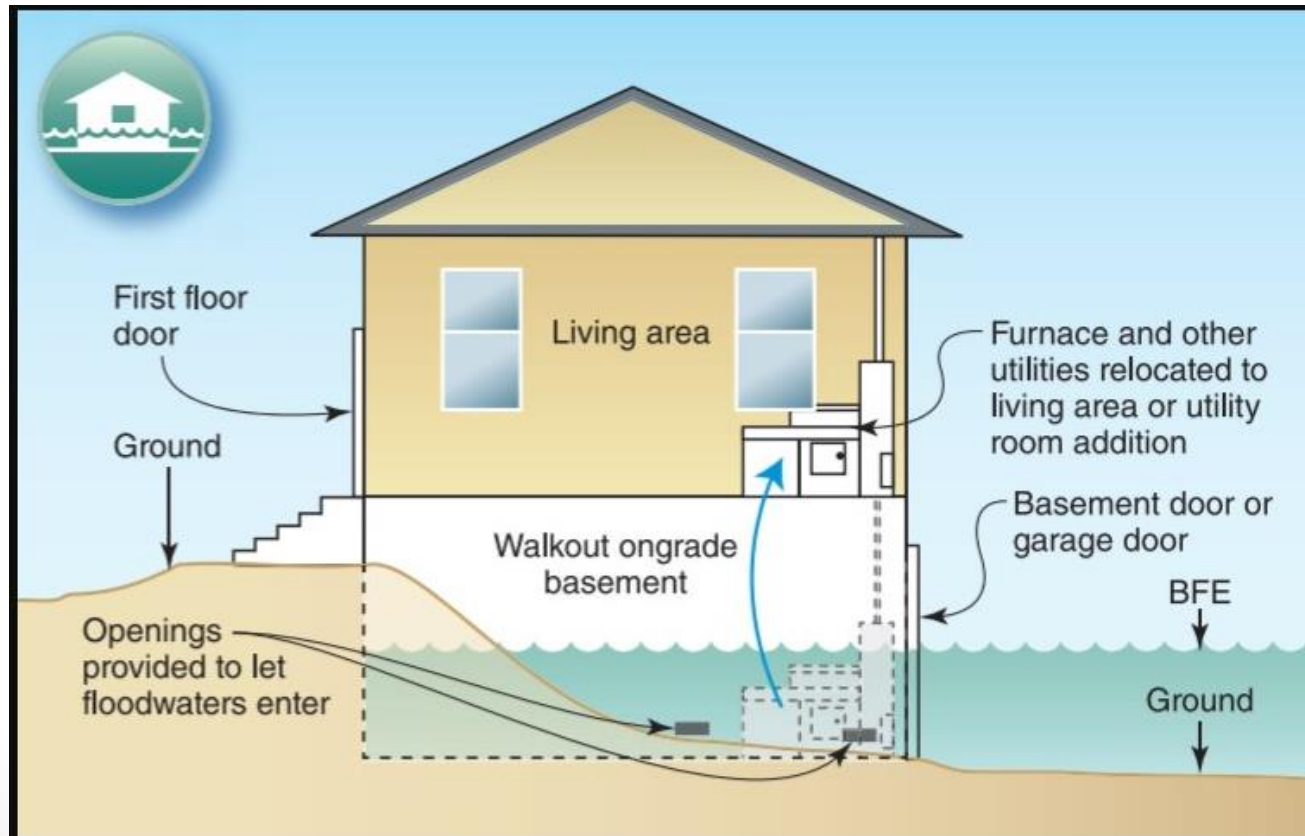
Property Impacts

Examples of older buildings with basements made compliant with regulations. (Only required if substantially improved).



Property Impacts

Examples of older buildings with basements made compliant with regulations. (Only required if substantially improved).





FEMA Floodplain in Four Mile Run

FEMA RE-STUDIED THE FOUR MILE RUN WATERSHED

- **New Hydrology** – Determines the flows from rainfall seen in the Run in cubic-feet-per-second. Leads to depth in the channel.
- **New Survey** of the Run's cross-sections.
- **New Hydraulics Model** – Determines the elevation of water surface through the cross-sections. Most commonly by USACE's Hydraulic Engineering Center (HEC) River Analysis System (RAS), or HEC-RAS program.
- **LAST STUDIED** in mid 1970's.

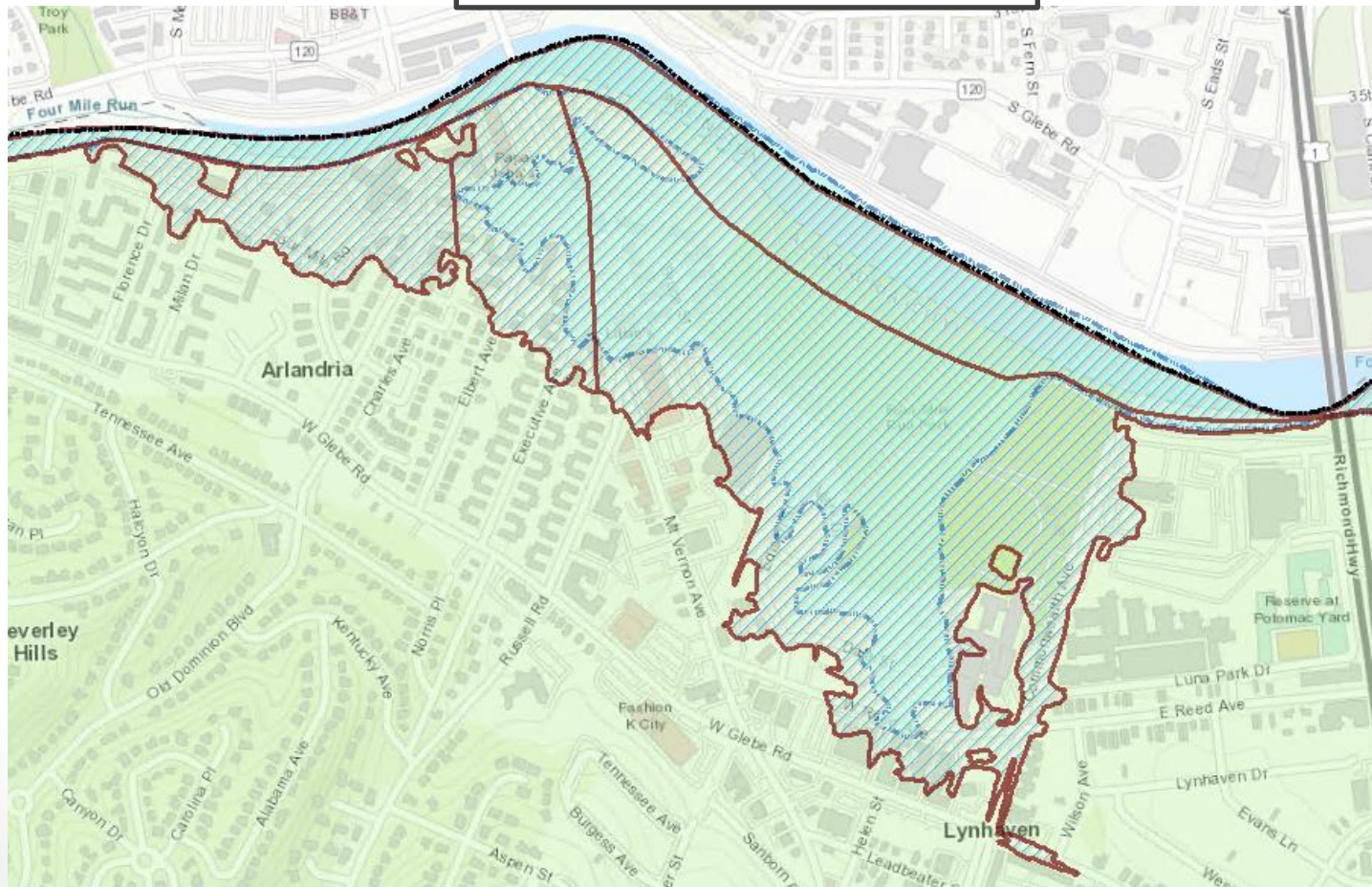
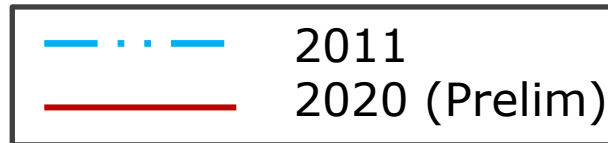
FEMA Floodplain in Four Mile Run

How have things changed in Four Mile Run since 1970?

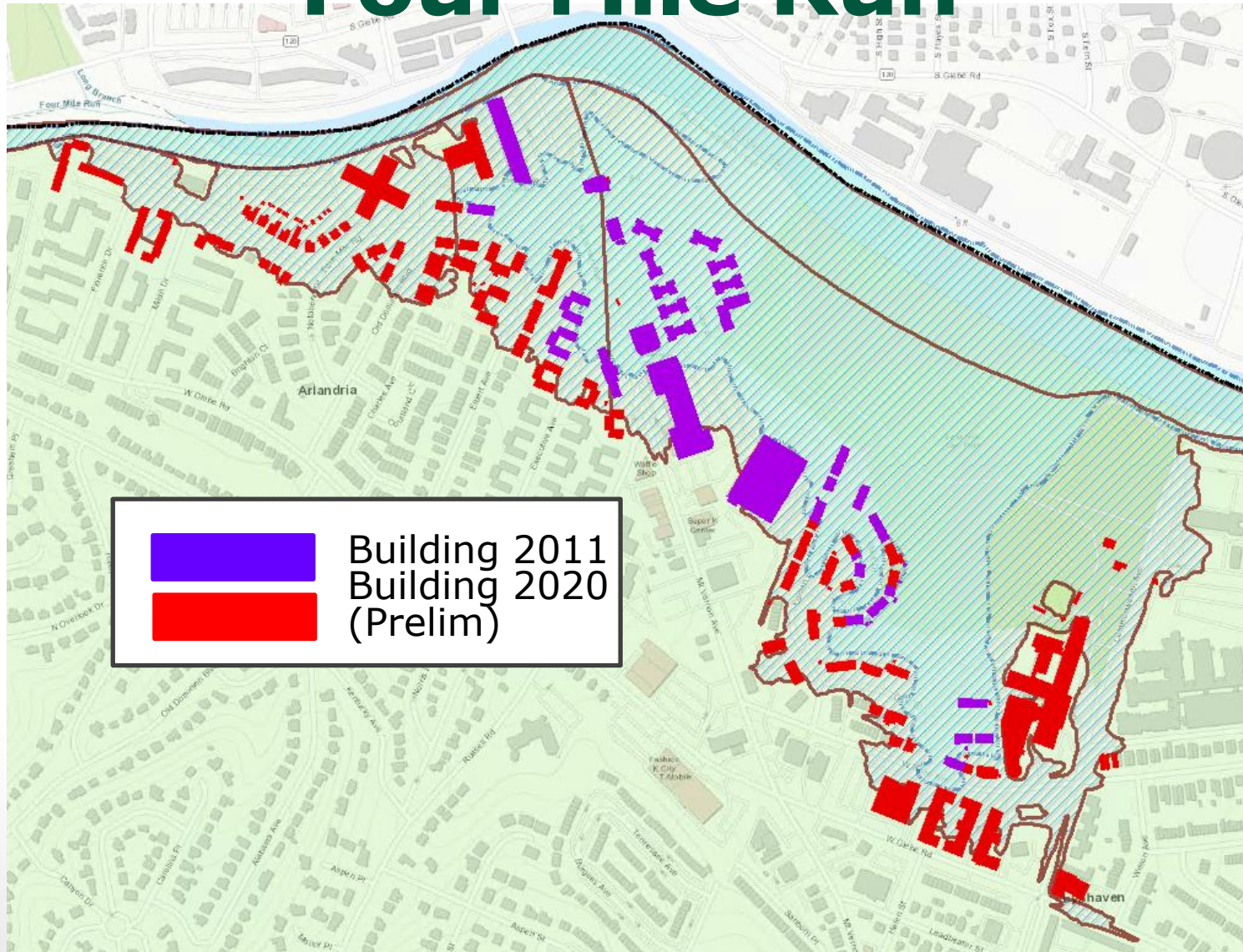
- Changes in the geometry of the channel.
- Updated modeling and mapping information and techniques. (LIDAR, computer modeling)
- Increased impervious area in the watershed.



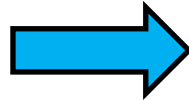
FEMA Floodplain in Four Mile Run



FEMA Floodplain in Four Mile Run



More Information?



Resources for more information:



City Website:

<https://alexandriava.gov/floodmap>

<https://alexandriava.gov/933446> (flooding & drainage)



FEMA

FEMA MAP UPDATE:

<https://arcg.is/1L4fXW>



FEMA

Flood Insurance:

- Your Homeowner's Insurance Provider
- FEMA: <https://floodsmart.gov>
 - Renter's insurance also available for belongings!
 - <https://www.floodsmart.gov/flood-insurance/types>



FEMA

FEMA's RISK Rating 2.0:

<https://www.fema.gov/flood-insurance/work-with-nfip/risk-rating>



COMING SOON: Explore City 50% matching grants for Floodproofing your property! City reimburses up to \$5,000 for qualified projects.
<https://www.alexandriava.gov/FloodAction>



KEY TAKE-AWAYS

- MAP changes are coming!
 - Take steps to protect yourself and your property.
- Get Flood Insurance Now!
 - If you are NOW in Zone X, flood insurance policies prior to map change will be grandfathered in at Zone X rates when the map change becomes effective.
 - Rates will remain if there is continuous coverage by the same owner.
 - 30-day waiting period for policy coverage. Don't wait!
- Floodproofing 50% matching grants up to \$5,000 coming soon from the City. Watch for updates at <https://alexandriava.gov/floodaction>



What's Next?

City continues community outreach through June 2021.

Appeal Period begins Summer 2021 for 90-days. Dates TBD.

FEMA sends Letter of Final Determination (LFD) in Spring 2022.

FEMA makes new maps effective 6-mo following LFD in Fall 2022. Any previous Letters of Map Change/Amendments will be validated against the new maps at this time, as appropriate by FEMA.



APPEALS PROCESS

FEMA Issues Public Invitation to Appeal or Comment (COMING SOON!)

Residents may submit an appeal if they perceive that modeling or data used to create the map is technically or scientifically incorrect.

- An appeal must include technical information, such as hydraulic or hydrologic data, to support the claim.
- Appeals cannot be based on the effects of proposed projects or projects started after the study is in progress.
- If property owners see incorrect information that does not change the flood hazard information—such as a missing or misspelled road name in the Special Flood Hazard Area or an incorrect corporate boundary—they can submit a written comment.

More information on dates for the appeals period coming soon.

Questions?

