



Updating flood mitigation service levels to improve equity and resiliency

Recommendation

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What is flooding in Fairfax County?



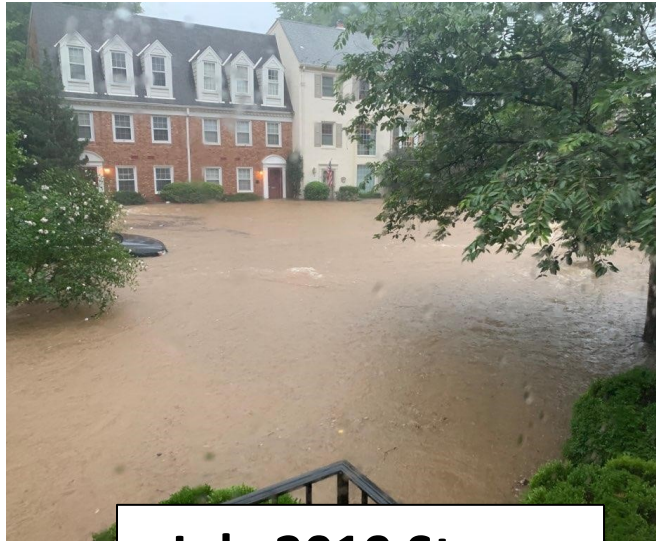
Hurr Isabel 2003



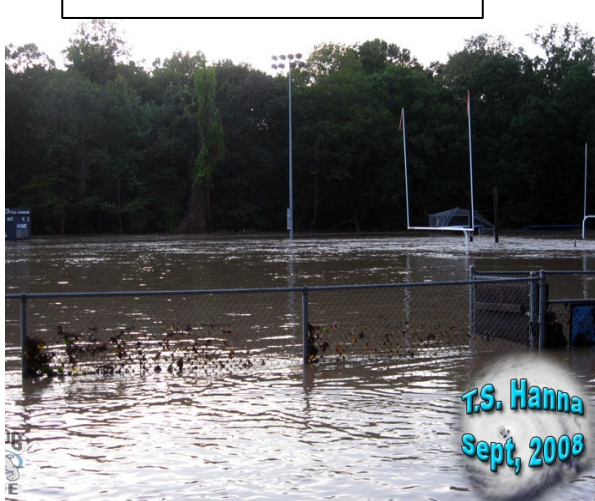
TS Hanna 2008



TS Lee 2011



July 2019 Storm



**The County can't eliminate
flood risk, but it can reduce risk
to life and property**



Three Strategies for Flood Risk Reduction



Residents Play a Role in Flood Mitigation



Managing flood risk is a shared responsibility among the County, developers, and residents

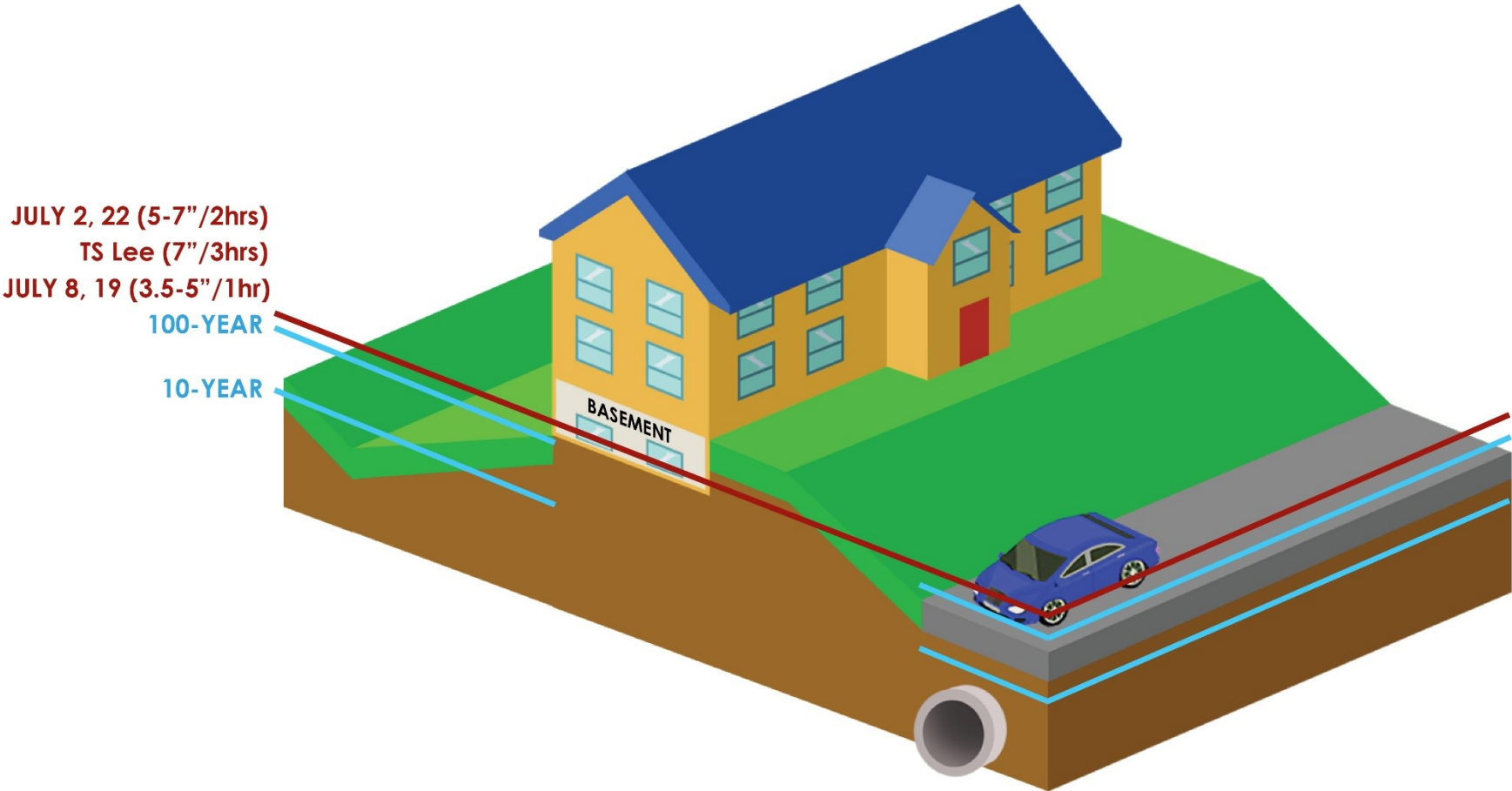


The Three Strategies are Interconnected



What is an Acceptable Level of Flood Risk?

Current Flood Risk Level of Service



Proposed Service Levels for Existing and Future Development

- Mitigate the risk of damage to existing structures from flooding during a **100-year storm event adjusted for climate change**
- Require future development to provide adequate drainage and safely convey the **100-year storm event adjusted for climate change**, for both individual lot and larger developments
- Modify design criteria to account for future changes to rainfall amount and sea level rise due to climate change



A Risk-based Approach is More Equitable

Select and prioritize projects based on frequency and impact of flooding

High Probability
Large Consequences



High Probability
Small Consequences



Low Probability
Large Consequences



Low Probability
Small Consequences



<https://www.floodsite.net>



Each Strategy has Costs and Limitations

- **Cost**
 - Funding
 - Staff resources
- **Implementation**
 - Feasibility
 - Compliance/enforcement



LDS Will Evaluate Potential Regulatory Changes

- LDS will develop a list of **potential regulatory and design criteria enhancements**
 - Define climate change impact
 - Identify opportunities to protect life and property at the development site
 - Identify opportunities to mitigate downstream impacts of the development
- LDS will develop a **“proof-of-concept” study** to determine the effectiveness and associated benefits and costs (Spring 2023)



These are the Next Steps to Achieve Flood Risk Reduction

2022

2023

Board supports the proposed levels of service

LDS presents proof-of-concept

Board approves proposed levels of service

Staff presents draft flood mitigation plan



Additional Information

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