



# Stormwater Advisory Committee Report

# Stormwater Advisory Committee

- Formed in August of 2018
- Held five meetings from August 2018 – February 2019
- Comprised of citizens of varying backgrounds and expertise

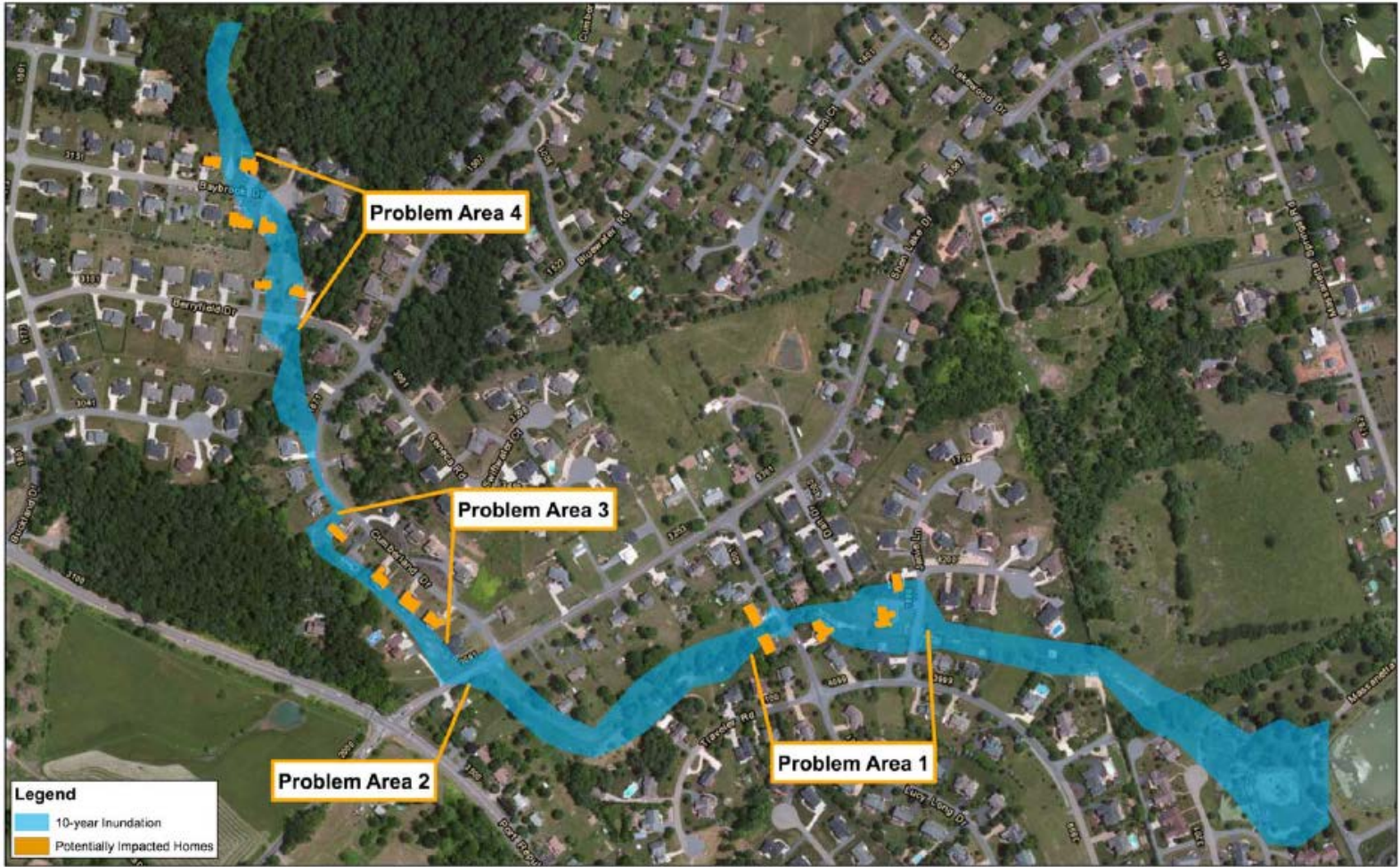
# Main Topics of Discussion

- County-wide flooding and stormwater runoff problems generally
- County's role in flood mitigation and stormwater management
- Specific stormwater runoff problems in the Lake Shenandoah Drainage Area and potential mitigation options
- Funding mechanisms for stormwater mitigation projects
- Higher construction standards

# Recommendations

Four committee recommendations were formulated, along the following topic lines:

1. Next Steps for the Lake Shenandoah Drainage Area
2. Funding Mechanism for Lake Shenandoah Watershed Improvements
3. Procedures to Address Other Areas of Concern
4. Higher Construction Standards

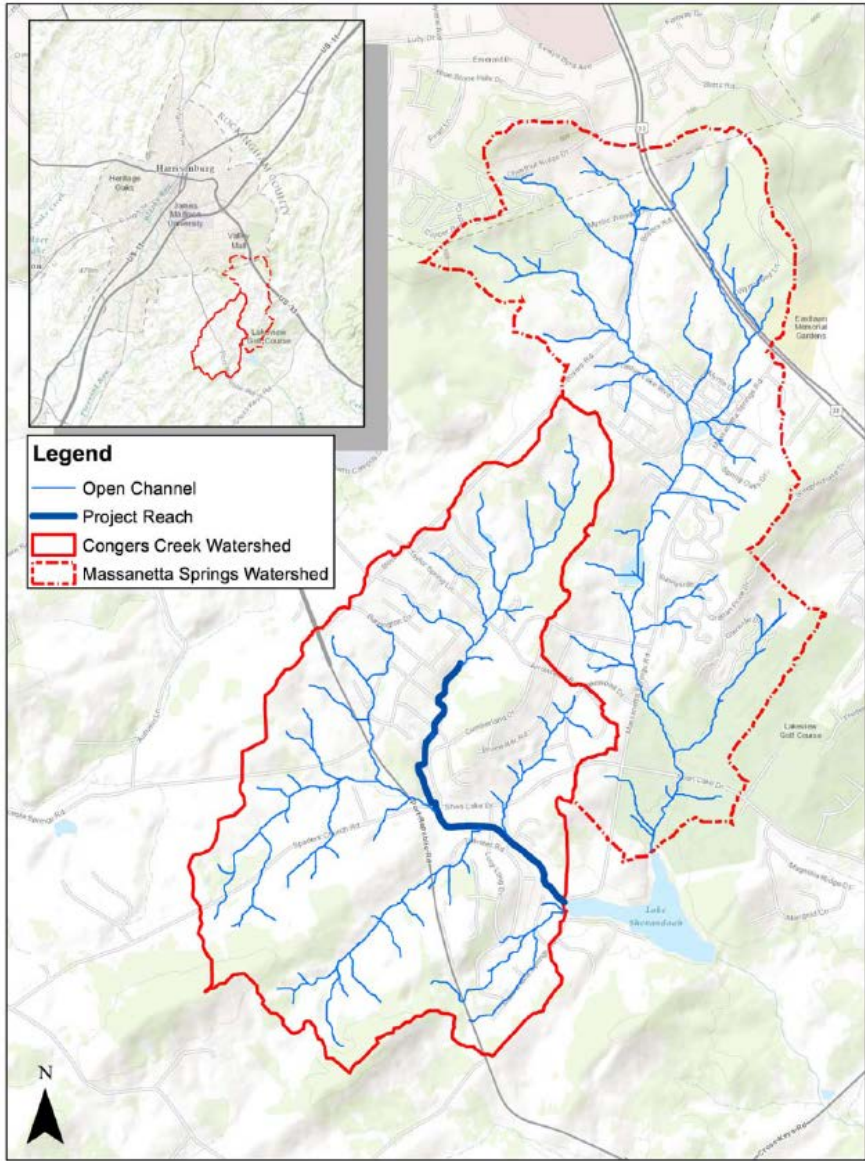


# Recommendation 1: Next Steps for the Lake Shenandoah Drainage Area

- Achieve protection for all homes in the study area to 10-year storm level of service at minimum
- Pursue VDOT Revenue Sharing for culvert upgrades. Ensure that water has a direct path to return to the receiving channel should an overtopping event occur
- Evaluate the removal of privately installed piping (not part of the VDOT system) along the entire drainage way and work with property owners to return those reaches to open channel if determined to be hydraulically advantageous
- Obtain further engineering analysis to run cost-benefit scenarios for different combination approaches utilizing infrastructure upgrades, a new detention facility, existing facility retrofits, and/or property acquisition
- The 100-year floodplain should be mapped and made publicly available on the County GIS information system for informational purposes as the best available data. Do not incorporate the area into the FEMA-regulated floodplain, but consider developing higher standards for the district for any work done to the homes
- Pursue grant funding where available

## Recommendation 2: Funding Mechanism for Lake Shenandoah Watershed Improvements

- Four committee members favored funding from the General Fund
- Two committee members favored fees assessed by sub-area rather than County-wide
  - Sub-area should be defined as properties that are within the drainage area of a specified inadequate drainage system
  - A rated fee structure should be used, based on % of impervious land cover
  - Assessment of fees should begin January 1, 2020
- Consensus was not reached



0 0.25 0.5 1 Miles



## Recommendation 3: Procedures to Address Other Areas

- The County should -review problems that may arise on a case-by-case basis and categorize as either
  1. Debris clean-up after a flood event,
  2. Routine maintenance failure, or;
  3. Inadequate infrastructure based on a 10-year storm level of service
- A separate fund, utilizing general fund revenue, should be established to be used for debris clean up after flood events. Some areas may also have the potential for Federal or State grant funding for streambank protection types of projects
- The County should not undertake responsibility for routine maintenance of drainageways on private properties
- If areas prove to have inadequate infrastructure for a 10-year storm level of service, a similar approach should be undertaken as for the Lake Shenandoah Watershed

## Recommendation 4: Higher Construction Standards

- The current stormwater regulations are more comprehensive than past standards, and the committee believes that the current state requirements are adequate
- Continue the recently implemented practice of requiring engineers to provide FFE's at the time of site plan review for homes proposed on parcels subject to flooding up to a 100-year flood event
- Improve internal communication logistics across departments to ensure the homes are properly constructed



Questions?