MAPPING OF UULNERABLE ROADS

identifying flash flood prone infrastructure in the NRV



CITIZENS RELY ON VULNERABLE ROADWAYS

- Encourage drivers to avoid areas already flooded
- 6" reaches the bottom of most cars
 - Loss of control
 - Stalling out
- 12" floats many vehicles
- 24" carries away most vehicles
 - Including SUVs and pick-ups



NEW RIVER VALLEY PROJECT GOALS

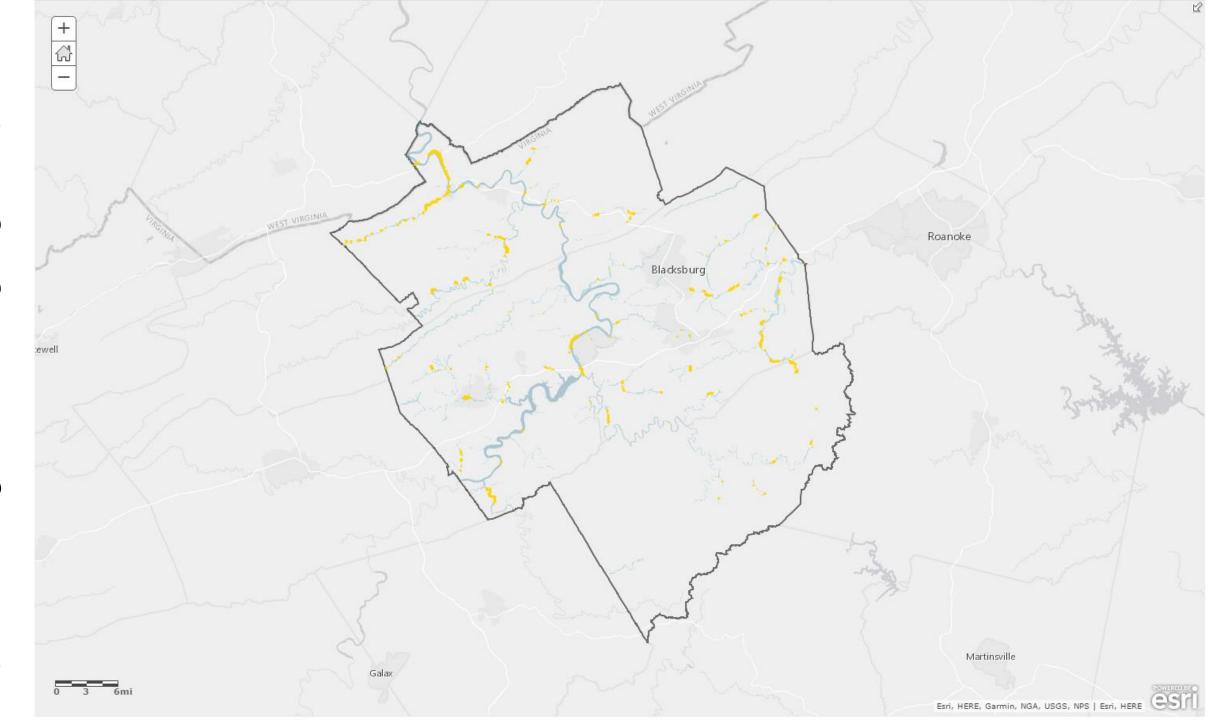
- Partnership with VDEM
- Coordination with VDOT
- Identify infrastructure in 100-year floodplain and flash flood prone areas:
 - Roadways
 - Bridges
 - Driveways and culverts
- Target education outreach towards region's most vulnerable citizens
- Purchase and install permanent signage



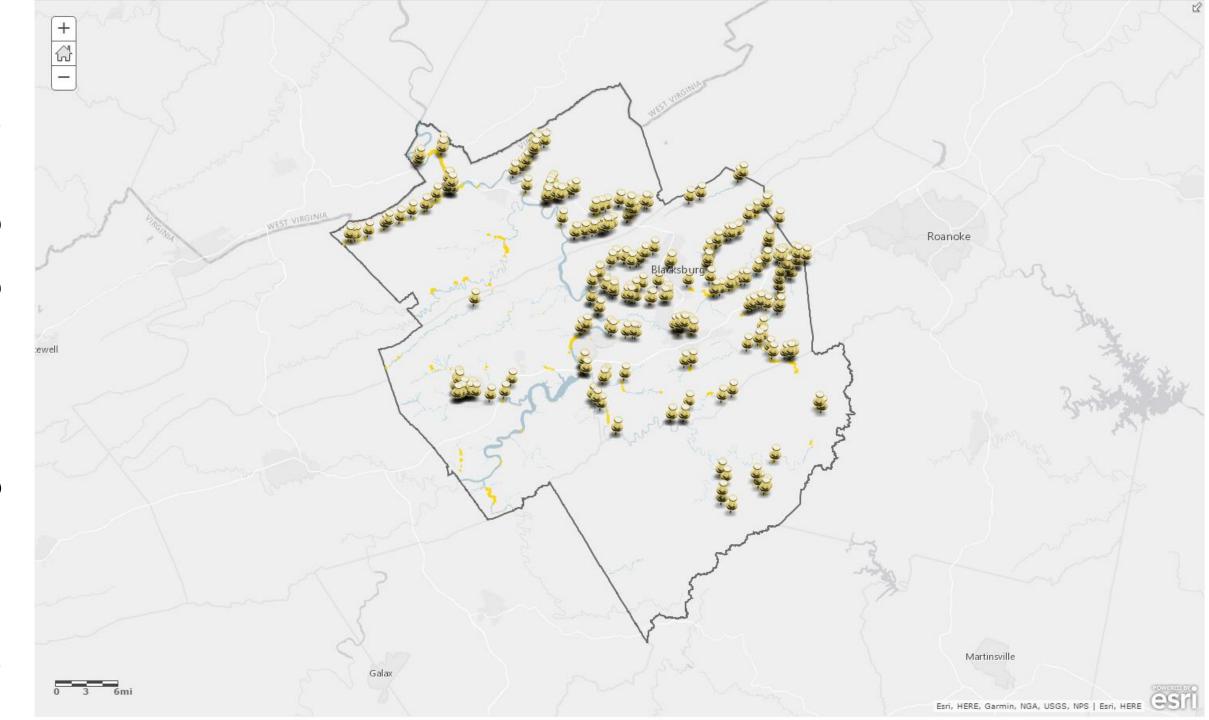




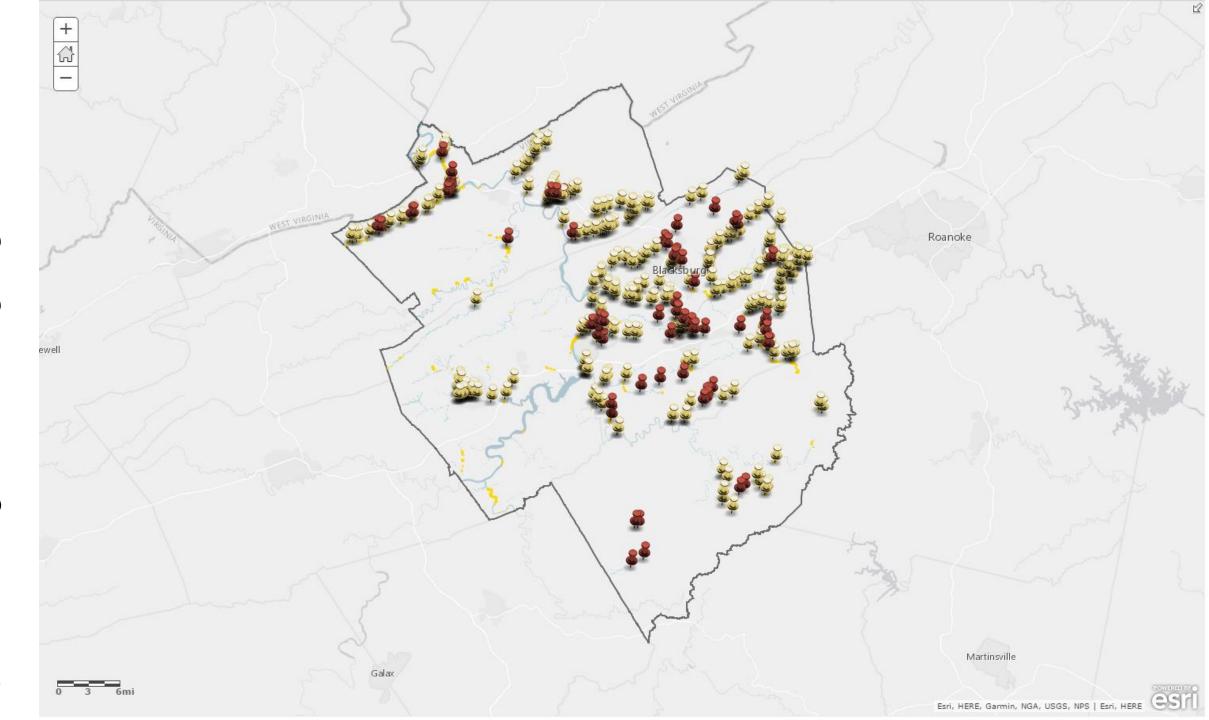
IDENTIFYING INFRASTRUCTURE - DATA



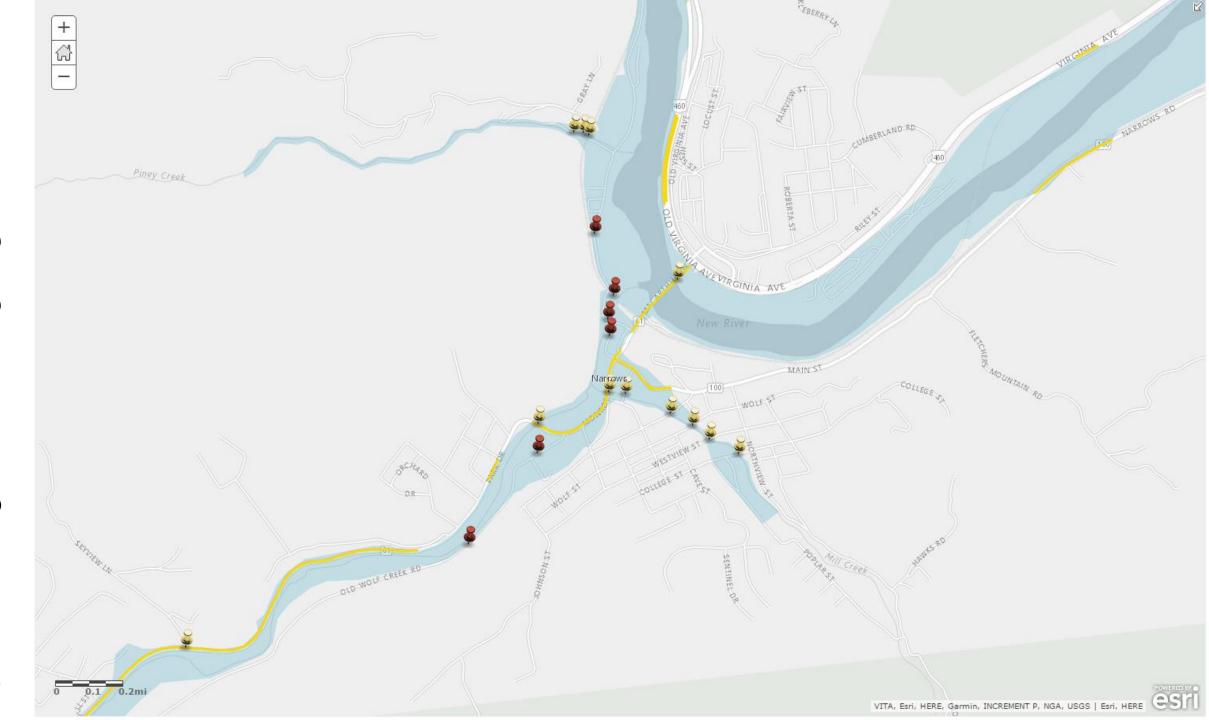
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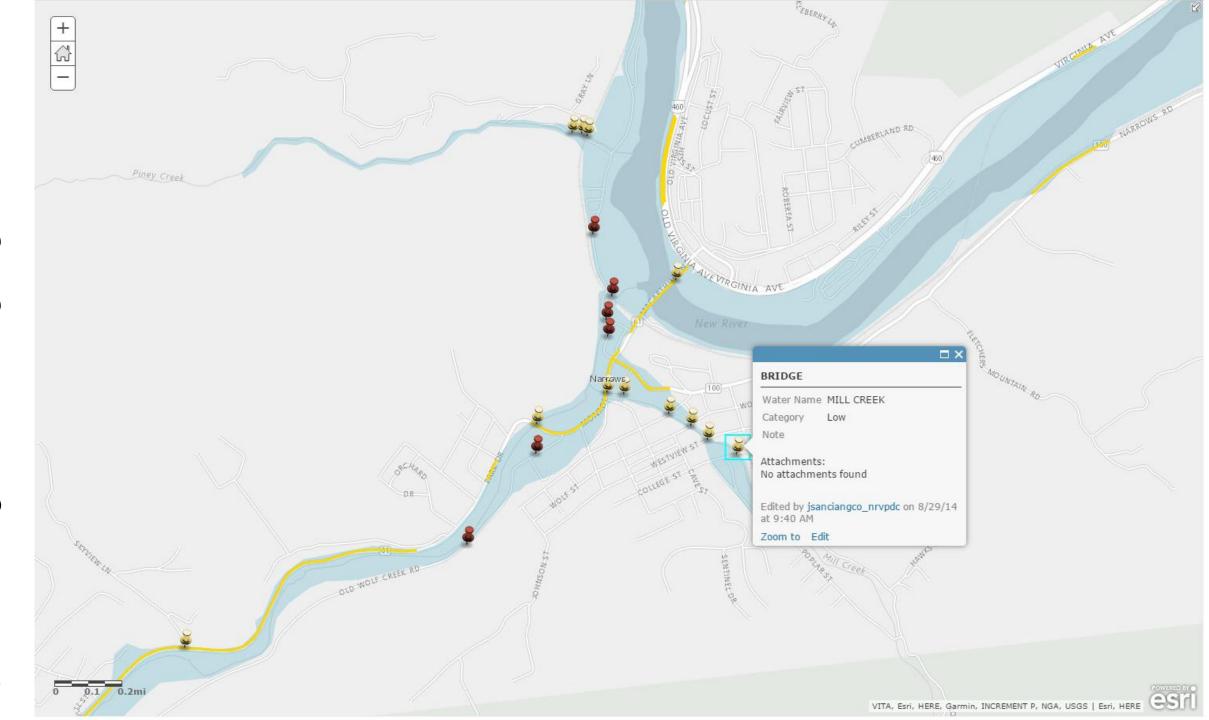


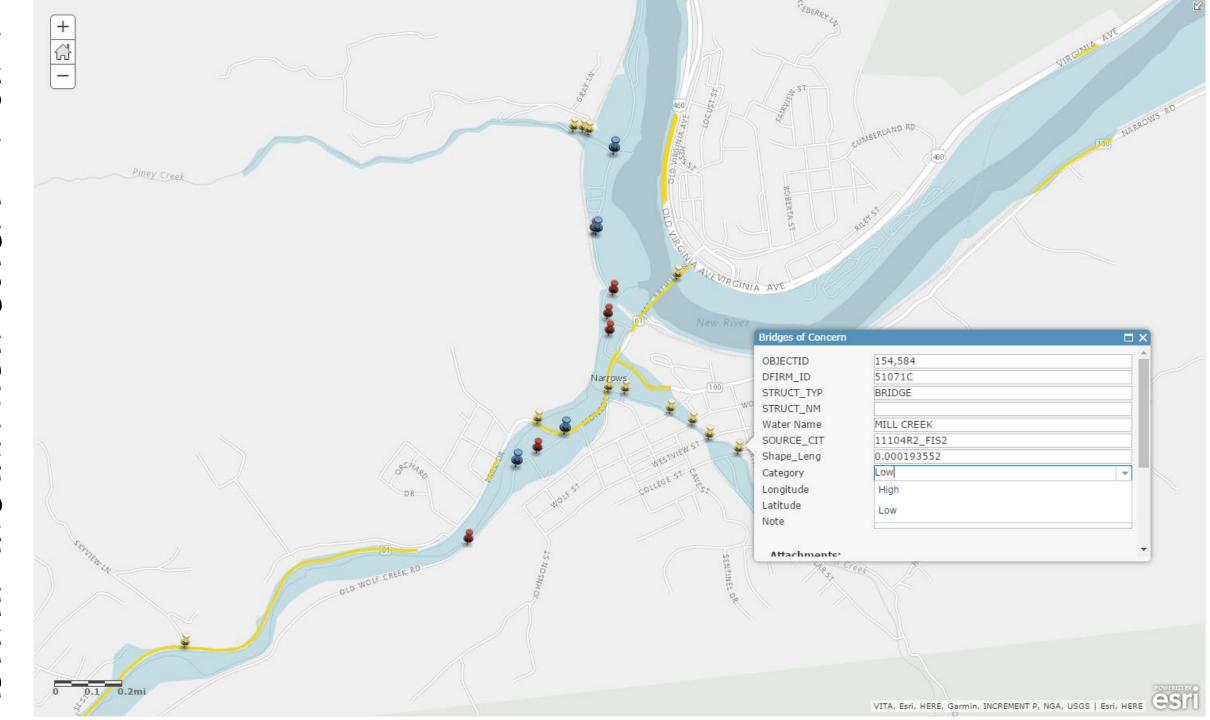
IDENTIFYING INFRASTRUCTURE - 1-0N-1

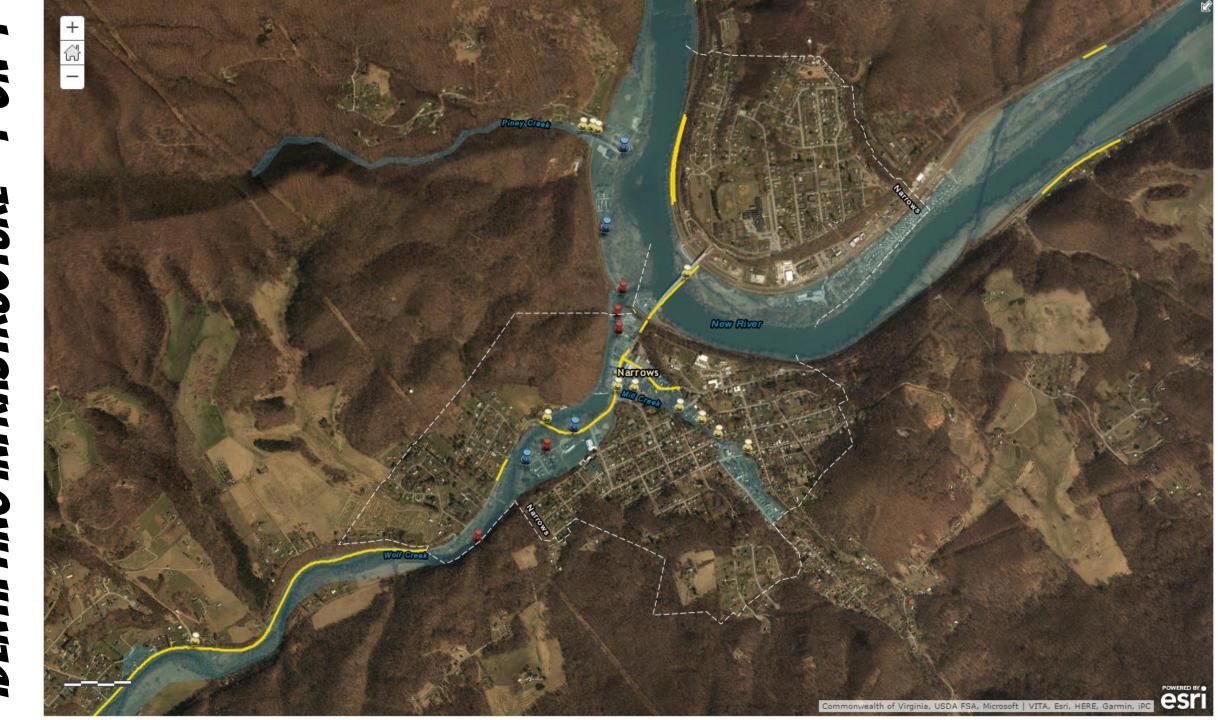


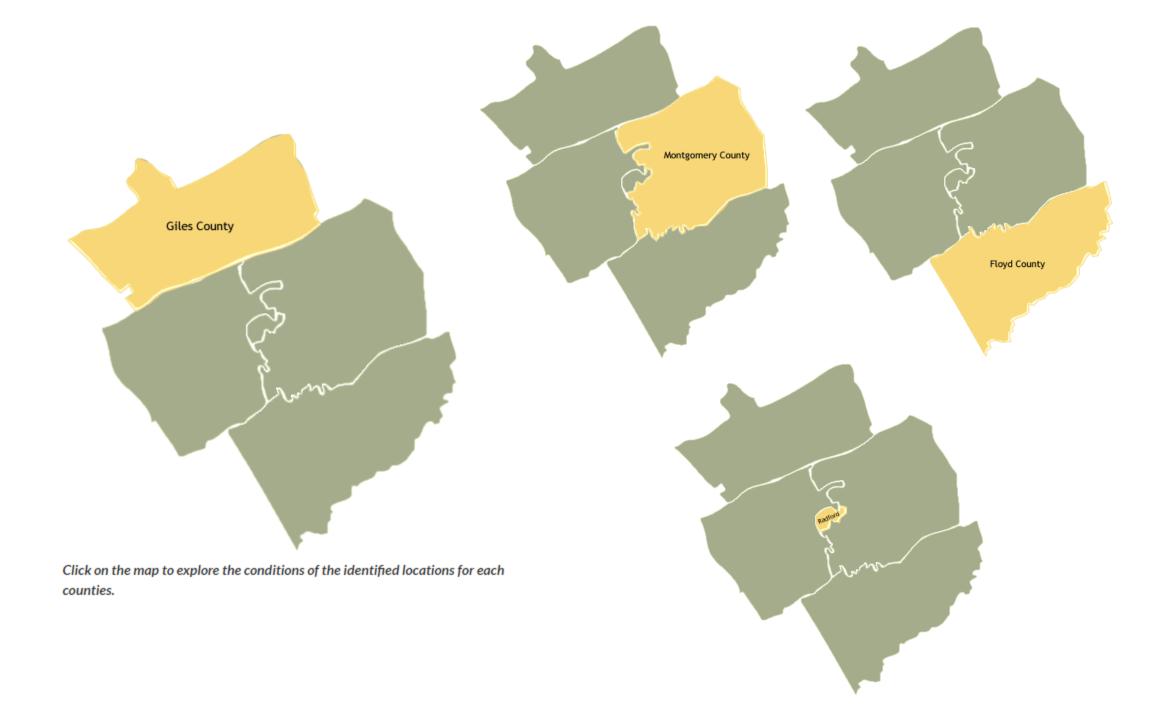
IDENTIFYING INFRASTRUCTURE - 1-0N-1











New River Valley Flood Prone Location Tool Giles County, Virginia 命 Ballard Waiteville Lindside Athens 4066 ft WHEN Lake NF Wilderness Peterstown **FLOODED** 14 Rich Creek **TURN AROUND** Ripplemead Pearisburg DON'T Newport DROWN Eggleston Staffordsville Radford AAP **Project Overview** Legend Belspring The Virginia Department of Emergency Management partnered with the Manufacturing Frequent Flood Area communities of the New River Valley to identify and map flood prone locations throughout the region. While several roadway segments and bridges are **Priority Mitigation Area** located within the 100-year floodplain, this map identifies the locations that are prone to flooding more frequently. Christi Radford Route 61 (Wolf Creek Rd) Route 625 (Goodwins Ferry Route 649 (Lurich Rd) Route 649 (Lurich Rd) Route 649 (Lurich Rd) Route 61 (Main St) Route 61 (Main St) Route 61 (Wolf Creek Rd) Route 1404 (Castle Rock Rd) Route 460 Route 460 Giles Co Narrows, Giles Co Narrows, Giles Co Narrows, Giles Co Narrows, Giles Co Giles Co Giles Co Pembroke, Giles Co Pembroke, Giles Co Pembroke, Giles Co

New River Valley Flood Prone Location Tool

Giles County, Virginia Route 649 (Lurich Rd) Giles Co Location: Boat ramp in Rte 649 Route 649 (Lurich Rd) Description: New River flood zone Giles Co View full report Route 649 (Lurich Rd) Narrows, Giles Co Route 61 (Main St) Narrows, Giles Co Route 61 (Wolf Creek Rd) Giles Co Route 649 (Lurich Rd) Narrows, Giles Co Route 61 (Wolf Creek Rd) Giles Co Route 625 (Goodwins Ferry Rd) Route 649 (Lurich Rd) Route 61 (Main St) Route 1404 (Castle Rock Rd) Route 460 Route 460 Giles Co Narrows, Giles Co Pembroke, Giles Co Pembroke, Giles Co Pembroke, Giles Co

New River Valley Flash Flood Mapping Project Site Inspection Form

Route: 649 (Lurich Rd)

Nearest Intersection: Route 61/649

Jurisdiction: Giles Co

Roadway Segment

Bridge



Location: Rte 649 near railroad crossing

Date: 3-Dec-14

Description: New River flood zone



Location: Boat ramp in Rte 649

Date: 3-Dec-14

Description: New River flood zone



New River Valley Flood Prone Location Tool

Giles County, Virginia + March 2010 Flooding Route 61 (Wolf Creek Rd) Giles Co Route 61 (Wolf Creek Rd) Location: Rte 61/Wolf Creek WB Description: Wolf Creek flood zone Giles Co View full report 3724 ft Route 649 (Lurich Rd) Narrows, Giles Co Route 61 (Main St) Narrows, Giles Co Route 649 (Lurich Rd) Giles Co Route 649 (Lurich Rd) Narrows, Giles Co Route 61 (Wolf Creek Rd) Giles Co Route 61 (Wolf Creek Rd) Giles Co Route 625 (Goodwins Ferry Rd) Route 61 (Main St) Route 1404 (Castle Rock Rd) Route 460 Route 460 Narrows, Giles Co Pembroke, Giles Co Pembroke, Giles Co Pembroke, Giles Co

New River Valley Flood Prone Location Tool Giles County, Virginia March 2010 Flooding Pearisburg Route 61 (Wolf Creek Rd) Giles Co Route 61 (Wolf Creek Rd) Location: Rte 61/Wolf Creek WB Description: Wolf Creek flood zone Giles Co View full report Staffordsville Route 649 (Lurich Rd) Giles Co Route 649 (Lurich Rd) Narrows, Giles Co Route 724 (Old Wolf Creek Rd) Route 649 (Lurich Rd) Route 649 (Lurich Rd) Route 649 (Lurich Rd) Route 61 (Main St) Route 724 (Monroe St) Route 724 (Old Wolf Creek Route 61 (Wolf Creek Rd) Narrows, Giles Co Giles Co DRICE MOUNTAIN

Montgomery Co

New River Valley Flood Prone Location Tool Montgomery County, Virginia Cloverdale BRUSHY -+ Ripplemead Pembroke Newport Eggleston **FLOODED** Staffordsville lacksburg Elliston POOR MOUNTAIN **TURN AROUND** DON'T Shawsville DROWN Radford AAP - New River Unit Project Overview Legend The Virginia Department of Emergency Management partnered with the Check Frequent Flood Area communities of the New River Valley to identify and map flood prone locations throughout the region. While several roadway segments and bridges are Priority Mitigation Area located within the 100-year floodplain, this map identifies the locations that are prone to flooding more frequently.

Route 669 (Fairview Church

Route 669 (Fairview Church

Route 615 (Old Pike Rd)

Route 615 (Old Pike Rd)

Montgomery Co

Route 3159 (Tom's Creek Rd)

Town of Blacksburg

Town of Blacksbu

Route 637 (Alleghany Spring

Route 637 (Alleghany Spring Rd) Route 787 (Indian Valley Rd)

Montgomery Co

New River Valley Flood Prone Location Tool Floyd County, Virginia Boones Mill + G Check Callaway WHEN **FLOODED TURN AROUND** DON'T Indian Valley DROWN Dugspur Project Overview Woolwine Legend The Virginia Department of Emergency Management partnered with the Frequent Flood Area communities of the New River Valley to identify and map flood prone locations throughout the region. While several roadway segments and bridges are **Priority Mitigation Area** located within the 100-year floodplain, this map identifies the locations that are Meadows prone to flooding more frequently. Laurel Fork Route 706 (Thunderstruck Rd) Route 706 (Thunderstruck Route 706 (Thunderstruck Route 698 (Little River Rd) Route 698 (Little River Rd) Route 706 (Thunderstruck Route 698 (Little River Rd) Route 221 (Floyd Hwy) Floyd Co Floyd Co

City of Radford

City of Radford

City of Radford

New River Valley Flood Prone Location Tool City of Radford, Virginia WHEN Motor Mile **FLOODED TURN AROUND** Radford DON'T DROWN Ingles Mountain Project Overview Legend The Virginia Department of Emergency Management partnered with the Frequent Flood Area communities of the New River Valley to identify and map flood prone locations throughout the region. While several roadway segments and bridges are Priority Mitigation Area located within the 100-year floodplain, this map identifies the locations that are prone to flooding more frequently. Second Ave Ext City of Radford Second Ave Ext City of Radford Route 4659 (Park Rd) City of Radford New River Dr City of Radford New River Dr City of Radford Second Ave Ext City of Radford New River Dr New River Dr New River Dr New River Dr

City of Radford

City of Radford

City of Radford

MITIGATION COORDINATION

VDEM

- permanent signage
- 30 signs
- turn around don't drown
- education & outreach

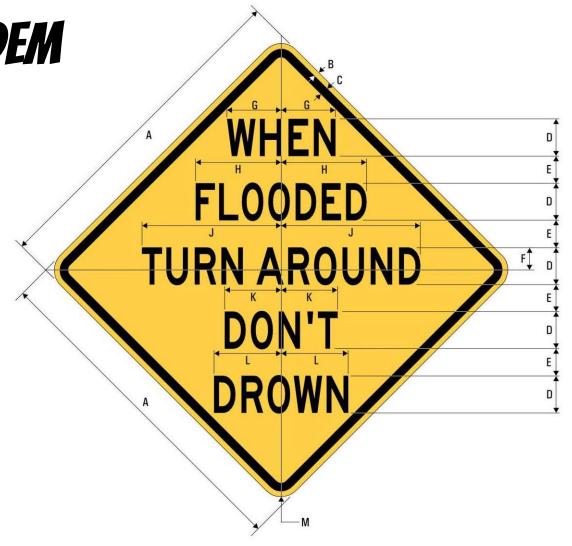
VDOT

- temporary signage
- 10 signs
- manual on uniform traffic control devices
- communication of frequent conditions



MITIGATION COORDINATION - UDEM

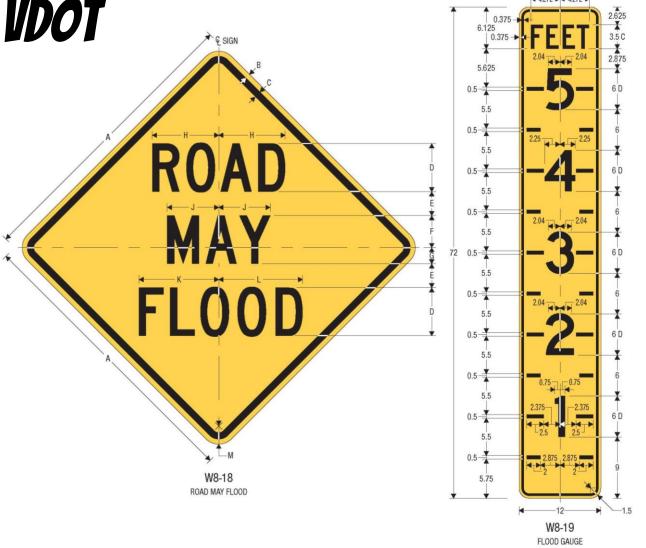
- afford higher number of signs
- temporary mitigation wasn't eligible
- encouraged communities to purchase additional signage



MITIGATION COORDINATION - VDOT

 sign compromise was more expensive

- encouraged temporary mitigation
- encouraged communities to contact for permanent signage



SUMMARY

- identified roadways and bridges (>20' long)
- http://nrvrc.org/floodmaps/
- VDOT: permanent mitigation target recommended = two or more events/year
- VDEM: identified need for temporary mitigation tools for emergency managers
- VDOT is open to purchasing and installing signs on a case-by-case basis



MAPPING OF VULNERABLE ROADS

identifying flash flood prone infrastructure in the NRV

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esharp@nrvrc.org

February 2, 2017 – Hazard Mitigation Plan Update