



**RESILIENCE ELEMENT
COMMITTEE**

SEPTEMBER 26, 2018

60 MINUTES: HOW DUTCH STORMWATER MANAGEMENT COULD HAVE MITIGATED DAMAGE FROM HURRICANE FLORENCE

<https://www.cbsnews.com/news/storm-water-management-dutch-solution-henk-ovink-hurricane-florence-damage-60-minutes/>

AGENDA

- Welcome and Introductions
- Bylaws/Operating Procedures
- Committee Scope, Purpose and Mission
- Defining Resilience
- Meeting Schedule
- Potential Topics and Speakers
- Public Comment
- Adjourn

COMMITTEE MEMBERS

Planning Commission Members:

- Pete Paulatos, Committee Chair, Planning Commission
- Cindy Floyd, Planning Commission Vice-Chair
- Sussan Chavis, Planning Commission

Citizens Representation:

- Fred Palm

Industry:

- Donna Brashier, The Beach Company
- Patrick Arnold, Charleston Homebuilders Association
- Jared Bramblett, Davis & Floyd
- Edward Oswald, Oswald Cooke

Special Interest Groups:

- Liz Fly, The Nature Conservancy
- Betsy La Force & Jason Crowley, Coastal Conservation League

Government Representation:

- Steven Julka, City of Charleston
- Charles Drayton, City of North Charleston
- Rob Rogerson, Town of Mt. Pleasant
- Kristen Crane, Town of James Island

Charleston County Staff:

- Joel Evans, Planning
- Andrea Pietras, Planning
- Niki Grimball, Planning
- Emily Pigott, Planning
- Mack Gile, Budget
- Chris Wannamaker, Public Works/Stormwater



**DISCUSSION OF
BYLAWS &
OPERATING
PROCEDURES**

OVERVIEW OF BYLAWS

- Define objectives of the Committee
- Variety in membership including interest groups, government, citizens and informed industry representation
- Discussion of voting procedures; quorum requirements and majority rule required to approve or disapprove
- Chair and Vice Chair to be appointed by Planning Commission; Staff will support the Committee
- Meetings, attendance and estimated timeline
- Public notice requirements
- Meeting procedures and minutes
- Definitions of role of Planning Department and staff participation
- Rules of Order: Robert's Rules of Order Revised; Member speaking procedures
- Amendments of Bylaws

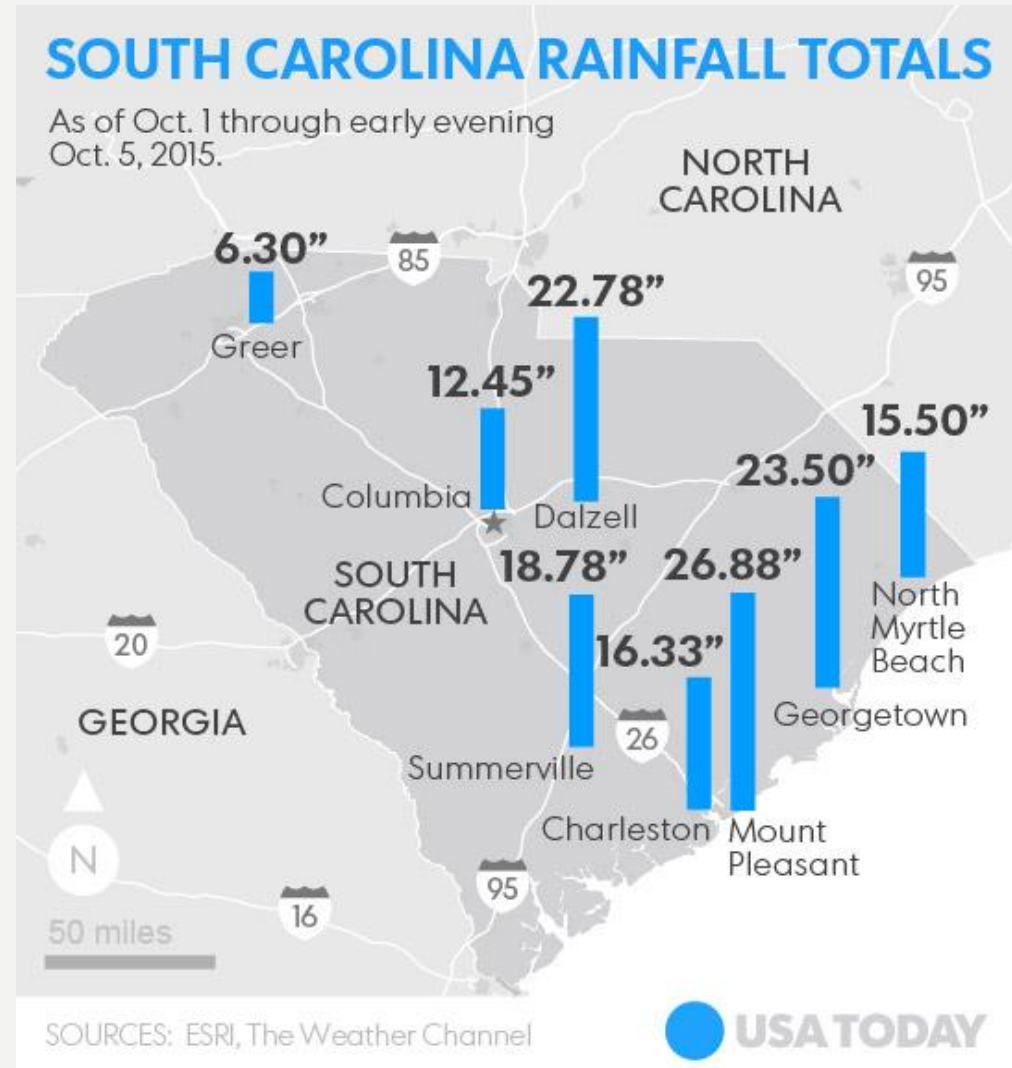
A vote will be taken at the next meeting to incorporate by-laws of the Committee; please review



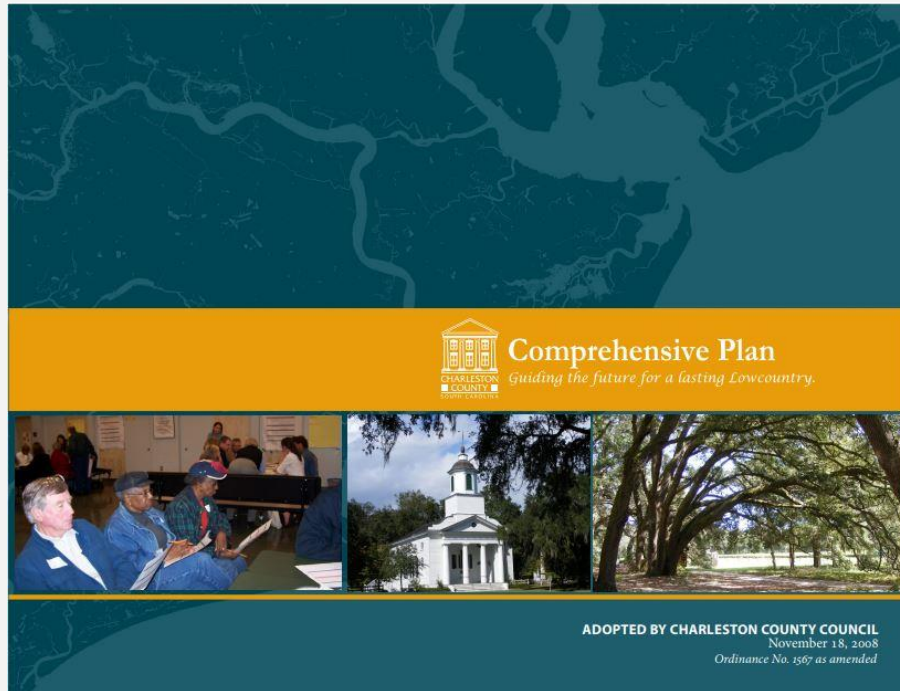
**WHAT ARE WE
HERE TO DO?**

HOW DID WE GET HERE?

- Planning Commission letter to County Council in 2015 following the flooding that occurred as a result of Hurricane Joaquin
- Citizen input during the comprehensive planning process led to inclusion in the County's Comprehensive Plan Ten-Year Update of Strategy NR 19/22, *"Create a new element of this Plan that explains high water impacts and identifies a goal, needs, and strategies to ensure Charleston County is resilient to flooding and high water issues in the future."*



COMMITTEE SCOPE, PURPOSE AND MISSION



The element must include:

- An inventory of existing conditions***
- A statement of needs and goals***
- Implementation strategies with time frames***

Create a Resilience Element for incorporation into the Charleston County Comprehensive Plan that explains high water impacts and other resilience related issues, is coordinated with the efforts of other jurisdictions, and identifies a goal, needs, and strategies to ensure Charleston County is resilient in the future.

What's next after we write the Element?

- Tentative timeline: 9 months – 1 year
- Committee will make recommendation to the Charleston County Planning Commission, who makes a recommendation to County Council.
- The addition will then go through the Council adoption process

WHY INCLUDE A RESILIENCE ELEMENT IN THE COMPREHENSIVE PLAN?

- What is a Comprehensive Plan?
 - Adopted by County Council by ordinance.
 - County's vision for where and how future growth and development should occur based on citizen input.
 - Serves as a guide for public policy decisions.
 - Establishes strategies to be carried out by the County.
 - Implemented by the Zoning and Land Development Regulations Ordinance, Historic Preservation Ordinance, Greenbelt Plan, Half-Cent Sales Tax Program, Stormwater, and other policies and ordinances.
 - Requires at least nine elements (population, housing, economic development, natural resources, cultural resources, transportation, community facilities, priority investment, and land use)
 - Charleston County adopted a 10th element (Energy Element) in 2010

The first step in the process of addressing resilience is to adopt a Resilience Element in the Comprehensive Plan because the Plan is the County's policy guide for the next 10 years



Comprehensive Plan Update

Guiding the future for a lasting Lowcountry.

WHAT IS RESILIENCE?

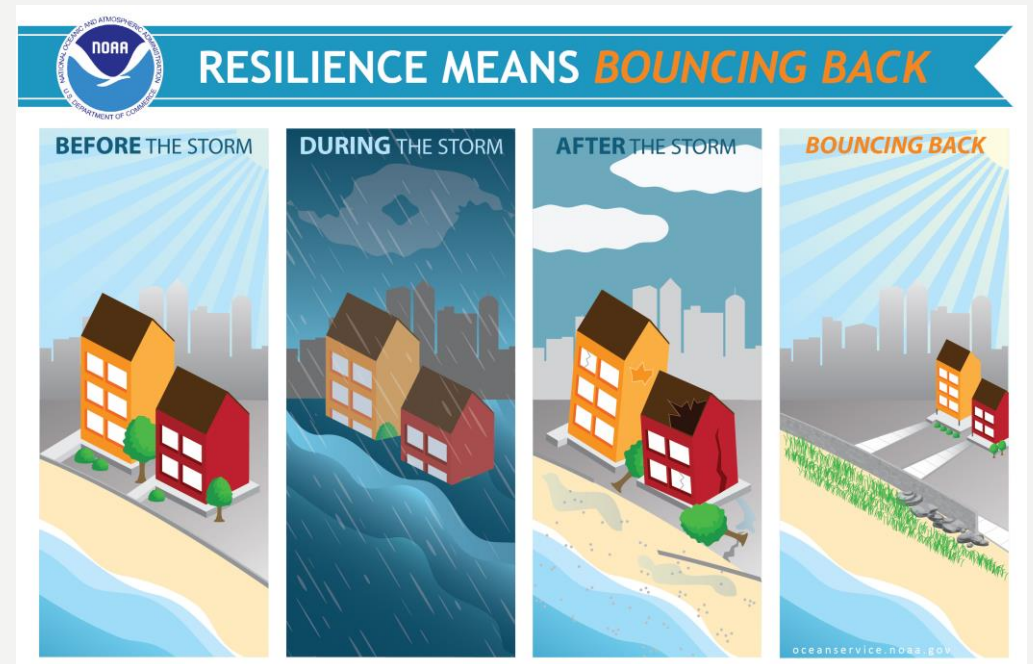


HOW DOES RESILIENCE AFFECT COMMUNITIES?

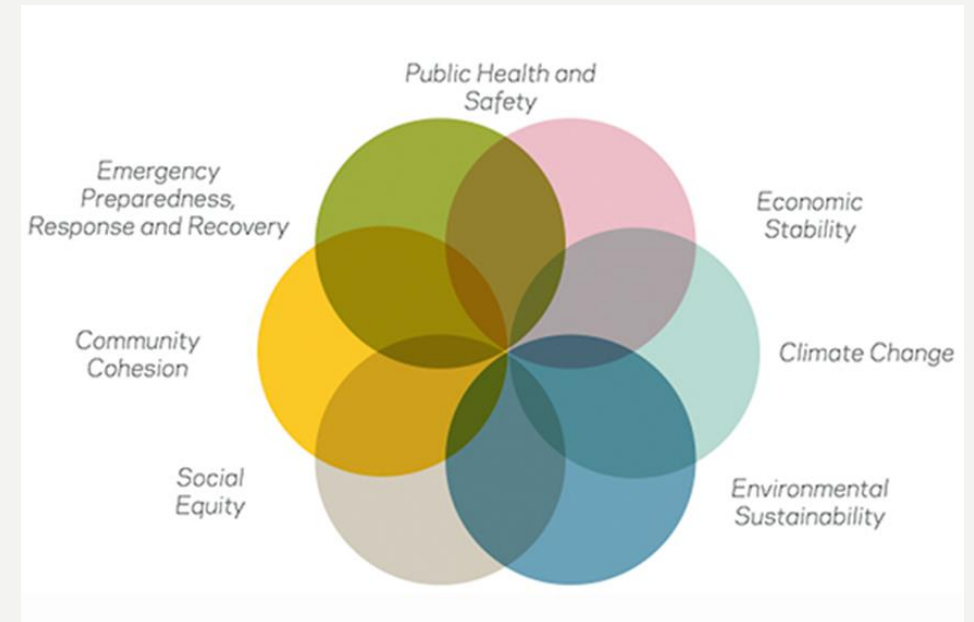
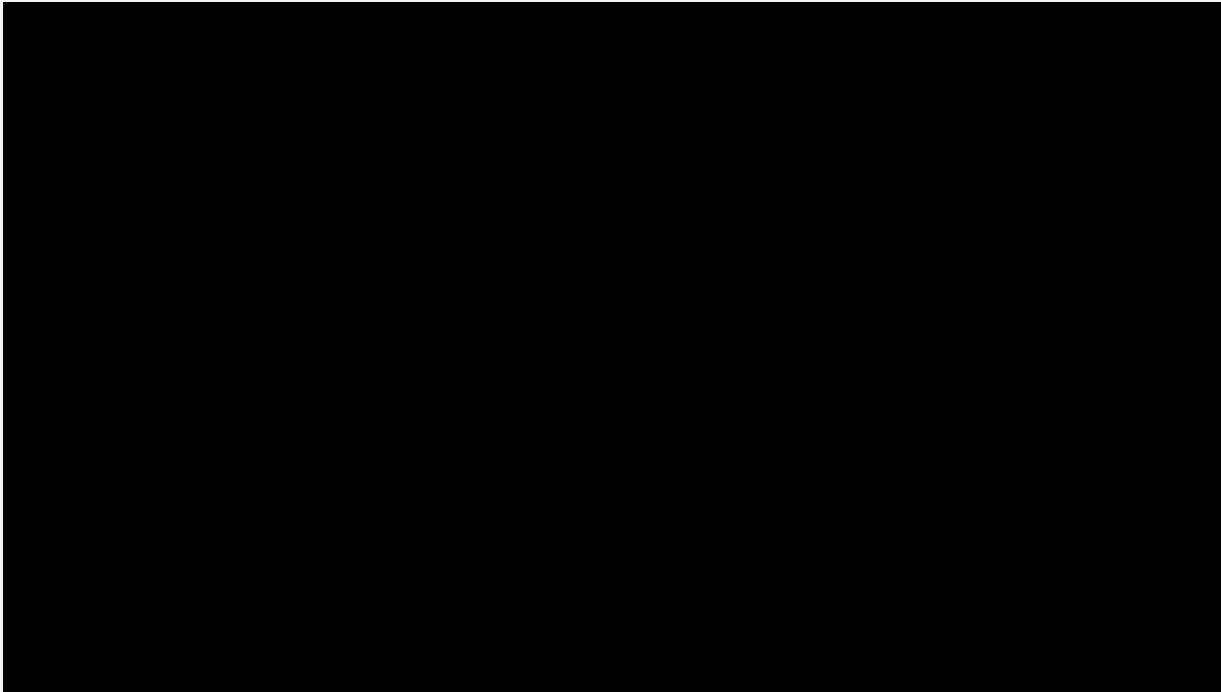


DEFINING RESILIENCE

- “The ability to prepare and plan for, absorb, recover from, and more successfully adapt to adverse events” – National Research Council
- “Resilience is the ability to anticipate risk, limit impact, and bounce back rapidly through survival, adaptability, evolution, and growth in the face of turbulent change.” – Community & Regional Resilience Institute



WHAT ENCOMPASSES RESILIENCE?



Multidimensional- social, economic, and environmental

RESILIENCE IN OTHER COMMUNITIES: NORFOLK, VA



- 400 year old city
- Current population 245,000
- Third largest naval station in the world & third largest port on the East Coast
- Ranked 281 out of 300 metropolitan areas for economic recovery after the Great Recession in 2008, according to the Brookings Institute
 - Overreliance on military & port jobs

RESILIENCE IN OTHER COMMUNITIES: NORFOLK, VA

- Key strengths

- Strength in other sectors- health care, education, finance, & IT
- Role as the region's urban job center
- Concentration of high-wage jobs
- Presence of educational institutions
- Emergence of an entrepreneurial economy

- Challenges:

- Sea-level rise and recurrent flooding
- A shifting economy
- A need to build strong, healthy neighborhoods



PLANNING FOR RESILIENCY

- Founding member of The 100 Resilient Cities, sponsored by the Rockefeller Foundation
- Conducted 6 months of public workshops
- Created a steering committee of residents, business, nonprofit, & city stakeholders
- Developed a resiliency strategy and action plan
 - 60 page document outlining the goals, strategies, and actions that will be taken to transform Norfolk into a resilient city
- Conducted a baseline economic analysis as a starting point
- Created an Office of Resilience

NORFOLK RESILIENT CITY

GOALS AND SUPPORTING STRATEGIES

- Design the coastal community of the future
 - Collectively create a vision for the city's future.
 - Identify and implement innovative infrastructure for water management.
 - Redesign tools and regulations to achieve our vision for the future.
- Create economic opportunity by advancing efforts to grow existing industries and new sectors
 - Create a multi-pronged economic development strategy.
 - Nurture the city's entrepreneurial ecosystem.
 - Strengthen the workforce development pipeline.
 - Reinvest in and revitalize neighborhoods.
- Advance initiatives to connect communities, deconcentrate poverty, & strengthen neighborhoods
 - Improve citizen access to information and services.
 - Use technology to support and enhance community-building efforts.
 - Connect people and facilitate dialogue that advances community-building efforts

EXAMPLES OF STRATEGY IMPLEMENTATION

Goal 1:

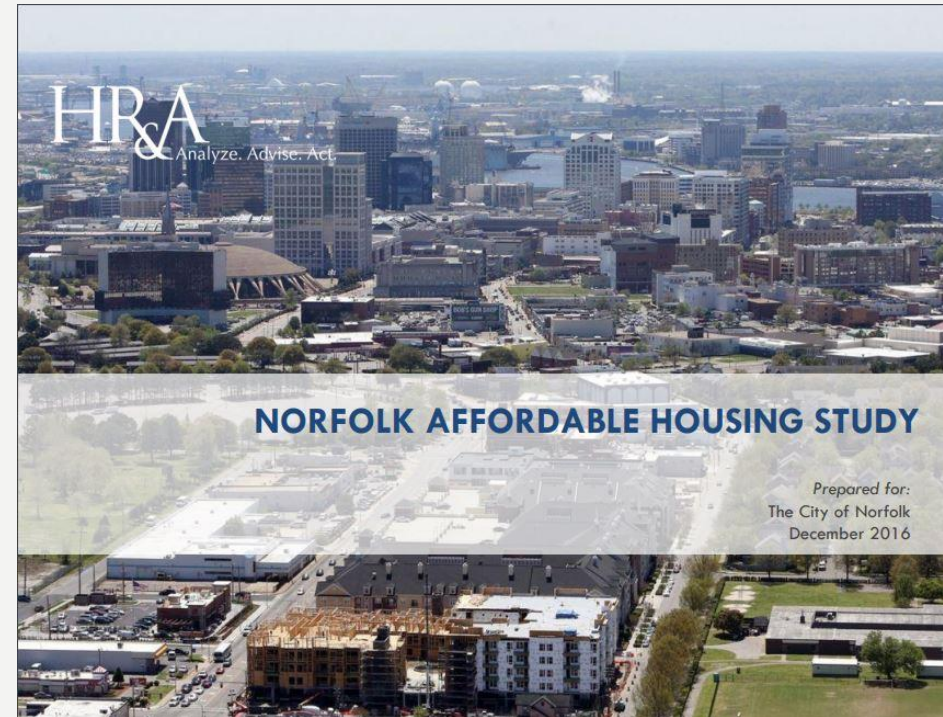
- Vision 2100
- Zoning Ordinance Rewrite
- Citywide Coastal Storm Risk Management Study
- Brownfield Redevelopment

Goal 2:

- RE.bound Bonds

Goal 3:

- We Feed
- Citywide Affordable Housing Study
- Bank On



RESILIENCE IN OTHER COMMUNITIES: FT. LAUDERDALE, FL

- The “Venice of America”- defined by its water and tropical weather
- But, the region is one of the most vulnerable to climate change in the world

The Effects of a Warming Climate:

1. Rising sea level
2. Escalation in temperatures and lengthening of the hot season
3. Changing rainfall patterns and storm intensity



CLIMATE CHANGE RESILIENCY

- Challenges:
 - stormwater flooding
 - salt intrusion to the water supply
 - extreme weather events
- Created the 2035 Vision for the City
- Goal of resiliency implemented by their five-year strategic plan and their Sustainability Action Plan



Articulates specific “green” goals, strategies and performance indicators, reflects how sustainability will be integrated into all levels of City decision-making, and establishes a system of accountability.

“WE ARE READY: WE ARE A RESILIENT AND SAFE COASTAL COMMUNITY”

EXAMPLES OF STRATEGY IMPLEMENTATION

- Created a Floodplain Management Ordinance and a Seawall Ordinance
- Close to achieving the goal to reduce water, fuel, electrical consumption, & greenhouse gas emissions, by 20% by the year 2020
- Completed 37 Stormwater Master Plan projects
- Installed 152 tidal valves
- Renourished the beach
- Lined wastewater pipes to reduce groundwater infiltration



POTENTIAL MEETING SCHEDULE

2nd Tuesday of every month

Oct. 23, 2018

Nov. 13, 2018

Dec. 11, 2018

Jan. 8, 2019

Feb. 12, 2019

Mar. 12, 2019

Apr. 9, 2019

May 14, 2019

June 11, 2019

July 9, 2019

Aug. 13, 2019

*Meetings to be held in
Committee Room B225 (2nd
floor of the PSB) – overflow will
be in Council Chambers*

*1st presentations will be from Ft.
Lauderdale and Norfolk to provide
perspective from cities that have
implemented resilience into their
comprehensive plans*



**WHO WOULD YOU
LIKE TO HEAR
FROM?**

**WHAT WOULD YOU
LIKE TO HEAR
ABOUT?**

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We now invite
any public
comments



MINUTES REMAINING

REFERENCES

- “Building Resilience Together: The Resilience Continuum.” *The Resilience Centre*, The Resilience Centre, www.theresiliencecentre.co.uk/services.html.
- City of Norfolk, Office of Resilience. “Norfolk's Resilience Strategy.” 2015.
- “Climate Resiliency.” City of Fort Lauderdale, FL, gyr.fortlauderdale.gov/greener-government/climate-resiliency.
- National Research Council. 2012. *Disaster Resilience: A National Imperative*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/13457>.
- “Resilience.” *NOAA's National Ocean Service*, NOAA, 27 Aug. 2009, oceanservice.noaa.gov/facts/resilience.html.
- “South Carolina Rainfall Totals.” *USA TODAY*, USA TODAY, 6 Oct. 2015, www.usatoday.com/story/weather/2015/10/06/after-flood-sunshine-devastating-damage-south-carolina/73436200/.
- “Strategy Implementation Updates.” *City of Norfolk, Virginia*, City Manager's Office of Resiliency, 2018, www.norfolk.gov/index.aspx?NID=3617.
- “What Is Community Resilience?” *Community and Regional Resilience Institute (CARRI)*, www.resilientus.org/about-us/what-is-community-resilience/.
- “When Disaster Happens, Will Your Community Be Prepared?” *NIST*, National Institute of Standards and Technology, 22 June 2017, www.nist.gov/video/when-disaster-happens-will-your-community-be-prepared.