

Everybody talks about the
weather, but nobody does
anything about it

Legal issues in planning for community resilience

Everybody talks about the weather...

- Community resilience is the capability to anticipate risk, limit impact, and bounce back rapidly through survival, adaptability, evolution, and growth in the face of turbulent change.
 - Community and Regional Resilience Institute. *Definitions of Community Resilience: An Analysis* (2013)
- Community resilience is the capability to anticipate risk, limit impact, and bounce back rapidly through survival, adaptability, evolution, and growth in the face of turbulent change. **Community resilience** is the sustained ability of a community to utilize available resources (e.g. [energy](#), [communication](#), [food](#), etc.) to respond to, withstand, and recover from adverse situations (e.g. [economic collapse](#) to [global catastrophic risks](#)). This allows for the evolution and growth of a community after disaster strikes. Communities that are resilient are able to minimize any [disaster](#), making the return to normal life as effortless as possible. By implementing a community resilience plan, a community can come together and overcome any disaster, while rebuilding physically and economically.
 - Wikipedia (accessed 2/23/2017)

Everybody talks about the weather...

- What “happenings” create the need for community resilience?
 - Conditions: drought, temperature extremes, water or food shortage
 - Events: earthquakes, hurricanes, tornadoes, fires, floods, “superstorms”
 - Environmental: pollution, oil/chemical spill
 - Other: acts of war or terrorism, cyber attacks
 - Personal: Loss of smart phone, cable TV

Everybody talks about the weather...

- Don't kid yourself
 - "it won't happen here"
 - Climate change is a hoax
 - We're prepared for any emergency
- Not "if," but when



Everybody talks about the weather...



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- Floyd triggered the second largest evacuation in US history to date, when 2.6 million coastal residents of five states were ordered from their homes as Hurricane Floyd approached.
- “The most common response when asked what they would do differently was to leave earlier next time.”
- The National Hurricane Study Program's Hurricane Floyd Assessment
- <http://www.erh.noaa.gov/mhx/Floyd/Impacts.php>

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- In September of 2004, the Asheville and the greater western North Carolina region was severely impacted from remnants of three hurricane systems, most notably Hurricanes Frances and Ivan. The result was torrential rainfall leading to major and record-breaking flooding, causing over \$200 million in damages for western North Carolina in just two weeks
- <https://nemac.unca.edu/content/asheville-floods-september-2004-symposium-commemorating-10th-anniversary-devastating-floods>

Everybody talks about the weather...



Everybody talks about the weather...

As floodwaters begin to recede in North Carolina, officials and experts are beginning to count the cost of [Hurricane Matthew](#). Early estimates of property damage and lost business are in the billions of dollars for a storm that was not forecast to focus on the state.

The storm passed over North Carolina just over a week ago and left at least 26 people dead and more than 2,100 people still in shelters as a result of floods, according to state officials.

...The storm damaged about \$1.5 billion in property, including homes, businesses and government buildings, according to officials with the North Carolina Department of Public Safety. The state deployed aerial drones for the first time to see above the flooded areas and assess the damage.

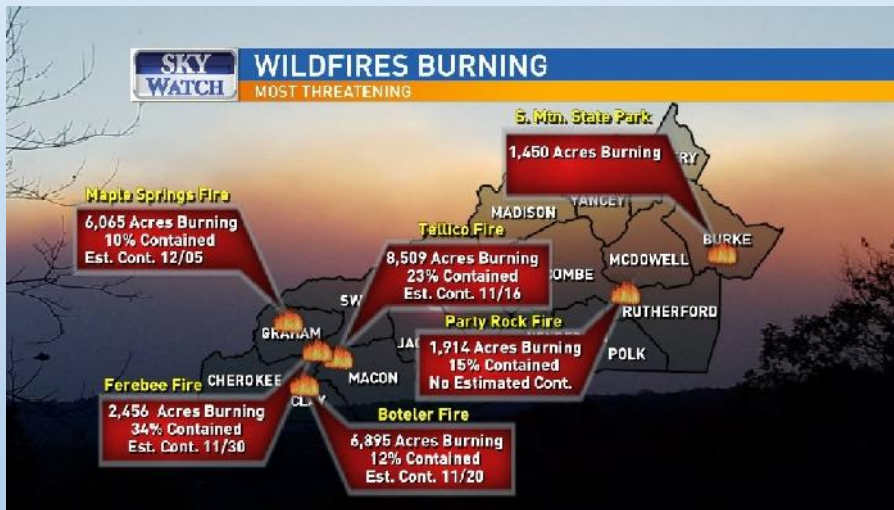
But that figure doesn't include other costs to the state's economy, including losses that businesses suffered when they were forced to close and when consumers were not spending because they were forced to hunker down or evacuate — lost economic output.

<http://abcnews.go.com/Business/billions-damage-losses-expected-north-carolina-hurricane-matthew/story?id=42857022>

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A series of almost 20 wildfires in western North Carolina have burned more than 46,000 acres in the state since Oct. 23, according to a press release on Wednesday by Gov. Pat McCrory.

Approximately 2,000 personnel from around the country are involved in combating the fires, which have cost an estimated \$15 million, the press release said.

- <http://www.dailytarheel.com/article/2016/11/wildfires-in-western-nc-continue>

- Property damage costs estimated at \$55 mm

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- Officials estimated at a news conference Tuesday that the cost of damages is around \$500 million. This is in addition to the cost of \$7,289,866 for fighting the Chimney Tops wildfire and \$347,101 for fighting the Cobbly Nob fire.
- The death toll remains 14 with authorities having identified 13 of the 14 victims. The Tennessee Bureau of Investigations is pursuing a lead that could help identify the last victim, Sevier County Mayor Larry Waters said.
- <http://www.knoxnews.com/story/news/local/tennessee/2016/12/14/whats-new-cost-gatlinburg-fire-damage-least-500m/95399402/>

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- Photo credits and sources:

Slide 4. <https://epicblog100.files.wordpress.com/2012/08/bury-head-sand-global-warming-cartoon4.gif>

Slide 5. NOAA <http://www.erh.noaa.gov/mhx/Floyd/Impacts.php>

Slide 7. left www.nhc.noaa.gov ; right www.osmins.org

Slide 9. left <http://abcnews.go.com/US/hurricane-matthew-death-toll-jumps-17-north-carolina/story?id=42724059>

right <http://www.cnn.com/2016/10/04/world/iyw-hurricane-matthew-how-to-help/>

Slide 11. http://wildfiretoday.com/wp-content/uploads/2016/11/SmokeInTheSouth_11-14-2016-copy.jpg

Slide 12. left [9 http://static-33.sinclairstoryline.com/resources/media/7c14d844-574e-4fb0-a09b-ecc799d8b0a4-large16x9_Fires_11_12_16.jpg?1478994099443](http://static-33.sinclairstoryline.com/resources/media/7c14d844-574e-4fb0-a09b-ecc799d8b0a4-large16x9_Fires_11_12_16.jpg?1478994099443)

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Slide 14. left http://hips.htvapps.com/htv-prod-media.s3.amazonaws.com/images/gatlinburg-fire-by-tennessee-national-guard-jpg-1481146735.jpg?crop=1.00xw:0.991xh;0,0&resize=1200:*

right <http://www.vrminetel.com/wp-content/uploads/2016/11/Gatlinburg-fire-3.png>

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State of North Carolina Emergency/Disaster Declarations, October-November 2016

NORTH CAROLINA CHESTNUT KNOB FIRE

NOVEMBER 6, 2016

FIRE MANAGEMENT ASSISTANCE DECLARATION DECLARED ON NOVEMBER 19, 2016

NORTH CAROLINA PARTY ROCK FIRE

NOVEMBER 5, 2016

FIRE MANAGEMENT ASSISTANCE DECLARATION DECLARED ON NOVEMBER 11, 2016

NORTH CAROLINA HURRICANE MATTHEW

OCTOBER 4, 2016 TO OCTOBER 24, 2016

MAJOR DISASTER DECLARATION DECLARED ON OCTOBER 10, 2016

NORTH CAROLINA HURRICANE MATTHEW

OCTOBER 4, 2016 TO OCTOBER 24, 2016

EMERGENCY DECLARATION DECLARED ON OCTOBER 7, 2016

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- Planning for a New Energy and Climate Future

- Shuford, Rynne, Mueller APA Planning Advisory Service Report No. 558 (2010)

- Findings:

- Long term weather patterns are changing (and changing quickly)
- Damaging weather: more frequent, more powerful, less predictable events
- Current regulations discourage innovation and resilient development

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- Planning for a New Energy and Climate Future
- Recommendations:
 - Local ordinances, building practices need to change
 - Need to respond quickly
 - Technology is becoming available
 - Weather will not wait

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- What can we do about it? What power do we have?
- Police power: Power of government to act in interest of the public health, safety and welfare, or in the public interest
- US Constitution: Preamble: “We the people of the United States, in Order to...promote the general welfare”
- NC Constitution: Preamble: “We, the people of the State of North Carolina, ...do, for the more certain security thereof and for the better government of this State, ordain and establish this Constitution.”

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- POWER

- Delegation and Exercise of the General Police Power.

- **§ 160A-174. General ordinance-making power.**

- (a) A city may by ordinance define, prohibit, regulate, or abate acts, omissions, or conditions, detrimental to the health, safety, or welfare of its citizens and the peace and dignity of the city, and may define and abate nuisances.

- **§ 153A-121. General ordinance-making power.**

- (a) A county may by ordinance define, regulate, prohibit, or abate acts, omissions, or conditions detrimental to the health, safety, or welfare of its citizens and the peace and dignity of the county; and may define and abate nuisances.

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- LIMITATIONS

- (b) A city ordinance shall be consistent with the Constitution and laws of North Carolina and of the United States. An ordinance is not consistent with State or federal law when:
 - (1) The ordinance infringes a liberty guaranteed to the people by the State or federal Constitution;
 - (2) The ordinance makes unlawful an act, omission or condition which is expressly made lawful by State or federal law;
 - (3) The ordinance makes lawful an act, omission, or condition which is expressly made unlawful by State or federal law;
 - (4) The ordinance purports to regulate a subject that cities are expressly forbidden to regulate by State or federal law;
 - (5) The ordinance purports to regulate a field for which a State or federal statute clearly shows a legislative intent to provide a complete and integrated regulatory scheme to the exclusion of local regulation;

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Three areas for local resilience regulation

- Emergency preparedness
- Flood regulation
- Zoning/Building requirements

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- **Emergency preparedness**

- **§ 166A-19.3. Definitions. (NC law is typical)**

- (6) Emergency. - An occurrence or imminent threat of widespread or severe damage, injury, or loss of life or property resulting from any natural or man-made accidental, military, paramilitary, weather-related, or riot-related cause.

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- **NC Gen Stat. § 166A-19.15. County and municipal emergency management.**
- (a) Governing Body of Counties Responsible for Emergency Management. - The governing body of **each county is responsible for emergency management within the geographical limits of such county.** All emergency management efforts within the county will be coordinated by the county, **including activities of the municipalities within the county.**

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- **NC Gen. Stat. § 166A-19.22. Municipal or county declaration of state of emergency.**
- (a) Declaration. - A state of emergency may be declared by the governing body of a municipality or county, if either of these finds that an emergency exists. Authority to declare a state of emergency under this section may also be delegated by ordinance to the mayor of a municipality or to the chair of the board of county commissioners of a county.

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- **NC Gen Stat. § 166A-19.31. Power of municipalities and counties to enact ordinances to deal with states of emergency.**
- (a) Authority to Enact Prohibitions and Restrictions. - **The governing body of any municipality or county may enact ordinances designed to permit the imposition of prohibitions and restrictions within the emergency area** during a state of emergency declared pursuant to G.S. 166A-19.22. Authority to impose by declaration prohibitions and restrictions under this section, and to impose those prohibitions and restrictions at a particular time as appropriate, may be delegated by ordinance to the mayor of a municipality or to the chair of the board of county commissioners of a county.

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- State law empowers localities to enact ordinances
 - Delegate to single official (mayor, commission chair) power to declare emergencies
 - Prescribe an array of ordinances to become effective in emergencies (curfew, travel, weapons, alcohol, fuel)
 - Access to Emergency Assistance funds

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- The problems (for weather related occasions):
 - Lack of uniform definitions, interpretations
 - Fragmented administrative responsibility
 - Outdated laws, ordinances
 - Outdated processes

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- Problems (cont'd)
 - There are disconnects between local planning and local hazard management from nomenclature to roles
 - The land use issue **MUST** become a focal point in Hazard Mitigation Plans

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- Recommendations (for weather events):
 - Consolidate Emergency Management functions into regional organization
 - Enable better use of predictive technologies
 - Distinguish weather emergencies from civil disturbances
 - Enable electronic meetings and signatures, provide for ratification
 - Practice, practice, practice...and train

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- **Flood plain/flood way regulation**

- General Authority in NCGS 143-215.51 et seq.
- § 143-215.51. Purposes.
- The purposes of this Part are to:
 - (1) Minimize the extent of floods by preventing obstructions that inhibit water flow and increase flood height and damage.
 - (2) Prevent and minimize loss of life, injuries, property damage, and other losses in flood hazard areas.
 - (3) Promote the public health, safety, and welfare of citizens of North Carolina in flood hazard areas.

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- § 143-215.54. Regulation of flood hazard areas; prohibited uses.
 - (a) A **local government** may adopt ordinances to regulate uses in flood hazard areas and grant permits for the use of flood hazard areas that are consistent with the requirements of this Part.
 - (b) The following uses may be made of flood hazard areas without a permit issued under this Part, **provided that these uses comply with local land-use ordinances** and any other applicable laws or regulations:
 - (1) General farming, etc. ... and other similar agricultural, wildlife and related uses;
 - (2) Ground level loading areas, parking areas, etc. ...and other similar ground level area uses;
 - (3) Lawns, gardens, play areas and other similar uses;
 - (4) Golf courses, tennis courts, ... open space and other similar ...recreational uses.

 - (c) New solid waste disposal facilities, hazardous waste management facilities, salvage yards, and chemical storage facilities **are prohibited** in the 100-year floodplain except as authorized under G.S. 143-215.54A(b).

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- § 143-215.54A. Minimum standards for ordinances; variances for prohibited uses.
- (a) A flood hazard prevention ordinance adopted by a county or city pursuant to this Part shall, at a minimum:
 - (1) Meet the requirements for participation in the National Flood Insurance Program and of this section.
 - (2) Prohibit new solid waste disposal facilities, hazardous waste management facilities, salvage yards, and chemical storage facilities in the 100-year floodplain except as authorized under subsection (b) of this section.
 - (3) Provide that a structure or tank for chemical or fuel storage incidental to a use that is allowed under this section or to the operation of a water treatment plant or wastewater treatment facility may be located in a 100-year floodplain only if the structure or tank is either elevated above base flood elevation or designed to be watertight with walls substantially impermeable to the passage of water and with structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy.

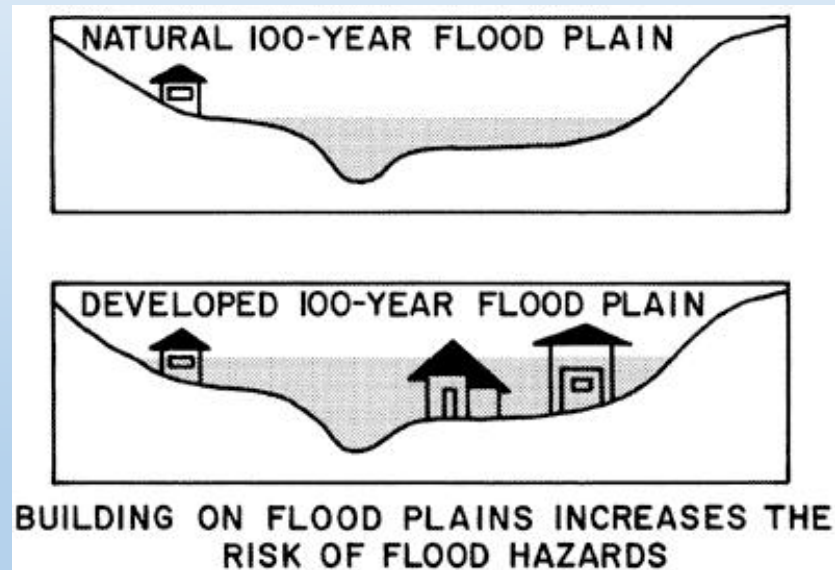
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- (b) A flood hazard prevention ordinance may include a procedure for granting variances for uses prohibited under G.S. 143-215.54(c). A county or city shall notify the Secretary of its intention to grant a variance at least 30 days prior to granting the variance. A county or city may grant a variance upon **finding that all of the following** apply:
 - (1) The use serves a critical need in the community.
 - (2) No feasible location exists for the location of the use outside the 100-year floodplain.
 - (3) The lowest floor of any structure is elevated above the base flood elevation or is designed to be watertight with walls substantially impermeable to the passage of water and with structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy.
 - (4) The use complies with all other applicable laws and regulations.

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- What more can you do?
- § 143-215.61. Floodplain management.
 - The provisions of this Part shall not preclude the imposition by responsible local governments of land use controls and other regulations in the interest of floodplain management for the 100-year floodplain.
-

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- Can you...
 - Require new construction to be higher than BFE?
 - Limit/prohibit other uses in the flood hazard area?
 - Prescribe certain building materials?

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- **Zoning/building regulations**

- **§ 160A-381. Grant of power.**

- (a) For the purpose of promoting health, safety, morals, or the general welfare of the community, any city may adopt zoning and development regulation ordinances. These ordinances may be adopted as part of a unified development ordinance or as a separate ordinance. A zoning ordinance may regulate and restrict the height, number of stories and size of buildings and other structures, the percentage of lots that may be occupied, the size of yards, courts and other open spaces, the density of population, the location and use of buildings, structures and land.

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- **§ 160A-383. Purposes in view.**
- Zoning regulations shall be made **in accordance with a comprehensive plan**. When adopting or rejecting any zoning amendment, the governing board shall also approve a statement describing whether its action is consistent with an adopted comprehensive plan and any other officially adopted plan that is applicable, and briefly explaining why the board considers the action taken to be reasonable and in the public interest. That statement is not subject to judicial review.

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- Constitutional analysis:
 - 5th Amendment: “...nor shall private property be taken for public use without just compensation”
 - Some governmental regulation of land use is necessary in a complex society
 - For most zoning ordinances, the applicable constitutional test is “rational relation” to some police power objective
 - This has been refined over the years to require a showing that there is an essential nexus between the regulation and rough proportionality (Nollan/Dollan)

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- Regulations that encourage resilience:
 - Flood hazard limitations
 - Steep slope
 - Landscaping/vegetation
 - Density/dispersion
 - Others?

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- In order to support a land use regulation that promotes resilience
 - Clearly identify the issue/problem (consequences of not regulating)
 - Do a study; use studies by others
 - Carefully draft ordinance to meet identified needs
 - Allow flexibility/variance

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- Questions?