



Source: NC Forest Service

HOKE COUNTY COMMUNITY READINESS

DETERMINING PILOT PROGRAM FOR LANDFIRE SMOKE AWARENESS AND EDUCATION

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**NC DEPARTMENT OF
HEALTH AND
HUMAN SERVICES**



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Introduction

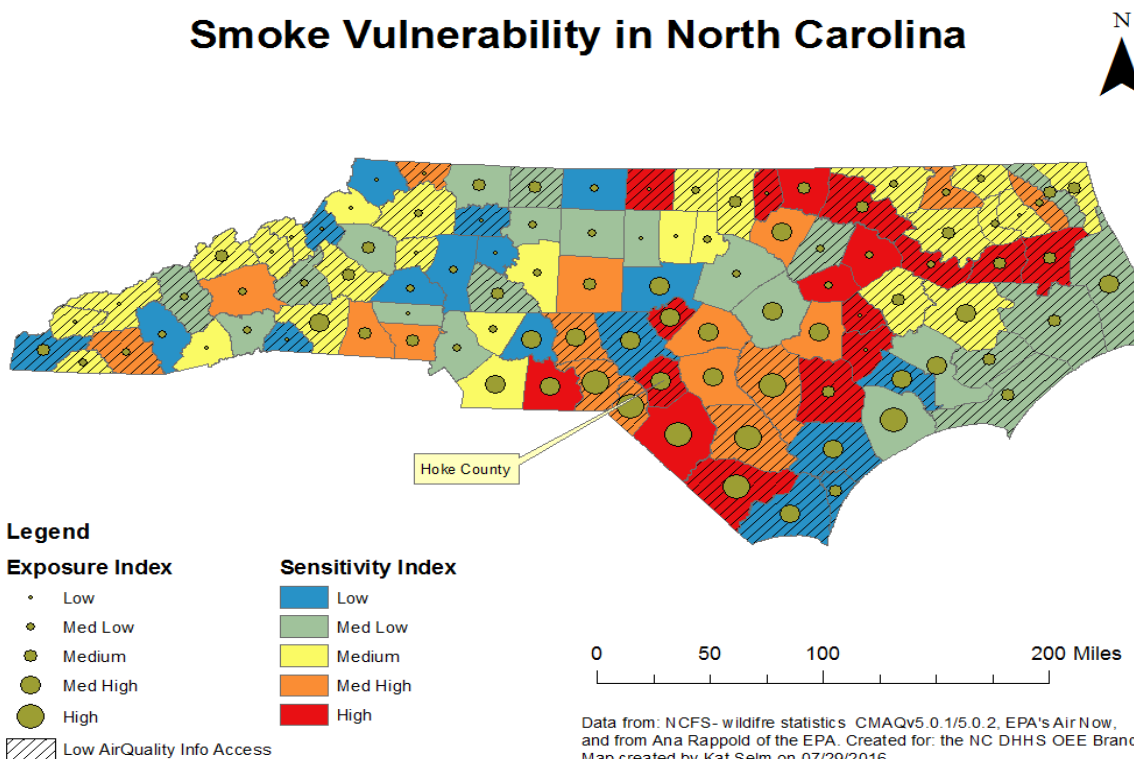
LANDFIRE SMOKE RELATED ILLNESS IN NORTH CAROLINA

North Carolina has a variety of private and public conservation lands that rely on fire to maintain ecosystem health (Nature Conservancy, 2016). Uncontrolled fires may result from controlled burns or other sources in forests across most of the state, as well as in peat bogs in Eastern North Carolina. Smoke from these fires may result in additional emergency department visits for people with respiratory and cardiovascular disease in North Carolina (Rappold, 2011; Tinling, 2016). In the future, precipitation may become more variable and heat exposures will increase, potentially influencing landfire development in North Carolina and smoke exposures for North Carolinians.

Through collaboration with the Environmental Protection Agency (EPA), NC State Climate Office, NC Forest Service, and stakeholder input, a smoke vulnerability map was created for North Carolina. Hoke, Robeson, and Columbus counties were the three North Carolina counties considered most vulnerable to landfire smoke exposures. All three had high exposure to landfire smoke illnesses and high numbers of people with underlying conditions. Hoke and Columbus counties also had low numbers of residents that accessed the EPA's air quality information system.

Hoke county was chosen as the county in which to focus adaptation efforts since it met all three criteria: high exposure, high sensitivity, and low adaptive capacity. Robeson county had higher adaptive capacity

Smoke Vulnerability in North Carolina



(i.e. low air quality info access), and Hoke’s sensitivity was higher than Columbus (Rappold, 2017; NC DHHS, 2017).

PREVENTION STRATEGIES

The aim of the NC Building Resilience Against Climate Effects (BRACE) program is to implement and monitor efforts at the state level that will reduce landfire smoke related illness in Hoke County. Based on a review of evidence-based interventions for reducing wildfire smoke related illness and feedback from local stakeholders, the program has identified a landfire educational program aimed at grade school students as the main intervention method.

NC BRACE can be most effective by building on current local efforts, utilizing local expertise, and working through existing channels of health and social service provision. However, local communities vary in their awareness of landfire smoke related health issues, the type of illness prevention programs already in place, and the priority given to those programs. To survey current landfire smoke related illness prevention efforts, identify needed resources for future efforts, and select a target population for piloting NC BRACE programming, NC BRACE interviewed 7 stakeholders who represented vulnerable populations in Hoke County. The Community Readiness Model (CRM) guided the interviewers and their analysis (Tri-Ethnic Center for Prevention Research, 2014).

THE COMMUNITY READINESS MODEL

Under this model, community readiness is defined as the degree to which a community is willing and prepared to act on an issue, in this instance, on landfire smoke related illness. For this analysis, NC BRACE has adapted the following dimensions of community readiness:

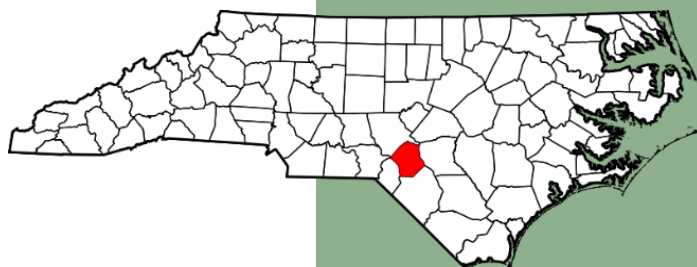
- Knowledge of the issue – How much does each vulnerable population know about landfire smoke related illness?
- Knowledge of existing efforts – How much does each population know about current programs and activities intended to address landfire smoke related illness?
- Community climate – What is each population’s attitude toward addressing landfire smoke related illness?
- Resources – What are the resources that are being used or could be used to address landfire smoke related illness?

In addition to knowledge and perceptions of efforts, NC BRACE considered what programs or efforts are currently being implemented for various vulnerable populations in Hoke County.

PURPOSE OF REPORT

This report aims to provide background information on current efforts in Hoke County and set the direction of future work by identifying a target population for landfire safety programming. NC BRACE provides a summary of the stakeholder interviews, a demographic profile based on US census data, and population addressed for future landfire smoke health programming based on the community readiness model (CRM) results.

Hoke County



POPULATION

We spoke with seven stakeholders whose work in Hoke County serves migrant workers and their families, low-income families, racial and ethnic minorities, outdoor workers, mobile home residents, older adults, and those with pre-existing conditions.

Based on their experience living and working in the area, these groups believe that farmworkers, individuals living in poverty, older adults, outdoor workers, and children are particularly vulnerable to landfire smoke related illness. Some of these groups are more exposed to landfire smoke, such as outdoor workers and individuals who live near the prescribed burning, while others are more sensitive to wildfire smoke, such as those over the age of sixty-five.

CONCERN FOR LANDFIRE SMOKE-RELATED ILLNESS

Stakeholders indicated a varied concern over landfire smoke related illness, noting that it becomes a high priority once people are aware of the frequency and the impact of landfire smoke related illness. A common outlook was that people didn't know that landfire smoke related illness was a threat but wanted to know more and thought it would be wise to educate those in the community.

CURRENT EFFORTS

Current efforts to address landfire smoke related illness and promote landfire safety include printed materials available in English and Spanish, presentations on landfire safety (including Smokey Bear presentations to schools) and providing information on their websites. These programs are designed for the whole population but especially children with the Smokey Bear school program.

According to stakeholders, most county residents had limited awareness or were unaware of these efforts, however, awareness was slightly higher among the efforts' intended recipients, but stakeholders felt that it should be increased as well.

EXISTING RESOURCES

The sources and stability of funding for existing programs varied. Stakeholders reported that the Smokey Bear school program is stable.

DEMOGRAPHIC BREAKDOWN

TOTAL POPULATION (2011)

49,272

RACE

White 51.5%

Black 22.8%

Hispanic 12.6%

American Indian 9.6%

Asian 1.3%

Native Hawaiian 0.4%

MEDIAN HOUSEHOLD INCOME

\$41,542

PEOPLE BELOW POVERTY LINE

22.2%

TYPES OF HOUSING STRUCTURES

Single Unit 76%

Mobile Home 19%

Multi-Unit 5%

Another resource is the North Carolina Forest Service’s Smoke Management Guidelines. Stakeholders were not aware of many additional resources such as staffing, technical expertise, or physical space that could be allocated to landfire smoke safety programs and felt that existing efforts could be supported by a larger staff or consistent volunteers and especially by increased funding.

RECOMMENDATIONS

The stakeholders NC BRACE spoke with believed that a targeted educational campaign would be both effective in teaching youth about landfire smoke related illness and raise awareness about landfire smoke in Hoke County. Six out of seven stakeholders believed that adding a health component to the Smokey Bear school program would be effective.

Stakeholders also offered additional feedback:

- Have a Smokey Bear type program for high school youth
- Public service announcements (PSAs) could be a hit or miss for people in the community
- Attending county fairs and festivals with landfire smoke health information could also benefit the community

“There needs to be more. Partnering with Smoky Bear would be great at educating folks on smoke effects and how to protect yourself.”

KEY THEMES

Add a health component to the Smokey Bear school program

Hoke County residents have a lack of awareness regarding landfire smoke related illnesses in their community

NC BRACE FOCUS

Add a health component to the Smokey Bear school program in Hoke County

ACKNOWLEDGEMENTS

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