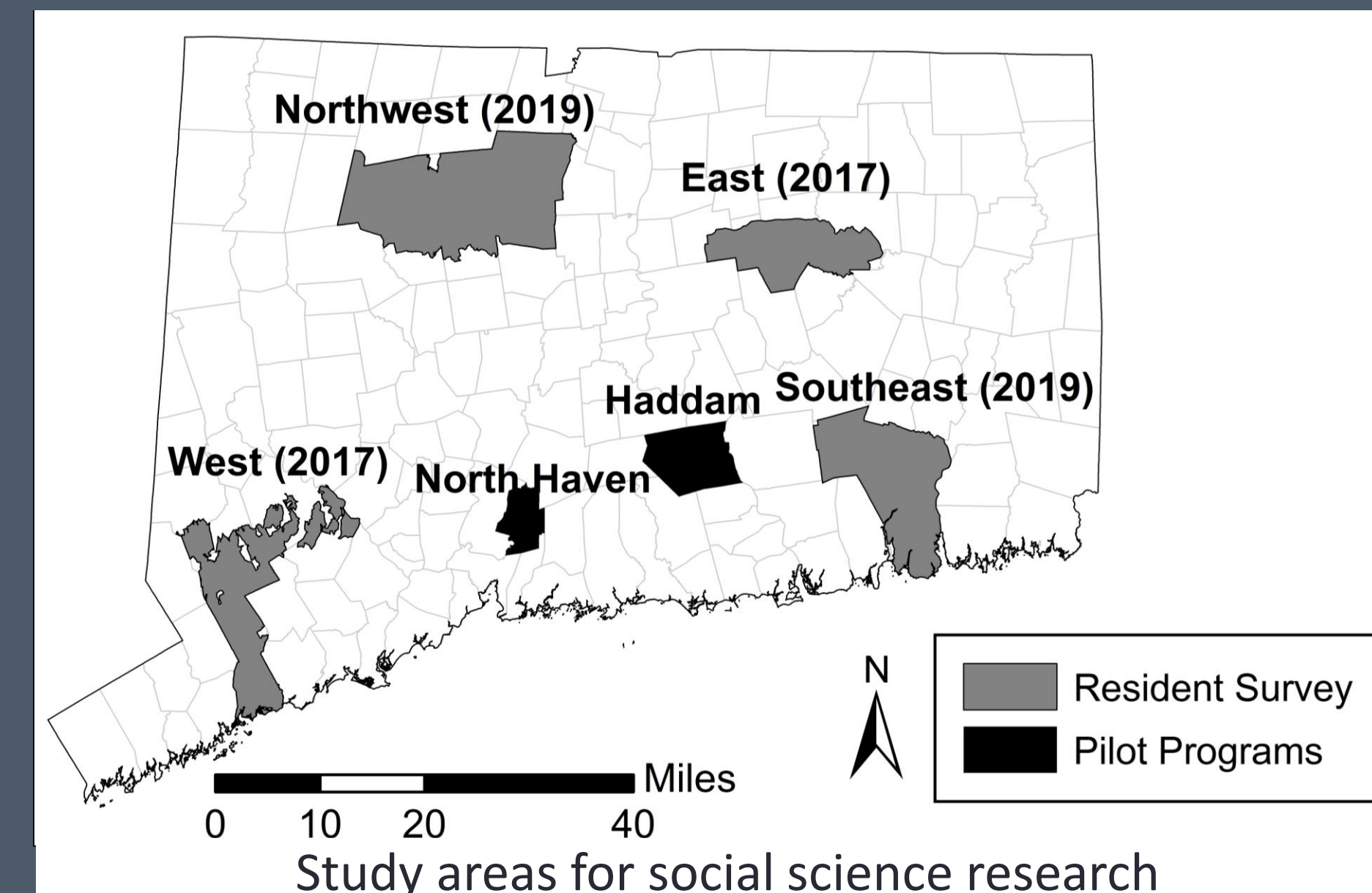


## INTRODUCTION

Major storms in the Northeast in 2011-2012 caused widespread power outages, many from trees or limbs falling on power lines. Trees provide many amenities to humans, but also pose risks to power infrastructure. **Stormwise** is a vegetation management program aiming to reduce the risk of tree-related storm damage to power lines. Tree trimming and removal related to vegetation management directly affects places where people live and work. Therefore, this study seeks to understand stakeholder perceptions of utility vegetation management.



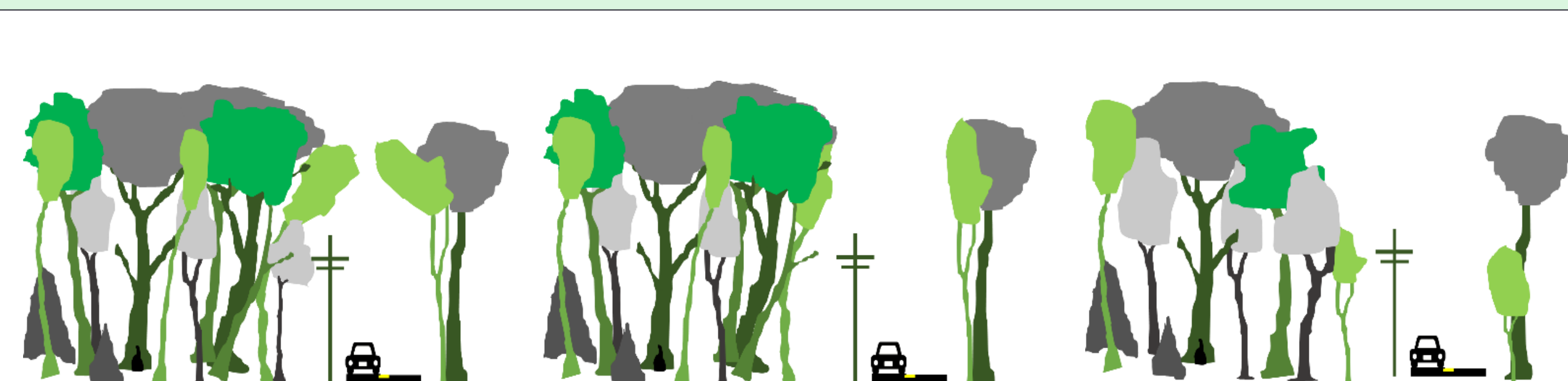
## RESIDENT SURVEYS 2017 & 2019

Self-administered surveys were used to measure attitudes toward vegetation management. During each of the winters of 2017 and 2019, we mailed 3,600 surveys to a random sample of residents in four areas of Connecticut. Surveys were equally distributed between urban and rural locations in all four areas. Survey questions addressed four topics: 1) experience with storms and power outages, 2) perceptions of trees in the community, 3) attitudes toward roadside tree and forest management, and 4) use of UAVs (drones) for vegetation management.

### SURVEY FINDINGS

We received 1,000 (28%) and 962 (27%) completed surveys in 2017 and 2019, respectively. Preliminary results suggested that respondents:

- Perceived that vegetation management improves public safety and reduces power outages
- Considered those who do vegetation management to be accountable
- Recognized the need for reliable power despite the tradeoff of trimming and removing trees
- Generally accepted the use of UAVs (drones) for vegetation management purposes (2019 survey only)



Respondents were asked to choose which illustration of the roadside forest was considered the most acceptable to them.

### SPATIAL ANALYSIS

We also evaluated how social and ecological landscape characteristics influence attitudes toward vegetation management. Differences existed among respondents along an urban-rural gradient and across areas of varying tree cover.

## HOMEOWNER INTERVIEWS

Interviews with Connecticut homeowners showed diverse reasons for consenting or objecting to utility tree removals.

- Those who objected to removals noted the perceived benefits of trees, including attractiveness, shade, and privacy provided by roadside trees
- Those who consented to removals cited concerns about the risks of trees to the power lines, roads, property, and people
- Participants who trusted the utility company were more willing to consent to a removal. Those that objected commonly referred to their skepticism about the actual threat of the tree to power lines, and apprehension about the ability of tree crews to effectively prune and remove trees



## FOREST LANDOWNER INTERVIEWS

The next phase of this research will focus on stakeholders who oversee vegetation management on medium- and large-sized tracts of forestland, as well as individuals who manage larger areas of private and public forests. Next steps will include:

- Interviews with forestland managers from across Connecticut about vegetation management along power lines
- Qualitative analysis of interviews to further understand decision-making associated with forestland management
- Integrate results into the broader vision of landscape-level vegetation management and current management practices

## PUBLISHED RESEARCH

- Kloster, D.P., A.T. Morzillo, J.C. Volin, and T.E. Worthley. Tree crew perspectives on wood product recovery from utility vegetation management. *Arboriculture & Urban Forestry*. In press.
- Kloster, D.P., A.T. Morzillo, and J.C. Volin. 2019. A national and local media perspective on responsibility for and solutions to power outages in the northeastern United States. *Environmental Hazards* 18:228-245.