

**CO-DESIGNING AI-DRIVEN FIRE PREPAREDNESS ASSESSMENT TOOLS TO MEET COMMUNITY NEEDS  
IN THE WILDLAND-URBAN INTERFACE**

**1952719**

**Meredith McClure, Conservation Science Partners  
PG, FY2020**

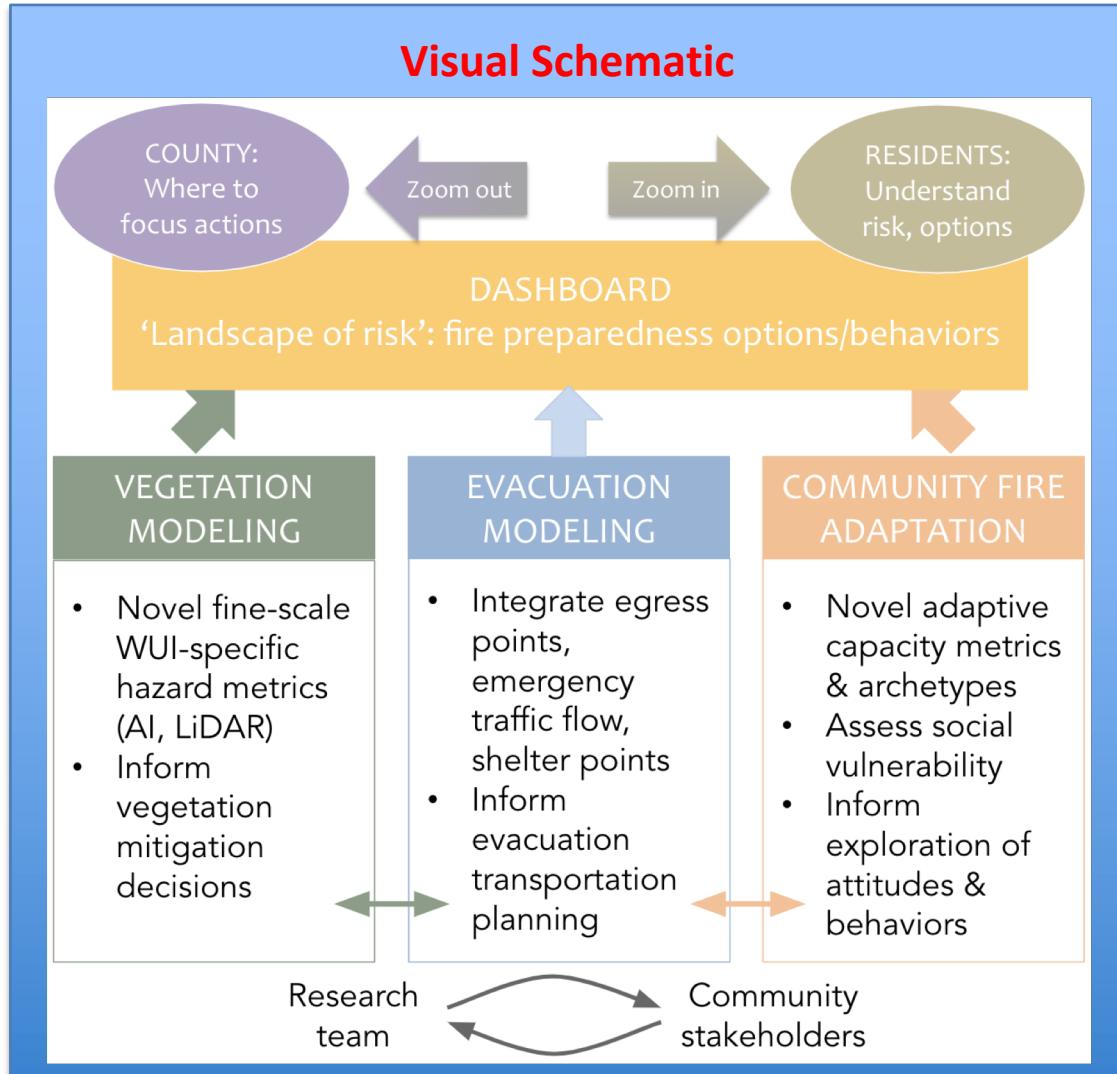
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**Community Partners (Name, Institution)**

Northstar Fire Department  
Truckee Fire Department  
Nevada County Information and General Services Agency  
Forestry Specialist for Nevada County, University of  
California Cooperative Extension  
Fire Safe Council of Nevada County\*  
Nevada County Firewise Community coordinators\*

# Project Overview



## Project Vision

Generate technical advances built on stakeholder understandings and relationships to help:

- quantify fine-scale WUI fuels conditions
- inform resident fire preparedness
- direct resources toward hazardous fuels mitigation among diverse vulnerable communities
- develop wildfire adaptation pathways

# Project Overview

## Use-Inspired Research

- Residents of fire-prone Nevada County need localized, WUI-specific information to prepare for wildfire and mitigate their risk
- Fire-safe councils, FireWise coordinators, county services agencies, and fire responders need to anticipate residents' behaviors in event of fire and plan/support accordingly
- Community member interviews have informed refinement of the project, anchoring work and products to evacuation planning

## PG Activities

- Identified communities for prototyping, stakeholder contacts, primary audiences/partners
- Scoped existing research, data, and tools to identify gaps and opportunities
- Conducted preliminary needs assessment via stakeholder phone interviews
- Held project team creative workshop to connect technical approaches and data with expressed community needs
- Soliciting further feedback from community stakeholders on proposed scope/products
- Pilot technical elements of proposed workflows
- Hold community workshop to share and solicit further feedback on potential product mock-ups, connect with future partners

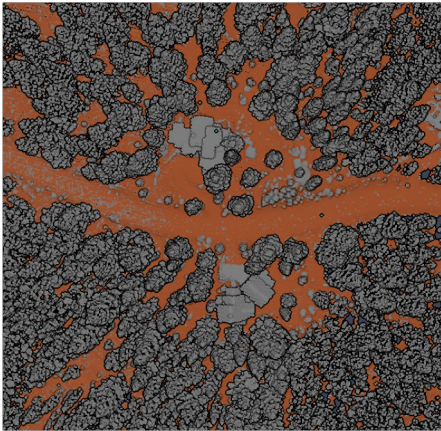
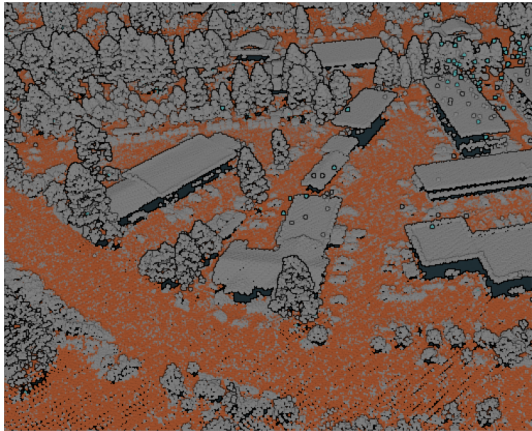
# Project Update

- Identify communities for prototyping, stakeholder contacts, primary audiences/partners



- Scope existing research, data, and tools to identify gaps and opportunities

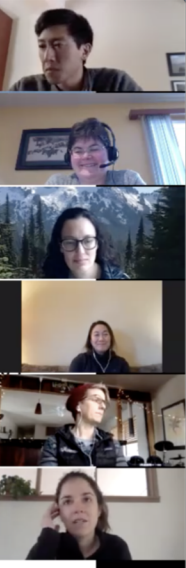
- Hold project team creative workshop to connect technical approaches and data with expressed community needs



- Conduct preliminary needs assessment via stakeholder interviews

### Wrap Up and Next Steps

- Recap the three topic areas
- Tying it all together – Analytics:
  - What are we excited about?
  - What seems promising?
  - How do these ideas scale to a broader geography?
  - What would we want to do with \$2 million?
  - What would the products look like?
- Next steps:
  - How does this inform interviews?



# Project Evolution

*Concerns about evacuation capacity or planning came up in interviews across residents, professionals and government officials. As a result, evacuation planning was a central topic explored in our team's creative workshop.*

*Furthermore, informants indicated that **there may be diverse evacuation responses across communities**. we want to explore how these responses interact with agency guidance. We are therefore focusing on developing information that could both allow residents to explore the relative risk in different fire response alternatives and allow planners to explore what these choices might mean for where vegetation mitigation, information outreach, and evacuation support efforts may be most needed.*

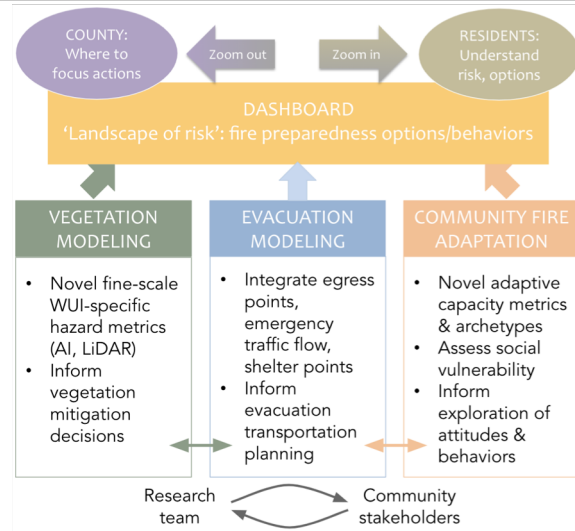
*Through our workshop discussions, we clarified that **the team is most excited about WUI-specific high-resolution vegetation and fuels modeling, as well as meaningful identification of and support for the most socially vulnerable community members**. **We found that a focus on evacuation modeling provides the ideal connection between these elements and voiced community needs.***

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## Visual Schematic



## Project Vision

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*Please organize the contents of slides (2) and (3) as a quad-chart using the template below. The quad chart should not be included in your lightning talks but should be submitted to NSF S&CC through an upload link that will be provided in the coming weeks.*