



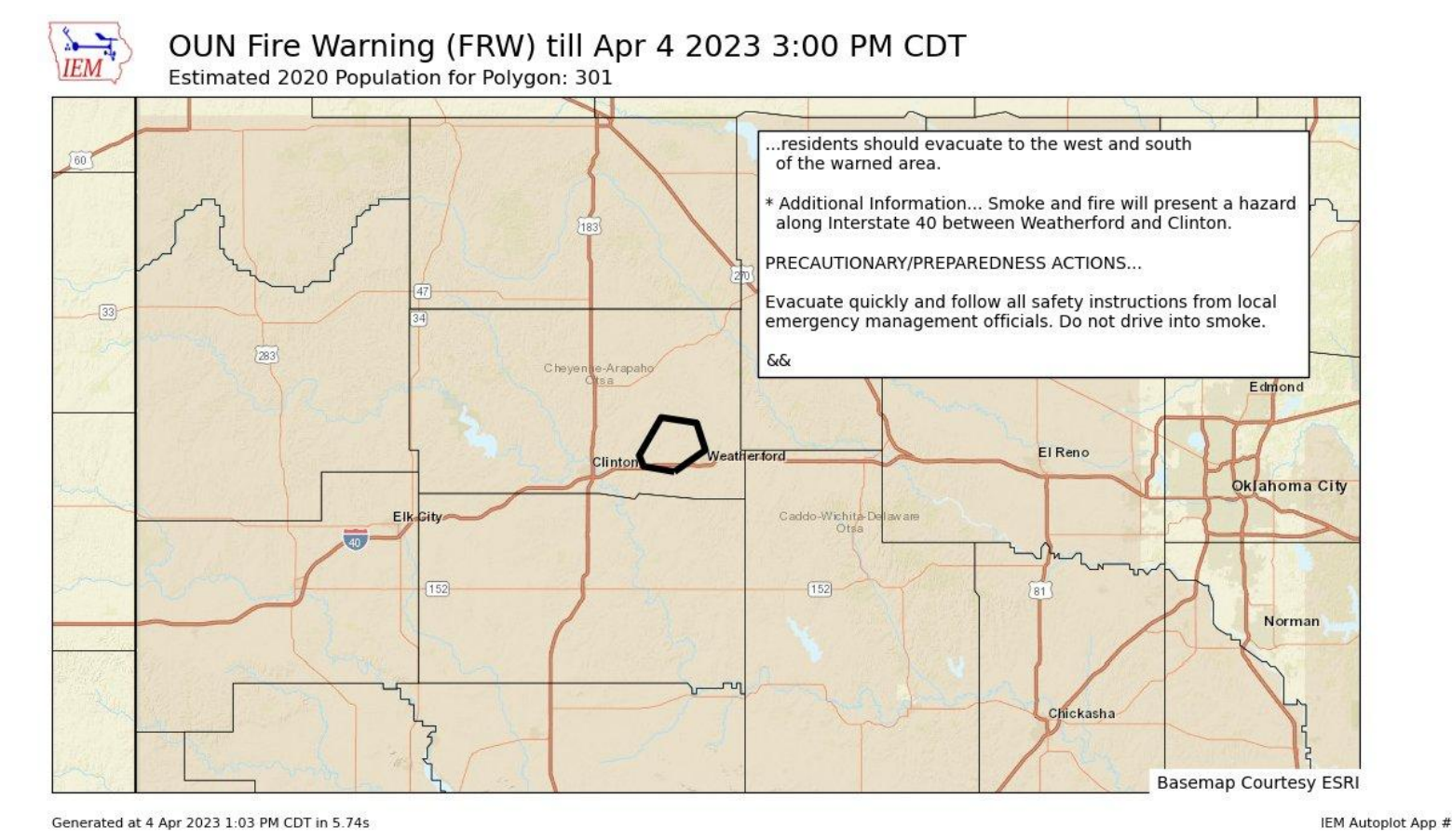
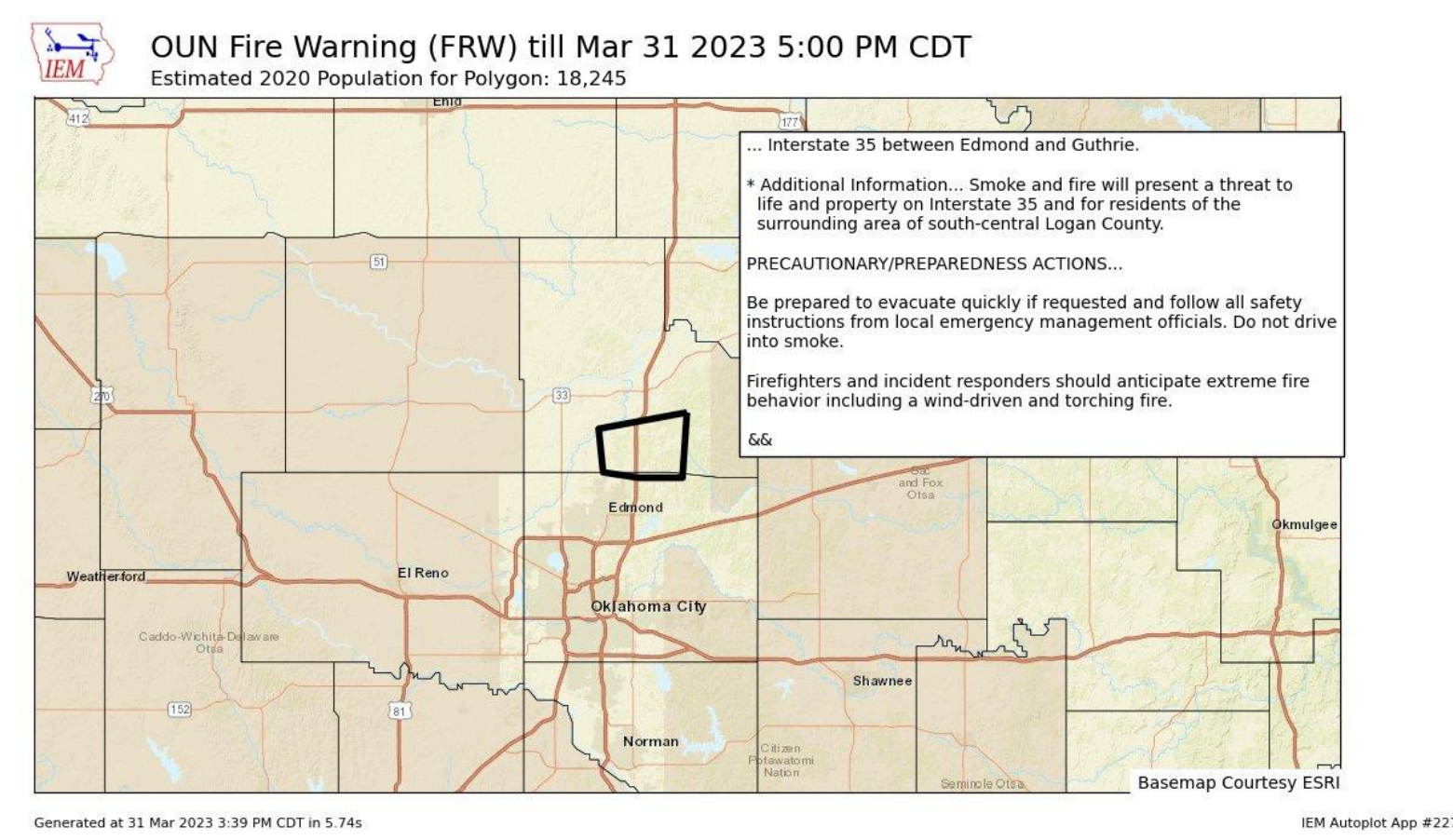
How Emergency Managers & Broadcast Meteorologists Receive, Use & Communicate Wildfire Forecasts & Alerts



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Study Motivation

- **Two destructive fires** occurred in the area of the Norman, OK NWS Weather Forecast Office (WFO)
 - "Simpson Road Fire" north the Oklahoma City, OK metro area (March 31, 2023)
 - "Route 66 Fire" near Weatherford, OK (April 4, 2023)
- **Fire Warnings** were issued for both fires using a novel "IWT Fire Warning procedure" developed at WFO Norman to **help warn and evacuate the public**
- **Questions remained** about how fire weather information was received by the public, broadcast meteorologists and other emergency managers, and what type of response(s) occurred:
 - **What was happening on the ground?**
 - **What was being communicated?**
 - **What kinds of actions were taken?**



Surveys

Researchers developed **two (2) surveys to better understand** emergency managers' and broadcast meteorologists' use of fire weather forecast information/products:

- Deployed in **fall/winter of 2023/2024** (broadcast meteorologist survey still ongoing)
- Pilot area: **Oklahoma and north Texas**
- Many quantitative questions, three qualitative questions (EM survey):
 - **Thematic analysis** conducted on qualitative answers
 - Inductive coding used to form general themes

Emergency Manager Survey Topics

- Jurisdiction information
- Fire weather forecasting sources
- Active wildfire operations
- NWS fire weather products
- 2023 Oklahoma wildfires

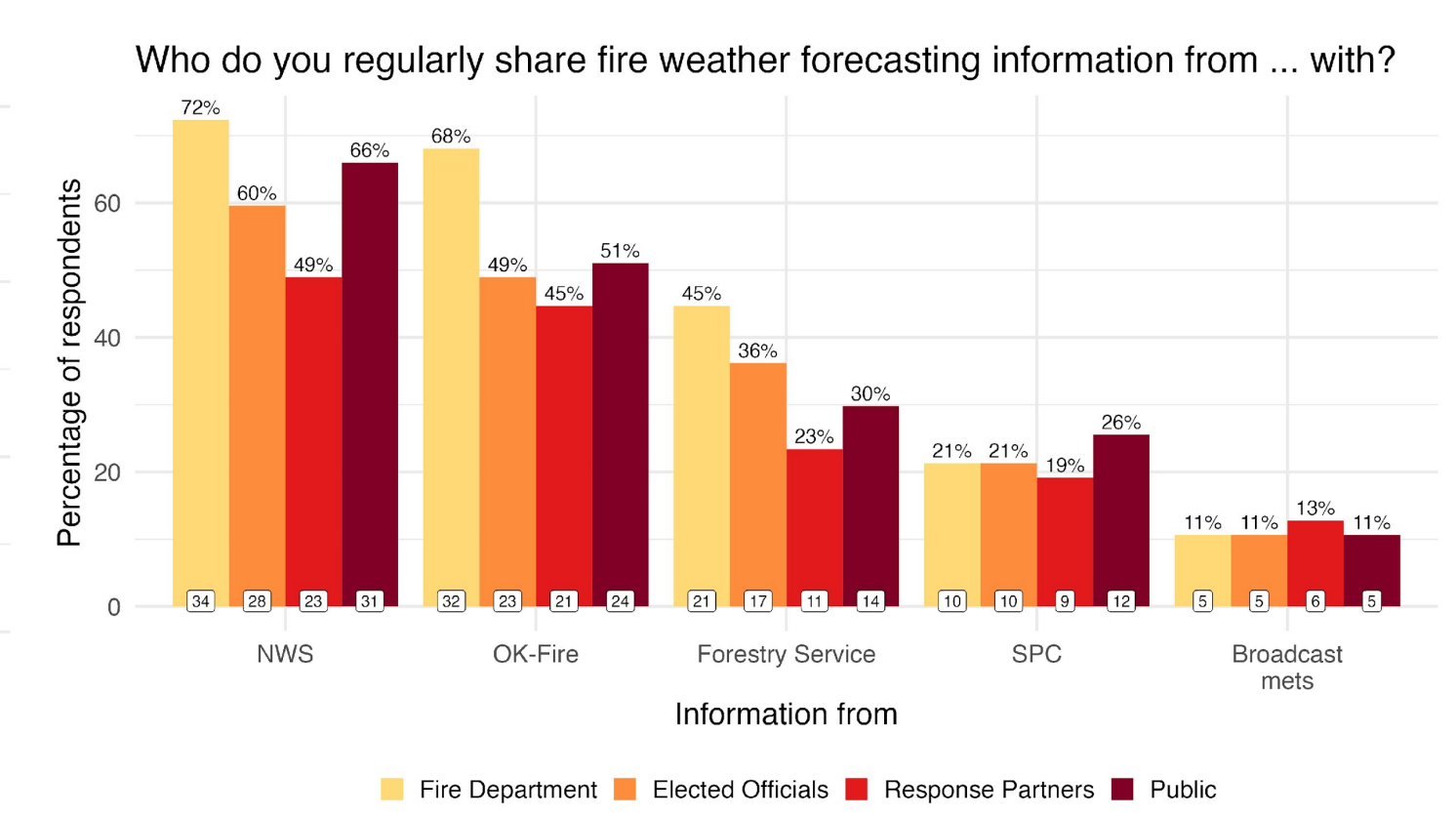
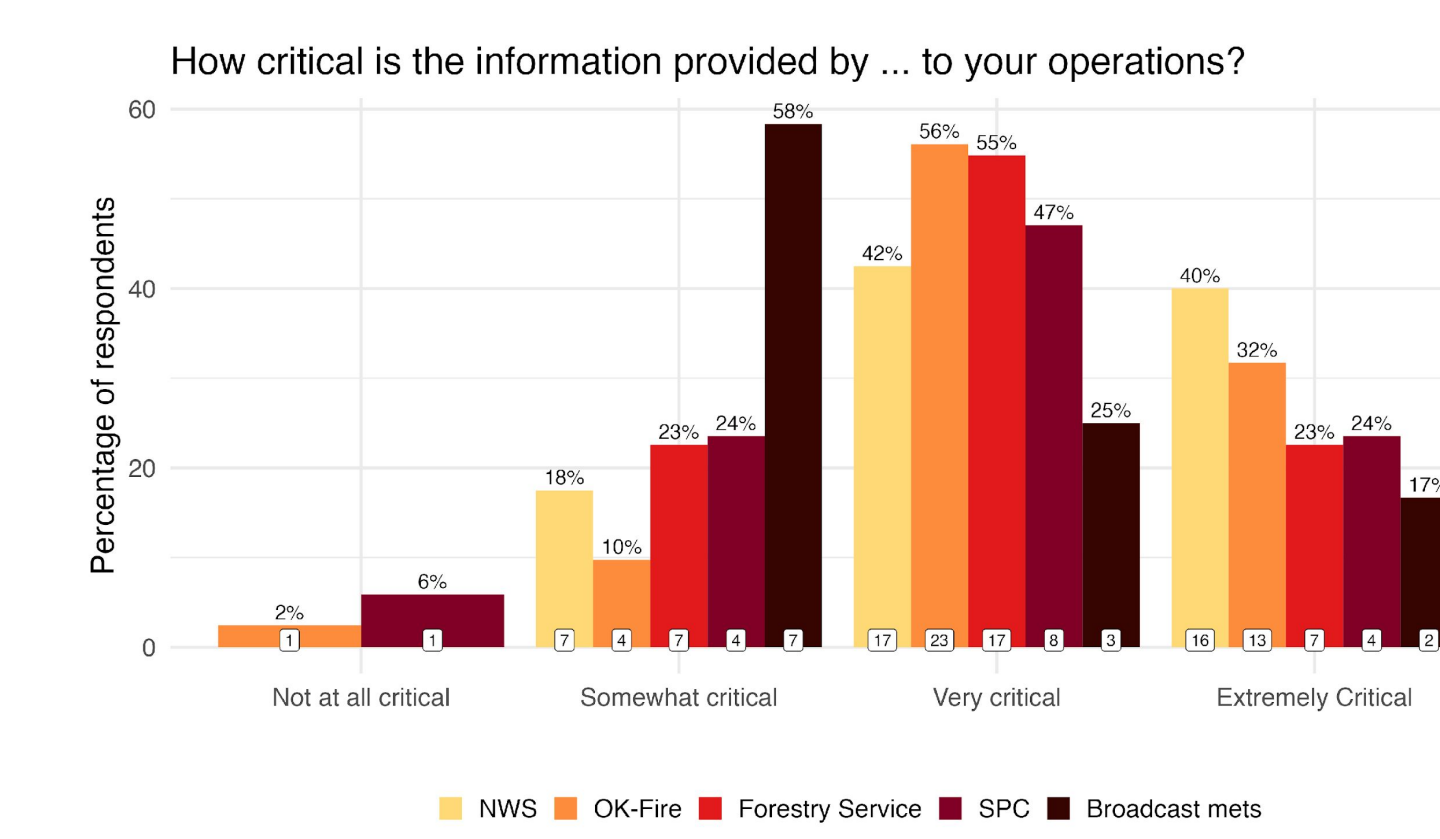
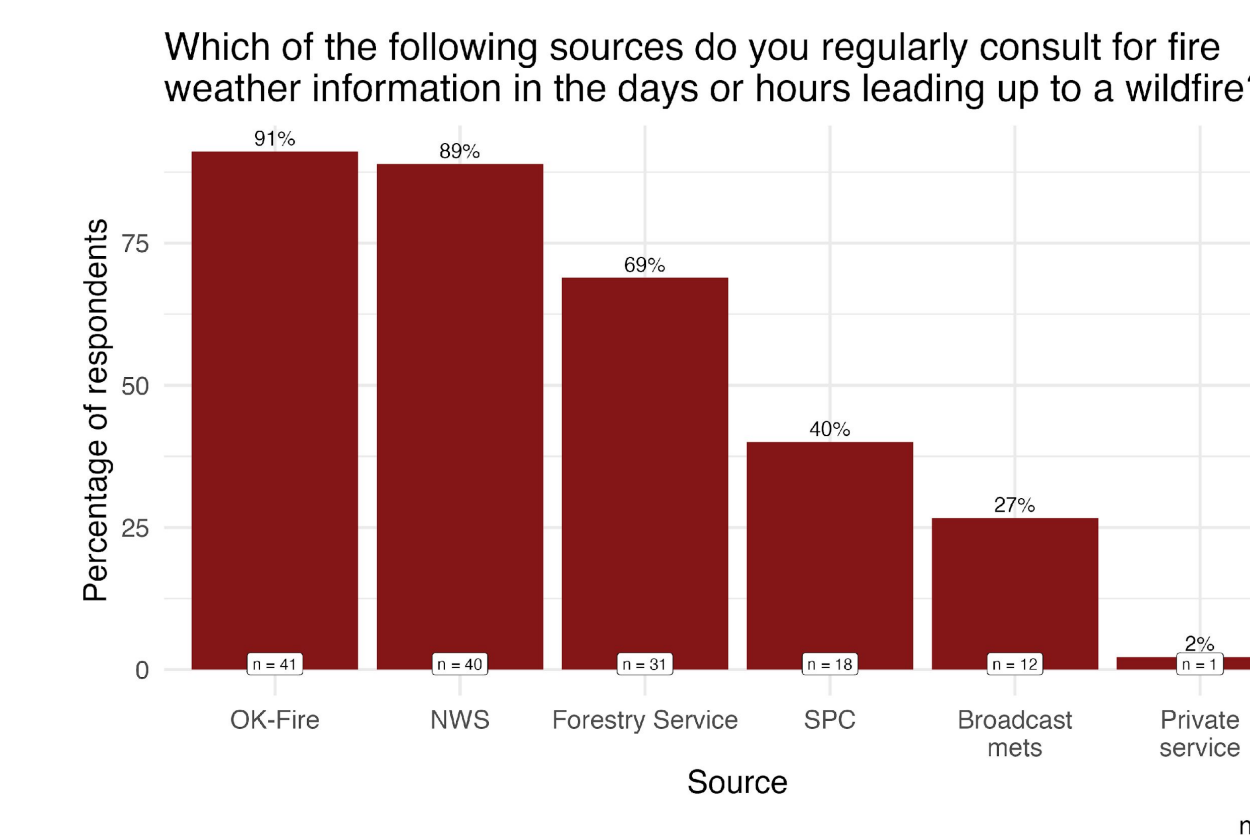
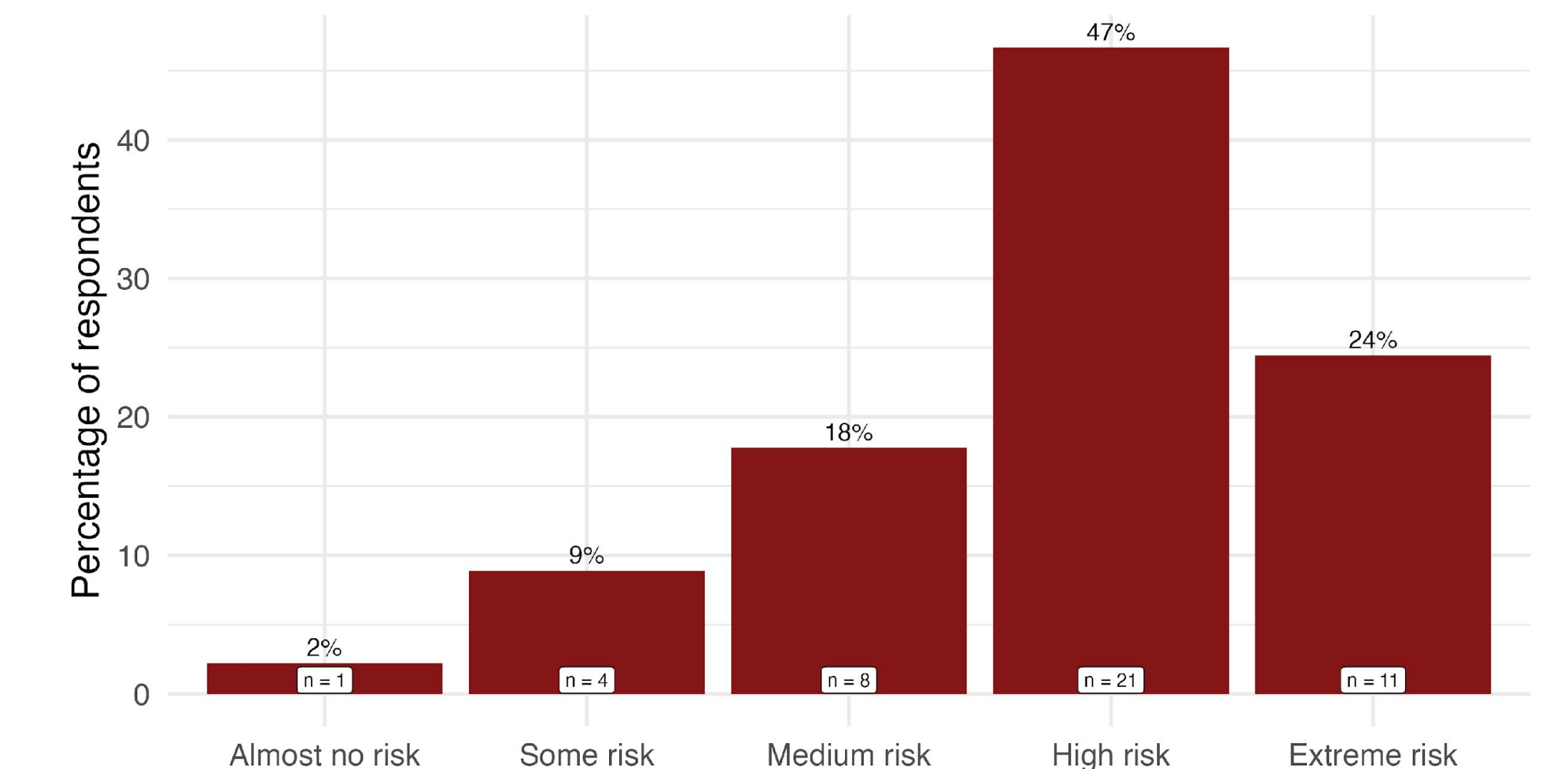
Broadcast Meteorologist Survey Topics

- Wildfire risk regarding television market
- NWS fire weather products
- Usefulness of fire weather products for communication on television
- Demographics

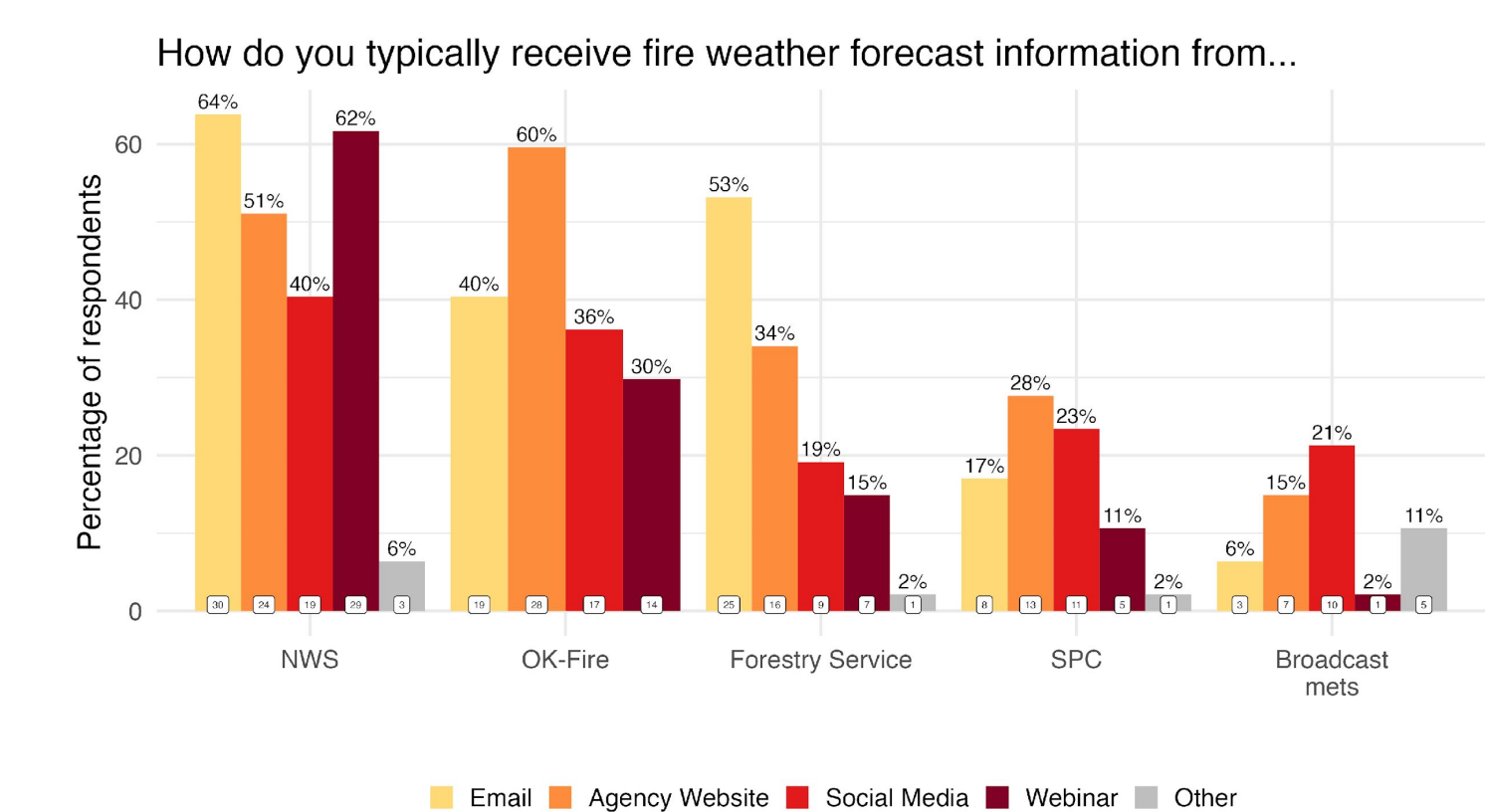
Results - Emergency Managers

Emergency Managers	
Total Responses	46
Jurisdiction Type	State: 3 County: 20 City: 17 Tribal: 5 Other: 1
EM Office Organization	Standalone Agency: 34 Part of Fire Dept: 4 Part of Law Enforcement: 1 Other: 7
Local WFO (EMs may monitor more than one WFO)	Norman: 36 Tulsa: 11 Amarillo: 3 Shreveport: 1

How would you characterize the risk that wildfires pose to your jurisdiction?



- What are some actions that you or your jurisdiction typically take in preparation for potential wildfires based on forecast information?
- What kind of actions might a Fire Weather Watch prompt for your jurisdiction?
- What kind of actions might a Red Flag Warning prompt for your jurisdiction?



General themes

Four categories of preparation

- Alerting contacts (**fire departments & chiefs**, city, county, state & tribal entities)
 - Using multiple modes (email, pager, phone call, Slack, text group, virtual call like Zoom)
- Assessing staffing (EOC, dispatchers, volunteers, spotters)
- Checking and readying resources (initiating **WAR days**, road equipment, water tankers, aircraft)
- Maintaining situational awareness (field reports, weather conditions)

Communication with the public

- Public is **most actively engaged once a Fire Weather Watch and/or a Red Flag Warning is issued**
- Primary modes of informing the public include:
 - **Social media, mass notification systems, local media** (also mentioned - billboards and red flags)

Future Work

- Collect additional data from broadcast meteorologists and conduct full analysis
- Conduct potential follow up interviews with emergency managers and broadcasters
- Expand geographic extent with future iterations of the survey

