

Science You Can Use *in 5 minutes*

How Wildland Fire Incident Catering Can Improve Morale and Nourish Wildland Firefighters

In early 2024, Michael Caggiano, a wildland firefighter and regional fire analyst with the Forest Service, approached David Flores, a research social scientist with the Forest Service's Rocky Mountain Research Station, with a proposal: what about conducting a research study on the perspectives of wildland firefighters around food catering?

While on wildland fire incidents, firefighters often stay at camps close to the

fireline, which means they are dependent upon the catering options for their three daily meals. These meals need to be of high quality and have the required calories so the firefighters can work the daily 12-to 16-hour shifts that may last for 14–21 days.

Flores recalls Caggiano saying, “One of the things that firefighters really want to change is the food. If you can improve basic things such as food, that would be huge.”

Flores was intrigued but his lack of background in nutrition and medicine gave him pause. Later that spring, he saw an opportunity to pursue this study. Myriam De Vroome, a master's student with the Wageningen University, located in the Netherlands, joined the station as an intern for four months. Because her master's research was on resilient farming and food systems, Flores proposed to De Vroome that she study Caggiano's question, and she agreed.

Wildland firefighters have opinions on catering

Since a nationwide study on the national catering system wasn't feasible, the team conducted an exploratory study, interviewing seven wildland firefighters who have worked in wildland fire between 1994–2000. The firefighters were very excited about participating in the study and wanted to be helpful, Flores says.

Each participant was asked nine open-ended questions related to their experiences with the catering systems. From these interviews several themes emerged: (1) sack lunches were the least nutritious and considered the worst meal of



On wildland fire incidents, wildland firefighters require high-quality nutritious meal options that provide the required calories so they can work the daily 12- to 16-hour shifts. The quality of these meals can affect both the physical and mental health of firefighters. Forest Service photo by Kari Greer.

the day, (2) having options when selecting dietary choices was preferred, and (3) catering affects morale. It was the last theme that Flores hadn't expected to hear: "It was really interesting how a good food caterer can really increase morale."

Another surprising finding was the suggestion to have portion sizes (low-, medium-, and high-calorie) meal options. "Everybody's served the same amount of food rather than whether they are working a 16-hour shift on a fireline, or they're doing administrative work at the incident command post," he says. "People who are doing more sedentary work don't require the amount of food or the high calories somebody out on the line requires."

Changes in catering perceptions

Collectively, what these exploratory findings suggest is that catering affects morale, and by extension, the health and well-being of wildland firefighters. However, a nationwide study interviewing a larger diverse pool of wildland firefighters is needed to determine whether these findings remain consistent. Until such a study can be conducted, managers may find these preliminary findings helpful to improve catering options that are currently available.

Managers may also need to consider that the upcoming generation of wildland firefighters have different attitudes about food than previous generations, which could impact retention and morale. "The newer generation of people entering into wildland firefighting are health conscious," Flores says. "Similar to athletes, high-quality nutritious food is very important to them."

Featured Scientist

[David Flores](#) is a Research Social Scientist with the Rocky Mountain Research Station located in Fort Collins, CO. His research focuses on the social and cultural characteristics of decision making and natural resource management.

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Management Considerations

- Of the three meals served during the day, respondents considered sack lunches the least nutritious due to their high levels of carbohydrates and processed sugar.
- If wildland firefighters perceive meals as having unhealthy dietary options, they may limit their daily caloric intake, which risks potential problems with health and performance.
- Morale may be boosted by selecting catering companies that provide high-quality meals with varied food choices and providing per diem during an incident.
- For those wildland firefighters in spike camps, remaining at camp and having provisions to build their own meals was more desirable rather than driving to base camp for breakfast and dinner.



Firefighters eating breakfast provided by catering services at the Badger Spike Camp, 2018 Ferguson Fire, Sierra National Forest, California. Forest Service photo by Kari Greer.

Further Reading

Flores, D.; De Vroome, M.; Caggiano, M. 2025. [Nourishing wildland firefighters: Exploring perspectives on wildland fire incident catering](#). Gen. Tech. Rep. RMRS-GTR-448. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 12 p.



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