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ECONOMIC EFFECTS OF LARGE FIRES: APPLICATION TO THE COLD SPRINGS FIRE

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Large wildfires disrupt the lives of families, workers, and employers. However, fire suppression and recovery efforts may provide economic opportunities. Understanding the impacts of large fires can help fire managers, policy makers, and community leaders plan for the challenges and opportunities of wildfires. Unlike with other natural hazards, there has been little research about how wildfires affect local economies. The purpose of this Joint Fire Science Program-funded project was to analyze the effects of large fires on labor markets and how fire suppression spending may mediate these effects.

Approach

First, we conducted an in-depth case study of the community economic impacts of wildfires in Trinity County, California in 2008. Second, using Bureau of Labor Statistics data, we compared the labor market trends of western US counties from 2004 to 2008 to identify differences between counties (n=150) that experienced wildfires where the Forest Service spent more than $1 million and counties that did not experience large wildfires (n=264). Third, we analyzed fire suppression financial transactions to identify where and how fire suppression funds were spent and develop measures of fire suppression contracting capacity.

Key findings

- Generally, local employment and wages in a county increase during large wildfires; economic disruptions from large wildfires are outweighed by the economic impact of the suppression effort in the short term.
- Large wildfires lead to longer-term instability in local labor markets by amplifying seasonal variation in employment over the subsequent year. This is particularly true in sectors such as tourism and natural resources.
- On average, the Forest Service spent nine percent of wildfire suppression funding in the county where the fires occurred. Amounts of local spending varied from zero to 39 percent.
- Local capture of suppression contracting is important because it helps mediate labor market effects. However, the ability of rural and resource-dependent counties to capture suppression expenditures appears to be limited.

Application to Cold Springs fire

The Forest Service spent $14 million on the Cold Springs fire, of which $8 million was reimbursed by other agencies. Less than one percent of the suppression funds were spent in Yakima County, where the fire was located. However, six percent of the funds were spent in adjacent Klickitat County, where the closest population centers are located. Using a single case, it is impossible to make causal claims about the impact of the wildfire. Nevertheless, Klickitat County has followed the general findings of our study, which are increasing employment and declining per capita wages in the natural resource sector and declining employment in leisure and hospitality compared to years without fires.

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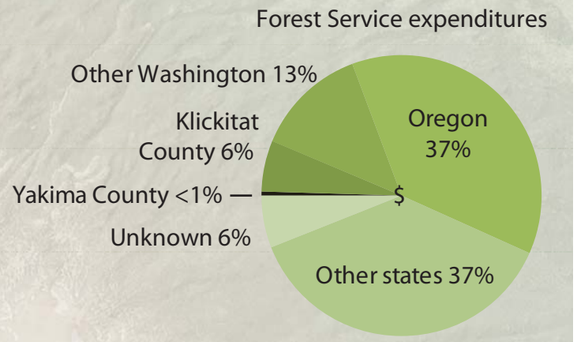
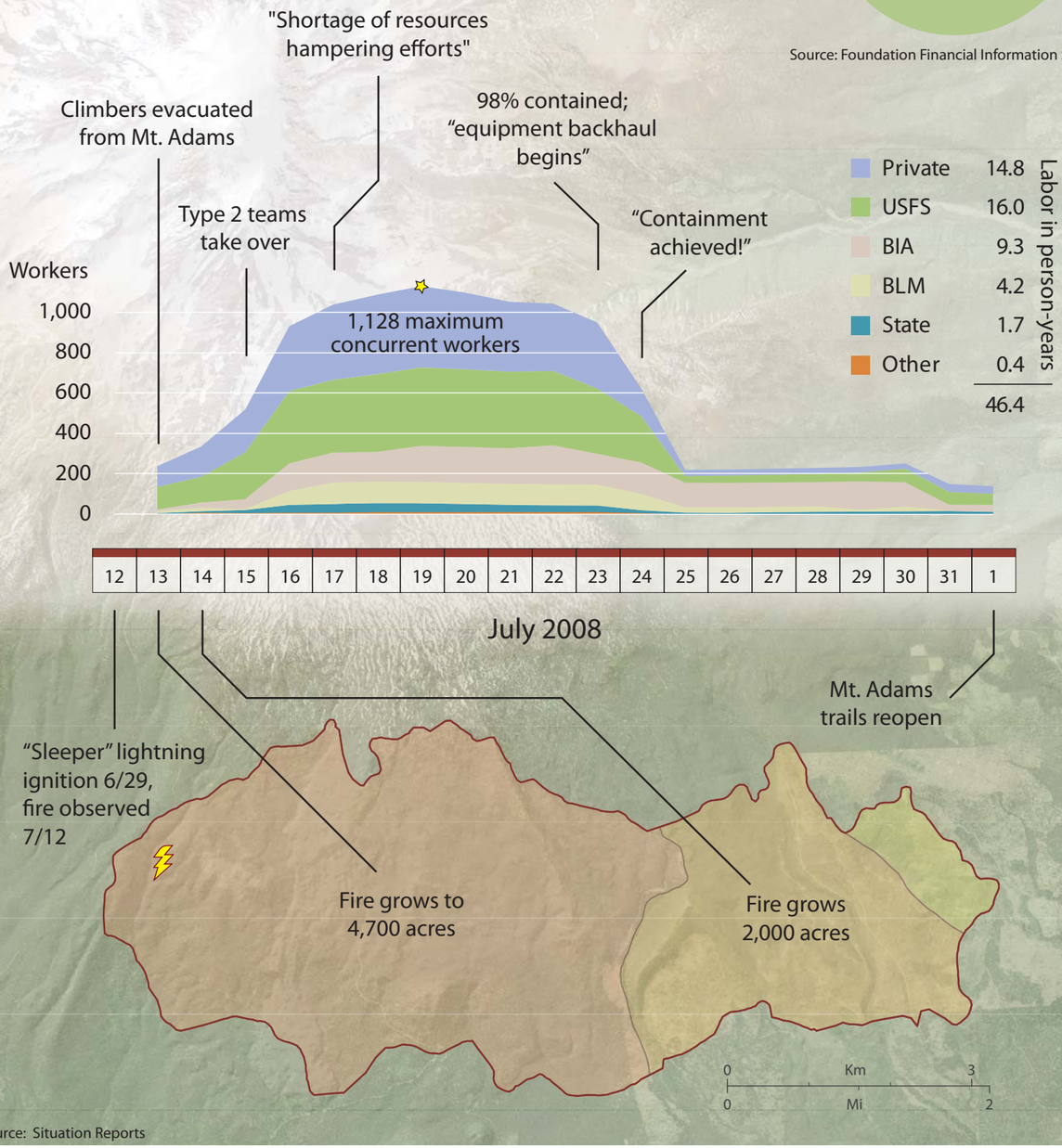
Cold Springs Fire

Forest Service gross expenses: $14 million

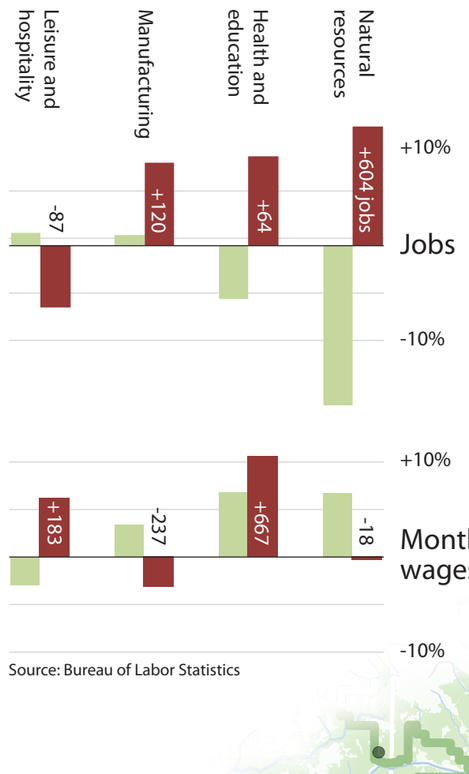
Forest Service net costs: $6 million



Source: Foundation Financial Information System



Source: Situation Reports

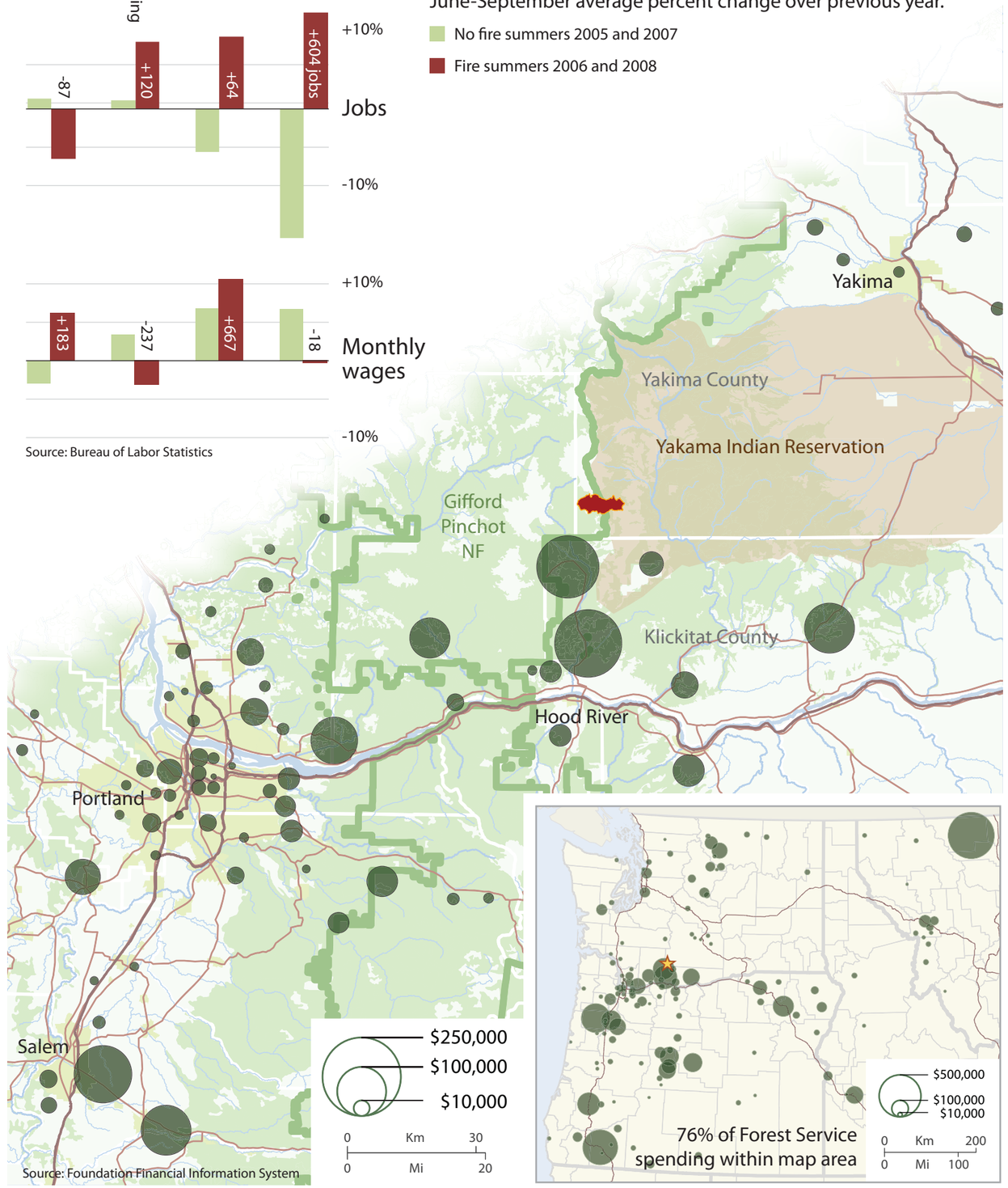


Source: Bureau of Labor Statistics

Private sector employment and wages
Klickitat County, Washington

June-September average percent change over previous year.

- No fire summers 2005 and 2007
- Fire summers 2006 and 2008



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