

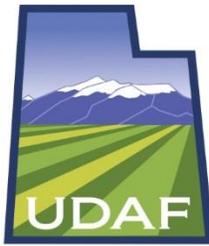
WILDFIRE STUDY

1. **Each 1,000 acres of wildfire result in 40 cattle being sold to reduce inventory (pp. 7-8). These animals are normally sold at a 40% discount and result in between \$500,000 and \$1.4 million in regional economic losses. The recovery process for the cattle to be back out on the range takes at least 2 years.**
 - Higher feed costs result in labor losses between \$250,000 and \$650,000.
 - Reductions in recreation visits result in regional economic losses that average between \$1.2 and \$3.7 million.

2. **Wildfires result in the forced sale of cattle due to the high cost of non-range feed. A reduction of 278 head of cattle (the median yearly amount) results in the following economic impacts (pp. 125-126 & Table 7.7):**
 - \$488,000 total loss in regional economic value annually.
 - \$119,000 in impacts to the agricultural producer industries.
 - \$90,000 decrease between employer compensation, proprietary income, property income, and indirect business taxes.
 - Total lost household income is estimated to be \$117,000 with half of this affecting household in the medium income range.
 - State and local government revenue is estimated to fall by \$23,000.
 - **Household income losses of \$36 per household (estimate of median reductions in livestock) up to \$104 per household (estimate according to mean reductions in livestock) due to slowed economic growth.**
 - Wildfires force ranchers to provide supplemental feed to their livestock, which is more expensive. In Utah, these costs range between \$220,000 (604 cow-calf units on a median fire year) to over \$578,000 (1,588 cow-calf units during a mean fire year).
 - Indirect losses in labor and other industries from supplemental feeding would range between \$27,321 (median fire year) to \$71,813 (mean fire year).

3. **Total economic impacts from wildfire forced cattle reductions are between \$1.224 million (median fire year) and \$3.377 million (mean fire year). These losses result in household income losses between \$85 and \$233 per household (pp. 127).**

4. **“Utah’s forest timber harvest has fallen by 70% between 1992 and 2012; during the same time period the number of mills fell by nearly 66%. In 2012, Utah mills operated at 20% of capacity, suggesting scope to absorb a large volume of wood product generated by fuels reduction activities” (pp. 8 & 164).**



WILDFIRE STUDY CONTINUED

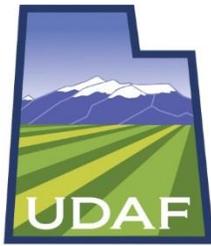
5. **“Between 2002 and 2015 Utah has annually averaged 1,283 wildfires burning 178,437 acres. In recent years Utah has experienced numerous fires in excess of 40,000 acres. Utah’s worst fire in recent memory was the 620,000 acres burned in 2016”** (pp. 5).
 - See Table 3.1 (pp. 28) for annual breakdown of wildfires.
 - See Figure 3.1 (pp. 30) for map of all wildfires from 1993-2015. See Figure 3.2 (pp. 31) for total acreage burned by year.

6. **“The 2008-2014 period shows that the USFS has seen its share of high severity burned acreage grow to 78% of all high severity acreage in the state. The proportion of total high severity associated with federal land administration has grown from 65% in 1992-1999 to almost 93% for acreage burned between 2008 and 2014. The data appear to suggest that federal wildfire management policies have, over time, resulted in more severe burns than management by state or local agencies. In fact, the data cannot be interpreted so simply”** (pp. 37).

7. **On average, wildfire suppression costs are increasing at an annual rate of \$5.15 per acre (pp. 168); therefore, those reduction methods that produce economic value (i.e. grazing, logging, etc.) should be employed to reduce the costs of forest wildfire management.**

8. **Wildfire management costs have grown from 16% of the USFS annual budget in 1995 to 52% in 2015, and is expected to consume 67% by 2025 (pp. 173).**
 - These increases in fire suppression funds have resulted in decreases in other programs:
 - Programs to improve and manage vegetation and watersheds (18%).
 - Investments in facilities, roads, and deferred maintenance (68%, 46%, and 95% respectively).
 - Land management planning (64%).

9. **Fuel treatment costs range between \$175 per acre for prescribed fire to an excess of \$1,000 per acre for mechanical treatments in some areas (pp. 190). Federal agency fuels reduction programs “remain a relatively small portion of overall wildfire management budgets; funding for treatments is not sufficient to meet needed landscape-scale fuel reduction efforts”** (pp. 190).



WILDFIRE STUDY CONTINUED

- 10.** South facing slopes, the steepness of the slope, and vegetation type and cover are the greatest indicators of wildfire risk. Management activities aimed toward vegetation thinning and fuel load reduction on state and federal lands are most likely to reduce the risk of catastrophic wildfires.

- 11.** Watersheds in the Northern half of the state are the most susceptible to sediment and other types of pollution in the case of a wildfire (pp. 6-7).
 - Thirty-three percent of Utah’s drinking water withdrawal points and reservoirs are in areas that would face major increases in sediment in the case of a wildfire.

- 12.** Wildfire caused losses in tourism and recreation include (pp. 146):
 - Reduction between 11,125 and 30,852 visitors seasonally.
 - Regional economic losses of between \$1.22 million and \$3.65 million.
 - Losses between 14 and 42 jobs.
 - Tax revenue losses between \$0.19 million and \$0.56 million.