The Utah Forest Institute is dedicated to improving outcomes for fire and forest health in Utah. Institute researchers are examining fire severity, fuel loading, and tree death in Utah, working in a complementary way with state and federal organizations. To date, much of the fire research in the U.S. has concentrated on forest types not abundant in Utah, and the Utah Forest Institute aims to fill some of these gaps.

Wildfires were once an important driver of ecosystem health in western U.S. forests, but decades of fire suppression, natural and human-caused disturbances and environmental change have combined to create conditions that favor wildfires. In April 2020, wildfires were already burning in Utah. Fire and land managers in southern Utah warned in early May that winter and spring precipitation in the area had promoted the growth of grasses poised to fuel wildfires in the dry summer months. Fires that were once an ecological benefit now impact human health and safety, air quality, and water quality.

The initial project of Utah Forest Institute researchers is creating the Utah Fire Atlas, which will describe the severity and patterns of fires in all Utah forest types using Landsat satellite data. The goal is to quantify at least 95% of the area burned since 1984 at a grid-scale of 100 ft x 100 ft, building on data from the federal Monitoring Trends in Burn Severity program. Using the fire atlas, researchers will characterize both wildfires and prescribed fires in Utah so the data can inform land management and policy decisions that will create greater resilience to wildfires and optimize post-fire conditions. The institute is concentrating on fires from 100 to 1000 acres – a size relevant to managers considering prescribed or “let burn” fires.

In the summer of 2020, the institute will have researchers on the ground verifying satellite-derived fire severity. For both lab analysis and fieldwork, the institute focuses on hiring students and recent graduates from Utah universities to build capacity in fire science within the state.

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