

# Colorado Strategic Wildfire Action Program: Effectiveness Monitoring Plan

The Colorado Strategic Wildfire Action Program (COSWAP) was created by the Colorado State Legislature after the devastating 2020 fire season to quickly move \$17.5 million state stimulus dollars to on-the-ground work. The goal of the program is to increase community resilience and protect life, property, and infrastructure from wildfire impacts. COSWAP supports fuels reduction efforts in the wildland urban interface through workforce development grants and landscape resilience investments in ten high-priority focus areas across Colorado.

The Colorado Forest Restoration Institute (CFRI) at Colorado State University is partnering with the Colorado Department of Natural Resources (DNR) to monitor outcomes of COSWAP landscape resilience investments. Our monitoring strategy will evaluate how COSWAP investments mitigate wildfire hazard and promote ecological resilience within individual projects, and assess the cumulative impact of cross-boundary forest management to improve landscape resilience within the ten COSWAP strategic focal areas. The intent of our monitoring program is to create learning opportunities that improve future projects by providing DNR, local project partners, and other local, state, and federal policy-makers a reliable, objective, quantitative measure of landscape resilience and wildfire hazard reduction.



## Project Monitoring

- Field based data on forest conditions will be combined with imagery analysis of forest cover to assess changes in fire hazard and ecological resilience within projects. Standardized methods across the state will facilitate cross boundary learning to improve project outcomes.
- In 2023, CFRI established over 110 long-term monitoring plots across five COSWAP projects, while also collaboratively monitoring 4 additional COSWAP projects to build monitoring capacity of local partners.

## Focal Area Monitoring

- Forest canopy changes across focal areas are measured remotely to determine cumulative impacts of forest management and wildfires on forest structure and resilient forest conditions.
- Fire behavior modeling will be combined with existing wildfire risk assessments that were used to identify the ten strategic focal areas (e.g. the Colorado Forest Action Plan and others). The resulting spatial data will be used to examine changes over time in wildfire risk to homes and infrastructure, water resources, and wildlife habitat in the local landscapes surrounding COSWAP investments.

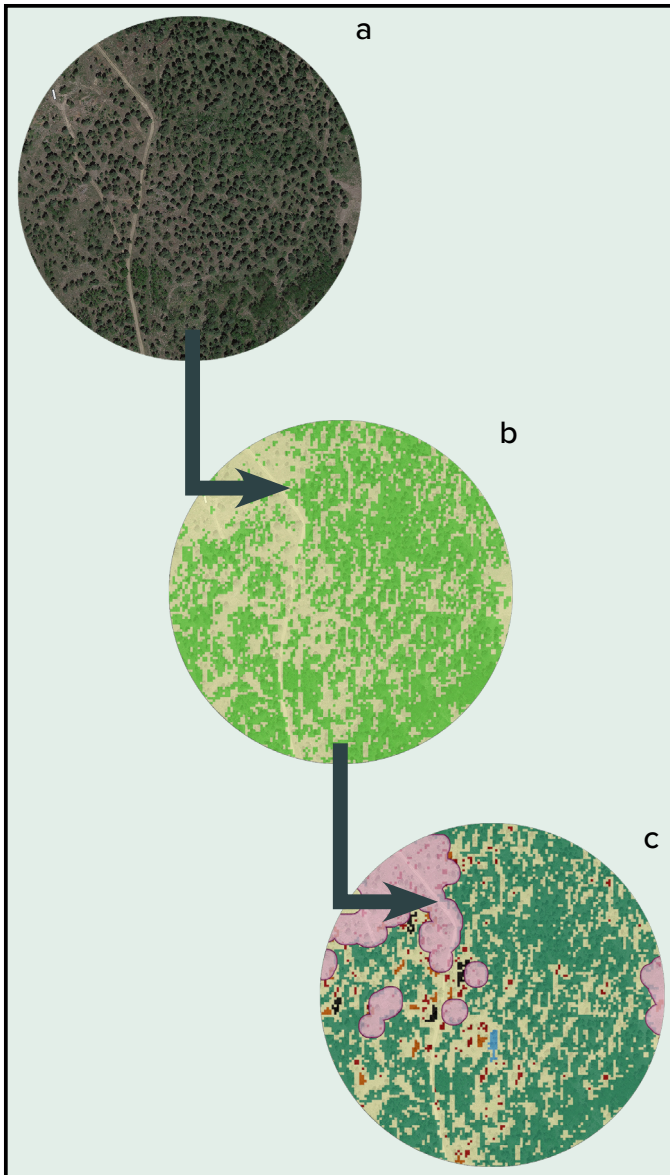


Figure 1. Aerial imagery (a) is used to assess changes in forest cover (b) and evaluate impacts on forest structure (c) that are important for assessing ecosystem resilience.



Figure 2. The cumulative impact of COSWAP projects (dark green) and neighboring cross-boundary projects (light green) will be assessed for changes to wildfire risk on values in each local context. Areas of dark red have higher overall risk of negative impacts from fire, while lighter colors are more likely to benefit from fire (Data source: Colorado State Forest Service, [Colorado Forest Atlas](#)). While forest management may have localized benefits to some resources, such as built infrastructure (brown circle), benefits to other resources, such as water resources, are realized over a larger area (blue circle).