

Integrating Climate Adaptation Strategies into Local Collaborative Forest Management in Northern Colorado

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Environmental Problem

Climate change is altering western dry forests, including those along Colorado's Front Range, underscoring the need for climate adaptation. There are numerous resources available to land and forest managers designed to support climate adaptation efforts. In fact, the sheer number of available tools makes it challenging to determine which are most useful. This project synthesized resources most critical to climate adaptation into a workflow for the Upper South Platte Partnership (USPP)—a group of land and forest managers that work in the Upper South Platte Watershed of Colorado.

Deliverables:

Decision-Support Tools (DSTs)

We constructed a library of 64 tools relevant to climate adaptation spanning 4 categories: conceptual frameworks, process-based workflows, quantitative models, and geospatial tools.

Menu of Adaptation Options

We compiled options for climate adaptation into a multi-level "menu" beginning with broad management goals and proceeding through more specific strategies and associated approaches.

Climate Adaptation Workflow

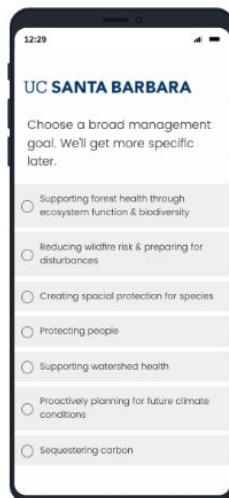
We developed an online tool mirroring the organization of our menu that recommends DSTs and identifies environmental justice factors to consider for each approach.

Climate Adaptation Workflow

UC SANTA BARBARA

Choose a broad management goal. We'll get more specific later.

- ☐ Supporting forest health through ecosystem function & biodiversity
- ☐ Reducing wildfire risk & preparing for disturbances
- ☐ Creating special protection for species
- ☐ Protecting people
- ☐ Supporting watershed health
- ☐ Proactively planning for future climate conditions
- ☐ Sequestering carbon



Streamlining all our findings into one seamless click-through workflow.

This user-friendly workflow takes USPP members on a journey to explore relevant management strategies, approaches, DSTs, and environmental justice callouts relevant to their work. It is derived from a literature review of 104 sources, 64 decision-support tools, interview analysis of 15 USPP members, as well as the Northern Institute of Applied Climate Science (NIACS) Climate Adaptation Menus.

Objectives

1

Evaluate and organize existing climate adaptation resources into a structured workflow to facilitate climate adaptation in local forest management.

2

Develop an understanding of current climate adaptation practices in the Upper South Platte Watershed.

3

Incorporate equity and environmental justice into forest adaptation practices.

Impact

Our project supports locally-relevant climate adaptation in the Upper South Platte Watershed by addressing key barriers faced by forest managers—including a lack of tailored guidance, challenges in communicating climate adaptation, and limited integration of equity considerations. Through interviews, several literature reviews, and an analysis of decision-support tools, we developed a Climate Adaptation Workflow (CAW). The CAW is an organized resource that aims to reduce information overload and support decision making around climate adaptation. Managers can use the CAW to understand which adaptation options best meet their management goals. With the ultimate goal of fostering conversations about climate change and adaptation, this project will support the Watershed in being more resilient to wildfire, drought, and the other impacts of a changing climate.

About the Upper South Platte Watershed

The Upper South Platte Watershed:

- Is located in the foothills and mountains near Denver, CO along the Front Range
- Includes 1,848 acres, 30% of which is protected, and 74% covered by forests
- Provides approximately 80-90% of the larger Denver metro area's water supply
- Is home to approximately 849,000 people across urban, suburban, rural, and wildland-urban interface (WUI) areas
- Spans a variety of regions, from urban areas in southwest Denver to grasslands and riparian ecosystems, up to montane, sub-alpine, and alpine zones
- Is home to the USPP, an organization committed to collaborative forest and landscape management

