



# Adaptive Silviculture for Climate Change Network

The ASCC Network is creating robust, science-based examples of integrating climate change adaptation into silvicultural planning and on-the-ground actions

## Project Purpose

The Adaptive Silviculture for Climate Change (ASCC) project is a collaborative effort to establish a series of experimental silvicultural trials across a network of different forest ecosystem types throughout the United States and Canada. Scientists, land managers, and a variety of partners have developed eight core and three affiliate sites as part of an international network researching long-term ecosystem response to a range of climate change adaptation actions.

## Adaptation Options

Which approach best prepares forest ecosystems for climate change? The ASCC Network utilizes a continuum of adaptation options to facilitate management goals to create tolerable or desired change in ecosystem attributes.

### RESISTANCE



- Improve defenses of the forest against change and disturbance
- Maintain relatively unchanged conditions

### RESILIENCE

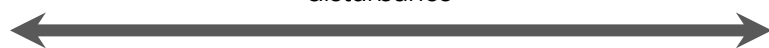


- Accommodate some degree of change
- Return to prior reference condition following disturbance

### TRANSITION



- Intentionally facilitate change
- Enable ecosystem to respond to changing and new conditions



Manage for Persistence

Manage for Change

## The Primary Objectives of ASCC

- Introduce natural resource managers to conceptual tools and approaches that integrate climate change into on-the-ground planning and decision-making processes
- Use a co-development, adaptive process with input from an expert panel of local managers and scientists to design specific experimental climate change adaptation treatments for a multi-region study

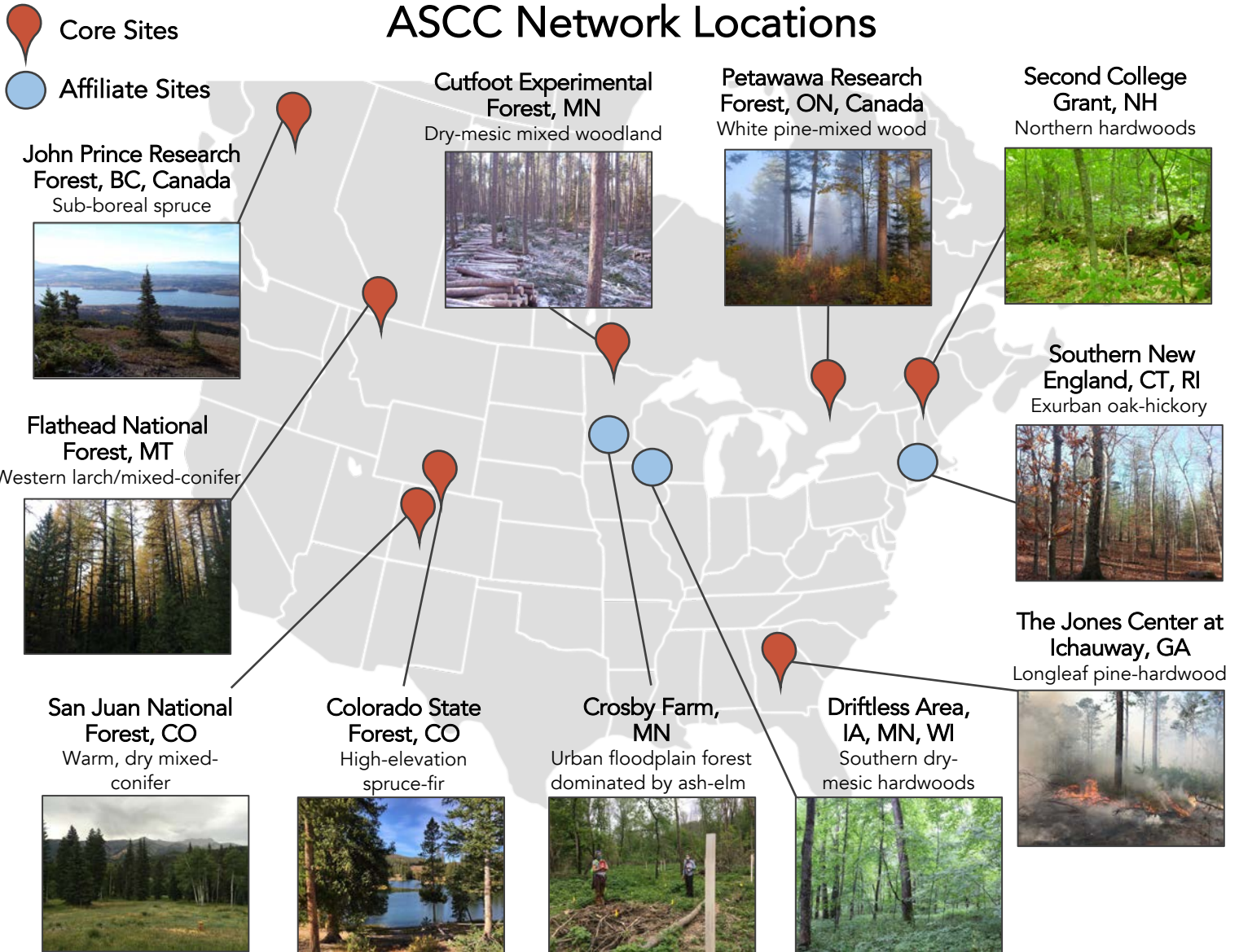


## Impact of the ASCC Network

The ASCC Network identifies locally appropriate actions for a changing climate to provide managers and scientists with tools for integrating climate change considerations into their decision-making. Treatments and findings from ASCC trials are part of an active network of long-term silviculture research that informs an experimental design model for research on forest adaptation for climate change. Science-management partnerships built through the ASCC Network inform research and advance communication of climate change adaptation at both a local and international scale.

For more information on the ASCC Network go to: [www.adaptivesilviculture.org](http://www.adaptivesilviculture.org)  
ASCC Network Lead and PI: [Linda.Nagel@colostate.edu](mailto:Linda.Nagel@colostate.edu) (Colorado State University)  
ASCC Network Coordinator: [Courtney.Peterson@colostate.edu](mailto:Courtney.Peterson@colostate.edu) (Colorado State University)  
USDA Forest Service Project Leads and PIs: [Chris.Swanston](mailto:Chris.Swanston) (Office of Sustainability & Climate)  
& [Maria.Janowiak](mailto:Maria.Janowiak) (Northern Institute of Applied Climate Science)

# ASCC Network Locations



## Study Design

The ASCC Network creates consistent experimental design criteria across all study sites while allowing individual trials to tailor treatments to their unique contexts. Teams of managers and scientists co-develop locally relevant desired future conditions, management objectives, and silvicultural tactics for the resistance, resilience, and transition adaptation approaches implemented at each site. A monitoring plan that meets the standards of the common study design allows scientists and managers to draw conclusions about adaptive silviculture across forest types.

## Progress and Next Steps

The initiation of each Network trial site involves an ASCC-led workshop with local managers and scientists about site-specific climate change impacts and forest adaptation approaches. Partners then work collaboratively to develop specific treatments for each silvicultural trial, which includes designing resistance, resilience, and transition management strategies to be implemented at each site. Managers and scientists collect pre-treatment data and conduct ongoing monitoring and evaluation of treatment success at each site.



For more information on the ASCC Network, go to: [www.adaptivesilviculture.org](http://www.adaptivesilviculture.org)