

Menu of Adaptation Strategies and Approaches

Developed for fire management

Strategy 1: Sustain fire as a fundamental ecological process

Approach 1.1: Restore or maintain fire in fire-adapted ecosystems

Approach 1.2: Develop fire use strategies in altered or novel ecosystems where fire can play a beneficial role

Strategy 2: Reduce the effects of biotic and abiotic stressors affecting fire regimes

Approach 2.1: Remove and prevent establishment of non-native invasive species that alter fuel regimes

Approach 2.2: Maintain or improve the ability of forests to resist pests and pathogens that may alter fuel regimes

Approach 2.3: Limit, selectively apply, and monitor land uses that increase fire risk or threaten fire resilience

Strategy 3: Reduce the risk of unacceptable fire

Approach 3.1: Protect fire-sensitive and vulnerable ecosystems from fire

Approach 3.2: Alter forest structure and composition to reduce the risk and spread of unacceptable fire

Approach 3.3: Establish or maintain fuel breaks to stop the spread of unacceptable fire

Strategy 4: Limit the effects of unacceptable fire and promote post-fire recovery

Approach 4.1: Promote habitat connectivity and increase ecosystem redundancy

Approach 4.2: Maintain or create fire refugia

Approach 4.3: Stabilize and enhance the physical fire footprint

Approach 4.4: Promote recovery of native vegetation and habitat

Strategy 5: Maintain and enhance structural, community, and species diversity using fire and fuels treatments

Approach 5.1: Maintain or increase structural diversity from stand to landscape scales

Approach 5.2: Promote diversity within and among communities to enhance fire resilience

Strategy 6: Identify, promote, and conserve fire- and climate change-adapted species and genotypes

Approach 6.1: Promote native species and genotypes that are better adapted to future climate and fire regimes, disfavor species that are distinctly maladapted

Approach 6.2: Use plant materials from regional areas that have current climate and fire regimes similar to anticipated future conditions

Strategy 7: Facilitate ecosystem adaptation to expected future climate and fire regimes

Approach 7.1: Facilitate the movement of species that are expected to be adapted to future climate and fire regimes

Approach 7.2: Use fire as a tool to align existing vegetation communities with changing climate and fire regimes

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Strategy 8: Use fire events as opportunities for ecosystem realignment

Approach 8.1: Revegetate burned areas using fire-tolerant and drought-adapted species and genotypes

Approach 8.2: Allow for areas of natural regeneration to test for future-adapted species

Approach 8.3: Maintain ecosystems that have undergone post-fire type conversion or realignment

Strategy 9: Promote organizational and operational flexibility

Approach 9.1: Develop adaptive staffing and budgeting strategies

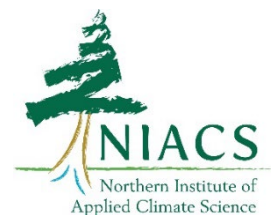
Approach 9.2: Explicitly consider changing climate and fire regimes during the planning process and adaptive management cycle

Approach 9.3: Engage and incorporate values of Indigenous communities in fire management decisions

Strategy 10: Promote fire-adapted human communities

Approach 10.1: Increase fuel reduction treatments in the wildland–urban interface (WUI)

Approach 10.2: Actively promote broad social awareness and increase education about anticipated effects of climate change on fire regimes



[Forestadaptation.org/fire](https://www.forestadaptation.org/fire)

Source: Sample et al. 2022. *Adaptation Strategies and Approaches for Managing Fire in a Changing Climate*.

More information: www.forestadaptation.org/fire or contact Martha Sample (Martha.Sample@nau.edu) or Courtney Peterson (Courtney.Peterson@colostate.edu).

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A supplemental topic to be used in the *Adaptation Workbook decision-support framework* – Swanston et al, 2016. *Forest Adaptation Resources: climate change tools and approaches for land managers*, 2nd edition.

<https://doi.org/10.2737/NRS-GTR-87-2>. **More information can be found at** www.forestadaptation.org/strategies.