

Menu of Adaptation Strategies and Approaches

Developed for Outdoor Recreation

Strategy 1: Protect and sustain key infrastructure

Approach 1.1 Stabilize shorelines to reinforce vulnerable infrastructure

Approach 1.2 Maintain, improve, and construct infrastructure using materials that can withstand a range of climate stressors

Approach 1.3 Maintain, improve, and construct infrastructure using designs that reduce impacts from variable water levels

Approach 1.4 Employ technological innovations to maintain the viability of developed winter recreation areas

Approach 1.5 Employ protective measures to minimize damage from disturbance events

Strategy 2. Enhance measures to prevent ecological damage from variable precipitation

Approach 2.1 Maintain and increase the capacity of stormwater infrastructure to accommodate variable precipitation

Approach 2.2 Enhance the capacity of natural systems to accommodate variable precipitation

Approach 2.3 Minimize impacts of existing roads and trails that are compromised by changing conditions

Strategy 3. Manage impacts from shifting visitation and use trends

Approach 3.1 Reduce visitor impacts to vulnerable areas

Approach 3.2 Optimize timing of opportunities to align with changing conditions

Approach 3.3 Provide alternative means of access

Strategy 4. Account for and communicate risks to human well-being

Approach 4.1 Train employees to be aware of climate-exacerbated risks to public safety

Approach 4.2 Prevent or minimize hazards from wildland fire

Approach 4.3 Prevent or minimize hazards from extreme heat events

Approach 4.4 Improve public awareness regarding climate change and climate-exacerbated risks

Approach 4.5 Communicate the reality of environmental change

Strategy 5. Manage recreational opportunities to address impacts of expected conditions

Approach 5.1 Recondition recreation-related infrastructure located in vulnerable areas

Approach 5.2 Use appropriate vegetation to increase resilience of recreation settings to climate-related stressors

Approach 5.3 Alter infrastructure to better capture and use natural and man-made snow

Approach 5.4 Employ snow-based options that are functional in low-snow conditions

Strategy 6. Alter recreational opportunities to accommodate expected conditions

Approach 6.1 Increase four-season and non-skiing recreation opportunities at winter sports areas

Approach 6.2 Relocate existing infrastructure and opportunities to areas with less risk of climate-exacerbated damage

Approach 6.3 Integrate long-term siting and climate considerations into recreation management

Approach 6.4 Use materials and designs that are impermanent

Approach 6.5 Remove or decommission vulnerable infrastructure



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A supplemental topic to be used in the decision-support framework – Swanston et al, 2016. *Forest Adaptation Resources: climate change and approaches for land managers*, 2nd edition - <http://www.treesearch.fs.fed.us/pubs/52760>

More information can be found at www.forestadaptation.org/adapt/adaptation-strategies