

Guide to Vegetation Treatment Costs for Land Management in the Great Basin Region



Treatment Type	Some Factors Affecting Cost	Example Costs*	Advantages of Treatment	Disadvantages of Treatment
Prescribed Burn Pinyon-Juniper Ecosystems and Sagebrush Ecosystems	<p>Vegetation Type: Low Cost: Grass (Fuel Model 1-3); Medium Cost: Shrub (Fuel Model 4-7); High Cost: Forest (Fuel Model 8-11)</p> <p>Size of Treatment Area: Per acre costs decrease as treatment area increases.</p> <p>Operational Difficulty: Burn units on steep slopes, with mid-slope control lines, or adjacent to homes will have higher costs.</p>	<p>Low Cost: \$5–\$25 per acre</p> <p>High Cost: \$125–\$175 per acre</p>	<ul style="list-style-type: none"> - Low per acre cost when treating large areas - Mimics natural processes which leads to positive public perception - Can effectively reduce fuel load and intensity of future fires - In areas with an abundance of native plants a prescribed burn performed in favorable weather conditions can favor the return of native species 	<ul style="list-style-type: none"> - Intensive planning requirements and liability concerns - Requires qualified applicators - Impaired air quality and reduced aesthetics over short term - Imprecise and variable treatment as fires may burn hotter or cooler than planned - Need for adequate fire weather conditions, narrow time period for application - In certain plant communities can favor return of non-native plants such as cheatgrass
Chainsaw Cut Pinyon-Juniper Ecosystems	<p>Tree Density: Cost increases with density of trees to be cut.</p> <p>Terrain: Steep terrain and distance from roads or difficult accessibility increase cost.</p> <p>Post-Cut Treatment: If trees are valued as a product (e.g., firewood) they may be removed for free or reduced price. If trees are to be stacked, chipped, burned or scattered, cost increases with labor intensity.</p>	<p>Low Cost: \$10–\$40 per acre</p> <p>High Cost: \$200–\$600 per acre</p>	<ul style="list-style-type: none"> - Precise treatment, ability to target trees and control boundaries - Ability to treat areas too steep for heavy machinery - Promotes growth of understory vegetation by minimizing disturbance and removing competition - Cut trees, slash or chips can be left on site to control erosion 	<ul style="list-style-type: none"> - Can be prohibitively expensive in rough, inaccessible terrain with high tree density - Fuel loads can be increased by leaving cut trees on site - High density of cut trees left on site can limit mobility of large herbivores and kill desirable plant species by shading - Understory response can be unpredictable and slow, especially in areas of high tree density - Small trees may be overlooked, sometimes requiring follow-up treatment
Heavy Machinery Pinyon-Juniper Ecosystems (Mastication, Chaining, Feller-buncher) Sagebrush Ecosystems (Mowing, Disking, Harrowing)	<p>Terrain: Steep slopes and rough terrain increase cost and can even prohibit use of heavy machinery.</p> <p>Vegetation Type and Density: Mature, dense stands of trees are the most costly to treat and costs increase where multiple passes are required.</p> <p>Fuel Prices: High fuel prices as well as remoteness of treatment site increase cost.</p>	<p>Sagebrush Treatment: \$10–\$65 per acre</p> <p>Pinyon-Juniper Treatment: \$50–\$500 per acre</p>	<ul style="list-style-type: none"> - Can be very effective in reducing fuel loads and thinning sagebrush, pinyon and juniper - Ability to target specific trees (mastication, feller-buncher), vary treatment intensity and precisely control treatment boundaries - Can be applied in combination with prescribed burn to increase benefit/ decrease cost - Flexibility in timing of treatment 	<ul style="list-style-type: none"> - Access to roads and fuel supply required - Should avoid use when soils are excessively wet - Can require follow-up treatment for small trees - Costly in cases of high tree density and rough terrain - Heavy machinery cannot be used in excessively steep, rough or inaccessible terrain
Herbicide Application Sagebrush Ecosystems	<p>Cost of herbicide and rate of application: Herbicides can be applied at different rates according to vegetation characteristics and management goals.</p> <p>Application method: Application by hand in rugged terrain is most costly, while aerial and ground rig application cost significantly less.</p>	<p>Low Cost: \$8–\$20 per acre</p> <p>High Cost: \$50–\$250 per acre</p>	<ul style="list-style-type: none"> - Can effectively target specific plants over large area - Often most cost effective method to remove undesirable plant species or groups - Viable option in remote, steep or rugged terrain when applied aerially 	<ul style="list-style-type: none"> - Negative public perception and concerns regarding broader environmental impact - Can increase fuel flammability in the short-term - Potential for targeted species to develop immunity if overused

*High and low costs represent those commonly reported by SageSTEP collaborators and the NRCS in 2010 and 2011. Costs reported here are meant to provide a starting point only and should be verified through additional research. Many of these treatments are eligible for cost-share assistance through the NRCS Environmental Quality Incentives Program. Contact your local NRCS agency or visit <http://www.nrcs.usda.gov/programs/eqip/> for more information.