

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

\*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.