

Criteria for Prioritizing Active and Passive Restoration Actions

Establishing a common approach to riparian restoration in the White River basin requires articulating the site criteria that are used to identify and prioritize restoration sites. Suggested criteria for land managers and land owners to use to prioritize sites are listed in Table 1 for active tamarisk and Russian olive control measures and in Table 2 for biological control measures (tamarisk leaf beetle). These criteria are principally driven by the Ecological Goals for the White River. Social, Economic, Cultural, and Management Goals provide direction for the manner in which selected sites are managed.

The selection of actual work sites will be driven by land management agencies and landowners in the context of the many other issues in the watershed (for example land-use issues, workforce availability, budget limitations, and logistical hurdles.) The prioritization criteria are a tool to inform the site selection process in order to increase the positive ecological impacts and the cost-effectiveness of restoration actions.

Feasibility Characteristics: The following three characteristics determine the feasibility of a site to be restored and must be met in order for restoration to proceed on a prioritized site.

1. Funding is available to complete the entire project, including monitoring and maintenance, to a point of success.
2. The landowner is willing. Cooperation, commitment, and common goals with the land owner or land manager are essential. Without long-term collaboration, monitoring, and maintenance, restoration is unlikely to succeed.
3. Site access is economically feasible. The accessibility of the site is important to consider due to the difficulty in management, monitoring, and maintaining the site. If there are adequate financial resources to properly monitor and maintain remote sites this is not an issue.

Table 1: Criteria for Prioritizing Sites for Active Tamarisk and Russian Olive Control

Criteria Category	Criteria Objective(s)
A. Healthy native vegetation communities	<p>Cottonwood gallery forests and mixed age stands</p> <p>Plant species or communities identified as threatened, endangered, special status, or of special concern by BLM, Colorado Natural Heritage Program, UDWR, USFWS, or Ute Tribe</p> <p>Islands of healthy native vegetation providing important seed sources for adjacent infested areas and/or high plant species diversity for wildlife</p> <p>Upland areas defoliated by the tamarisk leaf beetle where monitoring indicates that active revegetation is needed</p> <p>Stretches of high-density tamarisk where no active removal is planned but where the tamarisk leaf beetle will be active and the native seed source is insufficient for passive revegetation</p>
B. River channel complexity: side channels, backwaters, floodplain connection, large woody debris	<p>Conserve or restore aquatic habitat for native fish, including ESA (Colorado pikeminnow, razorback sucker) and Conservation Agreement (bluehead sucker, flannelmouth sucker, roundtail chub)</p> <p>Maintain or reestablish natural river channel morphology in areas that provide sediment transport and large woody debris inputs</p>
C. Good hydrologic connectivity	<p>Cottonwood stands in areas indicating good hydrology, e.g. young recruits, mixed age classes</p> <p>Low lying areas with stands of invasive woody species that are likely scoured by high flows and that could provide for cottonwood recruitment</p> <p>Oxbows and off-channel emergent wetlands</p>
D. Wildlife areas identified as important by BLM, CPW, UDWR, USFWS, and/or Ute Tribe	<p>Areas that provide habitat for federal, state, and/or tribal priority species</p> <p>Game habitat and/or migratory areas</p>
E. Social, Economic, Cultural	<p>Agricultural or grazing improvement</p> <p>Recreation: enhance access for public and/or improve aesthetics</p> <p>Opportunities for educational outreach</p> <p>Reduce risk to human life and public and private property from wildfires exacerbated by invasive woody species</p>

Criteria Category	Criteria Objective(s)
F. Management	<p>Desires of funding source</p> <p>Maintain existing and legacy restoration sites to not lose past investment and progress</p> <p>Logical expansion of other sites to promote connectivity</p> <p>Educational and training opportunities</p> <p>Opportunistic e.g. small or isolated TRO infestations that are easily managed before they expand</p>

Table 2: Criteria for Prioritizing Sites for Monitoring and/or Biological Tamarisk Control

Criteria Category	Criteria Objective
A. Costs	<p>Areas with insufficient funding to adequately address all aspects of restoration; i.e., active tamarisk control, revegetation, herbaceous weed control, monitoring, and maintenance</p> <p>Areas with very light tamarisk infestations with good native plant seed source.</p>
B. Landowner considerations	<p>Sites without landowner permission for active restoration methods</p> <p>Sites that are experiencing livestock grazing practices that are not considered Best Management Practices</p> <p>Sites with landowner requirements for control and revegetation that do not meet with the Vision, Guiding Principles, or Goals of the WRP</p>
C. Accessibility	<p>Areas generally inaccessible except through extraordinary measures</p>
D. BMP under development	<p>Areas of high herbaceous weed infestations along with tamarisk that are best left to a future effort that is informed by pilot projects</p>
E. Other situations	<p>Areas that could have sufficient native plant communities that are not considered as significant as cottonwood e.g. rabbitbrush, sagebrush, greasewood</p> <p>Cultural resource sites that would be damaged by active control</p> <p>Wildlife and plant species of concern that could be harmed by active control</p>