

Alternative E No Use of Acetolactate Synthase-inhibiting Herbicides
Emphasis on passive restoration:
Expanded version

EMC0445
see EMC0347

It is good practice to base vegetation management decisions on priorities, goals, scientifically proven methods and put emphasis on prevention. However, this section puts the greatest restrictions on BLM for vegetation management restorative processes. The actions called for will delay treatment due to lack of time, materials, personnel and funding. In addition, the section has many points of contradiction in relation to use of ALS herbicides, restoration with native vegetation, using best available science and using limited disturbance management practices. This alternative has several facts wrong and misses the mark on altering fire behavior. The section of greatest concern is banning use of ALS herbicides.. I strongly oppose Alternative E (Management outlined in Appendix G)

In relation to herbicide:

All the following bullet points are excellent points to consider when choosing a vegetation treatment. Each bullet also supports the use of acetolactate synthase (ALS)-inhibiting herbicides, including the targeted herbicide sulfometuron (inferred by mentioning crop damage) and chlorsulfuron, metsulfuron, imazapyr and imazapic, and possibly future products such as imazamox. For each point the quote from the proposed action is stated followed by one or more examples where only the use of an ALS herbicide would meet the criteria.

- OVR 2 *“Base treatments on the best available science and knowledge”*

Best base treatment of Saltcedar is imazapyr. This includes control results compared to mechanical, fire, biological and other herbicide treatments.

Best base treatment of Whitetop is metsulfuron or imazapic. This invasive weed will never have a biological control due to similarities with crops, and because it is a deep rooted perennial, mechanical or cultural practices due not result in control. No other herbicide in the EIS will control whitetop.

- GOAL-PLAN 1, *“Vegetation treatments are based on assessments of . . . (3) opportunities for prevention of soil disturbance and vegetation problems;”*

For any deep-rooted perennial weed, if herbicides are not part of the program, extensive soil disturbance is needed for control. Selective herbicides that promote release of desired vegetation, both grasses and broadleaves, and control deep-rooted perennials are metsulfuron or imazapic for mustard control, imazapic for control of Dalmatian toadflax, leafy spurge, mustards, Russian knapweed, bindweed, plus others. Aerial application of imazapyr for saltcedar control causes no soil disturbance. Without this option cutstump + herbicide or root plowing + herbicide are next best control options, each causing soil disturbance and vegetation problems.

- PRIORITIES 1 *“Prioritize treatments shown to have a high probability of restoring natural processes and natural biotic communities over treatments without this kind of documentation.”*

Imazapic, an AHAS mode-of-action herbicide, has shown to have the highest probability to restore natural processes and biotic communities for cheatgrass infested rangeland, adding in bunchgrass/shrub community release, replanting sites and fuel breaks.

Imazapyr has shown to have the highest probability to restore natural processes and biotic communities for saltcedar infested areas, adding in return of water (ponds and lakes filling, rivers running) and allowing shortest time to a productive, bio-diverse habitat, including restoring threatened and endangered species habitat.

- General, PRIORITIES 3 *“Vegetation . . . restoration treatments must utilize . . . 5. the least intrusive techniques available to restore ecological integrity”*

Aerial application of the selective herbicide imazapic for cheatgrass infested communities is the least intrusive technique to restore ecological integrity to rangeland. Without imazapic as a tool, control options include broadcast treatment of a non-selective herbicide glyphosate, annual or biannual disking, continuous mowing, or intensive grazing.

Aerial application of imazapyr for saltcedar is the least intrusive technique to restore ecological integrity to wetland areas. Without imazapyr, the next best option is cut stump treatments with triclopyr. Areas become severely trampled during this process and repeat treatment is often needed.

- RESTORATION 1 *“Use the least intrusive/extensive/risky vegetation treatment methods to enhance wildlife habitat and populations.”*

Less Intrusive example under PRIORITY 3.

Less Extensive: ALS inhibitors have the greatest activity towards control of numerous invasive weeds, resulting in the least number of broadcast applications needed. Typically one broadcast application, coupled with favorable changes in management or other control methods, followed by spot treatment during the next 2 to 3 years (not counting new invasion) can nearly eradicate an invasive weed population. Using an inferior herbicide will result in numerous extensive treatments.

Less risky: ALS inhibitors are the herbicides associated with the least amount of risk, including less risk than glyphosate. Human Health and Risk Assessments show these herbicides to have the least risk toxicology. To remove ALS inhibitors forces BLM to use higher risk products. When compared to large-scale mechanical treatments, or manual labor, ALS inhibitors present less risk to the person applying the treatment. When compared to prescribed fire, ALS inhibitors present less risk to the people applying the treatment and the surrounding environment.

- RESTORATION 16 “*Only herbicides that minimize adverse effects on environmental and human health, based on knowledge of all ingredients in the formulation, shall be utilized for chemical control.*”

ALS inhibiting herbicide are, as a group, the least toxic herbicides to the environment and humane health on the market. All ALS inhibitors are in the least toxic category of EPA. Removal of ALS inhibitors forces BLM to use a higher risk product. (Examples: imazapic versus multiple applications of picloram for leafy spurge control, multiple applications of 2,4-D or triclopyr versus imazapyr for foliar saltcedar control, multiple applications of 2,4-D or dicamba versus imazapic or metsulfuron for perennial mustard control)

RESTORATION 17 “*Prohibit use of sulfonylurea herbicides and other acetolactate synthase-inhibiting (ALS or AHAS) herbicides . . .*”

Following comments are in addition to the above reasons to keep ALS inhibiting herbicides. Alternative E goes against the 6th most identified key issue during scoping, “*Use newer, less toxic herbicides where feasible*”. Herbicides within the ALS inhibiting mode-of-action class are some of the least toxic herbicides available with metsulfuron methyl having the least toxic rating allowed by EPA, as discussed above. Herbicides in this family selectively control invasive plants that no other herbicides in the PEIS will control. Weeds among the top plants listed in the PEIS as responsible for degradation of BLM lands are halogeton, medushead, and *Bromus* species. All are selectively controlled by imazapic, an ALS inhibitor. Perennial pepperweed and whitetop, major western invasive weeds, typically growing in riparian and wetland areas, can only be controlled by the aquatic formulation of imazapyr. A selective ALS inhibitor, imazamox, will also be registered for this use in the next 2 years. Control for Sahara mustard, a newly identified invader, is currently being researched with ALS inhibitors as the most likely selective control alternative. Without ALS inhibitors as an option, numerous blocks of BLM land will become biological deserts. In addition, removing the option of all ALS inhibitors will result in no option for control of some weeds, no herbicide option for control of other weeds, and only one herbicide option for control of a majority of weeds. Having only one herbicide option results in no ability for resistance management. Without imazapyr only triclopyr cut stump or basal will control saltcedar. Without sulfometuron or imazapic only glyphosate is available for control of cheatgrass (already glyphosate resistant weeds). Without imazapic only picloram is available for control of leafy spurge or Dalmatian toadflax. Without the future option of imazamox only fluridone will be available for hydrilla control (already fluridone resistant hydrilla).

RESTORATION 17 “. . . *due to their demonstrated ability to damage off-site native and crop species.*”

This statement does not take in to consideration ALL ALS inhibitors. Native species are more tolerant to imazapic than introduced developed species. Imazapic was specially developed for establishment of native prairie and has a crop label. Chlorsulfuron and metsulfuron are also registered for use in crops and have very little activity on numerous native grasses, forbs and shrubs. Imazapyr is a known non-selective herbicide and only labeled for small-scale use in rangeland. The claim of “damage off-site . . . crop species” does not apply for a large majority of BLM land where adjacent cropland is non-existent. Claim of potential off-site damage to natives does not apply for many cases where herbicides are the chosen tool because the stand is a monoculture of invasive weeds. If off-site damage is a possibility, the process of developing the site specific management plan should eliminate herbicides that cause damage to the desired crop or native vegetation.

RESTORATION 12 TO 17 All these actions should be eliminated and replaced by “Follow label directions”. Some actions only state what is already on the herbicide label. Other actions assume restrictions without going through accepted methods to determine restrictions on a site-by-site basis. Example: “*Do not use broadcast herbicide treatments within 5000 ft of endangered, threatened, candidate, sensitive, or rare plants.*” EPA, USF&WS and NOAA already have a process to determine boundaries to these species that is stated on each herbicide label. To unnecessarily stay 500 ft from these species means avoiding rehabilitation of the most critical habitat area.

General, PRIORITIES 4. All treatment methods need to be given equal priority to assure that the soundest environmental treatment is identified and utilized. This section is correct in articulating that herbicide treatments should be used in conjunction with points 1 and 2, as all herbicide vegetation treatments should including a component of cultural, mechanical or biological control to assure the greatest long-term control possible. Endnote 3 is misleading. This list of potential herbicide hazards is only valid if the **WRONG** herbicide is used. If the correct herbicide is chosen for vegetation treatment there should not be any incidents of toxic effects on workers, residents, soil organisms, aquatic or avian species and minimal, short-term effect on a limited number of native plants.

RESTORATION 6 “*Prioritize non-chemical methods, unless shown to be ineffective, over chemical methods.*” When developing a treatment plan, all factors should be considered including budget and time to successful rehabilitation. It is unacceptable to use mechanical methods when an herbicide method will achieve the same results more cost effective and faster, without causing undue risk.