

APPENDIX 4

Prototype-Weed Prevention Measures

(U.S. Dept. of Ag. 1991 Record of Decision,
Noxious Weed Mgmt. Amendment to Lolo Natl. Forest Plan. U.S.Forest Service)

Management Requirement Best Known Practices

(should be followed unless the intent of the first column can be met with an alternative method which is discussed in the project environmental document)

Roads

- 1) Incorporate weed prevention into road layout, design, and alternative evaluation.
- 2) Remove seed source that could be picked up by passing vehicles and limit seed transport into relatively weed-free areas at moderate or high-ecological risk.
- 3) Retain shade to suppress weeds.
- 4) Re-establish vegetation on all bare ground to minimize weed spread.
- 5) Minimize weed spread caused by moving infested gravel and fill material to relatively weed-free locations

- 1.1) During transportation planning and alternative development, consider weed risk factors (presence of weeds, habitat type, aspect, shading, etc.) to evaluate road location and design.
- 2.1) Before construction equipment moves into a relatively weed-free area at moderate or high-ecological risk; mow, grade, or otherwise treat all seed-bearing noxious weed plants on the travel-way of existing Forest Service access roads. Treated sites must be reseeded as described in Weed Prevention Measure #4.1.
- 2.2) Clean off-road equipment (power or high-pressure cleaning) of all mud, dirt, and plant parts before moving into relatively weed-free areas at moderate or high-ecological risk. (This is not meant to apply to service vehicles that will stay on the roadway traveling frequently in and out of the project area.)
- 3.1) Minimize the removal of trees and other roadside vegetation during construction, reconstruction, and maintenance; particularly on south aspects.
- 4.1) For all construction, reconstruction, and maintenance activities, seed all disturbed soil (except traveled way) within seven days of work completion at each site - unless ongoing disturbance at the site will prevent weed establishment. In that case, seeding shall be done within seven days of final disturbance. Use a seed mix that includes fast, early-growing species to provide quick, dense re-vegetation. Seed should be certified relatively weed-free and/or analyzed (as deemed appropriate by the Forest Soils Scientist) before purchase to ensure minimum weed content. Consider the following options: • fertilization concurrent with seed application and follow-up fertilization; • applying relatively weed-free mulch with seeding; • double-seed, full rate at initial ground disturbance, and full rate again at the end of the project. See the current Lolo Seeding Guidelines for detailed procedures and appropriate mixes.
- 5.1) Gravel and fill to be placed in relatively weed-free areas which are at moderate or high-ecological risk to weed invasion must come from weed-free sources. Inspect gravel pits and fill sources to identify weed-free sources.

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- 6) Minimize sources of weed seed in areas not yet re-vegetated.
- 7) Ensure establishment and maintenance of vigorous, desirable vegetation to discourage weeds.
- 8) Minimize roadside sources of weed seed that could be transported to other areas.
- 9) Ensure that weed prevention and related resource protection is considered in travel management.

Recreation,

Wilderness, Roadless Areas

- 10) Minimize transport of weed seed by pack and saddle stock.
 - 11) Encourage a weed-free trail user's ethic.
 - 12) Ensure that areas under permit have on-site weed control and minimize spread to other areas.
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- 6.1) Keep active road construction sites which are in relatively weed-free areas at moderate or high-ecological risk to weed invasion closed to vehicles that are not involved with construction.
 - 7.1) Monitor all seeded sites. Re-fertilize and spot reseed as needed. Prefer native, pioneer species for seeding (low nutrient demanding) to minimize the need for fertilization.
 - 7.2) Road maintenance programs should include scheduled fertilization where needed (three-year period suggested).
 - 8.1) Road maintenance programs should include monitoring for noxious weeds. Weed infestations should be inventoried and scheduled for treatment according to the selected alternative. Consider developing timber sale "C" clauses and "T" specifications to collect deposits for use in weed-control road maintenance.
 - 9.1) Consider weed risk and spread factors in Travel Plan (road closure) decision making.
 - 10.1) Require that all pack and saddle stock in designated areas use only certified weed-free and straw bedding. (In established wilderness, this requirement should be deferred to the Limits of Acceptable Change Planning Process.) Encourage the use of weed-free feed in all areas of the forest.
 - 10.2) Pack and saddle stock should be quarantined and fed only weed-free feed for 24 hours prior to traveling off roads in the forest. Before quarantine, tail and mane should be brushed out to remove any weed seed.
 - 11.1) Sign trailheads for weed awareness and weed prevention techniques.
 - 12.1) Revise recreation special-use permits to require weed treatment consistent with the Forest Plan Amendment for Noxious Weed Management. Require all bare soil to be reseeded as described in Weed Prevention Measure #4.1.

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Cultural Resources

13) Ensure all bare ground is covered by desirable vegetation to discourage weeds.

Wildlife

14) Incorporate weed prevention into wildlife habitat improvement project design.

Range

15) Minimize the creation of bare soil and other factors that support weeds.

16) Minimize weed seed transport to relatively weed-free areas at moderate or high-ecological risk.

17) Ensure success of revegetation efforts to minimize weed spread.

18) Retain desirable roadside vegetation to discourage weeds.

Timber

19) Ensure that weed prevention is considered in all timber management project designs.

13.1) Archeological site excavations will be reseeded to the standards given in Weed Prevention Measure #4.1.

14.1) Environmental analysis for habitat improvement projects (prescribed fire) will include weed-risk considerations in the development and evaluation of alternatives.

15.1) Manage allotments to prevent excessive soil disturbance at salt licks, watering sites, and sensitive soil conditions.

15.2) All salt must be kept in containers and moved periodically.

15.3) Revise special use permits and allotment management plans to require weed treatment consistent with the Forest Plan Amendment for Noxious Weed Management. Require all base soil to be reseeded as described in Weed Prevention Measure #4.1.

16.1) In range allotments that have both weed-infested and relatively weed-free areas at moderate or high-ecological risk, control timing of animal movement from infested to noninfested areas. Prevent movement from infested to noninfested areas after weed seed set.

17.1) Avoid grazing any reseed sites until vegetation is well established.

18.1) Roadside vegetation should not be included when calculating allotment grazing capacity.

19.1) Consider weed risk and prevention factors (e.g., maximize shade and minimize soil disturbance) in all silvicultural prescriptions and in alternative development and evaluation for all timber sale environmental analyses.

Management Requirement Best Known Practices

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- 20) Minimize the creation of sites suitable for weed establishment.
- 21) Remove seed source that could be picked up by passing vehicles, and limit seed transport into relatively weed-free areas at moderate or high-ecological risk.
- 22) Examine weed prevention and treatment needs, and seek funding sources.

Minerals

- 23) Minimize chances of weed establishment in mining operations.
- 24) Remove seed source and limit seed transport into relatively weed-free areas at moderate or high-ecological risk.
- 25) Ensure that all disturbed soil is revegetated as soon as possible to discourage weeds.

20.1) Minimize soil disturbance: • no more than needed for tree regeneration, • prefer winter skidding on high weed-risk sites, • prefer broadcast burning over dozer piling, • when using dozer piles, prefer small piles and burn under conditions that minimize heat transfer to the soil, • avoid dozer fireline construction on high weed-risk sites, • ensure prompt regeneration to maximize shading, • seed skid trails, landings, and other disturbed sites as described in Weed Prevention Measure #4.1.

21.1) Before skidding equipment moves into a relatively weed-free area at moderate or high-ecological risk; mow, grade or otherwise treat all seed-bearing noxious weed plants on the travelway of existing Forest Service access roads. Treated sites must be reseeded as described in Weed Prevention Measure #4.1.

21.2) Clean skidding equipment (power or high-pressure cleaning) of all mud, dirt, and plant parts before moving into relatively weed-free areas at moderate or high-ecological risk.

22.1) Inspect proposed timber sale areas for weed status and risk. Collect KV or other funds to prevent, monitor, and treat soil disturbance or weeds as needed during and after timber harvest and regeneration activities.

23.1) Include weed prevention and treatment in all mining plans of operation and reclamation plans. Retain bonds for weed control until the site is returned to vegetative conditions matching the surrounding area.

24.1) Before equipment moves into a relatively weed-free area at moderate or high-ecological risk; mow, grade, or otherwise treat all noxious weeds along existing access roads (include in plan of operation). Treated sites must be reseeded as described in Weed Prevention Measure #4.1.

24.2) Clean equipment (power or high-pressure cleaning) of all mud, dirt, and plant parts before moving into relatively weed-free areas at moderate or high-ecological risk (include in plan of operation).

25.1) Reseed all bare soil within seven days as described in Weed Prevention Measure #4.1 (include in plan of operation).

Management Requirement Best Known Practices

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Lands

- 26) Incorporate weed prevention in all lands projects.
- 27) Ensure quick re-establishment of desired vegetation to discourage weeds.

Fire (See also measures under Timber and Wildlife)

- 28) Ensure that fire suppression and rehabilitation efforts minimize weed spread.

26.1) Consider weed risk, prevention, and treatment factors in alternative development and evaluation for all project planning.

26.2) Require weed control until the site is returned to a vegetative condition that matches the surrounding area.

26.3) Revise special-use permit plans to require weed treatment consistent with the Forest Plan Amendment for Noxious Weed Management. Require all bare soil to be reseeded as described in Weed Prevention Measure #4.1.

28.1) Include weed-risk factors and weed prevention considerations in the Resource Coordinator duties on all Incident Overhead Teams and Fire Rehabilitation Teams.

28.2) During fire rehabilitation, reseed all disturbed soil in relatively weed-free areas at moderate or high risk to weeds as described in Weed Prevention Measure #4.1.