

APPENDIX A – MITIGATION MEASURES

The following mitigation measures are listed in more detail than in Chapter 2, Alternatives.

PESTICIDE USE MANAGEMENT AND COORDINATION.

The Forest Service uses pesticides very judiciously, safely, and effectively. Base actual use and recommended use on analysis of effectiveness, specificity, environmental impacts, and economic efficiency. The Forest Service may use only pesticides registered or otherwise permitted in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act, as amended.

Pesticide Application According to Label Directions and Applicable Legal Requirements.

1. Objective. To avoid water contamination by complying with all label instructions and restrictions.
2. Explanation. Directions found on the label of each pesticide are detailed and specific, and include legal requirements for use.
3. Implementation. Constraints identified on the label and other legal requirements of application are incorporated into project plans and contracts. For in-service projects, responsibility for ensuring that label directions and other applicable legal requirements are followed rests with the Forest Service's project supervisor who shall be a certified commercial applicator. For contracted projects, it is the responsibility of the Contracting Officer or the Contracting Officer's Representative (COR) to ensure that label directions and other applicable legal requirements are followed.

Pesticide Spill Contingency Planning.

1. Objective. To eliminate contamination of water that may occur from accidental spills.
2. Explanation. The Forest Oil and Hazardous Substances Pollution Contingency Plan prepared by each Forest consists of predetermined actions to be implemented in the event of a spill. The plan lists who will notify whom and how, time requirements for the notification, guidelines for spill containment, and who will be responsible for cleanup. Site-specific planning that involves hazardous substances requires a spill plan which is contained in the project safety plan. Guidance on pesticides spill prevention and planning can be obtained in the FSH 2109.12.
3. Implementation. Spill contingency planning is incorporated into the Project Safety Plan. The environmental analysis process provides the means for including public and other agency involvement in plan preparation. The plan will list the responsible authorities.

Cleaning and Disposal of Pesticide Containers.

1. Objective. To prevent water contamination resulting from cleaning or disposal of pesticide containers.

2. Explanation. The cleaning and disposal of pesticide containers must be done in accordance with Federal, State and local laws, regulations, and directives. Specific procedures for the cleaning and disposal of pesticide containers are documented in State and local laws and in the Pesticide Storage, Transportation, and Spills Handbook, FSH 2109.12.

3. Implementation. The Forest or District Pesticide Use Coordinator will approve proper rinsing procedures in accordance with State and local laws and regulations, and arrange for disposal of pesticide containers when the pesticide is applied by in-service personnel. When the pesticide is applied by a contractor, the contractor is responsible for proper container disposal in accordance with label directions and Federal, State, and local laws.

WEED PREVENTION PRACTICES

Objective	Best Known Practice
<p>1. Incorporate weed prevention and control into project layout, design, alternative evaluation, and project decisions.</p>	<p>1.1 – Environmental analysis for projects and maintenance programs will need to assess weed risks, analyze potential treatment of high-risk sites for weed establishment and spread, and identify prevention practices. Determine prevention and maintenance needs, including the use of herbicides if needed, at the onset of project planning.</p> <p>1.2 – Coordinate with other agencies and adjacent landowners to prevent and control weeds. (CFR 222.8)</p>
<p>2. Avoid or remove sources of weed seed and propagules to prevent new weed infestations and the spread of existing weeds.</p>	<p>2.1 – Before ground-disturbing activities begin, inventory and prioritize treatment of invasive weeds in project operating areas and along access routes, or within reasonably expected potential invasion vicinity. Do a risk assessment accordingly; control weeds as necessary.</p> <p>2.2 – After completing “Practice 2.1” above, reduce risk of spreading and creating weed infestations. Plan operating areas and access routes to avoid heavy infestation areas, plan closure of access routes at finish of project, and/or begin project operations in uninfested areas before operating in weed-infested areas. Locate and use weed-free project staging areas. Avoid or minimize all types of travel through weed-infested areas, or restrict to those periods when spread of seed or propagules are least likely.</p> <p>Equipment Wash Station – Centralized wash station areas will be developed in several locations throughout the CNF. They must have a filter system, for example at least 6 inches of large cinder or gravel spread over an area 10' x 30'. Filter cloth may be used for temporary stations. The area will be a perched drainage to allow excess moisture to drain after being filtered and must be at least 200 yards from a natural drainage to avoid contamination. All wash station locations must be monitored annually and all weed materials removed as soon as possible.</p> <p>2.3 – Remove mud, dirt, and plant parts from project equipment before moving it into a project area. Determine the need for, and when appropriate, identify sites where equipment can be cleaned. Clean all equipment before entering National Forest System lands; a forest officer, in coordination with the unit invasive species coordinator, needs to approve use of on-forest cleaning sites in advance. This practice does not apply to service vehicles traveling frequently in and out of the project area that will remain on a clean roadway. Seeds and plant parts need to be collected when practical and incinerated.</p> <p>2.4 – If operating in areas infested with weeds, clean all equipment before leaving the project site. To minimize time spent cleaning equipment, time all work in infested areas last and concurrently, designate a “contaminated” parking lot where project vehicles working in the infested area may be parked for the duration of the project. This area should be monitored in followup mitigation and should be near a “clean” vehicle/equipment lot. Identify sites where equipment and vehicles can be cleaned before leaving the site at the end of the project. Seeds and plant parts need to be collected</p>

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	<p>when practical and incinerated.</p> <p>2.5 – Workers need to inspect, remove, and properly dispose of weed seed and plant parts found on their clothing and equipment after being trained to recognize the priority species in the area. Proper disposal means bagging the seeds and plant parts and incinerating them.</p> <p>2.6 – Coordinate project activities between resources and between agencies (such as city, county, ADOT, ASLD) with any nearby weed treatments, including herbicide applications, to maximize cost effectiveness of weed treatments.</p>
<p>3. Prevent the introduction and spread of weeds caused by moving infested sand, gravel, borrow, and fill material in Forest Service, contractor and cooperator operations.</p>	<p>3.1 – Inspect material sources on site annually, and ensure that they are weed-free before use and transport. Treat weed-infested sources for eradication, and strip, stockpile, and treat contaminated material before using pit materials.</p> <p>3.2 – Inspect and document the areas where materials are used (including those from treated weed-infested sources) annually for at least 3 years after project completion to ensure that any weeds transported to the site are promptly detected and controlled.</p> <p>3.3 – Maintain stockpiled, uninfested material in a weed-free condition.</p> <p>3.4 – Work with the responsible transportation agencies to adopt these practices for maintenance of roads that cross National Forest System lands.</p>
<p>4. Avoid creating soil conditions that promote weed germination and establishment.</p>	<p>4.1 – Minimize soil disturbance to the extent practical, consistent with project objectives.</p> <p>4.2 – In those vegetation types that have relatively closed canopies as a natural condition, retain shade to the maximum extent possible to suppress weeds and prevent their establishment and growth in and around project activity.</p>
<p>5. Where project disturbance creates bare ground, establish vegetation to minimize favorable conditions for weeds.</p>	<p>5.1 – Treat disturbed soil (except surfaced projects) in a manner that optimizes native plant establishment for that specific site. Define for each project what constitutes disturbed soil and objectives for plant cover revegetation.</p> <p>5.2 – Revegetation may include topsoil replacement, native seedbank promotion, planting, seeding, fertilization, and/or weed seed-free mulching as necessary. Use local native material where appropriate and feasible (or specifically identify why not used). Always use certified weed-free and weed seed-free hay or straw. Always use certified materials in areas closed by administrative order. Where practical, stockpile weed seed-free topsoil from the project area and replace it on disturbed areas (e.g. road embankments, staging areas, wash stations, or landings).</p> <p>5.3 – Use local seeding guidelines to determine detailed procedures and appropriate mixes. To avoid weed contamination, a certified seed laboratory needs to test each lot against the all-State noxious weed list to Association of Seed Technologists and Analysts (AOSTA) standards, and provide documentation of the seed inspection test. Seed lots labeled as certified weed seed-free at time of sale may still contain some weed seed</p>

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	<p>contamination.</p> <p>5.4 – Monitor and document all limited term ground-disturbing operations near weed infested areas for at least five growing seasons, or the documented seed viability for the species of concern following completion of the project. For ongoing projects, continue to monitor until reasonable certainty is obtained that no weeds have occurred. Provide for followup treatments based on inspection results.</p> <p>5.5 – Evaluate options, including closure, to minimize future infestations on sites where desired vegetation needs to be established.</p>
<p>6. Improve effectiveness of prevention practices through weed awareness and education.</p>	<p>6.1 – Provide information, training and appropriate weed identification materials to people potentially involved in weed introduction, establishment, and spread on National Forest System lands, including agency managers, employees, forest workers, permit holders, and recreational visitors. Educate them to an appropriate level in weed identification, biology, impacts, and effective prevention measures. Educate resource level managers to allow them to incorporate weed prevention practices in their planning of projects and daily activities.</p> <p>6.2 – Provide proficient weed management expertise at each administrative unit. Expertise means that necessary skills are available and corporate knowledge is maintained.</p> <p>6.3 – Develop incentive programs encouraging weed awareness, detection, reporting, and for locating new invaders.</p>