Appendix A

USDA Forest Service, Region 4 Best Management Practices for Weed Prevention and Management

APPENDIX A

USDA Forest Service, Region 4, Best Management Practices for Weed Prevention and Management

Forest Service Manual, Ogden, UT
Title 2000—National Forest Resource Management
R4 Supplement No. 2000-00-1
Effective XXXXXX, 2000

POSTING NOTICE. Supplements are numbered consecutively by Title and calendar year. Post by document name. Remove entire document and replace with this supplement. Retain this transmittal as the first page of this document. This is the first supplement to this Title.

Document Name	Superseded (Number of Pages)	New
2080	3	11

Digest:

2081.2—Adds Best Management Practices for Noxious Weed prevention and management.

JACK BLACKWELL
Regional Forester

Series 2000—National Forest Resource Management

R-4 Supplement 2000-00-01

Effective XXXXXXX, 2000

Zero Code—Noxious Weed Management

2081.2—Prevention and Control Measures

1. Carry out the noxious weed program with an integrated pest management approach considering the following priorities:

    a. Priority I—Potential New Invaders. Emphasis on education, awareness and prevention of noxious weed species that do not yet occur on National Forest System lands. Since a public awareness program is Priority I, Forest should prepare a Public Involvement Plan.

        (1) Conduct a continuing education and awareness program to train Forest Service personnel and public land users to recognize Priority I weeds. This should include: noxious weed herbarium specimens, photographs of noxious weed species, distribution of published reports, and so forth.

        (2) On an annual basis, share information on the weed treatment programs and established priorities with county weed control associations and other interested groups.

        (3) When a Priority I weed has invaded the forest, place it in Priority II and take appropriate action as described below.

    b. Priority II—Eradication of New Invaders. Highest treatment priority is eradication of new invading noxious weed species. Treatment must emphasize preventing conditions that allow them to become established. Eradication is the goal for these weeds. Components of this treatment priority include:

        (1) Give highest priority in funding to control efforts on new invaders.

        (2) Take isolation and eradication measures as soon as new invaders are identified. Take immediate measures to prevent the species from going to seed.

        (3) Coordinate new infestation surveys with adjacent landowners.

        (4) Identify and treat the cause of new weed infestations to reduce re-entry possibilities.

    c. Priority III—Established Infestations.

        (1) Emphasize containing and preventing further spread.

(2) Give special treatment considerations to breakouts from established stands and along routes of spread, or adjacent to private lands.

(3) Control methods should consider the practicality/cost effectiveness of the method compared to the likelihood of success.

(4) Emphasize biological control where successful agents are available.

(5) Direct emphasis toward species agreed to in local weed management areas, Memorandums of Understanding, and/or cooperative agreements with weed management partners.

2. Stop the spread of existing noxious weed infestations and prevent invasion of new sites or new noxious weeds by applying the following recommended prevention and control mitigation measures (best management practices for noxious weeds).

a. Incorporate noxious weed prevention into all project layout, design, and alternative evaluation.

(1) Environmental analyses will consider noxious weed risk in evaluating project location and design and development of alternatives and mitigating measures, including any or all of the following, as determined to be appropriate by the Forest Officer in charge:

(a) The presence of existing noxious weed infestations within the project site by species and magnitude,

(b) The vulnerability of the habitat type to noxious weed invasion,

(c) The risk for invasion or spread of noxious weeds that could be caused by the project,

(d) The evaluation of alternatives for noxious weed-free and/or low-risk sites for project implementation,

(e) The evaluation of alternative implementation methods which would reduce risk of invasion or spread of noxious weeds,

(f) Provide mitigation measures designed to minimize risk of invasion or spread of noxious weeds,

(g) The evaluation of direct, indirect, and cumulative effects to noxious weed species and populations. Soil disturbance activities will include noxious weed prevention measures.

b. Project implementation for all ground-disturbing operations within noxious weed infested areas will include provisions for monitoring and inspecting for at least one and preferably two growing seasons following operations. Ground-disturbing operations include, but are not limited to: range seedings, timber harvest, reforestation, wildlife browse plantings, road construction, and fire-burned areas and staging areas.

(1) Ground disturbing operations within noxious weed infested areas must comply with mitigation measures recommended by the Ranger District Weed Specialist and approved by the Responsible Forest Officer.

(2) Select noxious weed-free project construction staging areas.

(3) Retain shade in areas that will have ground disturbance to suppress noxious weeds.

(a) Except when removal is required for public safety, minimize the removal of trees and other roadside vegetation during construction, reconstruction, and maintenance, particularly on southerly aspects.

(4) Re-establish vegetation on bare ground (caused by ground-disturbing activities) to minimize noxious weed spread.

(a) For all ground-disturbing activities in noxious weed areas, seed all disturbed soil in a manner that optimizes plant establishment for that specific site—unless ongoing disturbance at the site will prevent noxious weed establishment or spread. Monitor and re-seed as needed until site is successfully revegetated according to project standards.

Exceptions to this mitigation measure will require monitoring and treatment of invading noxious weeds. Exceptions include:

- Grading and blading of travel ways, borrow ditches, rights-of-way, and drainage ways on system roads which are routinely maintained.
- Areas where management objectives would be adversely affected by seeding grass species; i.e.: reforestation plantations.

(b) Where practical, weed seed free topsoil should be stockpiled and replaced on disturbed areas such as road embankments, cuts, fills, and shoulders; gravel pits; skid trails; landings; staging areas; etc.

(c) Replanting should be done immediately after the disturbance activity to take advantage of the seedbed and to establish desirable species before the arrival of invading noxious weeds. Use a seed mix that includes fast, early season species to provide quick, dense revegetation. Seed will be certified weed-seed free before purchase to ensure minimum noxious weed content.

(d) Use local seeding guidelines for detailed procedures and appropriate mixes. If the risk for invasion by noxious weeds is high, use aggressive, early season species. If the risk is low,

use a more diverse mixture of native species that may take longer to establish. Include natives, pioneer species and/or nurse crops. Select for low nutrient demanding species to reduce the need for fertilization. Monitor all seeded sites. Spot re-seed as needed.

(5) Consider the following restoration practices for disturbed areas:

(a) Applying weed-seed free mulch with seeding,

(b) Surface scarification in the form of extreme surface roughening,

(c) Seeding at double the standard rate at initial ground disturbance, and full rate again at the end of the project,

(d) Limiting the use of fertilizer where it would favor noxious weed growth.

(6) Use only weed-seed free straw and mulch on road stabilization and erosion control projects.

(7) Minimize the movement of existing and new noxious weed species caused by moving infested gravel and fill material.

(a) Do not establish new material sources on sites where noxious weeds are present, unless the site has first been treated for eradication and the top 8" of contaminated material is stripped and stockpiled.

(b) All active gravel and borrow sources must be inspected and determined to be noxious weed free, and if noxious weed-infested, stripping and stockpiling of contaminated material must be implemented before material use and transport.

(c) Monitor the area where pit material from treated noxious weed-infested pit sites is used to ensure that any noxious weeds transported to that site are detected early and treated for eradication.

c. Minimize roadside sources of noxious weed seed that could be transported to other areas, and maximize effectiveness of weed control.

(1) Ranger District noxious weed prevention and control programs should include a monitoring plan for annual inspection of system roads and rights-of-way for invasion of noxious weeds. If noxious weeds become established, inventory and schedule for treatment.

(2) Blading or pulling of noxious weed-infested roadsides or ditches must be scheduled and coordinated with the Ranger District Weed Specialist to ensure that appropriate mitigation measures are applied. Roadsides and ditches which are infested with noxious weeds will not

be bladed or pulled on a routine maintenance schedule unless it is required for public safety or protection of the roadway.

(3) When necessary to blade noxious weed infested roadsides or ditches, schedule for spring or early summer prior to the seed-set stage or later in the fall after seeds have fallen. Minimize surface disturbance and isolate bladed material to the infested site.

d. Reduce noxious weed establishment in obliteration/reclamation projects.

(1) Treat noxious weeds in obliteration and reclamation projects before roads are made undriveable. Monitor and retreat as necessary.

e. Minimize transport and establishment of noxious weeds on NFS lands.

(1) Treat noxious weeds at trailheads, boat launches, outfitter and public campsites, airstrips, and roads leading to trailheads.

(2) Forest Service recommendations for remediation by any OHV or equipment user who is convicted of incorrect use which results in detrimental loss of vegetation and/or soil disturbance defined by detrimental displacement or clearly identifiable ruts with berms will include revegetation of disturbed areas.

(3) Infestations of noxious weeds will be closed to camping until noxious weeds have been eradicated.

(4) Campgrounds, trail heads, and similar areas that are open to public vehicle use are considered as high-risk areas and should be inspected annually for invasion of noxious weeds. Established infestations must be included in strategies for eradication.

(5) Remove seed sources that could be picked up by passing vehicles to limit seed transport.

f. Increase noxious weed awareness and prevention efforts among forest users.

(1) Use education programs to increase noxious weed awareness and prevent noxious weed spread by recreationists.

(2) Post and enforce the statewide noxious weed-free feed Order.

(3) Post pictures and descriptions of noxious weeds at NFS trailheads and at roadsides in noxious weed areas to inform recreationists of noxious weed presence and dangers of spreading.

(4) Post prevention practices at NFS trailheads and at roadsides in noxious weed areas. Recommended prevention practices include:

(a) Pack and saddle stock should be fed only weed-seed free feed for several days prior to traveling off roads in the Forest and should be brushed to remove any noxious weed seed.

(b) Stock should be tied and held in the back country in such a way as to minimize soil disturbance and avoid loss of native/ desirable vegetation.

(c) Motorized trail users should inspect and clean their vehicles prior to using NFS lands.

(5) Post notices in publicly accessible noxious weed treatment areas where and when there is a likelihood of contact with herbicide-treated-vegetation.

g. Reduce noxious weed establishment and spread at archeological excavations.

(1) Archeological excavation areas are considered as high-risk areas and should be inspected for invasion of noxious weeds. If noxious weeds become established, they must be inventoried and scheduled for treatment.

h. Ensure noxious weed prevention and control are considered in management of wildlife and fisheries.

(1) Ranger District noxious weed prevention and control programs should include a monitoring plan for inventory and annual inspection of areas where wildlife concentrate in the winter and spring which results in overuse and/or soil scarification. If noxious weeds become established, they must be inventoried and scheduled for treatment.

(2) Ranger District noxious weed prevention and control programs should include a monitoring plan for early detection of noxious weed spread or establishment in riparian areas, particularly from existing infestations and previously eradicated sites. New infestations must be treated for eradication before they become well-established.

i. Ensure noxious weed prevention and control are considered in management of all grazing allotments.

(1) Annual Operating Plans for every grazing allotment should include noxious weed prevention monitoring and reporting direction and provisions for annual inspection of areas where livestock concentrate which results in overuse and/or soil scarification. If noxious weeds become established, they must be inventoried and scheduled for treatment.

(2) For each grazing allotment containing noxious weed infestations, include direction in the Annual Operating Plan (AOP) for prevention and control of noxious weeds. Items to be addressed in the AOP may include: season of use, exclusion, minimizing ground disturbance, noxious weed seed transportation, maintaining healthy vegetation, control methods, revegetation, monitoring, reporting and education.

(3) Minimize ground disturbance and bare soil caused by livestock operations.

(a) Include ways to minimize ground disturbance in Allotment Management Plans (AMPs) and/or Annual Operating Plans (AOPs) (e.g. salt licks, watering sites, yarding/loafing areas, corrals and other heavy use areas).

(4) Minimize transport of noxious weed seed into and within allotments.

(a) Avoid driving, walking, riding, and/or herding through noxious weed infestations.

(b) Where and when practical, schedule entry of livestock in units with noxious weed infestations to be for pre seed-set or after seed has fallen. Fence or exclude noxious weed sites, until noxious weeds are eradicated, if scheduling is impractical or unmanageable.

(c) Entry units grazed by livestock transported onto the Forest from noxious weed-infested areas should be inspected annually for new noxious weeds. If noxious weeds become established, they must be inventoried and scheduled for treatment.

(5) Maintain healthy desirable vegetation that is resistant to noxious weed establishment.

(a) Manage forage utilization to maintain the vigor of desirable plant species as described in the Allotment Management Plan.

(b) Minimize and/or exclude grazing on restoration areas until vegetation is well established.

(6) Promote noxious weed awareness and prevention efforts among range permittees.

(a) Use education programs and/or Annual Operating Plan direction to increase noxious weed awareness and prevent noxious weed spread by permittees' livestock and/or management activities.

(b) Encourage permittees who are certified herbicide applicators to participate in allotment noxious weed control programs.

j. Minimize the creation of sites suitable for noxious weed establishment during timber harvest.

(1) Avoid driving, walking, skidding, landing, and/or hauling through noxious weed infestations.

(2) Minimize soil disturbance by considering winter skidding; broadcast burning over pile burning; smaller slash piles and burning under

conditions that minimize heat transfer to the soil; minimizing fire line construction; seeding skid trails, landings and other disturbed sites.

(3) Monitor for noxious weeds after sale activity and treat noxious weeds as needed.

(4) Timber sale and logging areas are considered as high-risk areas and should be inspected for invasion of noxious weeds. If noxious weeds become established, they must be inventoried and scheduled for treatment.

k. Minimize noxious weed establishment in mining operations and reclamation.

(1) Retain sufficient bonding until an appropriate percent of the potential vegetation ground cover, as determined by the Responsible Forest Officer, for the site is reestablished.

(2) Mining and mineral exploration areas are considered as high-risk areas and should be inspected for invasion of noxious weeds. If noxious weeds become established, they must be inventoried and scheduled for treatment.

l. Integrate noxious weed prevention and management in all soil and watershed and stream restoration projects.

(1) Ranger District noxious weed prevention and control programs should include a monitoring plan for early detection of noxious weed spread or establishment in riparian areas, particularly from existing infestations and previously eradicated sites. New infestations must be treated for eradication before they become well-established.

m. Reduce noxious weed establishment and spread in special use permits and easements.

(1) Holders of special use permits and easements shall be responsible for the prevention and control of noxious weeds on the area authorized when prescribed by the Forest Service.

(2) Require noxious weed prevention and control requirements in Operating and Maintenance Plans when authorized activities present a high risk for invasion by noxious weeds or the location of the activity is vulnerable to invasion by noxious weeds.

n. Mitigate and reduce noxious weed spread during wild fire and prescribed fire operations.

(1) Increase noxious weed awareness among fire personnel.

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

(2) Where practical and timely, establish fire camps, vehicle and crew staging areas, helibases, helispots, cargo and net loading areas, and airstrips in noxious weed-free areas.

(3) Assign a local Weed Specialist Resource Advisor to the IC Team when the wild fire or control operations occurs in or near a noxious weed area.

(4) When noxious weed infested areas are used for fire operations, mitigation measures, as determined by the Weed Specialist Resource Advisor, must be fully implemented. Flag off high-risk noxious weed infestations in areas of fire operations.

(5) All vehicles sent off Forest for fire assistance in noxious weed infested areas should be cleaned before returning to home units.

(6) Emphasize Minimal Impact Suppression Tactics (MIST) to reduce soil and vegetation disturbance. Minimize fire and dozer line.

(7) Avoid or minimize all types of travel through noxious weed-infested areas.

(8) Avoid ignition and burning in noxious weed areas unless it is part of a noxious weed control strategy.

(9) Avoid ignition and burning in areas with a high risk for invasion of noxious weeds.

(10) Unplanned burning of noxious weed areas will require post treatment of noxious weed infestations.

(11) Utilize noxious weed-free helibases and helispots for aerial ignition projects.

(12) Minimize fireline and soil disturbance.

(a) Encourage desirable vegetation during fire rehabilitation activities.

(b) Seed the entire burn, all cat lines, and severely disturbed areas when there is a high risk of noxious weed spread or invasion and such action is recommended by the local Weed Specialist Resource Advisor and approved by the Responsible Forest Officer. Hand seed catlines and severely disturbed areas.

(c) Prioritize treatment of noxious weeds on fire access roads as part of rehabilitation plan to reduce noxious weed spread into burned areas.

(13) Apply for restoration funding for noxious weed infestations as determined by Burned Area Rehabilitation teams.

o. Ensure all Forest Service administrative sites are noxious weed free.

(1) Apply noxious weed treatment and prevention on all Forest Service administrative sites including Ranger Stations, trailheads, campgrounds, pastures, interpretive and historic sites.

(2) Ensure all Forest Service employees are aware of and knowledgeable about noxious weeds.

(a) Encourage noxious weed awareness, education, and identification in employee development and training plans.

p. Ensure continuity in noxious weed management programs.

(1) Each unit will have a Weed Specialist who is trained and proficient in noxious weed management.

3. Treat poisonous plants only where there is a need identified through a site-specific EA, and only where a substantial livestock loss or an imminent threat to human exists.

4. Hay products may be accepted from any State Department of Agriculture, County Agriculture Officer, or their authorized agents, on National Forest System lands that have non-certified hay, feed, and straw closure orders in effect. Pelletized feed do not fall under the hay products closure orders.

5. Use of Sale Improvement Funds to Control Noxious Weeds. Where logging activity on planned or existing timber sales may contribute to the encroachment of noxious weeds, Sale Area Improvement and K-V collection modified to include provision for collection of funds to control or prevent the encroachment of noxious weeds within sale areas as provided for in FSM 2477. Enter planned expenditure of K-V funds for noxious weed control on Development and Budget System Plan.

2083—Information Collection and Reporting

Inventory noxious weeds and plot their location on a legible map(s). Update the inventory annually and coordinate with local/county weed boards. Inventory information can be supplemental to post-treatment evaluation described in FSM 2155.1. Make the inventory and summarize by weed species and acreage infested. Do not duplicate the acreage count where more than one weed species occurs on the same site.