

**Appendix X:**

**Heritage Resources Specialist Report**



# **NOXIOUS WEEDS EIS**

## **Heritage Resource Management Specialists Report**

### **Summary**

The Modoc National Forest proposes to reduce, control, or eliminate noxious weed infestations on 6,908 acres at 541 specific locations throughout the forest. The area affected by the proposal includes National Forest System lands managed by the Modoc National Forest (MDF) in Modoc, Lassen, and Siskiyou counties, California.

### **Proposed Action – Alternative 2**

The proposed action would initiate annual treatments of noxious weeds on a series of infestations ranging from an estimated low of 300 acres per year to a projected high of 1,500 acres per year (depending on annual budgets) scattered throughout the forest. The various methods analyzed under an integrated weed management approach are physical, cultural, and herbicidal. Wilderness and research natural areas would not be treated with herbicides. There would be no aerial application of herbicides by either fixed-wing or rotary aircraft. In addition, there would be no aquatic applications of herbicides. If approved, project operations would begin in 2008 and would continue for the next 5 years, barring any significant environmental changes. The proposed action calls for the reduction in noxious weed sites, reduction in the area covered by noxious weeds, or the eradication or control of 14 specific noxious weed species in 541 locations, covering approximately 6,908 acres.

### **Purpose and Need**

The purpose of this project is to economically implement those portions of the Modoc National Forest Noxious Weed Management Strategy and action plan that call for implementation of a program to reduce, control, or eliminate noxious weed infestations on 6,908 acres at 541 sites for 14 identified weed species.

The eradication and control of these plants would meet the need and requirement of the forest to promote the ecosystem health of forested and rangeland habitats by eliminating or reducing noxious weed competition with native forbs and grass species, and ultimately preventing the loss of wildlife habitat. It is important to eradicate and control these plants with minimal disturbance to the soil and native and desirable non-native species to maintain habitat, prevent erosion, and prevent damage to the soil profile.

Failure to reduce, control, or eradicate these small infestations at this time would mean the spread of these weeds would continue. The spread of noxious weeds on the Modoc National Forest may lead to noxious weeds out-competing desirable native plant species and thus altering native plant communities. The continued spread of these noxious weed species increases the adverse impacts to humans, wildlife, livestock, and native plant communities.

## **Alternatives**

### **Alternative 1 - No Action** (current management)

This alternative is required by regulation (Code of Federal Regulations 1502.8). Under current management, the forest is complying with direction in the forest land and resource management plan and the Sierra Nevada Forest Plan Amendment, to complete a noxious weed risk assessment for all planned projects on the forest. The risk assessment assigns an expected risk level to proposed activities and identifies any weed-related actions that need implementation before, during, or after project implementation. The use of herbicides has not been authorized for these weed-related actions. The forest currently has no NEPA decision that encompasses the treatment or containment of all noxious weeds on the forest.

### **Alternative 2**

Alternative 2 is the proposed action and is summarized on the previous page.

### **Alternative 3**

This alternative calls for treating noxious weeds by pulling and grubbing, or planting native species to eliminate the identified noxious weeds at the documented sites. No herbicides are proposed in alternative 3, and the alternative was developed in response to issues 1, 2, and 4. This alternative would treat 5,993 acres at 494 sites using physical methods.

### **Alternative 4**

This alternative was developed in response to significant issue 3. Alternative 4 builds on the proposed action by increasing the treatment periods from a maximum of 5 years to 10 years, with review of the NEPA document every 3 to 5 years to ensure environmental effects are within the range disclosed in this final EIS. In addition, alternative 4 allows for treatment of expanding populations in current or newly discovered sites through adaptive management. Alternative 4 would treat 6,899 surveyed acres at 536 sites using both herbicidal and physical methods. In addition, under the early detection – rapid response strategy, an additional 200 acres may be treated over the life of the alternative, with a cap of 100 acres treated in any one year.

### **Alternative 5**

Alternative 5 was developed in response to comments on the draft EIS to provide a non-herbicide alternative that contained additional non-herbicide treatments. This alternative would be implemented over a 10-year treatment period and provides for treatment of expanding populations of noxious weeds in current or newly discovered sites through early detection - rapid response. Alternative 5 provides several new physical methods, which include clipping (including use of string trimmers), and mulching/tarping, as well as goat grazing as treatments for eradicating or controlling the 14 identified species of noxious weeds. Alternative 5 would treat 280 acres at 541 sites. In addition, under the early detection – rapid response strategy, an additional 200 acres may be treated over the life of the alternative, with a cap of 100 acres treated in any one year.

## **Alternative 6**

Alternative 6 was developed to respond to comments that requested a more flexible approach using herbicidal treatment methods, early detection - rapid response techniques, and additional herbicides. This alternative would be implemented over a 10-year treatment period. The physical methods available in alternative 5 are also available as treatment methods in this alternative. Alternative 6 also includes the use of chlorosulfuron and two herbicide tank mixes. Alternative 6 would treat 341 acres at 541 sites. Under this alternative the three of the largest sites (159-acre common crupina site, 850-acre Dalmation toadflax site, and a 5,658 acre dyer's woad site) would only be treated in a limited manner to contain the spread of these sites. In addition, under the early detection – rapid response strategy, an additional 200 acres may be treated over the life of the alternative with a cap of 100 acres treated in any one year.

## **Environmentally Preferred Alternative**

The environmentally preferred alternative is alternative 6, as it provides a multi-method approach to reduce or eliminate most noxious weed sites, while preventing spread of the three largest sites. Alternatives 2 and 4 include the treatment of large-acreage sites with herbicides and would result in the application of a greater amount of herbicide in the environment than in alternative 6. Alternatives 3 and 5 (non-herbicide alternatives) do not provide effective treatment for rhizomatous species, thus allowing for expansion of these noxious weed sites.

## **EXISTING CONDITION - AFFECTED ENVIRONMENT**

### **Heritage Resources**

The Modoc National Forest has a vast array of prehistoric and historic archaeological resources and traditional cultural properties and locations still used by local Native American populations. The prehistoric resources of the Forest span the last 10,000 years and the historic period sites date between roughly 1826 to the mid-20th Century. Contemporary Native American groups include the Pit River Tribe (Achomawi/Atsugewi), the Klamath Tribes (specifically, the Modoc), and the Northern Paiute of the Surprise Valley area. Many locations throughout the Forest continue to be utilized by these contemporary Native American peoples for plant gathering (such as epos, and medicinal plants), hunting, and other traditional cultural uses (including religious activities).

Several documents identify areas on the Forest that have been identified as traditional cultural properties, or places (TCPs) used by these contemporary groups. Among these are the Roybal-Evans (1982) report "Sites with Cultural Significance for the Upriver Bands of the Pit River Indian Tribe", and John Allison's (1994) volume entitled "The Cultural Landscape of the Klamath, Modoc and Yahooskin Peoples: Spirit, Nature, History". Other relevant sources in this subject area include several ethnographic reports prepared for various utility projects which have crossed the Forest in the last decade. Examples of sites or areas considered as TCPs by Native Americans could include springs (where medicinal waters may be extracted), mountain peaks, and the vast epos fields in the Devil's Garden. Some of these TCPs may be found eligible for nomination to the National Register of Historic Places (NRHP).

Prehistoric archaeological resources include numerous "lithic scatters", places where peoples in the past made some stone tool or butchered an animal, or camped briefly, to more prominent encampments and village sites with visible rock rings, pit house depressions, and an array of stone tools. They also include rock stacks or cairns, rock alignments, and rock art (petroglyph and pictograph sites). Over 7,000 such prehistoric sites have been recorded on the Forest to date. The overall average site density for the Forest is one site per 54 acres.

Historic period sites are less common, but include over 300 recorded to date spanning from about 1846 through the 1940s. The earliest dated site at present is the 1846 Applegate Trail, which crosses the Forest passing through the Warner Mountain, Devil's Garden, and Doublehead Ranger Districts. Other historic sites include Modoc War-related sites (1872-1873), homesteads (1870s-1920s), ranches, logging camps, old Forest Service ranger stations, and Civilian Conservation Corps sites (1930s). Very little standing architecture (e.g., cabins) remains on the Forest -- most having decayed over the years or systematically burned or removed during the 1950s and 1960s.

Cultural, or heritage, resources sites are managed in several ways. The level or intensity of management, according to the FLRMP, has the following range:

- **Preservation** - sites are protected by excluding incompatible land activities.
- **Conservation** - when preservation is not feasible, scientific information is recovered from sites so that other land use activities can occur.
- **Interpretation** - sites are developed for public enjoyment and education through signs, trails, and public information kiosks.
- **No Management** - sites are not preserved in any way. (These sites are not of the quality suitable for nomination to the National Register of Historic Places. They contain little scientific information or Native American cultural heritage value.)

## **DESIRED FUTURE CONDITION**

The desired future condition for the Forests heritage resources include continuing inventory to locate and record all heritage resources, and evaluate them in terms of eligibility to the National Register of Historic Places. Additionally, selected heritage resource sites may be developed for Public interpretation illustrating the past history and heritage of the Forest and the various cultures and groups that have occupied and used this area for the last 10,000 years. A Forest standard includes the protection of access and use of sites and locations important to traditional Native American religious and cultural practices consistent with the American Indian Religious Freedom Act of 1978, and with the more recent Executive Order 13007.

Generally, heritage resources are conserved and protected largely by directing activities or use away from sensitive areas, by maintaining confidentiality, and by informing Forest users of heritage resource protection requirements.

## **MANAGEMENT OBJECTIVES**

As stated above, the conservation and/or protection of heritage resources should be a management objective.

## **MANAGEMENT REQUIREMENTS**

Depending upon the method selected for treatment of noxious weeds there may be varying degrees of potential effects on Heritage Resources, and varying degrees of complying with the provisions of the FLRMP and Historic Preservation compliance requirements.

## **MANUAL/MECHANICAL MANIPULATION**

The use of either manual or mechanical treatment methods for the control of noxious weeds have the greatest potential for affecting heritage resources such as prehistoric and historic archaeological sites in a direct manner. These methods may also affect potential traditional cultural properties and contemporary Native American uses. If these methods are proposed, then a decision must be made as to whether or not the proposed action could affect these resources. Depending upon the anticipated nature of the affect full compliance with the National Historic Preservation Act (NHPA) may be required. If it is determined that the affect may be relatively minor, that is, unlikely to affect those qualities that may make an heritage property eligible for the NRHP, then the action may be treated as an "Exempt Undertaking" under the Pacific Southwest Regions "Programmatic Agreement" (PA) with the California State Historic Preservation Office (SHPO).

## **CHEMICALS**

The use of chemicals (herbicides), generally, will have little potential effect on most archaeological properties (prehistoric or historic) and should be considered to have "no effect" on those qualities that may make a property eligible for the NRHP. Therefore, treatment of noxious weeds by the use of chemicals should be classed as an "Exempted Undertaking" in regards to compliance with the NHPA. The current PA allows for programmatic compliance for this class of undertaking.

However, this type of treatment, may have an effect on Native American TCPs, especially if the area is used for gathering food or medicinal plants. Any proposed use of chemical treatment should include advanced notification of the appropriate tribal organization and individuals who may use the area. Existing ethnographic information may help identify areas subject to potential conflicts.

## **BIOLOGICAL**

The use of the introduction of natural biological agents, such as insects, to control noxious weeds, should have no effect on most heritage resources, and could be treated under the PA. The same may be said for the seeding of native species of plants, provided they are broadcast, or less than a cubic meter of soil is disturbed per acre planted. This action could also be dealt with under the PA. Again, however, these types of treatments may potentially affect Native American TCPs or use of an area and consultation with the appropriate tribal group or individuals should take place early in the planning stages of these efforts.

## GOAT GRAZING

Goat Grazing (Alternatives 5 and 6) – The use of goat grazing to control noxious weeds should not represent a significant effect to most archaeological resources. Some very minor ground disturbance may be present as a result of the short-term trampling affect of a goatherd milling about in a single location. This action, however, should result in relatively little lateral displacement of surface artifactual materials (e.g., obsidian waste flakes, surface artifacts such as projectile points) and should have no impact on subsurface archaeological materials.

## MONITORING REQUIREMENTS

Monitoring may be required if management recommendations are made for the alteration or redesign of a proposed undertaking for the protection or conservation of heritage resources. The monitoring should be focused on the effectiveness of the protective measures.

## DIRECT AND INDIRECT IMPACTS

### Alternative 2

The use of physical/manual treatment methods for the control of noxious weeds has potential for affecting heritage resources such as prehistoric and historic archaeological sites in a direct manner by causing surface displacement of artifacts (including the illegal removal of artifacts by hand crews). This method may also affect potential traditional cultural properties and contemporary Native American uses. If this method is proposed, then a decision must be made as to whether or not the proposed action could affect these resources. Depending upon the anticipated nature of the affect full compliance with the National Historic Preservation Act (NHPA) may be required. If it is determined that the affect may be relatively minor, that is, unlikely to affect those qualities that may make an heritage property eligible for the NRHP, then the action may be treated as an "Exempt Undertaking" under the Pacific Southwest Regions "Programmatic Agreement" (PA) with the California State Historic Preservation Office (SHPO).

The use of chemicals (herbicides), generally, will have little potential effect on most archaeological properties (prehistoric or historic) and should be considered to have "no effect" on those qualities that may make a property eligible for the NRHP. Therefore, treatment of noxious weeds by the use of chemicals should be classed as an "Exempted Undertaking" in regards to compliance with the NHPA.

However, this type of treatment may have an effect on Native American traditional cultural places (TCPs), especially if the area is used for gathering food or medicinal plants. Any proposed use of chemical treatment should include advanced notification of the appropriate tribal organization and individuals who may use the area. Existing ethnographic information may help identify areas subject to potential conflicts.

Indirect affects of these methods may be beneficial in some instances by removing unwanted noxious weeds and promoting the re-growth of native plants.

### **Alternative 3**

The use of physical/manual treatments under this alternative would have the same direct and indirect effects as noted in Alternative 2 above.

The use of the introduction of seeding of native species of plants (cultural treatments), provided they are broadcast, or there is less than a cubic meter of soil disturbed per acre planted, should have no impacts on archaeological (prehistoric and historic) resources. This action could also be dealt with under the Regional PA. Again, however, this type of treatment may potentially affect Native American TCPs or Native American use of an area, and consultation with the appropriate tribal group or individuals should take place early in the planning stages of these efforts.

### **Alternative 4**

This alternative, which includes the use of physical/manual treatments, chemical treatments, and cultural treatments, would have the same levels of direct and indirect effects as noted above for these treatments in Alternatives 2 and 3.

### **Alternatives 5 and 6**

Goat Grazing (Alternatives 5 and 6) – The use of goat grazing to control noxious weeds should not represent a significant effect to most archaeological resources. Some very minor ground disturbance may be present as a result of the short-term trampling affect of a goatherd milling about in a single location. This action, however, should result in relatively little lateral displacement of surface artifactual materials (e.g., obsidian waste flakes, surface artifacts such as projectile points) and should have no impact on subsurface archaeological materials. Other proposed methods such as clipping and mulching/tarping, similarly should be relatively benign on most archaeological materials. As previously stated, each proposed treatment location needs to be identified prior to any action to assure that there are no heritage resources at risk.

### **Alternative 1 (No Action)**

There would be no direct effect on heritage resources as a result of the alternative. However, the proliferation of invasive weeds could displace native plants traditionally used by native people, and could also result in increased erosion of heritage/archeological sites as native vegetation is displaced. The displacement of native plants could also have an impact on visually aesthetic elements of heritage sites.

### **CUMULATIVE EFFECTS**

There are no direct or indirect effects from herbicide application control methods in any alternative, therefore, there would be no cumulative effects on heritage resources from those activities. Physical/manual, cultural control and goat grazing may have direct and indirect effects, although environmental protection measures are in place to avoid or minimize these effects. Other activities already planned or ongoing on the Forest (with the exception of illegal activities) also have measures to protect heritage resources, as required by the Forest Plan and other regulations. Cumulative effects from any action alternative are expected to be minimal, and heritage resources, known or discovered during

activities would be protected.

---

Specialist Report Prepared By: Gerald R. Gates, Forest Archaeologist  
January 8, 2008 (revised)

**REFERENCES:**

ALLISON, John

1994 *The Cultural Landscape of the Klamath, Modoc, and Yahooskin Peoples: Spirit, Nature, History.* Prepared for the Klamath Tribes in fulfillment of National Historic Preservation Grants to Indian Tribes & Alaskan Natives, Grant #41-92-NA-411

GATES, Gerald R.

1983 *Cultural Resource Overview: Modoc National Forest.* USDA-Forest Service, Modoc National Forest, Alturas, CA.

ROYBAL-EVANS Associates

1982 *Sites with Cultural Significance for the Upriver Bands of the Pit River Indian Tribe.* Prepared for the Bureau of Land Management, March 1982.