

# NOTICE OF PROPOSED ACTION

*California Integrated Weed Management Program*

*(Project # 46417)*

*CARSON and BRIDGEPORT RANGER DISTRICTS*

*HUMBOLDT-TOIYABE NATIONAL FOREST*

*Nevada, Sierra, Plumas, Lassen, Placer, El Dorado, Alpine, Tuolumne  
and Mono Counties, California*



United States  
Department of  
Agriculture

Forest Service  
Intermountain  
Region

SEPTEMBER 2015

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## COMMENTS WELCOME

The Carson Ranger District welcomes your comments on a proposal to implement an Integrated Weed Management Project (IWMP) to treat terrestrial, non-native invasive plants on Humboldt-Toiyabe National Forest (HTNF) System Lands in California. The project area includes approximately 693,721 acres across nine California counties and two ranger Districts, Carson and Bridgeport (Table 1, Figure 1).

**Table 1. Acres of Humboldt-Toiyabe National Forest (HTNF) System Lands that occur within California (Project Area).**

County	Ranger District	Acres within HTNF Jurisdiction
Lassen	Carson	1,616
Plumas	Carson	7
Nevada	Carson	4,369
Sierra	Carson	30,029
El Dorado	Carson	45
Placer	Carson	68
Alpine	Carson	254,459
Mono	Bridgeport	402,808
Tuolumne	Bridgeport	320
<b>TOTAL:</b>		<b>693,721</b>

The IWMP will include the use of a variety of methods to treat noxious and invasive plant species including prevention, mechanical, manual (hand-pulling), chemical, and biological controls. Treatments would involve integrated prescriptions that generally combine the use of multiple types of methods over several years. The IWMP will include a monitoring plan that outlines a strategy for monitoring both treatment effectiveness and the effectiveness of project design features.

## BACKGROUND

The Humboldt-Toiyabe National Forest spans the entire state of Nevada and portions of California. In 2001 a programmatic Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) was completed to implement an Integrated Pest Management Program for the Toiyabe-Nevada portion of the Humboldt-Toiyabe National Forest. The EA addressed the use of multiple methods for treating invasive plant species including prevention,

mechanical, manual (hand-pulling), chemical, and biological controls. While this document provides a thorough strategy for controlling weeds on National Forest System (NFS) Lands in Nevada, NFS lands in California were not included in the analysis.

The terms “Noxious Weeds” and “Invasive Species” are used interchangeably throughout this document to describe terrestrial, non-native plant species that pose a threat to native plant communities. More specifically:

Invasive plants are defined in Executive Order 13112 as “non-native plants whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Invasive plants compromise the ability to manage public lands for a healthy native ecosystem. Invasive plants can create a host of environmental effects that can be harmful to native ecosystem processes, including: displacement of native plants; reduction in functionality of habitat and forage for wildlife and livestock; increased potential for soil erosion and reduced water quality; alteration of physical and biological properties of soil; loss of long-term riparian area function; loss of habitat for culturally important plants; high economic cost of controlling noxious and invasive weeds; and increased cost of keeping recreational sites free of noxious and invasive weed species.

“Noxious” is a legal term, used by regulatory agencies, such as the California Department of Food and Agriculture (CDFA) and the U. S. Department of Agriculture Animal Plant Health Inspection Service (USDA-APHIS) to describe plants considered to be a threat to agriculture and/or non-crop areas. To be considered noxious, a plant has to be listed on a noxious weed list maintained by one or both of these agencies. In California, CDFA has started to also list invasive plants based on their threat or impact to wildlands.

California classifies invasive and noxious weeds as a method of prioritizing their control and publishes lists by classification (Class A through C). The HTNF incorporates this list as they apply to National Forest System lands.

- Class A weeds are typically given the highest priority for treatment. These weeds either currently do not occur in the state or occur in such low numbers that eradication is considered possible. Prevention and eradication are the treatment goals for Class A weeds.
- Class B weeds are invasive weeds with populations of varying distribution and densities within the state. The level of mandated control is based on local conditions. These weeds may require eradication within certain areas of the state. Eradication and control are the treatment goals for Class B weeds.
- Class C weeds are widespread and common within the state. Control is generally the treatment goal for Class C weeds.

## **PURPOSE AND NEED**

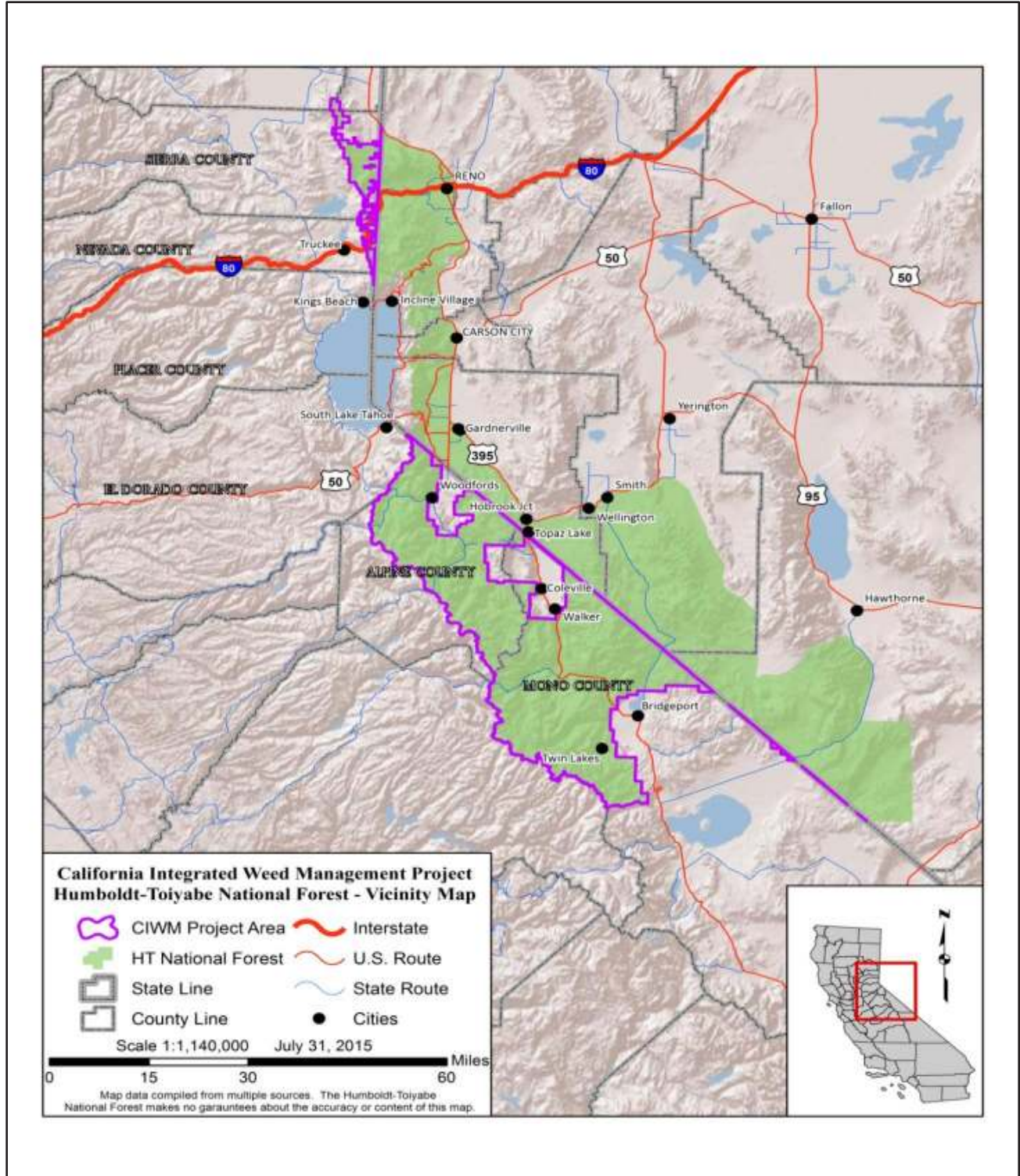
The purpose of this project is to implement an Integrated Weed Management approach to prevent, eradicate and/ or control infestations of invasive plants on the Humboldt-Toiyabe National Forest that occur in California, using manual, mechanical, biological, and chemical control measures. The purpose is also to establish criteria, under which an Early Detection Rapid Response (EDRR) approach would be implemented, thereby allowing for rapid treatment of



*Humboldt-Toiyabe National Forest*

newly discovered target invasive plants. Non-native invasive species have prolific seeding rates that quickly colonize in disturbed settings. Wildfire events, in particular, can pose the highest

**Figure 1. California Integrated Weed Management Project Area-Humboldt-Toiyabe National Forest**



risk for weed spread with bare ground, high nutrient availability and a lack of competing plants. Displacement of native plant communities by invasive plants can have negative impacts on fire regimes, wildlife habitats, recreation opportunities, forage production, and scenic beauty. The 2001 Noxious Weed Programmatic EA only included addressing non-native invasive plant species HTNF Lands in Nevada.

There is also a need to take an aggressive approach in controlling and eradicating invasive species that occur on HTNF Lands within California. Invasive plants are spreading at an alarming rate in California, and fast encroaching onto National Forest System lands. Currently in California there are approximately 200 invasive plant species identified by the California Invasive Plant Council (Cal-IPC), about 127 of which Cal-IPC identifies as occurring in the Sierra Nevada region. Approximately 1,166 acres of non-native invasive plant species are currently mapped within California on HTNF lands (Table 2). The majority of the known infested areas on the Carson and Bridgeport Ranger Districts occur primarily as scattered, individual populations that are less than one acre in size (Figures 2, 3, 4). Taking an aggressive approach in weed treatment will increase the potential for eradicating these small infestations and reduce the potential for future spread into neighboring areas.

## **PROPOSED ACTION**

The Proposed Action includes annually treating a portion of the invasive plant infestations that occur in California on the Humboldt-Toiyabe National Forest. The number of infestations and acres treated each year will depend upon available funding. Treatments would involve integrated prescriptions that generally combine the use of herbicides with mechanical, manual, and biological control methods over several years. The proposed action would include treating existing populations as well as any future infestations that might occur.

### **Implementing Treatment Strategies**

For each known invasive plant infestation, and for future infestations that may be discovered, one of three treatment strategies is proposed:

1. Annually treat and monitor the infestation with the goal of eradication

Infestations of species documented as highly invasive with severe or substantial ecological impacts in California and those that are currently limited in their distribution and abundance on the Forest making their eradication an achievable goal.

2. Treat and monitor a portion of the identified occurrences each year, focusing on reducing the area coverage and amount over time (eradicate/control)

Under this strategy, invasive plant species would be annually treated, focusing first on eradicating and then containing the most isolated, outlying occurrences and, over time, reducing the footprint of larger, less isolated occurrences. Treatments will also be designed to contain infestations along transit routes in order to prevent these invasive plants from moving into natural forest settings. Where appropriate, restoration and reclamation activities would be designed to lower spread potential.

3. Treat only leading edge infestations or where concurrent with higher priority species (control)

Under this strategy targeted efforts to control, contain or eradicate certain species would be a lower priority for one or more of the following reasons: 1) the species is less invasive and unlikely to create large monocultures on NFS lands; 2) the species cannot be feasibly addressed with available treatments at the Forest- wide scale; or 3) the species is not causing significant ecological impacts.

Criteria for prioritizing treatment sites, given limited funding, will follow the following guidelines:

1. Infestations with a high potential for future spread (prolific species found in high traffic areas such as administrative sites, trailheads, major access points for the forest, and systems vulnerable to invasion (recent fires)
2. High value areas (such as Wilderness) and portals to these areas
3. Early invaders with small isolated infestations on the forest.
4. Leading edge and satellite occurrences of larger more established infestations
5. Treating the perimeter of larger infestations

Using the above criteria, in addition to other site specific information, the HTNF will focus on 12 non-native invasive species (Table 2) for treatment and monitoring. Figures 2, 3, and 4 show locations of existing weed populations located within the project area. Note that additional invasive plant species have been mapped or are known to occur on the forest, but would not be targeted for eradication or control at this time due to widespread occurrence or limited ecological impact.

**Table 2. Priority Weed Species for Treatment and Associated Treatment Goal**

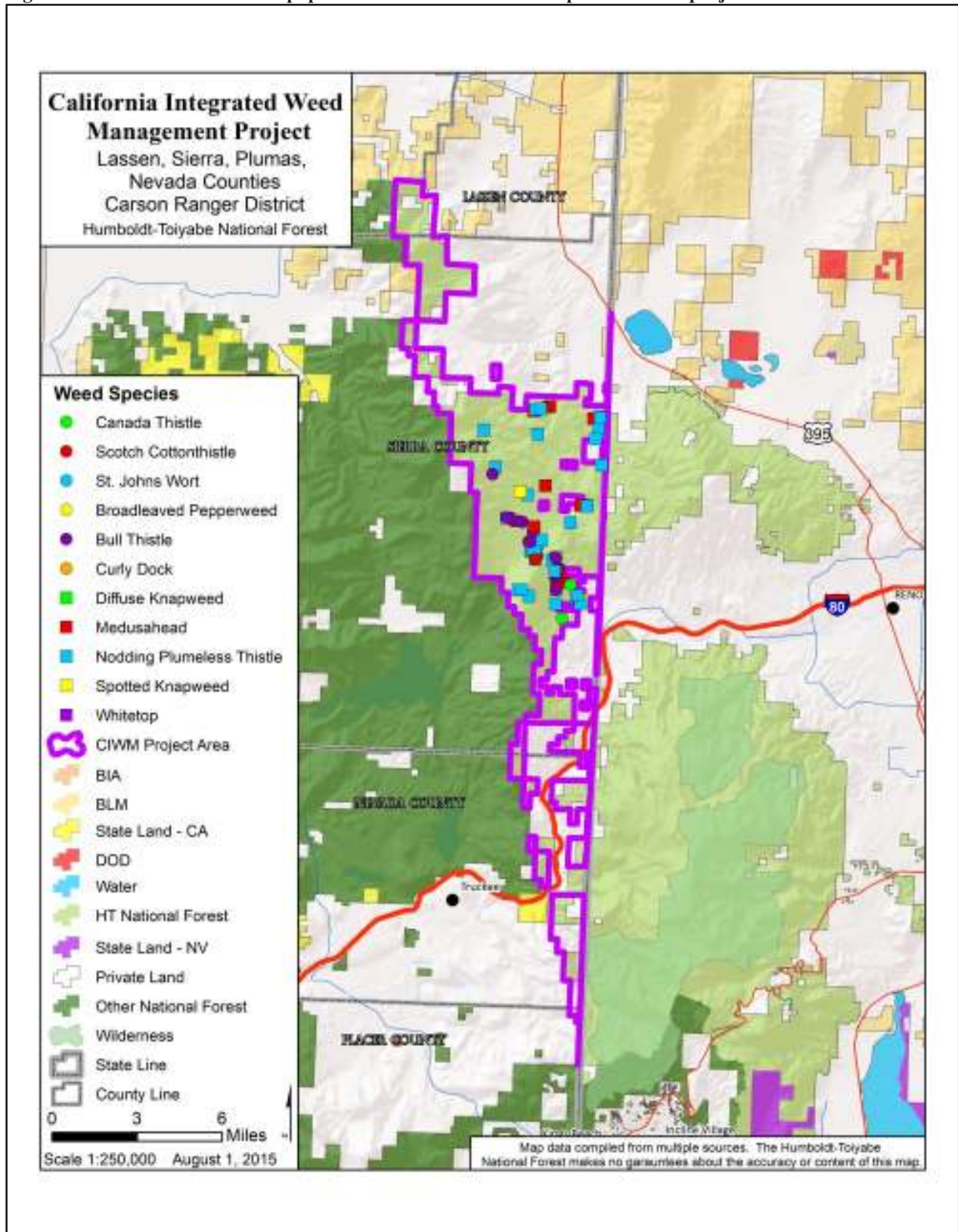
Weed Species	Mapped acres on HTNF Lands in California	Number of Individual Locations	CA State Weed List Category	NV State Weed List Category	Treatment Goal
<b>Russian Knapweed</b> ( <i>Acroptilon repens</i> )	0	0	Category B	Category B	Prevention
<b>Diffuse Knapweed</b> ( <i>Centaurea diffusa</i> )	2	12	Category A	Category B	Control/Eradicate
<b>Spotted knapweed</b> ( <i>Centaurea maculosa</i> )	5	4	Category A	Category A	Control/Eradicate

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<b>Weed Species</b>	<b>Mapped acres on HTNF Lands in California</b>	<b>Number of Individual Locations</b>	<b>CA State Weed List Category</b>	<b>NV State Weed List Category</b>	<b>Treatment Goal</b>
<b>Musk Thistle (nodding plumeless thistle)</b> <i>(Carduus nutans)</i>	462	57	Category A	Category B	Control
<b>Scotch Thistle</b> <i>(Onopordum acanthium)</i>	12	21	Category A	Category B	Control
<b>Bull Thistle</b> <i>(Cirsium vulgare)</i>	234	62		N/A	Control
<b>Canada Thistle</b> <i>(Cirsium arvense)</i>	8	19	Category B	Category C	Control
<b>Yellow-Star Thistle</b> <i>(Centaurea solstitialis)</i>	4	3	Category C	Category A	Control/Eradicate
<b>Perennial Pepperweed (broad-leaf pepperweed)</b> <i>(Lepidium latifolium)</i>	12	5	Category B	Category C	Control
<b>Hoary Cress (whitetop)</b> <i>(Cardaria draba)</i>	204	19	Category B	Category C	Control
<b>Medusahead</b> <i>(Taeniatherum caput-medusae)</i>	223	13	Category C	Category B	Control
<b>Cheatgrass</b> <i>(Bromus tectorum)</i>	unknown	unknown	N/A	N/A	Control



Figure 2. Current invasive weed populations within the northern portion of the project area





*Humboldt-Toiyabe National Forest*

Figure 3. Current invasive weed populations within the central portion of the project area.

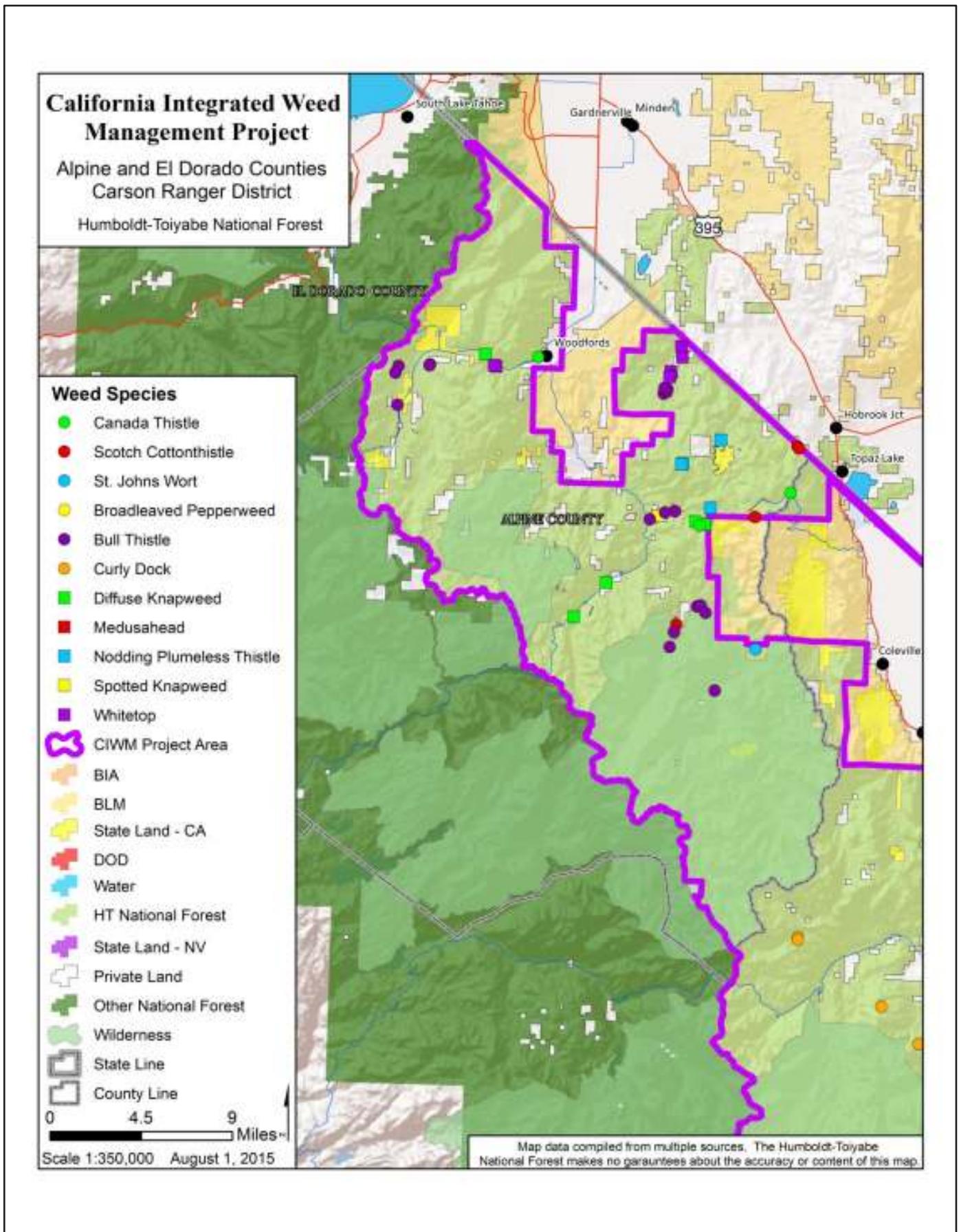
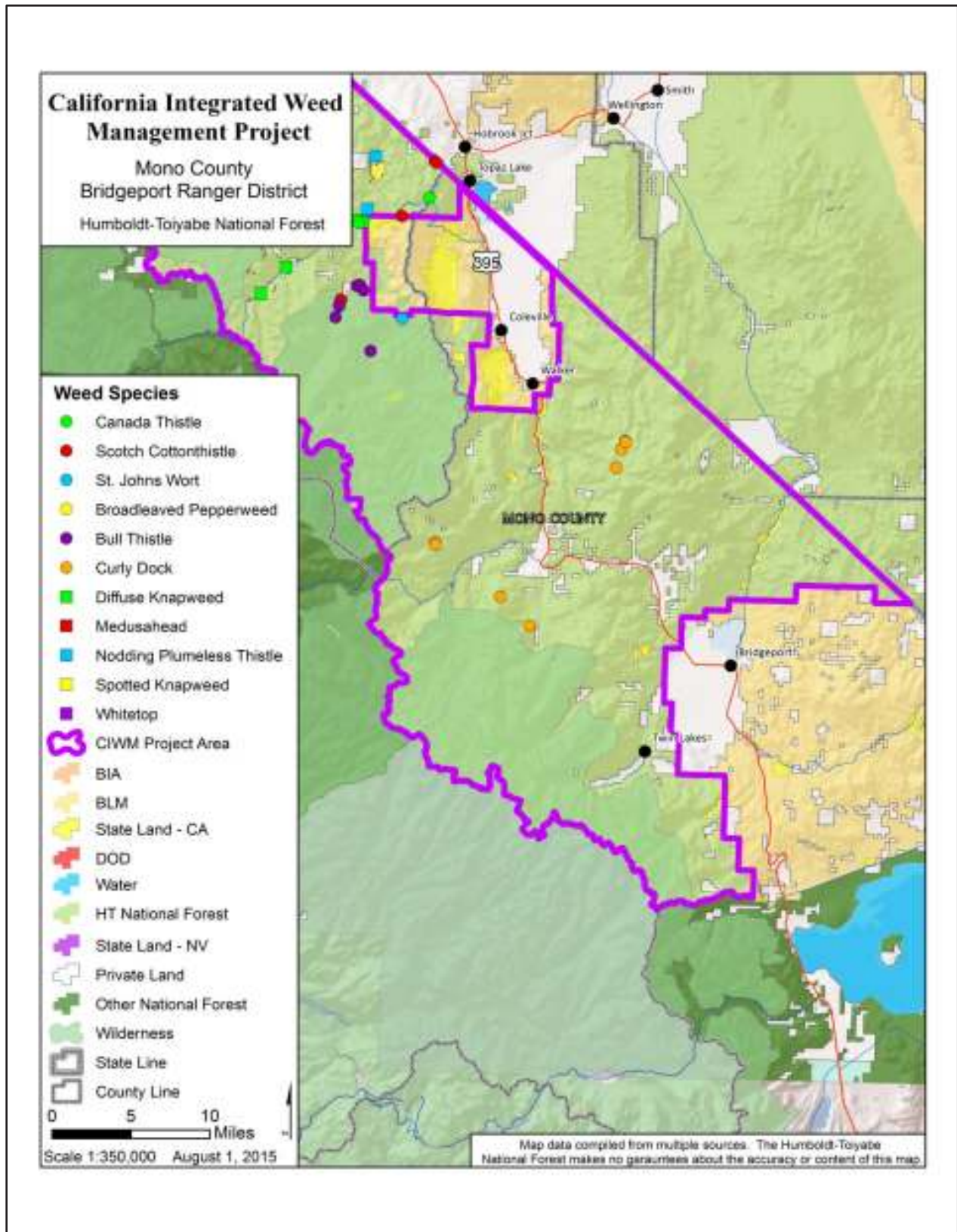


Figure 4. Current invasive weed populations in the southern portion of the project area





## ***Additional Details of the Proposed Action***

### **PREVENTION**

A major component of the IWMP will include incorporating measures into project planning and project implementation that prevent, or greatly reduce the potential for weeds to become established. To prevent the spread of noxious and invasive weeds, the following preventive measures will be incorporated into the IWMP:

- **Noxious Weed Risk Assessment** -Forest Service Manual 2081.02 requires a noxious weed assessment be conducted when any ground disturbing action or activity is proposed to determine the risk of introducing or spreading noxious weeds associated with the proposed action. For projects having moderate to high risk of introducing or spreading noxious weeds, the project decision document must identify noxious weed control measures that must be undertaken during and/or before project implementation. The Risk Assessment includes information on current condition of the project area, potential risk of increased spread and design features to minimize potential for new infestations. The Assessment also determines if weed treatments need to occur prior to commencement of project activities.
- **Best Management Practices** (BMPs)-incorporate BMPS for weed prevention into all project planning efforts which include a ground disturbing component. BMPS include (but not limited to):
  - Require all construction vehicles to be inspected for weeds prior to entering work site
  - Set up weed wash stations and clean all equipment before leaving the project site if operating in areas infested with weeds.
  - Locate and use weed-free project staging areas.
  - All sand, gravel, borrow, and fill material will be inspected and certified weed free
  - To the extent feasible, design project areas to avoid known noxious weed infestations; if unavoidable then assess if pretreatment needs to be conducted prior to construction activities.
  - Before ground-disturbing activities begin, inventory weed infestations and prioritize areas for treatment in project operating areas and along access routes;
  - Incorporate a post monitoring and treatment plan into all ground disturbing project planning efforts. Monitoring should continue for a minimum of five years after the project is completed to assure an Early Detection Rapid Response to new infestations.
- **Revegetation (following Forest Service Project Activities)-**
  - Include weed prevention measures, including project inspection and documentation during project operations;



- Retain bonds until reclamation requirements, including weed treatments, are completed, based on inspection and documentation;
- To prevent conditions favoring weed establishment, re-establish vegetation on bare ground caused by project disturbance as soon as possible using either natural recovery or artificial techniques;
- Maintain stockpiled, weed-free material in a weed-free condition;
- Revegetate disturbed soil in a manner that optimizes plant establishment for each specific project site. Revegetation may include topsoil replacement, planting, seeding, fertilization, liming, and weed-free mulching, as necessary;

For existing infestations or new establishments of noxious or invasive weeds, one or more of the following treatment methods will be applied to eradicate and/or control weed populations.

## **TREATMENT**

### ***Manual Methods***

- **Hand Pulling:** Pulling or uprooting plants can be effective against some shrubs, tree saplings, and herbaceous invasive plants. Annuals and tap-rooted plants are particularly susceptible to control by hand-pulling. It is not as effective against many perennial invasive plants with deep underground stems and roots that are often left behind to re-sprout. The advantages of pulling include its small ecological impact, minimal damage to neighboring plants, and low (or no) cost for equipment or supplies.
- **Pulling Using Tools:** Most plant-pulling tools are designed to grip the plant stem and provide the leverage necessary to pull its roots out.
- **Clipping:** “Clipping” means to cut or remove seed heads and/or fruiting bodies to prevent germination. This method is labor-intensive and effective for small and spotty infestations.
- **Mulching:** Covering with certified “weed free and plastic free” mulch such as rice straw, grass clippings, wood chips, newspaper.
- **Tarping:** Placing tarps to shade out weeds or solarize them (to injure by long exposure to heat of the sun) .

### ***Mechanical Methods***

- **Mowing, Cutting, Brushing, Trimming, Weed Eating:** Mowing and cutting can reduce seed production and restrict invasive plant growth, especially in annuals cut before they flower and set seed. These treatments are used as primary treatments to remove above-ground biomass in combination with herbicide treatments to prevent re-sprouting, or as follow-up treatments to treat target plants missed by initial herbicide use. Also, mowing and cutting can be used, in conjunction with herbicide treatments, to reduce vegetative materials and to promote vigorous growth in order to

decrease the amount of herbicide application needed, and to increase herbicide effectiveness.

### ***Biological Controls***

- **Insects and Grazing Animals-** Biological control involves using living organisms, such as insects, pathogens, or grazing animals, to suppress weed infestations. This treatment method is generally most appropriate in situations where weed infestations are large and well established, and on sites where other control methods are not feasible. Biocontrol methods generally suppress host weed populations, but may not contain or eradicate them. USDA-Agriculture Research Service (ARS) approves the release of biological control agents after intensive testing to determine the specificity to a host plant.

Grazing animals, either alone or in combination with other treatment methods, can be highly effective in reducing weed populations through the use of targeted grazing prescriptions. Targeted grazing includes the use of goats, sheep, or other livestock that have been specifically ‘trained’ by their operators to eat certain plant species. On the Carson and Bridgeport Ranger Districts, grazing weed treatments are generally conducted by targeted grazing contractors who specialize in these services.

### ***Other***

- **Prescribed Burning-** Prescribed burning would be used only in very limited situations where burning could help achieve management objectives. Prescribed burning is often used to control cheatgrass and medusahead infestations, but can also be used to control other noxious weeds as well. Burning may be used prior to other weed treatments to remove vegetation and increase the effectiveness of other treatments (eg herbicide). A site specific burn plan and close consultation and coordination with a fuels specialist, would be completed before any prescribed burning activities occurred.

### ***Herbicide Methods***

Depending on the level of infestation, the type of weed species (e.g. deep rooted perennial or biannual) and/or its proximity to sensitive areas (e.g. water) herbicides can be applied through a variety of methods as described below:

- **Directed Broadcast/Spot Spray-** Accomplished by sprayer wand with regulated nozzle in such a fashion that spray is concentrated at the target species. This is typically accomplished using a backpack sprayer.
- **Broadcast Spray-** Broadcast application (using truck/UTV mounted sprayers) over wider areas would be used only when necessary to treat large infestations. In some instances, broadcast spraying may be the only effective way to treat very dense and extensive weed infestations. When using broadcast spray drift reduction measures will be used. This will include low spray pressure of 30PSI or less, spray nozzles

with large orifices. Wind speeds of 8mph or less and no treatment if inversions are present. Drift cards will be used to help monitor spray applications.

- **Hand/Selective-** Treatment of individual plants to avoid spraying other desirable plants. There is a low likelihood of drift or delivery of herbicides away from treatment sites. This method is used in sensitive areas, such as near water, to avoid getting any herbicide on the soil or in the water. Hand/Selective methods could be done under more variable conditions than spot spraying or broadcast spraying. Specific methods include:
  1. Dip and clip – similar to cut stump, where cutting tool is first dipped in herbicide, then used to cut target species to be treated
  2. Cut stump – herbicide is sprayed on cut surfaces to eliminate or greatly reduce re-sprouts;
  3. Wicking and wiping – herbicide is wiped onto the target species using a wick applicator

### ***Proposed Herbicides***

Seven herbicides are proposed for use in this project, using the application methods described above: ***aminopyralid, clopyralid, chlorsulfuron, glyphosate, imazapyr, triclopyr and Sulfometuron.***

When appropriate, herbicides with different modes of action have been proposed for an invasive plant species. This can help reduce the risk of populations developing herbicide tolerance from repeated application with the same herbicide.

Only herbicides that have been approved for use in the state of California and have a label certifying that the chemical has been approved for use by the Federal Environmental Protection Agency (EPA) and the California Department of Pesticide Regulation (DPR), would be used. The label contains information about the product, including its relative toxicity, potential hazard to humans and the environment, directions for use, storage and disposal, and first aid treatment in case of exposure. Label directions provide for public and worker safety by requiring posting of treated areas, pre-designation of mixing, storage and filling sites, and transportation and handling practices in accordance with toxicity of each formulation.

Label directions, as well as all laws and regulations governing the use of pesticides, as required by the U.S. Environmental Protection Agency, the California Department of Pesticide Regulation, and Forest Service policy pertaining to pesticide use, would be followed. Coordination with the appropriate County Agricultural Commissioners would occur, and all required licenses and permits would be obtained prior to any pesticide application. A site-specific safety and spill plan would be developed prior to herbicide applications. Where herbicide treatments are proposed, the lowest effective label rates would be used.

The following is a short description of the proposed herbicides and their uses:

***Aminopyralid-***Aminopyralid is a pre- and post-emergent herbicide that can control a number of key invasive broadleaf species. Aminopyralid provides residual weed control activity, reducing the germination of target plants and the need for re-treatment. The herbicide has a lower effective application rate (compared to other registered herbicides) and a non-volatile formulation.



Aminopyralid is labeled in California for use to the water's edge. For best results aminopyralid is generally applied to young weeds that are actively growing during time of application. It is proposed for use primarily on starthistles, knapweeds, and Canada thistle using directed foliar spray, broadcast spray or wicking. Broadcast spray would be limited to disturbed areas dominated by non-native species. A product example is **Milestone**.

**Clopyralid**-Clopyralid is a pre- and post-emergent herbicide that can control a number of key invasive broadleaf species. Clopyralid also provides residual weed control activity, reducing the germination of target plants and the need for re-treatment. An integrated approach that includes revegetation may be required. For best results Clopyralid is generally applied to young weeds that are actively growing during time of application. It is proposed for use primarily on starthistles and knapweeds, using directed foliar spray, broadcast spray or wicking. Broadcast spray would be limited to disturbed areas dominated by non-native species. A product example is **Transline**.

**Chlorsulfuron**-Chlorsulfuron is a selective pre- and post-emergent herbicide used to control many broadleaf species. Chlorsulfuron would be used primarily as a post-emergent for use on tall whitetop, (*Lepidium latifolium*) and hoarycress (*Cardaria spp.*), using directed foliar spray or wiping. A product example is **Telar**.

**Glyphosate**-Glyphosate is a non-selective systemic herbicide that can control most annual and perennial plants. Glyphosate rapidly binds to soils, and is not readily absorbed by plants roots. Its non-selectiveness causes this herbicide to kill most plants where applied, including desirable native species. Plants can take several weeks to die and a repeat application in the same season is sometimes necessary to remove plants that were missed during the first application. Only formulations without a premixed surfactant are being proposed for use. Aquatic formulation of glyphosate can be used in aquatic settings. Product examples include **Accord, Rodeo** or **Aquamaster**.

**Imazapyr**-Imazapyr is a non-selective herbicide used for the control of a broad range of weeds including terrestrial annual and perennial grasses and broadleaved herbs, woody species, and riparian and emergent aquatic species. It can be applied pre-emergent, but is most effective when applied as a post-emergent herbicide. A product example is **Habitat**.

**Triclopyr**-Triclopyr is a selective post-emergent herbicide used to control woody and broadleaf plants. It is proposed for use primarily on woody species such as saltcedar (*Tamarix ramosissima*). Application for woody species would include cut stump, directed foliar spray or wiping. **Garlon 3A** is a product example.

**Sulfometuron-methyl**- Sulfometuron-methyl is a selective herbicide and will be used for pre-emergent control of annual grasses such as medusahead or cheatgrass. In some cases a mix of Sulfometuron methyl and chlorsulfuron (Landmark) will be use. This product is designed to be used in dry areas and will not be used near any wet meadows, marshy areas, or riparian areas. **Oust** is a product example.

### **Surfactants**

Herbicide treatments would include the use of a surfactant to enable herbicide penetration of the plant cuticle (a thick, waxy layer present on leaves and stems of most plants). Surfactants are

materials that facilitate the activity of herbicides through emulsifying, wetting, spreading or otherwise modifying the properties of liquid chemicals. Treatments would also include use of a dye to assist the applicator in efficiently treating target plants and avoiding contact with plants that have already been treated. A methylated seed oil surfactant, such as Hasten or Competitor, would be used as a surfactant and a water soluble dye, such as Highlight Blue, would be used as a dye. Both the surfactant and the dye are considered to be virtually non-toxic to humans. The use of these additives in the formulations would result in almost no increase in risk to the health and safety of the workers or public, and in fact the use of these products, particularly the dye can reduce over exposures.

### **MONITORING**

Post-treatment monitoring will occur on all treatment sites to determine if treatment methods were successful. Level of success determinations will be commensurate with the treatment goal of the site (i.e. eradicate, control etc). For example, if the objective was eradication, post-treatment monitoring would focus on a visual inspection of the treatment area for the presence or absence of the noxious or invasive weed species. This treatment would be considered successful when the target species is absent from its former location. Treatments designed to contain, control or suppress would be based on quantitative inspection (i.e. a reduction in percent cover or size of infestation of the noxious or invasive weed). If monitoring demonstrates that a treatment has not been effective, corrective actions (such as retreatment with the same or different method, or combination of methods) would be identified and implemented to enhance the level of success.

### **ANNUAL IMPLEMENTATION PROCESS**

The Annual Implementation Process will include a yearly pre-treatment assessment of current weed conditions and will provide an annual plan for how, when, and where weeds will be treated. This process will be conducted by interdisciplinary team who will review up to date weed maps and proposed treatment areas and provide feedback on appropriate design features, special notifications, or other issues that may be associated with treatments. The Implementation Process will also help to prioritize treatment areas based on updated inventory information, proximity to sensitive areas, and/or the EDRR to newly discovered weed populations. The Annual Implementation Process will be discussed in more detail in the EA.

## **SUMMARY OF POTENTIAL ISSUES AND RELEVANT DESIGN FEATURES**

The statements below are based on preliminary review and analysis from the ID team and provide information on potential resource issues related to the proposed action. Where relevant, design features associated with each issue are presented. Design features, as stated below, are elements of the project design that were developed to avoid or minimize potential impacts of the proposed action on forest resources. Design features are applied in conjunction with pertinent management direction and guidelines. These issues, in addition to issues generated through public comment, will be fully developed, analyzed and discussed in detail in the Environmental Assessment.

### **Soils/Watershed**

**Issue:** The use of herbicide treatments may negatively affect soil conditions and or increase the risk of contaminating watersheds through drift and ground water seepage.

#### ***Design Features to meet Lahontan Regional Water Quality Control Board Monitoring Standards:***

Under the Proposed Action, the Carson and Bridgeport Ranger Districts will follow the Lahontan Regional Water Quality Control Board notification protocol (LRWQB 2003) that was designed for weed treatments on the Lake Tahoe Basin Management Unit. The protocol will be included as an appendix to the EA; key components of the protocol are:

- Where infestations are greater than ¼ acre but less than one acre in size and rapid action is required to prevent impending seed production, LRWQCB will be notified with request for a “return in 48-hour” response. The LRWQCB will notify the Forest within two days if anything more is needed prior to treatment. If the LRWQCB does not respond, it can be interpreted that the agency does not need anything additional.
- Where infestation areas are greater than one acre, or are within 25 feet of a water surface, or infestation areas are from ¼ to 1 acre and so do not require rapid consultation for seed production control, full consultation with LRWQCB is required prior to treatment.
- State and Regional Water Quality Control Board certified Best Management Practices will be implemented. BMPs applied to all Forest projects are outlined in the Water Quality Management for Forest System Lands in California, BMP handbook.

#### ***Additional Design Features to protect water and soil quality:***

1. Mixing or application of herbicides will not occur within 100 feet of a well or spring used as a domestic water source. Certified applicators will be briefed about the locations of water sources prior to beginning work and buffers will be flagged on the ground.
2. Where possible, manual weed treatment methods will be utilized within 50 feet of perennial rivers, streams, lakes and other water bodies, including seasonally flooded Stream Environment Zones (SEZs).
3. Chlorsulfuron, Triclopyr, and Sulfometuron-methyl will not be applied within 50 feet of perennial rivers, streams, lakes, and other water bodies, including seasonally flooded SEZs
4. Only dip & clip and wicking & wiping applications of Aminopyralid or the aquatic formulation of Glyphosate will be used within 10 feet of perennial rivers, streams, lakes, seasonally flooded SEZs, and meadows.
5. When applying aquatic formulations of herbicides within 50 feet of perennial rivers, streams, lakes and other water bodies, including seasonally flooded SEZs, a surfactant registered by the California Department of Pesticide Regulation for aquatic use will be utilized.



6. Preparation of herbicides for application, including mixing, filling of wands and rinsing of spray equipment, will take place outside of Riparian Conservation Areas and more than 300 feet from surface water. Herbicide preparation will occur only on level, disturbed sites off of roadways, such as the interior of landings. Water drafting from aquatic features will not occur.
7. Streams or other surface waters must not be used for washing herbicide application equipment or personnel, unless required in an emergency situation. However, Pesticide Worker Safety Regulations require that water, soap and a towel be available within ¼ mile of field workers and at mixing sites.
8. Manual treatment will be utilized in lieu of chemical treatment when effective.
9. Herbicides will be used in accordance with label instructions. Project Design Features may describe more restrictive measures for use and application. Herbicide applications will treat only the minimum area necessary to meet project objectives.
10. Prior to the start of application, all spray equipment would be calibrated to insure accuracy of delivered amounts of pesticide. Application equipment used will be regularly inspected during pesticide application to insure it is in proper working order.
11. Herbicides will be applied by trained and/or certified applicators in accordance with label instructions and applicable federal and state pesticide laws. Label instructions include precautions on application under certain wind, temperature, precipitation and other weather conditions to reduce drift, volatilization, leaching, or runoff.
12. Herbicide spray applications will not occur when wind velocity is eight miles per hour or greater. A weather kit will be carried by applicators and weather conditions would be monitored periodically by trained personnel during herbicide applications. Prior to beginning work, applicators will be provided with information on local terrain and wind patterns and how they affect spray drift.
13. Weather conditions (wind speed and direction, precipitation, precipitation probability, temperature, temperature inversions, atmospheric stability, and humidity) will be carefully monitored before and during herbicide applications to minimize drift, volatilization, and leaching or surface runoff of herbicides, based on label precautions.
14. Herbicide applications will not be conducted during rain nor immediately following rain when soil is saturated or runoff, standing water, or a heavy dew is present. Application will occur only under favorable weather conditions, defined as:
15. 30% or less chance of precipitation on the day of application based upon NOAA weather forecasting. If rain, showers or light rains are predicted within 48 hours, the amount of rain predicted shall be no more than ¼ inch of rain, and rain does not appear likely at the time of application.
16. A spill cleanup kit will be readily available whenever herbicides are transported or stored. A spill kit would be carried by the applicator at all times when using wicking application method.

### **Recreation/Wilderness**

**Issue:** Wilderness character and recreational experiences may be affected from the noxious weed treatments, particularly the use of herbicides.

#### ***Design Features:***

1. Weed control in wilderness areas will be limited to prevention and hand pulling, unless other methods are determined necessary to preserve wilderness character and treatment methods do not detract from wilderness character. A Minimum Requirements Analysis will determine the minimum necessary activity.
2. Regional Forester approval (through the Minimum Requirements Analysis) will be required if herbicide use is proposed to control an invasive plant infestation in any Wilderness Area (FSM 2320, and Wilderness Management Plans) or Research Natural Area (Refer to FSM 4060).
3. Treatments at special use sites, along Forest Service trails, at developed recreation sites and areas of concentrated public use will avoid holidays and will be scheduled to avoid high use periods of the day. Permittees and District Resource or Recreation Managers will be notified prior to treatments so that treatments can be scheduled to minimize conflicts.
4. Special Use Permit holders with wells or domestic water sources within 500 feet of proposed treatment areas will be notified prior to annual treatments and diversion points will be marked on the ground prior to treatments.

### **Heritage Resources/Tribal Relations**

**Issue:** Noxious weed treatments may affect heritage resource sites particularly when mowing or other mechanical methods are used. Machinery, digging and other types of ground disturbance can damage artifacts such as lithic scatter or historical dwelling sites. Noxious weed treatments also may affect traditional plant gathering areas used by local tribes.

#### ***Design Features:***

1. Weed treatments will be coordinated with the District Heritage Resource specialist on an annual basis to assure cultural resources are protected during treatment activities.
2. Cultural resource surveys will be conducted as needed and evaluation will occur on a case by case basis. Existing cultural resources will be considered with each treatment of weeds.
3. The Forest Service recognizes the significance of protecting Native American ethnobotany locations. The Districts will consult with Native American tribes and develop management strategies which protect the integrity of these sites and their uses. Herbicides will not be used to treat noxious or invasive weeds in any Area of Concern or gathering site for local Tribes without coordination with the Tribes. The Carson and Bridgeport Ranger Districts will continue to coordinate with the tribes about the District's Noxious Weed Programs on an annual basis.

### **Aquatic and Terrestrial Wildlife**

**Issue:** The use of herbicides to treat noxious weeds may potentially affect aquatic wildlife species such as the Sierra Nevada yellow-legged frog, Yosemite toad, and the Lahontan and Paiute cutthroat trout. Herbicides could affect these species directly and indirectly if over-concentrations of herbicide are applied or applied incorrectly. Noxious weed treatments may also indirectly affect terrestrial wildlife due to disturbance occurring during the nesting or denning season, particularly if treatments include ground disturbing activities such as mowing and prescribed burning.

#### ***Design Features:***

1. During the Annual Implementation Process, the Forest Fisheries Biologist will review new treatment sites identified under EDRR that are within 500 feet of Sierra Nevada yellow-legged frog or Yosemite toad occurrences or within their designated critical habitats. Treatment strategies in these areas will be developed collaboratively on an annual basis by the noxious weed coordinator, the Forest Fisheries Biologist and the U.S. Fish and Wildlife Service if necessary, to assure treatment efforts do not impact frog and toad populations.
2. When in proximity to Lahontan and Paiute cutthroat trout habitat, every effort will be made to treat weeds by manual methods. If it is determined the use of herbicides is the only practical method to treat weed infestations in these areas, only dip & clip and/or wicking & wiping applications of Glyphosate or Imazapyr will be used within 50 feet from occupied Lahontan and Paiute cutthroat trout habitat. Because Paiute cutthroat trout occur only in the wilderness, any herbicide use would need to be approved through the Minimum Requirements Analysis process and would include specific guidelines for the use of herbicides.
3. During the Annual Implementation Process, the noxious weed coordinator will inform the District and/or Forest wildlife biologist of new infestations before each treatment season, to verify that treatments would not disturb nesting or denning activity of any special status wildlife species. Limited operating periods for all special status wildlife species will be implemented as necessary, based on the most current wildlife data from pre-project field surveys, or habitat suitability as determined by the project biologist. Most vegetation management activities are prohibited during limited operating periods (LOP), unless surveys confirm that nests are uninhabited (SNFPA 2004).
4. Any treatments proposed in occupied or potential habitat for the Bi-State Distinct Population segment of sage grouse and/or the Greater sage grouse will be reviewed with the District wildlife biologist during the Annual Implementation Process. All pertinent Forest Plan Amendment standards and guidelines related to these species will also be reviewed and followed during treatment planning and implementation.

### **Vegetation**



**Issue:** Noxious weed treatments could potentially affect non-target native plant communities including rare plant populations. The use of herbicides and potentially other treatment activities could impact individual plants as well as populations. Modification of the plant community structure and composition could impact sensitive plants and their habitats.

***Design Features:***

1. The forest or district botanist will be consulted prior to chemical treatment of new weed occurrences or expanding occurrences, to ensure that Threatened, Endangered, Proposed, Candidate, and Sensitive (TEPCS) plant species are not affected.
2. All Herbicide treatments proposed within 500 feet of Webber ivesia populations will be reviewed by the district and/or forest botanist and the U.S. Fish and Wildlife Service to verify that treatment strategies are consistent with management direction for the species.
3. In all treatment applications, the herbicide spray nozzle will be kept as close to target plants as possible in order to limit overspray and drift to non-target native plant species.
4. To protect riparian and wet meadow vegetation communities, herbicide application in riparian corridors and wet meadows will be limited to directed foliar spray or wiping methods and spray will be directed away from native vegetation.

**Livestock Grazing**

**Issue:** Noxious weed treatments could affect livestock grazing operations by delaying grazing activities.

***Design Features:***

1. The Forest rangeland specialist will be notified annually of the proposed treatment schedule. Grazing permittees will be notified when treatments are proposed on their active allotments. If more intensive treatments are required on a particular allotment, treatment activities will be discussed with the permittee and included in the Annual Operating Instructions for Grazing Permits.
2. Any need to exclude livestock from treated or revegetated sites would not exceed ten acres within an allotment and would be met through temporary fencing constructed by the Forest Service.

## **COMMENT PROCESS**

The Forest Service encourages your substantive comments on this proposed action, along with supporting reasons that the responsible official should consider in reaching a decision.

Your comments will help us prepare an environmental assessment on the proposed action. The assessment will be used to determine whether to prepare an environmental impact statement or a finding of no significant impact. If there is no potential for significant impacts, that finding along with the environmental assessment and a proposed decision will be sent to those who

commented. If the environmental assessment concludes that there is the potential for significant impacts then an environmental impact statement would be prepared.

Written, facsimile, hand-delivered, oral, and electronic comments concerning this action will be accepted for 30 calendar days following the publication of the legal notice in the Reno Gazette-Journal. The publication date in the newspaper of record is the exclusive means for calculating the comment period for the Proposed Action. You should not rely upon dates or timeframe information provided by any other source.

Written comments must be submitted to: District Ranger, Carson Ranger District, 1536 South Carson St. Carson City, Nevada 89701 fax 775 884-8199. The office business hours for those submitting hand-delivered comments are: 8am to 4:30pm, Monday through Friday, excluding holidays. Electronic comments must be submitted in a format such as an email message, plain text (.txt), rich text format (.rtf), or Word (.doc) to [www.fs.usda.gov/project/?project=46417](http://www.fs.usda.gov/project/?project=46417).

In cases where no identifiable name is attached to a comment, a verification of identity will be required for objection eligibility. If using an electronic message, a scanned signature is one way to provide verification.

Individuals and organizations wishing to be eligible to object must meet the information requirements of a 36 CFR 218 Subpart A and B. It is the responsibility of persons providing comments to submit them by the close of the comment period. Only those who submit timely and specific written comments regarding the proposed project during a public comment period established by the responsible official are eligible to file an objection under §218.

Comments received in response to this solicitation, including names and addresses of those who comment, will be considered part of the public record for this project and will be available for public inspection and will be released if requested under the Freedom of Information Act.

Thank you for your interest and involvement in the National Environmental Policy Act (NEPA) process on the Humboldt-Toiyabe National Forest. The Forest Service is transitioning to a web based electronic mailing system that allows all interested parties to receive project material (scoping documents, updates, draft and final NEPA documents, and decisions) by email. This new system gives you direct control over which mailing lists you are subscribed to and immediate electronic access to project documents as they are posted online.

To subscribe to this new system you may go online now to migrate to electronic notifications, by following this link: [www.fs.usda.gov/project/?project=46417](http://www.fs.usda.gov/project/?project=46417). Once at the project site you will see a box titled "Get Connected" on the right hand side of the page. In the box is a "Subscribe to Email Updates" menu item. When you click on that item you will be prompted to provide your email address and select a pass word. When you have logged in you will be able to manage your account by subscribing to projects by Forest, District, project type, or project purpose. You will also be able to change your email address and password, or delete subscriptions for projects you no longer wish to follow or which have been completed. Once you are subscribed your name will be removed from the existing postal mailing lists.

For further information contact Maureen Easton, Project Manager at (775) 884-8151