

June 26, 2018

Integrated Noxious Weed Management (INWM) Plan

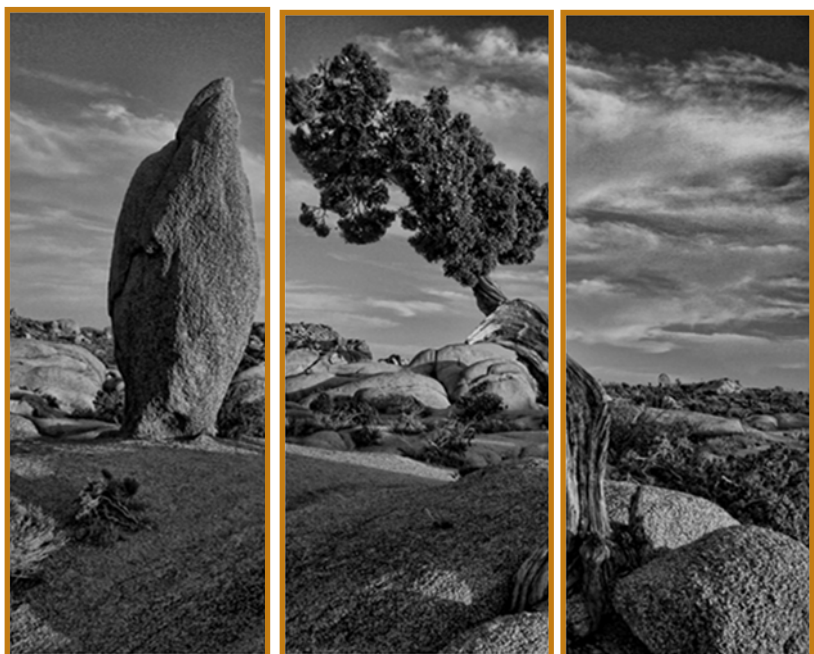
Palmer Solar Project
El Paso County, Colorado

Prepared For:

Palmer Solar LLC and JSI Construction Group LLC
1710 29th Street, Suite 1068
Boulder, Colorado 80301

Pinyon Project No.:

1/18-1215-01





Corporate Headquarters
3222 South Vance Street, Suite 200, Lakewood, CO 80227
T: 303.980.5200 F: 303.980.0089
www.pinyon-env.com

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Prepared by:

A handwritten signature in black ink that reads "Pam Wegener".

Pam Wegener
Biologist

Reviewed by:

A handwritten signature in black ink that reads "Allison Haraminac".

Allison Haraminac
Energy Market Manager

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I. Introduction

Palmer Solar LLC and JSI Construction LLC is developing a large-scale photovoltaic solar energy facility on approximately 500 acres of undeveloped rangeland in Fountain, El Paso County, Colorado (Figure 1). Pinyon Environmental, Inc. (Pinyon) was contracted to conduct a noxious weed inventory and Integrated Noxious Weed Management (INWM) Plan to support project development and permitting requirements.

When implemented properly, this INWM Plan fulfills county and state noxious weed management requirements and recommendations, including:

- State of Colorado Executive Order D 006 99 Development and Implementation of Noxious Weed Management Programs of July 19, 1999.
- Colorado Noxious Weed Act (Colorado Revised Statutes; Title 35, Article 5.5).
- El Paso County Noxious Weed Management Plan, Approved December 28, 2017.

I.1 Background

Noxious weeds are invasive plant species pursuant to management requirements under the Colorado Noxious Weed Act. Because of the adverse effects of noxious weeds to the environment and the economy, the Colorado Noxious Weed Act requires landowners and managers to eradicate and/or control the spread of noxious weeds.

The Colorado Department of Agriculture (CDA) is the lead agency in charge of noxious weed management requirements and recommendations in Colorado. The CDA classifies noxious weeds into three categories: List A (high priority), List B (medium priority), and List C (low priority). List A species have been designated by the CDA for eradication, meaning that known locations of List A species require treatment. List B species have been designated for eradication, suppression, or control based on species and location. The CDA has written management plans for all List A and most List B noxious weed species. These management plans are included in the Code of Colorado Regulation entitled “Rules Pertaining to the Administration and Enforcement of the Colorado Noxious Weed Act” (8 CCR 1206-2; CDA, 2007).

The CDA does not yet have written management plans for List C species and therefore does not yet require management for List C species. The management plans for List C species will be designed to support the efforts of local governing bodies to facilitate more effective integrated weed management on private and public lands. The goal of these plans will not be to stop the continued spread of these species but to provide additional education, research, and biological control resources to jurisdictions that choose to require management of List C species (CDA, 2017). The CDA also maintains a Watch List of weed species that may become problematic and may need to be listed as noxious weeds in the future.

Additionally, the Colorado Noxious Weed Act stipulates that each county in Colorado must adopt a noxious weed management plan for its jurisdiction. The El Paso County Noxious Weed Management Plan was approved by the Board of County Commissioners on December 28, 2017, and defers to the state noxious weed list and management goals (El Paso County, 2017).

1.2 Project Location

The proposed project is located south of Calhan Reservoir and east of Old Pueblo Road in El Paso County, Colorado (Figure 1). The approximate geographical location of the project is centered at decimal degree coordinates (World Geodetic System [WGS] 84) latitude 38.630458 °, longitude -104.650432°. The project is in portions of Sections 22, 26, 27, 28, and 35, Township 16 South, Range 65 West, of the 6th Principal Meridian on the United States Geological Survey (USGS) Fountain, Colorado 7.5-Minute Quadrangle (USGS, 1961 Revised 1994). The elevation of the project area is approximately 5,500 feet above mean sea level.

2. Methods

On June 10, 2018, Pinyon biologists Brandee Anderson and Pam Wegener conducted a noxious weed inventory of the project area. The weather during the site visit was cloudy in the morning and sunny in the afternoon, with a temperature between 70 and 90 degrees Fahrenheit (°F). Wherever possible, the biologists conducted windshield surveys from a vehicle on accessible roads and two-tracks in the project area. Areas not visible or accessible from roads were systematically surveyed on foot. Field notes and photographs were used to document general conditions (Appendix A).

During the site visit, the biologists used global positioning system (GPS) units to record relevant information. All spatial data were collected in the NAD 1983 State Plane Colorado Central Projected Coordinate System. Noxious weed data were collected as point, line, or polygon features, depending on the location and shape of the weed population(s). The following information was collected with the GPS at each weed population:

- Noxious weed species;
- Approximate radius size of the infestation in feet (if the location was collected as a point);
- Severity (density) ratings for each infestation. The following density categories were used:
 - High (>70% cover)
 - Medium (40 – 70% cover)
 - Low (10-40% cover)
 - Scattered (<10% cover)
- Any additional comments.

When noxious weeds were widespread and homogenous throughout the landscape, the biologists took general notes on an aerial map rather than mapping discrete locations with the GPS devices. The GPS and aerial map data were later digitized using Geographic Information Systems (GIS) software, and used to develop a Noxious Weed Inventory Map (Figure 2).

3. Results

For the purposes of this INWM Plan, the project area can be broadly categorized into shortgrass prairie habitat and rangeland areas (“Uplands”; Photos 1-5 in Photographic Log), and the wetter area along the drainage outflow from the Calhan Reservoir (“Calhan Reservoir Drainage Area”; Photo 6 in Photographic Log) (Figure 1). The Uplands had evidence of prior agricultural use, including spatial patterns of vegetation indicative of center-pivot irrigation, and were heavily grazed in parts. The Calhan Reservoir Drainage Area was generally moist with high weed densities.

3.1 Uplands

The Uplands were generally dry, and consisted mostly of shortgrass prairie habitat. The area was dominated by cholla (*Cylindropuntia* sp.) and fourwing saltbush (*Atriplex canescens*) shrubs, as well as a variety of grasses and herbaceous species, including alfalfa (*Medicago sativa*), crested wheatgrass (*Agropyron cristatum*), blue grama (*Bouteloua gracilis*), prickly poppy (*Argemone* sp.), and wavy leaf thistle (*Cirsium undulatum*).

The Uplands in the eastern section of the project area were heavily grazed and generally more degraded than those in the western section of the project area. While the Uplands were generally dry, several outflow pipes and drainages were noted (Photos 4 and 5 in Photographic Log). The vegetation in these wetter areas tended to be weedier than the surrounding areas.

Field bindweed (*Convolvulus arvensis*; List C) was the most common noxious weed noted in the Uplands. This species occurred mostly next to roads, two-tracks, and drainage areas (Figure 2), and was found in scattered to high densities. Canada thistle (*Cirsium arvense*; List B) and hoary cress (*Cardaria draba*; List B) also occurred in moist areas of the upland section in scattered to high densities. No List A species were observed in the Uplands.

3.2 Calhan Reservoir Drainage Area

The Calhan Reservoir Drainage Area had a higher density and diversity of weeds than the Uplands and consisted almost entirely of noxious weeds, with few native species noted (Figure 2; Photo 6 in Photographic Log). The noxious weeds noted in the area included four List B species: Canada thistle, common teasel (*Dipsacus fullonum*), hoary cress, and Russian olive (*Elaeagnus angustifolia*), and one List C species: field bindweed. Common teasel, hoary cress, and Russian olive generally occurred in large patches with high densities, while Canada thistle and field bindweed were noted in mixed densities and generally observed throughout the entire area. No List A species were observed in the Calhan Reservoir Drainage Area.

4. Weed Management Plan

The sections below outline general and project-specific Weed Management Priorities and Best Management Practices (BMPs). Appendix B contains weed fact sheets including pertinent identification information, plant phenology, and applicable treatments from the CDA, and Table I outlines management goals and recommended control measures for the noxious weeds that were noted in the project area.

4.1 General Weed Management Priorities

El Paso County has established the following priorities for noxious weed management: prevention; inventory, mapping, and monitoring; control; restoration; and education and awareness.

4.1.1 Prevention

Prevention focuses on the early detection and eradication of small noxious weed populations to prevent spread. It is easier to prevent the spread of a weed when the weed populations are confined to a limited space than to eradicate weeds from areas in which large populations have already been established. Section 4.2 addresses project-specific priorities focused on noxious weed prevention.

4.1.2 Inventory, Mapping, and Monitoring

Inventory, mapping, and monitoring is used to develop noxious weed management strategies and evaluate vegetation trends over time. By mapping noxious weed populations prior to and following construction activities, the effectiveness of weed control efforts can be quantified. On June 10, 2018, Pinyon conducted a pre-construction noxious weed inventory for the project area (Figure 2). Ongoing noxious weed inventory, mapping, and monitoring objectives are outlined in Section 4.3.3.

4.1.3 Control

To effectively control noxious weed populations, a combination of cultural, mechanical, biological, and chemical control methods can be used.

Cultural controls, such as using weed-free hay and promoting weed education, are widely used and can be the most cost-effective techniques. Cultural controls can be effective at reducing the likelihood of all noxious weed species noted in the project area from spreading. Project-specific cultural BMPs are outlined in Section 4.3.

Mechanical controls, such as mowing and hand pulling, can be labor intensive and are predominantly used for smaller infestations. Mowing can be effective at reducing Canada thistle and hoary cress populations noted in the project area. Mechanical treatments for the noxious weeds noted in the project area are described in Appendix B and Table I.

Biological controls (biocontrols) are very cost efficient; however, they take a long time to be effective and do not result in eradication of the weed. Biocontrols can be an effective long-term control technique for weeds that have large established populations and if the management goal is suppression. Biocontrols are available for several noxious weeds noted in the project area, including Canada thistle, Russian olive, and field bindweed (Appendix B). However, due to the short-term nature of construction, biocontrols are not recommended for this project.

Chemical controls use herbicides to disrupt weed growth. Herbicides are widely used and can be effective at eradicating weed species. However, herbicides can damage or kill non-target plants and have other environmental consequences if not used properly. Because of the risks associated with herbicide use, ***all herbicide applications must be performed by personnel under the supervision of a certified applicator licensed by the CDA*** (in accordance with the Colorado Pesticide Applicator Act, Colorado Revised Statutes; Title 35, Article 10) ***and in accordance with the product label.***

4.1.4 Restoration

Revegetation with native species deters the germination of noxious weed seeds. Project-specific BMPs that address the reintroduction of native plants are outlined in Section 4.3.2.

4.1.5 Education and Awareness

Education and awareness objectives focus on public outreach to promote the benefits of noxious weed management to five major groups of stakeholders: 1) rural property owners with noxious weed infestations, 2) urban property owners with noxious weed infestations, 3) land managers and property owners without regulated weeds, 4) local, county, and state government agencies, and 5) community and non-profit groups focused on parks, conservation, and restoration issues. Public outreach tools used by El Paso County include informational handouts and brochures, formal presentations, training courses, staffing booths at community and regional events, and the County Website.

For this project, education and awareness of construction and operations personnel regarding the implementation of this INWM plan will be key to its successful implementation (see Section 4.3.2).

4.2 Project-Specific Weed Management Priorities

The following priorities for weed management are based on the information obtained during the weed inventory, and the management goals set by the CDA and El Paso County.

Priority 1: No List A species were observed within the project area. However, if any List A species are found prior to or during construction, it is a priority that these species be eliminated. List A species that occur in similar environments and that may develop within the project area if introduced include, but are not limited to: cypress spurge (*Euphorbia cyparissias*), hairy willow-herb (*Epilobium hirsutum*), Japanese knotweed (*Fallopia japonica*), and myrtle spurge (*Euphorbia myrsinites*).

Priority 2: Canada thistle and hoary cress (List B species) were observed in the isolated drainages and outflow pipes in the Uplands (Figure 2, Photos 4 and 5 in Photographic Log). Because the surrounding area is of higher quality (i.e., generally free of weeds), it is a priority to treat and eradicate these isolated populations before they spread.

Priority 3: The Calhan Reservoir Drainage Area had a high weed density. The number of noxious weeds in the Calhan Reservoir Drainage Area should be reduced to decrease the potential for the weeds to spread to the surrounding, less weedy areas.

Priority 4: Field bindweed, a List C noxious weed, is scattered throughout otherwise high quality (weed-free) areas in the Uplands (Figure 2). Although it is not required by law to manage List C weeds, management of the species is recommended. Efforts to suppress the spread of field bindweed should be

focused near roads, parking areas, and two-tracks, as seeds could be easily spread from these areas by vehicles.

4.3 Project-Specific Best Management Practices

Noxious weed management BMPs shall be followed both prior to and during construction as well as during reclamation/reseeding activities to prevent spread. It is important to note that the success of the treatment is contingent upon the timing of the treatment and the plant phenology. For example, herbicides to treat common teasel can be effective during the rosette stages (spring or fall). Therefore, if construction activities are anticipated to begin in the winter, plans should be made to treat common teasel the preceding season, if practical. The timing of effective treatment and plant phenology are summarized in Appendix B and Table I.

4.3.1 Pre-Construction

- Prior to the start of construction or re-start or construction after a delay of more than three weeks, List B weed populations shall be treated using mechanical and chemical methods. Species-specific treatment recommendations are summarized in Appendix B and Table I. The extent of treatment shall depend upon the location of the proposed construction activity:
 - Uplands: If the proposed construction activity is to occur in the Upland areas, all List B populations within 50 feet of the proposed area of disturbance shall be treated prior to construction.
 - Calhan Reservoir Drainage Area: If the proposed construction activity is to occur in the Calhan Reservoir Drainage Area, all List B populations within the Calhan Reservoir Drainage Area shall be treated prior to construction.
- Prior to construction activities, high priority noxious weed species populations shall be treated using mechanical and chemical methods (Appendix B, Table I). These species include the Canada thistle and hoary cress populations noted in the project area Uplands (see Section 4.2). Because construction activities can exacerbate the spread of weeds, treating these high priority populations prior to construction can help to reduce their spread.

4.3.2 Construction and Reclamation/Reseeding

- Construction personnel shall be made aware of this INWM plan and the correct implementation of the BMPs contained herein.
- During construction and reclamation/reseeding, all List B species shall be treated using mechanical and chemical methods. Species-specific treatment recommendations are summarized in Appendix B and Table I. The extent of treatment shall depend upon the location of the proposed construction activity, as described in Section 4.3.1.
- Contractor vehicles shall be inspected before they are used for construction to ensure that they are free of soil and debris capable of transporting noxious weed seeds or roots. Heavy construction equipment shall be cleaned prior to use in the project area.

- Disturbed areas shall be reclaimed using a permanent native seed mixture. If areas are completed and permanent seeding cannot occur due to the time of year (e.g., winter months), mulch and mulch tackifier will be used for temporary erosion control until seeding can occur.
- All topsoil, either imported or salvaged on the project area, shall be treated with an herbicide for noxious weeds prior to final seeding.
- Only certified weed-free mulch and bales shall be used on the project (in accordance with the Colorado Weed Free Forage Crop Certification Act, Colorado Revised Statutes; Title 35, Article 27.5).

4.3.3 Post Construction

- Following revegetation, native grasses shall be routinely mowed during the growing season to prevent the spread of Canada thistle and hoary cress and the introduction of other weeds to the project area.
- One year after construction is completed, the project area shall be surveyed for new noxious weed infestations. The survey shall occur during the growing season and shall be used to inform whether additional treatment is required. The priorities outlined in Section 4.2 shall be used to guide and focus treatments.
- Following the initial post-construction survey, the project area shall be surveyed for noxious weeds once every five years during the growing season. The survey shall be used to inform whether additional treatment is required. The priorities outlined in Section 4.2 shall be used to guide and focus treatments.

4.4 Project-Specific Documentation

To show that weed management activities are being implemented, activities related to noxious weeds shall be documented. A sample form that can be used to document weed management activities has been included in Appendix C. This form can be used to document various weed management-related activities including:

- Weed inventory and/or inspections
- Weed management activities
- Vehicle and/or equipment inspections

In addition to the filled-out form documenting weed management activities, other documentation shall also be maintained. This documentation may include:

- Copies of seed tags that document noxious weed percentage.
- Seed testing results.
- Weed-free certification for hay bales and straw.
- Weed-free certification for topsoil.

- Herbicide spray sheets that include herbicide applicator name, company, and CDA license number. Herbicide spray sheets also should include herbicide type, amount, and target species of application.

5. References

- Colorado Department of Agriculture (CDA), 2017. *The Official State Portal, Colorado Department of Agriculture Website*. Available at: <http://www.colorado.gov/ag>.
- Colorado Department of Agriculture (CDA), Conservation Services Division, 2007. *Code of Colorado Regulation entitled "Rules Pertaining to the Administration and Enforcement of the Colorado Noxious Weed Act" (8 CCR 1206-2)*. Entire rule effective March 30, 2018.
- Colorado Revised Statutes, 2016. *Colorado Noxious Weed Act; Title 35, Article 5.5*. State of Colorado.
- Colorado Revised Statutes, 2016. *Colorado Pesticide Applicator Act; Title 35 Article 10*. State of Colorado.
- Colorado Revised Statutes, 2016. *Colorado Weed Free Forage Crop Certification Act; Title 35 Article 27.5*. State of Colorado.
- El Paso County, 2017. *Noxious Weed Management Plan*. El Paso County, Colorado. Board of County Commissioner's approval December 28, 2017.
- USGS, 1966. "7.5 Minute Topographic Map, Boulder, Colorado," United States Geological Survey, Revised 1979.

Tables

TABLE 1: MANAGEMENT GOALS AND CONTROL MEASURES FOR NOXIOUS WEEDS OBSERVED IN THE PROJECT AREA

Common Name	Scientific Name	USDA Plant Code	Distribution within Study Area¹	Weed Management Goals¹	Control Methods	
					Chemical	Mechanical
List B						
Canada thistle	<i>Cirsium arvense</i>	CIAR4	Prevalent throughout the Calhan Reservoir Drainage Area and isolated drainages in the Uplands.	Suppression for entire project area. Elimination for populations within 15 feet of a road or parking lot on an annual basis. (See Page 102 of Rules).	Apply herbicides during the spring bud to bloom stage and fall regrowth, and immediately after mowing.	Mow every 10 to 21 days throughout the growing season.
Common teasel	<i>Dipsacus fullonum</i>	DIFU2	Prevalent throughout the Calhan Reservoir Drainage Area.	Suppression for entire project area. Elimination for populations within 15 feet of a road or parking lot on an annual basis. (See Page 82 of Rules).	Apply herbicides during the spring and fall rosette stages or early summer bolting stage.	Dig at the rosette during the summer bolting stage.
Hoary cress	<i>Cardaria draba</i>	CADR	Prevalent throughout the Calhan Reservoir Drainage Area and isolated drainages in the Uplands.	Suppression for the sections of project area that are within two miles of Interstate 25; elimination for the sections of the project area that are beyond two miles of Interstate 25 by 2021. Elimination for populations within 15 feet of a road or parking lot on an annual basis. (See Page 57 of Rules).	Apply herbicides during the early spring to summer growth stages, and immediately after mowing.	Mow repeatedly during the summer.
Russian olive	<i>Elaeagnus angustifolia</i>	ELAN	Prevalent throughout the Calhan Reservoir drainage, with highest densities in the northern section of the drainage at the intersection with the project area.	Suppression for entire project area. Elimination for populations within 15 feet of a road or parking lot on an annual basis. (See Page 105 of Rules).	Apply herbicide to tree-stumps immediately after the tree is cut.	Hand-pull scattered seedlings and sprouts, and cut larger trees.

Common Name	Scientific Name	USDA Plant Code	Distribution within Study Area¹	Weed Management Goals¹	Control Methods	
					Chemical	Mechanical
List C						
Field bindweed	<i>Convolvulus arvensis</i>	COAR4	Prevalent throughout the project area, with higher concentrations in the Calhan Reservoir Drainage Area, two-tracks, and isolated drainages in the Uplands.	No specific weed management goal set by state.	Apply herbicides after bloom (late summer to fall).	None.

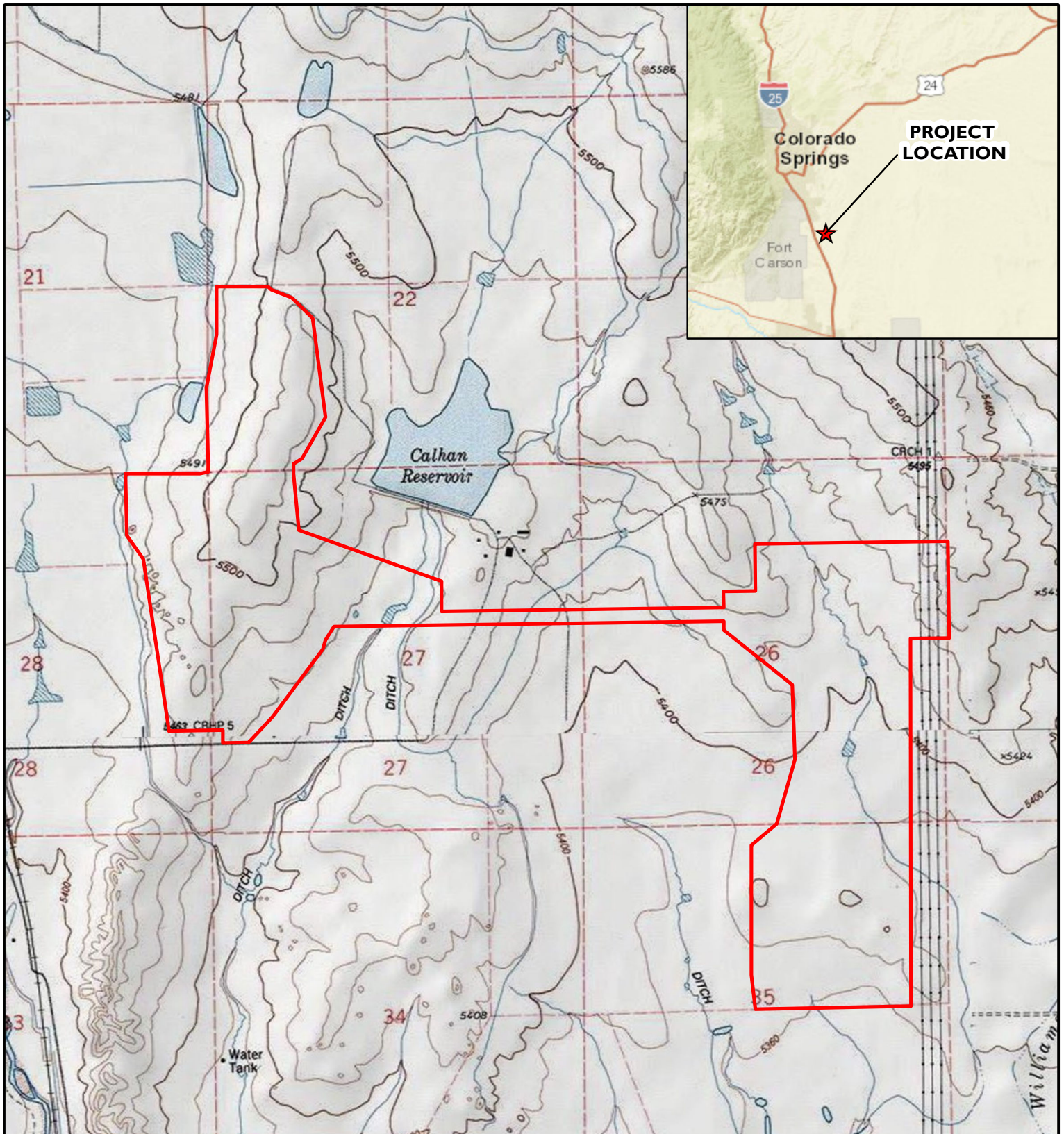
Notes:

USDA = United States Department of Agriculture; CDA = Colorado Department of Agriculture

¹ See Figure 2 for details on distribution within the project area.

Sources: Rules Pertaining to the Administration and Enforcement of the Colorado Noxious Weed Act (8 CCR 1206-2, Effective March 30, 2018); Colorado Department of Agriculture Noxious Weed Fact Sheets

Figures



Legend



Project Area

USGS 7.5' Topographic Map
Fountain, Colorado 1961 (Revised 1994)

0 1,000 2,000
Feet

Pinyon
Environmental, Inc.

PROJECT LOCATION

Palmer Solar Project
El Paso County, Colorado

Site Location: Sections 22, 26, 27, 28 and 35, Township 16S, Range 65W, 6th Principal Meridian

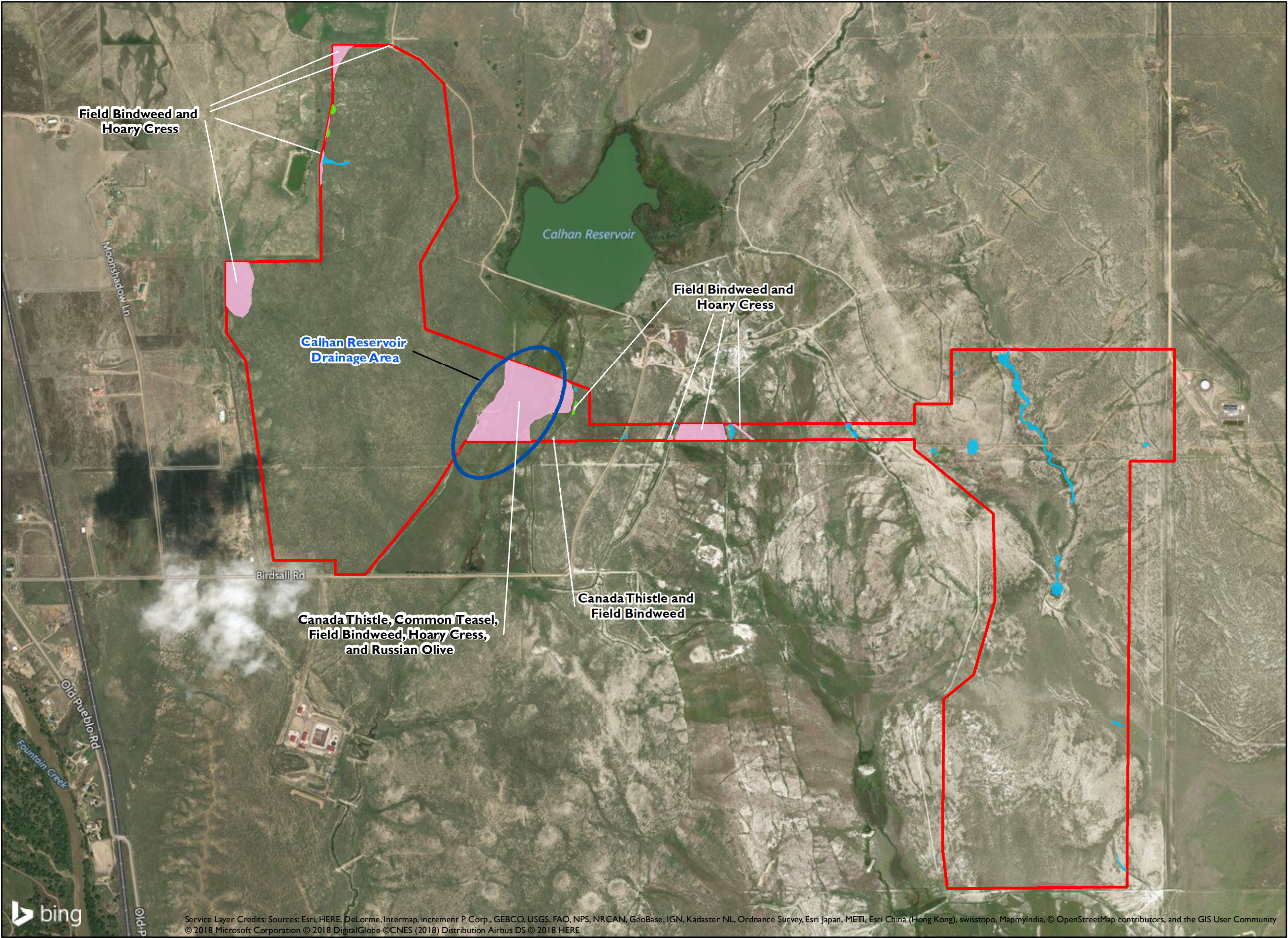
Pinyon Project Number: I/18-1215-01.3300

Drawn By: MJS

Reviewed By: PJW

Figure: I

Date: 6/22/2018

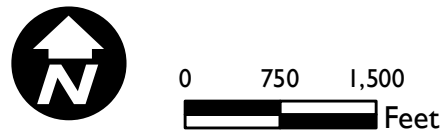


Legend

- Project Area
- Canada Thistle
- Field Bindweed
- See Label for Species

Notes:
Field Bindweed was scattered throughout the upland areas in the eastern half of the project area. The map indicates higher densities and/or more prevalent areas of infestation for this species.

Noxious weed densities were generally highest in the drainage directly south of Calhan Reservoir.



NOXIOUS WEED INVENTORY
Palmer Solar Project
El Paso County, Colorado

Site Location: Sections 22, 26, 27, 28 and 35, Township 16S, Range 65W, 6th Principal Meridian		Drawn By: PJW	Figure: 2
Pinyon Project Number: I/18-1215-01.3300		Reviewed By: BCA	Date: 6/25/2018

Appendix A

Photographic Log

Photo 1.
Representative
photo of
Uplands in the
western section
of the project
area. Facing
west.



Photo 2.
Representative
photo of
Uplands in the
eastern section
of the project
area. Area has
been heavily
grazed. Facing
north.



Photo 3.
Representative
photo of
Uplands in the
eastern section
of the project
area. Compact,
bare soil as
shown here was
common
throughout the
eastern section
of the project.
Facing south.



Photo 4.
Representative
photo of isolated
drainage areas in
the Uplands.
Canada thistle,
hoary cress,
and/or field
bindweed were
often found in
these
environments.



Photo 5.
Representative
photo of isolated
drainage areas in
the Uplands.
Canada thistle,
hoary cress,
and/or field
bindweed were
often found in
these
environments.



Photo 6.
Representative
photo of the
weedy Calhan
Reservoir
Drainage Area.
Common teasel,
Canada thistle,
and Russian olive
can be noted in
the photo.
Facing west.

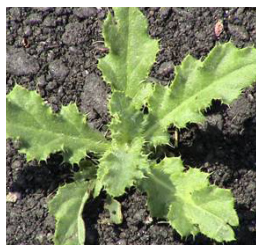


Appendix B

Noxious Weed Fact Sheets

Canada thistle

Colorado Dept. of
Agriculture
Conservation
Services Division
700 Kipling Street,
Suite 4000
Lakewood, CO
80215
303-239-4100



Key ID Points

1. Purple flowers form in clusters of 1-5 per branch.
2. Floral bracts are spineless.
3. Small heads, vanilla scent.

Canada thistle Identification and Management



Canada thistle during the flowering stage. This stage typically occurs in the early summer. Seed production will follow and effective management options will then become limited.

Identification and Impacts

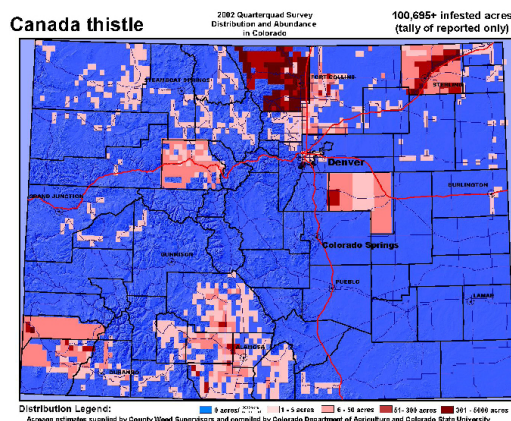
Canada thistle (*Cirsium arvense*) is a non-native deep-rooted perennial that spreads by seeds and aggressive, creeping, horizontal roots (rhizomes). Canada thistle can grow 2 to 4 feet in height. The leaves are oblong, spiny, bright green in color, and are only slightly hairy on the undersurface. Flowers occur in small clusters that form on the ends of branches. They are about 1 cm in diameter, tubular shaped, and vary from white to purple in color with a strong vanilla scent (female flowers).

Canada thistle emerges from its root system from late April through May. It begins to flower in late spring to early summer with increase in day length. Canada thistle only produces about 1,000 to 1,500 seeds per plant. Typically, it reproduces vegetatively through a creeping root system, and can quickly form dense stands. Every piece of root, from 1/2 to 1 inch in length, is capable of forming new plants. The key to controlling Canada thistle is to eliminate seed production and also to reduce the plant's nutrient reserves in its root system through persistent, long-term management.

Canada thistle is one of the most feared noxious weeds in the U.S. as it can infest many land types, from roadsides, ditch banks, riparian zones, pastures, irrigated cropland, to the most productive dryland cropland. Forage production is severely reduced because cattle will not graze near infestations.

The key to effective control of Canada thistle is combining control methods. These weeds need to be continually stressed, forcing it to exhaust root nutrient stores and eventually die. Of all control methods, prevention is most important. Maintain healthy pastures and rangeland and continually monitor your property for new infestations. Details on the back of this sheet can help to create a management plan compatible with your site ecology.

Canada thistle is designated as a "List B" species on the Colorado Noxious Weed Act. It is required to be either eradicated, contained, or suppressed depending on the local infestations. For more information visit www.colorado.gov/ag/csd and click on the Noxious Weed Program link or call the State Weed Coordinator at the Colorado Department of Agriculture, Conservation Services Division, 303-239-4100.



All photos © Kelly Uhing, Infestation map above, Crystal Andrews, Colorado Department of Agriculture.

Cirsium arvense

**CULTURAL**

Establishment of selected grasses can be an effective cultural control of Canada thistle. Contact your local Natural Resources Conservation Service for seed mix recommendations. Maintain healthy pastures and prevent bare spots caused by overgrazing. Bare ground is prime habitat for weed invasions.

**BIOLOGICAL**

Cattle, goats, and sheep will graze on Canada thistle when plants are young and succulent in the spring. Follow up grazing with a fall herbicide application. Insects are available but have not been effective. Insects can be obtained at no charge from the Colorado Department of Agriculture. Please call 970-464-7916 or visit www.colorado.gov/ag/csd for more information.

**MECHANICAL**

Due to extensive root system, hand-pulling this plant is not a viable option. Mowing can be effective if done every 10 to 21 days throughout the growing season. Combining mowing with herbicides will further enhance control of Canada thistle.

Integrated Weed Management:

Combining control methods for Canada thistle is imperative. This weed needs to be continually stressed, forcing it to exhaust root nutrient stores and eventually die.

Of all control methods, prevention is most important. Maintain healthy pastures and rangeland and continually monitor your property for new infestations.

HERBICIDES

The following are recommendations for herbicides that can be applied to range and pasturelands. Always read, understand, and follow the label directions. Rates are approximate and based on equipment with an output of 30 gallons per acre. Please read label for exact rates. **The herbicide label is the LAW!**

HERBICIDE	RATE	APPLICATION TIMING
Aminopyralid (Milestone)	5-7 ounces/acre or 1 teaspoon/gal water	Apply in spring at the pre-bud growth stage and/or to fall regrowth. Add non-ionic surfactant 0.32oz/gal water or 1 qt/100 gal water.
Chlorsulfuron (Telar DF)	1-3 ounces/acre or 0.50 grams/1 gal water	Apply in spring during bud to bloom stage and/or to fall regrowth. Add non-ionic surfactant 0.32oz/gal water or 1 qt/100 gal water.
Clopyralid + 2,4-D (Redeem R&P)	3 pints/acre or 1.25 oz/gal water	Apply from rosette to bud stage when all plants have emerged. Add non-ionic surfactant @ 0.32oz/gal water or 1 qt/100 gal water. (Spring or Fall)
Picloram (Tordon 22K *This is a Restricted Use Pesticide*)	1 qt/acre or 1.0 oz/gal water	Spring - early bud stage and/or fall regrowth. DO NOT apply near or under trees or where soils have rapid permeability or where water level is high. Add a non-ionic surfactant @ 0.32oz/gal water or 1 qt/100 gal water.

Photos © Kelly Uhing, Colorado Department of Agriculture

Canada thistle

Colorado
State
University

COLORADO
DEPARTMENT OF
AGRICULTURE

Common teasel

Colorado Dept. of
Agriculture,
Conservation
Services Division
700 Kipling Street
Suite 4000
Lakewood, CO 80215
303-239-4100



Key ID Points

1. Grows over 6 feet tall.
2. Leaves at the base are dark green and appear rippled.
3. Flowers are purple or white.

Common teasel Identification and Management



Identification and Impacts

Common teasel (*Dipsacus spp.*) is a biennial or sometimes monocarpic perennial forb. The fruits are a four-angled achene, each containing a single seed. Common teasel can produce more than 2,000 seeds per plant. The flowers are purple or white with spiny, awned bracts at the base. The flower head is generally egg-shaped, with a square base. The floral bracts at the base of the head are generally longer than the head. Rosette leaves are conspicuously veined, with stiff prickles on the lower midrib and appear to be wrinkled. Stem leaves are simple, opposite, net-veined, stalkless, and clasp the stem. Mature plants can grow up to or over six feet tall. The taprooted stem is rigid with several rows of downward turned prickles. Plants die after production of seed has occurred.

Habitats for Common teasel include open, sunny habitats that range from wet to dry levels. It is generally found along irrigation ditches, rivers, abandoned fields, pastures, waste places, and forests. Common teasel is spreading rapidly in America, particularly in the Pacific Northwest. In Colorado, teasel is usually found in relatively moist, disturbed situations but is moving into drier areas. Seeds can stay viable for at least 2 years. Seeds don't generally disperse far from the parent plant. Plants can regenerate

fairly easily, due to the bare ground where the basal leaves were. Common teasel is native to Europe where it historically had many uses.

The key to effective control of Common teasel is prevention. Eliminate seed production to decrease the spread of this forb, and continue to deplete the seed bank for four to six years. Reseeding areas with perennial grasses for several years will reduce an infestation. Mechanical and chemical control methods are effective when dealing with Common teasel. Details on the back of this sheet can help to create a management plan compatible with your site ecology.

Common teasel is designated as a "List B" species in the Colorado Noxious Weed Act. It is required to be either eradicated, contained, or suppressed depending on the local infestations. For more information visit www.colorado.gov/ag/csd and click on the Noxious Weed Management Program. Or call the State Weed Coordinator at the Colorado Department of Agriculture, Conservation Services Division, 303-239-4100.



Photos © Kelly Uhing, Colorado Department of Agriculture.

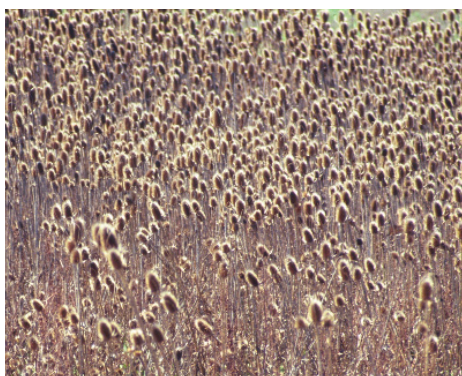
Dipsacus spp.

**CULTURAL**

Prevent the establishment of new infestations by minimizing disturbance and seed dispersal, eliminating seed production and maintaining healthy native communities. Contact your local Natural Resources Conservation Service for seed mix recommendations. Maintain healthy pastures and prevent bare spots caused by overgrazing.

**BIOLOGICAL**

There is no biological control available for Common teasel. Since biological control agents take years to research, develop and release, no releases are expected in the foreseeable future. For more information, contact the Palisade Insectary of the Colorado Department of Agriculture at 970-464-7916.

**MECHANICAL**

Treatments such as digging and cutting can be effective in certain situations. Digging at the rosette and bolting stage, making sure that the majority of the root comes up, can be effective. Cutting plants when near the flowering stage is also effective. When using either of these methods, revisiting the site frequently is recommended to ensure regrowth does not occur.

Integrated Weed Management:

The key to controlling Common teasel is to eliminate seed production and exhaust the seed bank in the soil. Common teasel does not reproduce vegetatively and dies after seed production.

Mechanical and chemical control methods can be effective.

Common teasel

HERBICIDES

NOTE: The following are recommendations for herbicides that can be applied to range and pasturelands. Rates are approximate and based on equipment with an output of 30 gal/acre. Please read label for exact rates. **Always read, understand, and follow the label directions. The herbicide label is the LAW!**

HERBICIDE	RATE	APPLICATION TIMING
Metsulfuron (Escort XP)	1 oz. of product/ac. + 0.25% v/v non-ionic surfactant	Apply when in rosette or bolting growth stage. (Spring or Fall rosettes or Early summer bolting)
Aminopyralid (Milestone)	4 to 7 fl. oz./ac. (start with 7 fl. oz.) + 0.25% v/v non-ionic surfactant	Apply when in rosette or bolting growth stage. Best choice of herbicide to use in riparian areas. (Spring or Fall rosettes or Early summer bolting)
Imazapic (Plateau)	8 to 12 fl. oz./ac. + 2 pt/ac. methylated seed oil	Apply when in rosette or bolting growth stage. Good choice of herbicide to use in riparian areas. (Spring or Fall rosettes or Early summer bolting)

Photos © Steve Dewey, Utah State University, Bugwood.org.

Hoary cress

Colorado Dept. of
Agriculture,
Conservation
Services Division
700 Kipling Street
Suite 4000
Lakewood, CO 80215
303-239-4100



Key ID Points

1. White flowers.
2. Grows erect 10-24" in height.
3. Leaf is 3/4-4" long with blunt end and fine white hairs.

Hoary cress Identification and Management



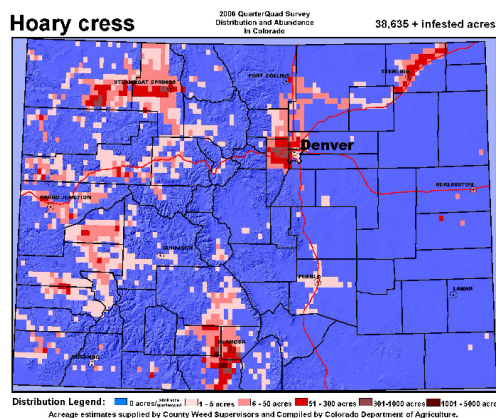
Identification and Impacts

Hoary cress (*Cardaria draba*), commonly known as whitetop, is a creeping perennial that is a member of the mustard family and native to Europe. The stems, in the rosette stage, may grow up to 2 inches in height and produce grayish-green leaves that are lance shaped. The leaves are alternate and 3/4 to 4 inches long. The upper leaves have 2 lobes that clasp the stem. The plant has numerous small, white flowers with 4 petals on stalks radiating from a stem. Seed capsules are heart-shaped with two small, flat, reddish brown seeds. One plant can produce from 1,200 to 4,800 seeds. The plants emerge in early spring with stems emerging from the center of each rosette in late April. Hoary cress flowers from May to June and plants set seed by mid-summer.

Habitats for Hoary Cress include: fields, waste places, meadows, pastures, croplands and along roadsides. It is typically found on unshaded, generally open areas of disturbed ground. It generally does better with moderate amounts of precipitation and grows well on alkaline soils.

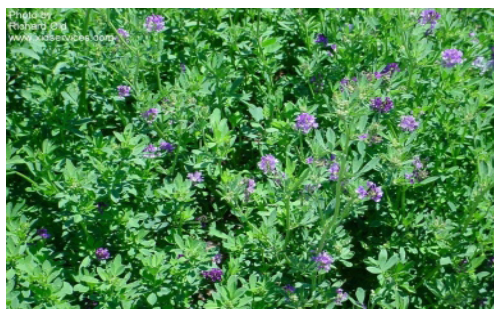
The key to effective control of Hoary cress is prevention. Preventing the encroachment of these weeds is the most cost-effective management. Preventing invasions by limiting seed dispersal, monitoring and using weed free hay, and quarantine animals that may have grazed in infested areas. Beyond prevention, the key is early detection when infestations are small, and aggressive management. Integrated Weed Management is required for proper control. Details on the back of this sheet can help to create a management plan compatible with your site ecology.

Hoary cress is designated as a "List B" species in the Colorado Noxious Weed Act. It is required to be either eradicated, contained, or suppressed depending on the local infestations. For more information visit www.colorado.gov/ag/csd and click on the Noxious Weed Management Program. Or call the State Weed Coordinator at the Colorado Department of Agriculture, Conservation Services Division, 303-239-4100.



Photos © Kelly Uhing, Colorado Department of Agriculture; Above map: Crystal Andrews, Colorado Department of Agriculture,

Cardaria draba

**CULTURAL**

Prevent the establishment of new infestations by minimizing disturbance and seed dispersal, eliminating seed production and maintaining healthy native communities. Contact your local Natural Resources Conservation Service for seed mix recommendations. Planting competitive legumes, such as alfalfa, can reduce Hoary cress in crop rotations.

**BIOLOGICAL**

There is no biological control available for Hoary cress. Since biological control agents take years to research, develop and release, no releases are expected in the foreseeable future. For more information, contact the Palisade Insectary of the Colorado Department of Agriculture at 970-464-7916.

**MECHANICAL**

Mowing several times before the plants bolt stresses Hoary cress and forces the plant to use nutrient reserves stored in the root system. Combining mowing with herbicides will further enhance control of this weed. Mow repeatedly during the summer, then apply a herbicide in the fall.

Integrated Weed Management:

No single treatment provides effective, long term control. The best and first defense is always prevention. Once established, integrate a variety of combinations of competitive planting, crop rotations, and herbicides. This can reduce Hoary cress to manageable levels.

Hoary cress

HERBICIDES

NOTE: The following are recommendations for herbicides that can be applied to range and pasturelands. Rates are approximate and based on equipment with an output of 30 gal/acre. Please read label for exact rates. **Always read, understand, and follow the label directions. The herbicide label is the LAW!**

HERBICIDE	RATE	APPLICATION TIMING
Metsulfuron (Escort XP)	1 oz. product/acre 0.25 v/v non-ionic surfactant	Apply at the early bud growth stage; i.e. "broccoli" growth stage. (Early Spring to Early Summer)
Chlorsulfuron (Telar)	1 oz. product/acre 0.25 v/v non-ionic surfactant	Apply at the early bud growth stage; i.e. "broccoli" growth stage. (Early Spring to Early Summer)
Imazapic (Plateau)	12 fl. oz./acre + 2 pints/acre methylated seed oil or crop oil concentrate	Apply at late flower to post-flower growth stage. (Late Spring to Mid Summer)



Russian olive

Colorado Dept. of
Agriculture
Conservation Services
Division
700 Kipling Street
Suite 4000
Lakewood, CO 80215
303-239-4100



Key ID Points

1. Leaves are silvery white with dense scales.
2. Flowers have 4 small sepals and are light yellow clusters.
3. Red-yellow fruits on mature plants.

Russian olive Identification and Management



fields and open areas. Russian-olive can out compete native vegetation, interfere with natural plant succession and nutrient cycling, and tax water reserves. Because Russian-olive is capable of fixing nitrogen in its roots, it can grow on bare, mineral substrates and dominate riparian vegetation. Although Russian-olive provides a plentiful source of edible fruits for birds, ecologists have found that bird species richness is actually higher in riparian areas dominated by native vegetation.

Identification and Impacts

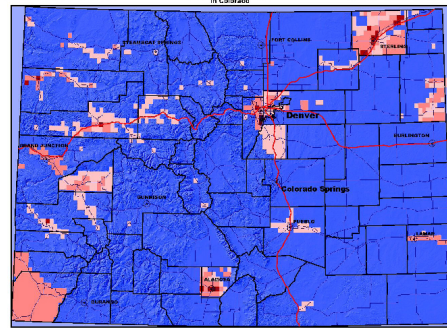
Russian olive (*Elaeagnus angustifolia*) is a perennial tree or shrub that is native in Europe and Asia. The plant has olive-shaped fruits, silver color at first then becoming yellow-red when mature. Russian olive can reproduce by seed or root suckers. Seeds can remain viable for up to 3 years and are capable of germinating in a broad range of soil types. Spring moisture and slightly alkaline soil tend to favor seedling growth. The plants extensive root system, sprouts root suckers frequently. The stems can reach up to 30 feet in height with branches and trunks that have 1 to 2 inch thorns. Leaves are 2 to 3 inches long, alternate, narrow, have simple blades, and are untoothed. The lower surface is silvery white with dense scales, while the upper surface of the leaf is light green in color. Flowers are 4 small sepals in light yellow clusters, fragrant, and appear May through June. Russian olive twigs are flexible, reddish, and have surfaces coated with gray and scaly pubescence, becoming smooth.

Once thought to be a beneficial windbreak tree, it since has been deemed detrimental to the environment. Russian olive can grow in a variety of soil and moisture conditions, but prefers open, moist riparian zones. It is shade tolerant and can be found along streams,

The key to effective control of Russian olive is preventing establishment of the trees or shrubs. If plants are already present, control options include cut-stump treatments and mechanical mowing. These treatments are dependant on size and location of the plant. Details on the back of this sheet can help to create a management plan compatible with your site ecology.

Russian olive is designated as a "List B" species in the Colorado Noxious Weed Act. It is required to be either eradicated, contained, or suppressed depending on the local infestations. For more information visit www.colorado.gov/ag/csd and click on the Noxious Weed Management Program. Or call the State Weed Coordinator at the Colorado Department of Agriculture, Conservation Services Division, 303-239-4100.

Russian-olive 2003 Quarantined Survey Distribution and Abundance in Colorado 10,026+ infested acres



Photos © Clockwise from lower left: (1) Richard Old, XID Services, Inc., Bugwood.org; (2) Patrick Breen, Oregon State University, Bugwood.org; (3) Kelly Uhing, Colorado Department of Agriculture and map by Crystal Andrews, Colorado Department of Agriculture.

Elaeagnus angustifolia

**CULTURAL**

Cultural controls are not an option when dealing with Russian olive. Replacing with native trees is important once Russian olive has been removed. Contact your local Natural Resources Conservation Service for recommendations of other possible trees or shrubs.

**BIOLOGICAL**

Tubercularia canker overwinters on infected stems and spreads via rain-splash, animals, or pruning implements to open wounds in the bark. Infected tissue becomes discolored or sunken. Entire stems may be girdled and killed, and the disease can deform or kill stressed plants over time. For more information, contact the Colorado Department of Agriculture's Insectary in Palisade, Colorado at 970-464-7916.

**MECHANICAL**

Mowing hedges with a brush type mower, followed by removal of cut material may be the most effective method for eradication. Stump sprouting commonly occurs after cutting down the tree, and excavation of the entire stump can trigger root sprouting. Burning is practical when conditions support a long hot fire and most effective in summer or early fall. Saplings are most sensitive.

Integrated Weed Management:

The most effective combination of control efforts has been cutting trees, followed by either spraying or burning the stumps. "Cut-stump" treatments that are applied during the winter months, using an approved herbicide seems effective. Trees are "cut" with a hatchet or chainsaw, then immediately treated with herbicide on the open wound.

HERBICIDES

NOTE: The following are recommendations for herbicides that can be applied to range and pasture-lands. *Rates are approximate and based on equipment with an output of 30 gallons per acre. Always read, understand, and follow the label directions. The herbicide label is the LAW!*

HERBICIDE	RATE	APPLICATION TIMING
Triclopyr (Garlon 4, Remedy)	Undiluted (100% solution)	Apply to the cambial layer of the tree immediately after the cut-stump treatment.
Imazapyr + Water (Habitat + Water or Arsenal + Water)	Diluted by mixing 8 to 12 fl. oz / 1 gallon of water	Apply to the cambial layer of the tree immediately after the cut-stump treatment.
Imazapyr (Habitat or Arsenal)	4 to 6 pt./Acre	Broadcast spray/spraying individual trees; low or high volume spray.

Russian olive



**CULTURAL**

After a saltcedar infestation is managed, revegetation is necessary in order to protect the soil resource and reduce the threat of reinvasion. Seeded grasses, willow stakes, and cottonwood cuttings can reduce the chances of saltcedar reinvading managed sites.

**BIOLOGICAL**

The saltcedar leaf beetle (*Diorhabda elongata*) larvae and adults feed on foliage. This causes stem dieback and potential death of the plant if defoliation is consistent. The leaf beetle should be available for limited distribution. For more information, contact the Palisade Insectary of the Colorado Department of Agriculture, 970-464-7916.

**MECHANICAL**

A bulldozer or prescribed fire can be used to open up large stands of saltcedar. These methods must be followed up with a herbicide treatment of the resprouts when they are 1 to 2 meters tall. Chainsaws, or loppers for smaller plants, are effective for cut-stump treatments to smaller infestations or in environmentally-sensitive management areas.

Integrated Weed Management:

Select the appropriate control method based on the size of the area and other environmental or cultural considerations. Re-seed controlled areas with desirable species to protect the soil resource and to prevent or slow saltcedar reinvasion. Follow up control efforts the same growing season and for several years afterwards.

Saltcedar

HERBICIDES: The following are recommendations for herbicides that can be applied to range and pasturelands. Rates are approximate and based on hand-held equipment with an output of 30 gallons per acre. Always read, understand, and follow the label directions. **The herbicide label is the LAW!**

HERBICIDE	RATE	APPLICATION TIMING
Triclopyr (Garlon 4 *approved aquatic label*)	Foliar - 2-4 qts./acre Cut-stump - undiluted 100% Basal bark treatment 1:3 of herbicide:natural oil	Foliar treatments - late spring to early fall Cut-stump - anytime except when snow is present Basal bark - anytime except when snow is present
Glyphosate (Rodeo *approved aquatic label* **nonselective, will kill all vegetation it contacts**)	Cut-stump - undiluted 100%	Treat anytime except when snow is present. Treat the cambium immediately after being cut. Thoroughly wet the surface, but not to the of run-off.
Imazapyr (Arsenal or Habitat *Habitat is approved for use in aquatic sites*)	Cut-stump - 8-12oz/gal water Foliar - 0.5-6.5oz/gal water + nonionic surfactant or methylated seed oil	Cut-stump - anytime except spring during heavy sap flows. Foliar - late spring to late summer. Spray entire crown and 70% of plant. Avoid spray solution run-off. After application, do not disturb saltcedar for 2 years or overall control will be reduced.

All photos © Kelly Uhing.

Field bindweed

List C Species

Rangeland, pasture, and riparian site recommendations

1

Colorado Department of
Agriculture

305 Interlocken Pkwy
Broomfield, CO 80021

(303) 869-9030
weeds@state.co.us



Key ID Points

1. Leaves are shaped like arrowheads.
2. Flowers are funnel-shaped, white to pink, and have two small bracts one inch below the flower base.

Field bindweed Identification and Management



Identification and Impacts

Field bindweed (*Convolvulus arvensis*) is a non-native deep-rooted perennial that reproduces from seed and creeping, horizontal roots (rhizomes). Field bindweed stems are prostrate (grows low to the ground) and twining, and grow up to 6 feet long. Leaves are distinguishable by their arrowhead shape. The flowers are bell or trumpet-shaped, white to pink in color, and are about 1 inch long. Field bindweed seeds can remain viable in the soil for up to 40 years.

Field bindweed emerges from its root system in the spring. Flowering occurs from June to September and until the first fall frost. The number of seeds produced per plant ranges from 25 to 300 and seed production is variable depending on environmental conditions. Field bindweed is an extremely difficult noxious weed to control because, in part, of its taproot that may go 20 feet deep into the soil, and which repeatedly gives rise to numerous long rhizomes.

Field bindweed is a problem throughout Colorado. It is one of the most competitive perennial weeds. It is widespread in cultivated areas, pastures, lawns, gardens, roadsides, and waste areas from 4,000 to 8,000

feet in elevation.

To successfully manage field bindweed, containment and persistence in controlling existing stands are necessary in order to exhaust the root system and deplete the soil seed bank. This weed needs to be continually stressed, forcing it to exhaust root nutrient stores and eventually die. Of all control methods, prevention is most important. Maintain healthy pastures and rangeland and continually monitor your property for new infestations. A healthy cover of desirable perennial plants will assist in discouraging field bindweed establishment.

Field bindweed is designated as a "List C" species on the Colorado Noxious Weed Act. It is required to be either eradicated, contained, or suppressed depending on the local jurisdictions managing this species.

On the back of this sheet are field bindweed management recommendations. For more information, visit www.ag.state.co.us/csd/csdhome.html. Or call the State Weed Coordinator at the Colorado Department of Agriculture, Conservation Services Division, 303-239-4100.



White flower © Mary Ellen Harte, Invasive.org.
All other photos © Kelly Uhing.

Convolvulus arvensis

**CULTURAL**

Establishment of selected grasses can be an effective cultural control of field bindweed. Contact your local Natural Resources Conservation Service for seed mix recommendations. Maintain healthy pastures and prevent bare spots caused by overgrazing. Bareground is prime habitat for **weed invasions**.



Bindweed mite damage

BIOLOGICAL

The bindweed gall mite, *Aceria mahlerbae*, has proven to be effective in reducing field bindweed infestations. This is an option for large infestations. To obtain a mite release, contact the Colorado Department of Agriculture, 970-464-7916.

**MECHANICAL**

Cutting, mowing, or pulling has a negligible effect unless the plants are cut below the surface in the early seedling stage. Well-established populations have a large seed bank in the soil that can remain viable for over 40 years.

Integrated Weed Management:

Field bindweed requires active management once it is established because of its potential to regenerate rapidly. Even small infestations should be viewed as a serious threat and managed aggressively.

Contain and persistently control infestations in order to exhaust the root system and deplete the soil seed bank.

Maintain a healthy cover of perennial plants to discourage field bindweed establishment.

HERBICIDES: The following are recommendations for herbicides that can be applied to range and pasturelands. *Rates are approximate and based on equipment with an output of 30 gallons per acre. Please read label for exact rates.* Always read, understand, and follow the label directions. **The herbicide label is the LAW!**

HERBICIDE	RATE	APPLICATION TIMING
Clarity + 2,4-D Amine	1 qt./acre or 1 oz/gal water	Just after full-bloom and/or fall. DO NOT apply near or under trees/shrubs or where soils have rapid permeability. DO NOT apply when outside temperatures will exceed 85 degrees. Add non-ionic surfactant @ 0.32oz/gal water or 1 qt/100 gal water.
Tordon 22K *this is a Restricted Use Pesticide*	1 qt./acre or 1 oz/gal water	Just after full-bloom and/or fall. DO NOT apply near or under trees/shrubs or where soils have rapid permeability. Add non-ionic surfactant @ 0.32oz/gal water or 1qt/100 gal water.
Roundup Ultra *non-selective herbicide, will kill all vegetation*	4 - 5 qts./acre or 4 - 5 oz/gal water	Apply at full-bloom and/or fall. Add non-ionic surfactant @ 0.32oz/gal water or 1qt/100 gal water. Use caution when applying near grasses or other desirable vegetation.

Field bindweed



Appendix C

Blank Documentation Form



Corporate Headquarters
3222 South Vance Street, Suite 200, Lakewood, CO 80227
T: 303.980.5200 F: 303.980.0089
www.pinyon-env.com

Palmer Solar Project, El Paso County, Colorado
NOXIOUS WEED MANAGEMENT ACTIVITY DOCUMENTATION

Date:	Name:
-------	-------

Activity (check all that apply):	
<input type="checkbox"/> Weed Management	Go to Section A
<input type="checkbox"/> Weed Inventory/Inspection.....	Go to Section B
<input type="checkbox"/> Vehicle/Equipment Inspection.....	Go to Section C
<input type="checkbox"/> Other (Describe)	

Section A – Weed Management	
<input type="checkbox"/> Mowing	<input type="checkbox"/> Deadheading
<input type="checkbox"/> Hand pulling	<input type="checkbox"/> Herbicide application (fill out section below)
<input type="checkbox"/> Weed free straw/bales (attach certification)	<input type="checkbox"/> Weed free seed (attach seed tags)
<input type="checkbox"/> Weed free topsoil (attach documentation)	<input type="checkbox"/> Other (describe)
Target Area (stationing and description):	Target Species:
Herbicide Application (either fill out below or attach spray sheet with same information)	
Name and Company of Applicator:	Colorado Herbicide Application License Number:
Weather/Wind:	Application Method:
Herbicide Used (Name and Active Ingredient):	Total Amount and Rate used:
Target area (stationing and description):	Target Species:



Corporate Headquarters
3222 South Vance Street, Suite 200, Lakewood, CO 80227
T: 303.980.5200 F: 303.980.0089
www.pinyon-env.com

Palmer Solar Project, El Paso County, Colorado
NOXIOUS WEED MANAGEMENT ACTIVITY DOCUMENTATION

Section B – Weed Inspection/Inventory	
Target Area (stationing and description):	Target Species:
Reason for inspection/inventory:	
Summary of findings:	
Follow up activities needed:	
<input type="checkbox"/> Follow up activities completed (provide details)	

Section C - Vehicle/Equipment Inspection	
<input type="checkbox"/> Tires/treads free of mud	<input type="checkbox"/> Tires/treads free of plant material
<input type="checkbox"/> Understory free of mud	<input type="checkbox"/> Understory free of plant material
<input type="checkbox"/> Mud scraped off	<input type="checkbox"/> Mud washed off
<input type="checkbox"/> Plant material removed	<input type="checkbox"/> Plant material washed off
<input type="checkbox"/> Other (describe)	