STATE OF COLORADO

Gibson - DNR, Amber <amber.gibson@state.co.us>

Weed Management plan for the Rocky Flat gravel pit

1 message

Susan Goemmer <butteranch185@gmail.com> Fri, Apr 11, 2025 at 9:35 AM
To: "Gibson - DNR, Amber" <amber.gibson@state.co.us>

Good morning Amber,
I finally have a weed management plan. I met with Charles Bryant of Huerfano County and he authored the management plan. I will get started as soon as possible. Please let me know if this suits you. I have his contact information if you have any questions.
Thank you,
Lukas Dearmin Goemmer Ranch
Rocky Flat gravel pit
La Veta, CO 81055

Goemmer Pit Management Plan 2025.docx
9575K

2025

Rocky Flat Pit Management Plan

Prepared By: Charles Bryant

Huerfano County Noxious Weed Department

4/9/2025

Prepared For: Lukas Dearmin

Date of Review: 04-07-2025

Applicant: Lukas Dearmin

Property Address: Non-metallic surface mine area, I.D.: M19811245

- **LAT\LONG:** 37.47461, -105.02379 (property entrance)

Site Type: Industrial-non-metallic surface mine-Gravel Pit

Reviewed By: Charles Bryant-Huerfano County Noxious Weed Manager CDA License #:3322

A. Overview

The Huerfano County Noxious Weed Department was contacted by Lukas Dearmin regarding best management practices for the control and suppression of Colorado State List Noxious Plant Species among the permit area for the Goemmer Pit M1981245. The primary noxious species of concern within the permit area are: Scotch thistle, musk thistle, diffuse knapweed, spotted knapweed, hoary cress (white top), cheat grass and common mullein. The following integrated management options have been provided to aid in the operator's efforts to satisfy the performance standards set forth within the site permit and to be in compliance with the Colorado Noxious Weed Act of 1991.

Please contact the Huerfano County Noxious Weed Department should assistance be needed in identifying additional noxious\problematic plant species within the mine area that are not included in this report.

Treatment Process: The following treatment process follows the integrated vegetation management approach (IVM). IVM is the practice of utilizing a variety of control options to achieve control of the target species. This IVM program utilizes cultural, mechanical and chemical treatment options. Single method treatment programs are rarely successful.

TREATMENT AREA CHARACTERISTICS\CONSIDERATIONS

1. **Environmentally Sensitive Areas:** Sensitive areas to be aware of include: active well heads, abandoned well heads, established desirable tree\brush species, areas known has having a high water table with permeable soils, and areas of standing water. The herbicides recommended in this management plan are of relatively low toxicity to humans, animals, and insects when used as directed. See specific manufacturer MSDS (material safety data sheet) for specific information.

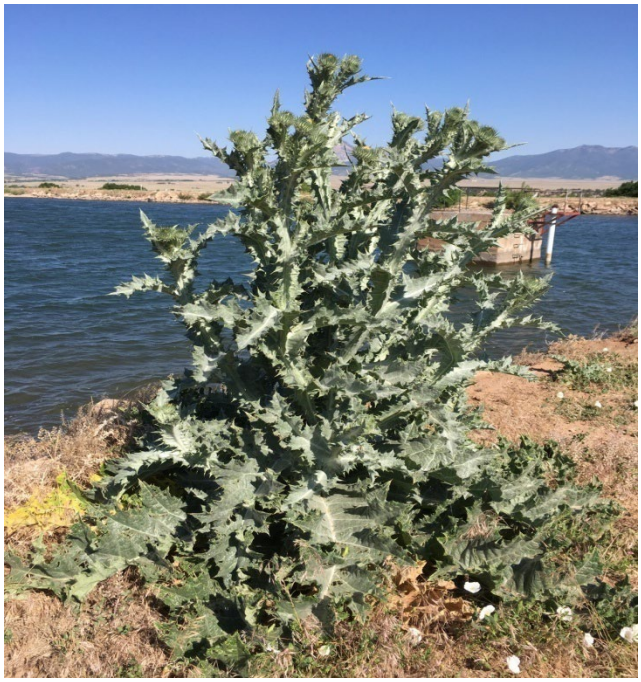
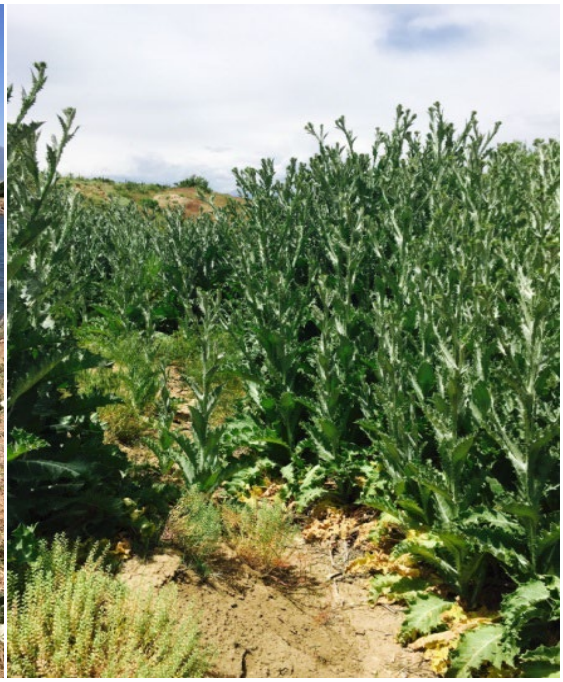
2. **Registry of Pesticide Sensitive Persons:** According to the 2025 Registry of Pesticide Sensitive Persons (updated annually) there are **NO** registrants within the treatment area or region.

3. Endangered and Threatened Species: The treatment area is not considered critical habitat to any endangered or threatened species as indicated by species distribution mapping provided by the United States Fish and Wildlife Service.

B. Species Profile

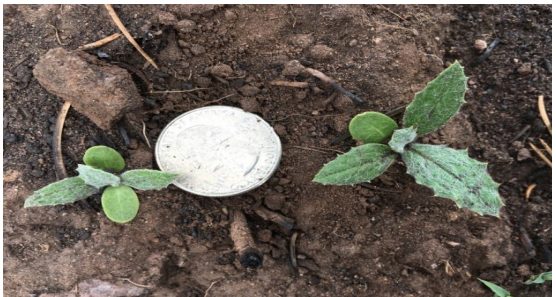
1) <u>Scotch Thistle</u>

Type: Biennial
Origin: Europe and Asia
Class: B
Seed Life: Up to 38 years
Seeds per Plant: 8,000-40,000
Reproduction: Seed

Description: This large biennial species of thistle is capable of reaching heights in excess of 8 feet and produces between 8,000-40,000 seeds per plant. This plant is capable of growing on a variety of sites and is fairly drought tolerant.

Threats: Scotch thistle can create dense monocultures that can greatly impede site access and the establishment of favorable vegetation. Scotch thistle seed has very long soil viability of 38+ years, so control efforts can be long-term.



(a) Mechanical: Given the biennial growth habits\characteristics of Scotch thistle, mechanical controls can be effective in the prevention of seed development. Control options include severing the stalk 3-4 inches under the soil, hand pulling, and mowing prior to bloom. Mechanical controls should be performed frequently to have any effect.

(b) Cultural: Avoid the transportation of viable seeds by cleaning all machinery\equipment that enters the infested area and avoid the relocation of soils or plant materials from the infested area to un-infested areas. Avoid allowing livestock to access the infested areas. Disturbed soil sites are highly vulnerable to the establishment of noxious plant species. Disturbed soil sites should be monitored for the presence of noxious plant species and to determine if reseeding is needed should native vegetation not become reestablished.

(c) Chemical: The preferred method of chemical application will be spot spraying and limited broadcast application of ***Opensight*** herbicide with a surfactant. ***Opensight*** herbicide will be applied at the rate of 2 to 2.5 oz.\acre. Apply at the seedling or rosette to mid-bolt stages when plants are actively growing. **Always use a non ionic or methylated seed oil surfactant with all herbicide mixes. Follow the manufacturer's recommended application rate.**

(d) Biological: None

2) Musk Thistle

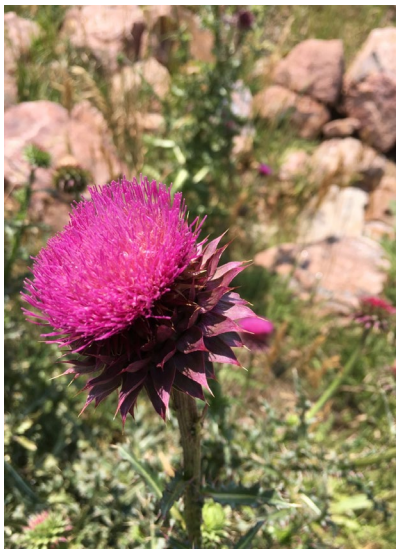
Type: Biennial
Origin: Europe and Asia
Class: B
Seed Life: Up to 20 years
Seeds per Plant: Up to 120,000
Reproduction: Seed

(a) Mechanical: Given the biennial growth habits\characteristics of musk thistle, mechanical controls can be effective in the prevention of seed development. Control options include severing the stalk 3-4 inches under the soil, hand pulling, and mowing prior to bloom. Mechanical controls should be performed frequently to have any effect.

(b) Cultural: Avoid the transportation of viable seeds by cleaning all machinery\equipment that enters the infested area and avoid the relocation of soils or plant materials from the infested area to un-infested areas. Avoid allowing livestock to access the infested areas. Examine all hay for the presence of noxious weeds and be vigilant for the establishment of noxious weed species in areas where hay is stored\fed or otherwise broadcast. Goats will consume small immature plants.

(c) Chemical: The preferred method of chemical application will be spot spraying and limited broadcast application of ***Opensight*** herbicide with a surfactant. ***Opensight*** herbicide will be applied at the dosage of 2 to 2.5 oz.\acre. Apply at the seedling or rosette to mid-bolt stages when plants are actively growing. **Always use a non ionic or methylated seed oil surfactant with all herbicide mixes. Follow the manufacturer's recommended application rate.**

(d) Biological: Pending availability later in 2025 season.



3) Hoary Cress (white top)

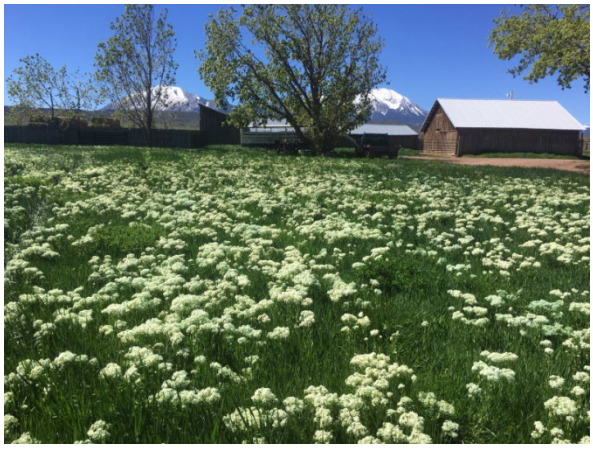
Type: Perennial
Origin: Europe and Asia
Class: B
Seed Life: Up to 3 years
Seeds per Plant: Up to 4,800
Reproduction: Seed and Spreading Root

(a) Mechanical: Given the aggressive perennial growth habits\characteristics of Hoary Cress, mechanical control is not recommended.

(b) Cultural: Avoid the transportation of viable seeds and plant fragments capable of regeneration by cleaning all machinery\equipment that enters the infested area and avoid the relocation of soils or plant materials from the infested area to un-infested areas. Avoid allowing livestock to access the infested areas. Disturbed soil sites are highly vulnerable to the establishment of noxious plant species. Disturbed soil sites should be monitored for the presence of noxious plant species and to determine if reseeding is needed should native vegetation not become reestablished.

(c) Chemical: The preferred method of chemical application will be spot spraying and limited broadcast application of ***Opensight*** herbicide with a surfactant. ***Opensight*** herbicide will be applied at the dosage of 2.5 to 3oz.\acre. **Always use a non ionic or methylated seed oil surfactant with all herbicide mixes. Follow the manufacturer's recommended application rate.**

(d) Biological: Pending CDA review for statewide use (*Aceria drabae)*, will likely not be available for 2025 season.



Diffuse & Spotted Knapweed (Including hybrids)

Type: Biennial
Origin: Europe
Class: B
Seed Life: 10 years
Seeds per Plant: Up to 1,200
Reproduction: Seed

a) Mechanical: Given the biennial growth habits\characteristics of diffuse knapweed\spotted hybrid, mechanical controls can be effective in the prevention of seed development. Control options include severing the stalk 2-3 inches under the soil, hand pulling, and mowing prior to bloom. Mechanical controls should be performed frequently to have any effect.

b) Cultural: Avoid the transportation of viable seeds and plant fragments capable of regeneration by cleaning all machinery\equipment that enters the infested area and avoid the relocation of soils or plant materials from the infested area to un-infested areas. Avoid allowing livestock to access the infested areas. Disturbed soil sites are highly vulnerable to the establishment of noxious plant species. Disturbed soil sites should be monitored for the presence of noxious plant species and to determine if reseeding is needed should native vegetation not become re-established.

c) Chemical: The preferred method of chemical application will be spot spraying and limited broadcast application of ***Opensight*** herbicide with a surfactant. ***Opensight*** herbicide will be applied at the dosage of 2 to 2.5 oz.\acre. **Always use a non ionic or methylated seed oil surfactant with all herbicide mixes. Follow the manufacturer's recommended application rate.**

d) Biological: Two of the more effective biological controls is the seed head feeding weevil ***Larinus minutes*** and the root boring weevil *Cyphocleonus achates.* Depending upon availability from the Palisade Insectary, either of these two options can be utilized.

5) <u>Common Mullein</u>-*Verbascum thapsus*

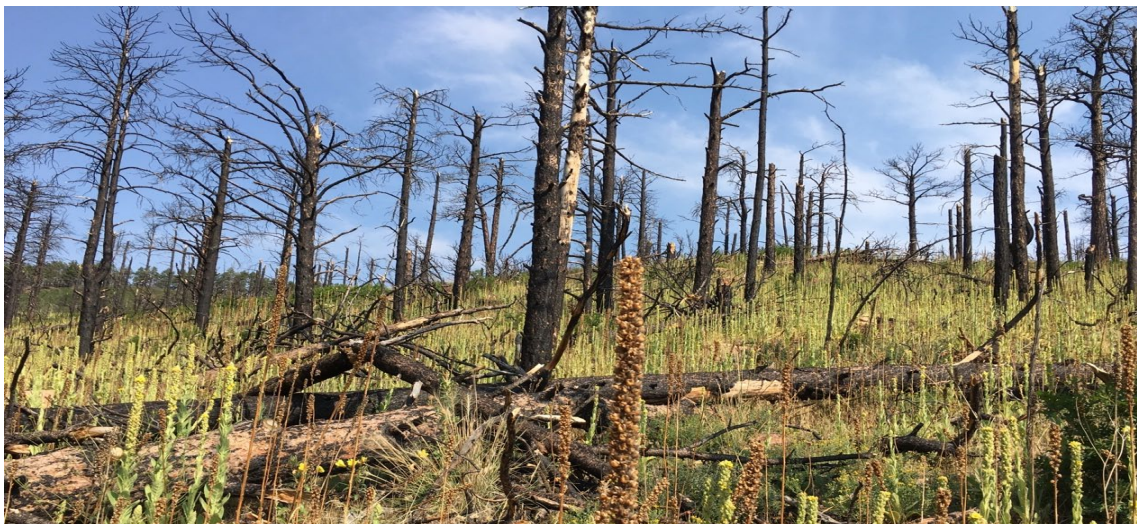
Type: Biennial
Origin: Europe
Class: C
Seed Life: 80+ years
Seeds per Year: Up to 240,000
Reproduction: Seed

(a) Mechanical: Given the biennial growth habits\characteristics of common mullein, mechanical controls can be effective in the prevention of seed development. Control options include severing the stalk 2-3inches under the soil, hand pulling, and mowing prior to bloom. Given the rocky nature of the site, severing the stalk below the soil may not be practical. An acceptable alternative to prevent seed production (but will not kill the plant) is severing the stalk at the soil surface. If this measure is performed on second-year bolting plants throughout the growing season the plant will eventually die with the onset of winter. First year rosettes may recover the following season. Mechanical controls should be performed frequently to have any effect.

(b) Cultural: Avoid the transportation of viable seeds by cleaning all machinery\equipment and clothing that enters the infested area and avoid the relocation of soils or plant materials from the infested area to un-infested areas. Avoid allowing livestock to access the infested areas. Examine all hay for the presence of noxious weeds and be vigilant for the establishment of noxious weed species in areas where hay is stored\fed or otherwise broadcast.

(c) Chemical: The preferred method of chemical application will be spot spraying with ***Opensight*** herbicide at the rate of <u>2 to 2.5 oz.\acre</u> when plants are in the seedling, rosette or mid-bolt stages of growth. **Be sure to use a non-ionic surfactant or methylated seed oil adjuvant at the manufacturers recommended rate.**

Biological: None approved for release.



6) **Cheat Grass-***Bromus tectorum*

Type: Winter Annual
Origin: Europe
Class: C
Seed Life: 4-5 years
Seeds per Plant: Up to 3,000
Reproduction: Seed

(a) Mechanical: Given the annual growth habits\characteristics of cheat grass, mechanical controls can be effective in the prevention of seed development. Control options include severing the stalk(s) 1-2 inches under the soil, hand pulling, and mowing prior to seed set. Mechanical controls should be performed frequently to have any effect.

(b) Cultural: Avoid the transportation of viable seeds by cleaning all machinery\equipment and clothing that enters the infested area and avoid the relocation of soils or plant materials from the infested area to un-infested areas. Avoid allowing livestock to access the infested areas. Examine all hay for the presence of noxious weeds and be vigilant for the establishment of noxious weed species in areas where hay is stored\fed or otherwise broadcast. Grazing is not recommended after plants have set seed. **Properly timed grazing (very early in the season) can be an effective control option to limit seed production.** Cheat grass actually has fairly decent forage value prior to seed set.

(c) Chemical: While technically a broadleaf\selective herbicide, one of the active ingredients in ***Opensight*** (aminopyralid) has been demonstrated to suppress the growth\proliferation of cheatgrass. Given the widespread distribution of the five other species described in this management plan within the mine site, much of the area can be broadcast sprayed. Given the fact that cheatgrass occupies many of the same areas as the aforementioned target species that ***Opensight*** will be utilized for, it is expected that the active ingredient *aminopyralid* will provide ancillary control of cheatgrass. Should the ancillary control method yield unfavorable results, please contact our department for an alternate chemical control option. Other herbicides (though more expensive) are available. Another practical method of chemical control will be spot or limited broadcast spraying with a 1% V/V solution of glyphosate* with the addition of a non-ionic surfactant during periods of the season when desirable grasses and forbes are dormant, for example late fall through early spring. If the mix water used is “hard” (high in inorganic salts) consider using a

surfactant that contains ammonium sulfate or other nitrogen source to prevent hard water antagonism. ***Formulations of glyphosate vary widely. Rate shown is approximate. Consult product label for specific rate.***

Overview of Control Options

MECHANICAL: This control option is most effective on annual and biennial species but should generally be avoided on the perennial targeted species listed above. Soil disturbance\bare ground areas as a result of mechanical controls should be avoided due to the possibility of noxious weed establishment.

CULTURAL: Prevention and good land use practices are key components of this control option. Avoid the use of contaminated feed, overgrazing, soil disturbance and introduction of noxious weed seeds\plant fragments. The establishment of desirable plant competition is also a key component.

CHEMICAL: In this vegetation management program the application of herbicides in combination with the other methods listed above will prove to be an effective means of achieving the containment and suppression of the targeted species. The chemical application rates listed above are for reference purposes only. The label affixed to the herbicide product will be the official designated source for application rates and proper usage and should be followed should they differ from the recommendations provided in this management plan. **The label provided on the herbicide container is a legal document. Failure to follow all directions is a violation of federal and state law.**

E. Overall Assessment

Given the high amount of site disturbance within the mine area, establishment of the species contained within this report and other noxious species is likely. Continued site monitoring will be required to ensure treatment efficacy and so that pioneering noxious plant species can be mitigated before the cost of control becomes excessive. It is strongly suggested that infestations of Colorado State List Noxious Plant Species be mapped before and after control efforts to document overall treatment efficacy\efforts. Treatment efforts should be recorded (date, time, target species, control method). These records can be submitted to the Bureau of Mining and Reclamation as proof of performance if need be.

SAFETY RECOMMENDATIONS FOR CHEMICAL APPLICATIONS

The following is a brief list of recommended safety practices for the safe application of herbicides. This is by no means an exhaustive list; the herbicide container labeling should be referred to for specific usage\safety guidelines.

1) **Read the Label!** The herbicide product label should be read and understood in its entirety before the product is used. ***The label provided on the herbicide container is a legal document. Failure to follow all directions is a violation of federal and state law.***

2) **Proper PPE (personal protective equipment):** Adhere to the herbicide manufacturers recommendations for proper protective equipment. The recommended PPE for the herbicides prescribed within this management plan require a minimum of: Long sleeved shirt and pants, chemical resistant category A gloves, *shoes plus socks*, and protective eyewear. **Rubber "muck" style boots or the like are suggested given the relative ease of cleaning\removal. Lightweight coveralls are also suggested for these same reasons. Refer to herbicide label(s) for safety guidelines.*

3) **Equipment calibration:** Ensure proper calibration of equipment to avoid over\under application of herbicide. ***Contact the Huerfano County Noxious Weed Department if assistance is needed.***

4) **Environmental Considerations:** Avoid herbicide drift and off target damage by only applying in low wind conditions (10mph or less) and using the coarsest practical spray droplet size at the lowest practical pressure. Apply as near to the target as possible. The use of a surfactant\adjuvant also aids in off target movement of the herbicide. Applications should not be made within 6-8 hours of expected rainfall. When spraying around trees, do not apply herbicide within the "drip line" of the tree canopy. Proper equipment calibration is necessary to avoid the over\under application of herbicides and the associated negative environmental effects. Periods of abnormally hot and dry weather may affect the performance of herbicides negatively.

5) **Container Disposal:** Triple wash all empty herbicide containers to aid in the removal of residues and puncture so that they cannot be reused. Combine the rinsate of the empty container to the application equipments' tank and apply on treatment area(s). Triple washed containers that are punctured can be safely disposed of with household trash. Never reuse empty herbicide containers.

6) **Herbicide Storage:** Do not contaminate water, food, or feed by storage or disposal. Do not ship or store with food, feeds, drugs, or clothing. Avoid freezing.

Prepared By: Charles Bryant-Huerfano\Custer County Noxious Weed Manager
(719)989-1353---------cbryant@huerfano.us