

Yuma County Noxious Weed Management Plan

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I. Introduction

A. Statement of Compliance

This plan complies with the *Colorado Noxious Weed Act* (Title 35, Article 5.5, C.R.S.) as revised by the 2004 Colorado Legislature. The purpose of the Yuma County Noxious Weed Management Plan is to overview the control of targeted noxious weeds within Yuma County as determined by the *Colorado Noxious Weed Act* and the *Rules Pertaining to the Administration and Enforcement of the Colorado Noxious Weed Act*. The targeted noxious weeds to be controlled are designated within this plan. Control is aimed at eradicating, reducing, suppressing or containing populations of non-native, invasive noxious weeds which pose a threat to the environment and economy of Yuma County by reducing agricultural production, property value, wildlife habitat, and threatening the native plant population unique to Yuma County.

B. Yuma County Pest District Policies

Upon acceptance of these revisions, the Advisory Board for Yuma County Pest Control District will send the approved plan to the Yuma County Board of County Commissioners. The Yuma County Board of County Commissioners will approve the amended Yuma County Noxious Weed Management Plan (C.R.S. § 35-5.5-105). Yuma County Pest Control District will then implement the Yuma County Noxious Weed Plan. The Yuma County Pest Control District will control noxious weeds on county properties, on governmental properties and right of ways under intergovernmental cooperative agreements between the federal, state, county, and local governments found within the county, and on private property under contract with the private property owner. In addition, Yuma County Pest Control District will cooperate with the Colorado State University Cooperative Extension Service, the Yuma County Conservation District, the Yuma Conservation District, and the Natural Resources Conservation Service in conjunction with landowners for the management of noxious weed populations found on their properties. Request for assistance, for noxious weed control, from the public will be directed to the Yuma County Pest Control District.

C. Severity of Noxious Weeds in Yuma County

At the present time Yuma County has a manageable noxious weed problem. Due to the invasive nature of many noxious weeds, a major noxious weed problem could develop in a very short period of time without prompt identification and diligent control. The increased soil disturbance through the increased exploration of energy (oil, natural gas, wind, etc.), the subdivision of land into residential and recreational areas, as well as increased use of public and private lands may create a noxious weed problem.

It is imperative that the Yuma County Pest Control District continues to monitor noxious weed populations throughout Yuma County and initiate control programs before noxious weed densities become unmanageable.

D. Operating Budget

The Yuma County Noxious Weed Program is, one of three programs, administered by Yuma County Pest Control District. Funding sources include, but are not limited to, Yuma County Pest Control District budget, cooperative funding, grants and revenue producing contracts.

E. Public Comment

Public comment and participation is encouraged. Public comments will be taken at the Yuma County Pest Control District office (420 West Hoag, Yuma, CO) or at any meeting of the Yuma County Pest Control District Advisory Board which meets the 2nd Wednesday of each month.

F. Yuma County Pest Control District Advisory Board

Yuma County Pest Control District was established under C.R.S. 35-5-104 and Yuma County Resolution 3-17-89A. The Yuma County Board of Commissioners will appoint the Yuma County Pest District Advisory Board (CRS § 35-5-105 & CRS § 35-5.5-107). The Yuma County Pest Control District Advisory Board will provide policy and advice for noxious weed control in Yuma County. Noxious weed control powers for the Yuma County Pest Control District Advisory Board are outlined in the Colorado Noxious Weed Act under the provisions of CRS § 35-5.5-107.

G. Description of Yuma County

1. Yuma County is a major agriculture county within the state of Colorado
2. Yuma County is traversed by four transportation routes; Highway 34 and Highway 36 run in an east-west direction, while Highway 59 and Highway 385 run in a north-south direction. Total maintained centerline mileage along these transportation routes in Yuma County is 215 miles.
3. Yuma County has 2,500 centerline miles of maintained county roads.
4. The Burlington Northern Railroad travels through Yuma County 40 miles in an east-west direction.
5. Major Natural Features:
 - a. Yuma County vary from rolling sand hills with grass in the northeast, shifting to level hard lands with both irrigation and dry land farming in the west. Elevations range from 3,500 feet in the southeastern part of Yuma County to 4,150 feet in the northwestern corner of Yuma County.
 - b. Lakes and Reservoirs: Bonny Reservoir, Hale Ponds, and Stalker Lake.
 - c. Major River Drainages: North Fork of the Republican River, Arikaree River, and South Fork of the Republican River.
6. Major Soil Types:
 - a. Forty-seven major and minor soil types have been identified within Yuma County. Most of the soil types fall into productive and fertile classification. The greater majority of these soil types are a variation of sand, sandy loam, or loams.
7. Cities and Towns within Yuma County:
 - a. Yuma
 - b. Wray
 - c. Eckley
8. Unincorporated Private Yuma County Towns:
 - a. Idalia
 - b. Kirk
 - c. Joes
 - d. Vernon

9. Landowner Statistics

- a. Yuma County total acres 1,522,560
- b. Privately owned total acres 1,455,901
- c. State of Colorado total acres 49,838
- d. United States government total acres 6,440
- e. Local government/Municipalities total acres 1,421

H. In concluding this introduction, a key point must be made, “NOXIOUS WEEDS ARE THE RESPONSIBILITY OF THE LANDOWNER.” The time and effort Yuma County Pest Control District directs towards noxious weed control acknowledges Yuma County’s commitment to the responsibility of noxious weed control on county property and right-of-ways.

II. SITUATION STATEMENT

A. Under the Colorado Noxious Weed Act, the Colorado Department of Agriculture has appointed a Colorado State Noxious Weed Advisory Board. The Colorado State Noxious Weed Advisory Board has designated the following noxious weed species and management goals below:

- 1. Any designated Colorado “A List” Species. A List species are rare noxious weeds for which state wide eradication is the goal. To date the A List species are:

- African rue (*Peganum harmala*)
- Camelthorn (*Alhagi pseudalhagi*)
- Common crupina (*Cupina vulgaris*)
- Cypress spurge (*Euphorbia cyparissias*)
- Dyers woad (*Isatis tinctoria*)
- Elongated mustard (*Brassica elongate*)
- Flowering rush (*Butomus umbellatus*)
- Giant reed (*Arundo donax*)
- Giant salvinia (*Salvia aethopsis*)
- Hairy willow-herb (*Epilobium hirsutum*)
- Hydrilla (*Hydrilla verticillata*)
- Japanese/Giant/Bohemian knotweed (*Polygonum cuspidatum*)
- Meadow knapweed (*Centaurea pratensis*)
- Mediterranean sage (*Salvia aethopsis*)
- Medusahead (*Taeniatherum caput-medusae*)
- Myrtle spurge (*Euphorbia myrsinites*)
- Orange hawkweed (*Hieracium aurantiacum*)

Parrotfeather (*Myriophyllum aquaticum*)
Purple loosestrife (*Lythrum salicaria*)
Rush skeletonweed (*Chondrilla juncea*)
Squarrose knapweed (*Centaurea virgata*)
Tansy ragwort (*Senecio jacobaea*)
Yellow starthistle (*Centaurea solstitialis*)
(*) species currently found in Yuma County

2. B List species are weed species with discrete statewide distributions that are subject to eradication, containment, or suppression in order to stop their continued spread. To date, these B List species are:

Absinth wormwood (*Artemisia absinthium*)
Black henbane (*Hyoscyamus niger*)
Bouncingbet (*Saponaria officinalis*) *
Bull thistle (*Cirsium vulgare*) *
Canada thistle (*Cirsium arvense*) **
Chinese clematis (*Clematis orientalis*)
Common tansy (*Tanacetum vulgare*)
Common teasel (*Dipsacus fullonum*)
Corn chamomile (*Anthemis arvensis*)
Cutleaf teasel (*Dipsacus laciniatus*)
Dalmatian toadflax broad-leaved (*Linaria dalmatica*) **
Dalmatian toadflax narrow-leaved (*Linaria genistifolia*)
Dame's rocket (*Hesperis matronalis*)
Diffuse knapweed (*Centaurea diffusa*) **
Eurasian watermilfoil (*Myriophyllum spicatum*)
Hoary cress/Whitetop (*Cardaria draba*) **
Houndstongue (*Cynoglossum officinale*)
Jointed goatgrass (*Aegilops cylindrical*) **
Leafy spurge (*Euphorbia esula*) **
Mayweed chamomile (*Anthemis cotula*)
Moth mullein (*Verbascum blattaria*)
Musk thistle (*Carduus nutans*) **
Oxeye daisy (*Chrysanthemum leucanthemum*)
Perennial pepperweed (*Lepidium latifolium*)
Plumeless thistle (*Carduus acanthoides*)
Russian knapweed (*Centaurea repens*) **
Russian-olive (*Elaeagnus angustifolia*) **
Salt cedar (*Tamarix ramossissima*) **
Scentless chamomile (*Matricaria perorate*)
Scotch thistle (*Onopordum acanthium*) **
Scotch thistle (*Onopordum tauricum*) **
Spotted knapweed (*Centaurea maculosa*) **

Sulfur cinquefoil (*Potentilla recta*)
Wild Caraway (*Carum carvi*)
Yellow nutsedge (*Cyperus esculentus*) *
Yellow toadflax (*Linaria vulgaris*)
(*) species currently found in Yuma County
(**) species currently on Yuma County weed list

3. C List species are species of noxious weeds that are so widespread throughout Colorado that they are targeted for improved management. To date the C List species are:

Bulbous bluegrass (*Poa bulbosa*)
Chicory (*Cichorium intybus*)
Common burdock (*Arctium minus*) *
Common mullein (*Verbascum Thapsus*) *
Common St. Johnswort (*Hypericum perforatum*) *
Downy brome (*Bromus tectorum*) *
Field bindweed (*Convolvulus arvensis*) **
Halogeton (*Halogeton glomeratus*)
Johnsongrass (*Sorghum halepense*) *
Perennial sowthistle (*Sonchus arvensis*)
Poison hemlock (*Conium maculatum*) *
Puncturevine (*Tribulus terrestris*) *
Quackgrass (*Elymus repens*)
Redstem filaree (*Erodium cicutarium*) *
Velvetleaf (*Abutilon theophrasti*) *
Wild proso millet (*Panicum miliaceum*) *
(*) species currently found in Yuma County
(**) species currently found on Yuma County weed list

4. Yuma County added two other weed species to the Yuma County weed list not listed by the state of Colorado.

Silverleafed povertyweed (*Ambrosia tomentosa*)
Woollyleafed povertyweed (*Ambrosia grayi*)

5. Noxious weed trends show that field bindweed presents the largest infestations and challenges within Yuma County. Field bindweed also has the largest economic impact on landowners within Yuma County. Field Bindweed is found mainly in agricultural fields and roadsides. Canada thistle and Musk thistle would be the second most significant noxious weeds within Yuma County. Canada thistle has been historically found in agricultural crops and within the riparian zones of the three river systems within Yuma County. Musk thistle has

been historically found in the rangeland areas and riparian zones within Yuma County.

Jointed goatgrass would be the third most significant noxious weed in Yuma County. Jointed goatgrass is historically found in the wheat producing acres and roadsides within Yuma County. At this time Diffuse and Spotted knapweed along with Hoary cress have been found in Yuma County. These infestations have become a priority for control to curtail a larger problem. These three species have been primarily found in CRP acres in the southern portion of Yuma County.

6. The attitudes of landowners vary from those who will not or do not cooperate in controlling noxious weeds to those who take a very aggressive approach. The fact that Yuma County is agriculturally driven and oriented is a plus in that most residents see the need for noxious weed control.

7. Yuma County Problem Area

1. County roads and highway right-of-ways.
2. Russian-olive and tamarisk along the major river drainages and tributaries.
3. Conservation Reserve Program (CRP) fields have been found to have large infestations of noxious weeds.
4. Riparian areas.

III. PRIORITIES AND GOALS

- A. Public Education

Yuma County Pest Control District will place timely articles in local papers, newsletters, and other publications as educational pieces. Additionally, a spokesperson will be provided for local community and civic organizations as part of the educational program. Public education will be conducted through the use of posters, seminars, newspaper articles, radio interviews, newsletters, FFA meetings, 4-H meetings, public meetings, and direct contact with the public.

- B. Partnerships

Yuma County Pest Control District realizes that without the establishment of partnerships the noxious weed control efforts within Yuma County would be underutilized. Yuma County Pest Control District has helped form the Republican River Watershed Weed Management Area. This partnership consists of local, state, and federal government agencies, conservation districts, local landowner groups, and non-governmental organizations.

Yuma County Pest Control District will continue to promote and establish partnerships that will help continue the noxious weed control efforts within Yuma County and the state of Colorado.

C. Operation (Integrated Pest Management) Priorities

Yuma County Pest Control District will promote an Integrated Pest Management Program (CRS§35-5.5-102), which includes chemical, mechanical, biological, cultural, and revegetation methods for the control of noxious weeds.

D. Economic Priorities

Best management practices (BMP) will be implemented based on environmental concerns and economic feasibility.

E. Environmental Priorities

Environmental concerns including human interactions, water, air, wildlife, fisheries, amphibians, soil, plants, and beneficial insects will be considered when selecting and implementing a specific weed control program.

F. Short Term Goals

Yuma County Pest Control District will:

1. Continue to develop public education and outreach programs, focusing on identification, prevention, and control of targeted weeds.
2. Increase efforts to aid private landowners, both large and small, to identify and control weeds.
3. Continue to maintain reasonable control of the targeted weeds through GIS mapping to monitor the progress of the noxious weed control program.
4. Identify, control, and monitor new noxious weed infestations.
5. Continue efforts in gaining the cooperation of all landowners, private and public, in noxious weed control.
6. Continue cooperative agreements with federal and state land management agencies.

G. Long term Goals

Yuma County Pest Control District's long-term goal is to contain and reduce the present infestations of noxious weeds found in Yuma County. In accordance with the Colorado Noxious Weed Act (CRS§35-5.5-101, *et seq.*) total eradication of rare noxious weed species found in Yuma County is a top priority. Yuma County Pest Control District will continue its efforts to prevent the introduction of additional noxious weed infestations through educational and outreach programs for both the public and private sectors. BMP's including chemical, mechanical, biological, and revegetation methods will be implemented.

IV. Plan of Work Implementation

A. Education

Emphasis is placed on education and will be achieved through the use of a multimedia package that will target desired audiences. These following programs will be utilized to reach Yuma County Pest Control District's educational objectives:

1. Articles will be placed in local publications.
2. Local radio broadcasts for general information will be used to reach the public.
3. A speaker will be provided upon request for any organization's meetings.
4. Seminars will be conducted in various regions of the county to educate the public on noxious weed identification and control.

B. Description of Integrated Weed Management Techniques

Yuma County Pest Control District will establish and set criteria for management of the noxious weed species found within Yuma County, using an integrated management program. Yuma County Pest Control District will cooperate with Yuma County Conservation District, Yuma Conservation District, CSU Cooperative Extension Service, and NRCS to help landowners develop and implement their Integrated Pest Management Program. Yuma County Pest Control District may enter into cooperative agreements with other governmental agencies, local municipalities, and private landowners for the implementation of their Integrated Pest Management Program where appropriate. For this plan the following definitions for the control measures will be used.

1. Cultural Control means those methodologies or management practices conducted to favor the growth of desirable plants over undesirable plants, including, but not limited to, maintaining an optimum fertility and plant moisture status in an area, planting at optimum density and spatial arrangement in an area, and planting species most suited to an area (CRS§35-5.5-103c).
2. Mechanical Control means those methodologies or management practices that physically disrupt plant growth, including but not limited to, tilling mowing, burning, flooding, mulching, hand-pulling, and hoeing (CRS§35-5.5-103d).
3. Biological Control means the use of organisms such as sheep, goats, cattle, insects, and plant diseases to disrupt the growth of undesirable plants (CRS§35-5.5-103a).
4. Chemical Control means the use of herbicides or plant growth regulators to disrupt the growth of undesirable plants (CRS§35-5.5-103b).
5. Management of the various undesirable plants will vary depending on the site where the plant is located. The integrated management options listed above are meant to provide various management techniques for controlling noxious weeds in the various environmental sites they are found.

C. Prevention Measures

Preventive control means using BMP, which will stop or forestall noxious weeds from contaminating an area. These are often the most practical and cost effective means of noxious weed control. Recommended practices for Yuma County include:

1. Early Detection and Rapid Response (EDRR) can stop the spread of new and emerging noxious weeds species before they become established in Yuma County.
2. Promoting revegetation with weed-free seed and mulch applied to all disturbed areas.
3. Promoting the Colorado Weed Free Hay and Forage Program (CRS§35-27.5-101 *et seq.*) and the Colorado Seed Act (CRS§35-27-101 *et seq.*).
4. Prioritizing weed management in areas that contain abundant weed concentrations and escalating dispersion rates to reduce the potential spread.
5. Minimize soil disturbance on new development sites or other soil disturbing activities such as excessive grazing (where applicable).

D. Mapping of Infestations

Historical maps dating back to 1990 are located at the Yuma County Pest Control District office located in Yuma, Colorado. Yuma County Pest Control District is currently developing a master GIS map that is located at the Yuma County Pest Control District office in Yuma. This master map will be updated yearly. All mapped information will be shared with the noxious weed program under the Colorado Department of Agriculture.

E. Resource Information

1. Noxious Weeds of Colorado – Current edition
2. Colorado Flora Eastern Slope – Current edition
3. Weeds of the West – Current edition
4. Specimen Labels
5. Weeds of California and Other Western States – Current edition
6. Invasive Plants of Range and Wildlands – Current edition
7. Nebraska Weeds – Current edition
8. Biology and Management of Noxious Rangeland Weeds – Current edition
9. Weeds of the Great Plains – Current edition
10. CSU Extension Publications
11. Techline Publications
12. NRCS Technical Guides
13. North American Weed Management Association
14. Colorado Weed Management Association
15. Center for Invasive Plant Management
16. Colorado Department of Agriculture
17. USDA PLANTS Database

F. Landowner Responsibility

The control of noxious weeds is the responsibility of every landowner (CRS§35-5.5-104). Yuma County Pest Control District will provide technical advice and assistance to landowners upon request. Yuma County Pest Control District will cooperate with landowners to develop and manage an acceptable noxious weed control plan. Under the requirements of the Colorado Noxious Weed Act, a landowner may be required to file and comply with an acceptable plan to control noxious weeds on the property they manage/own.

G. Enforcement on Private Lands

Yuma County Pest Control District will adhere to the Colorado Noxious Weed Act concerning all enforcement issues. Private lands enforcement procedures are outlined in CRS§35-5.5-109 and include Yuma County Pest Control District personnel physically inspecting a property at the request of the property owner, a neighboring landowner or occupant that has reported suspected noxious weed infestations, or if noxious weeds are visually observed from a public right-of-way.

The landowner will be notified via certified mail of the inspection date, noxious weed species, approximate size of noxious weed infestation found, and the best available control methods of integrated management. The property owner will then have a reasonable time after receipt of notification, which at no time shall exceed 10 days, to comply with the terms of notification, or develop and submit an acceptable plan to Yuma County Pest Control District and schedule for the completion of the submitted plan for compliance, or request arbitration at the property owner's expense.

H. Enforcement on Public Lands

Yuma County Pest Control District will adhere to the Colorado Noxious Weed Act concerning all enforcement issues. Public lands enforcement procedures are outlined in CRS§35-5.5-110. As stated in the Colorado Noxious Weed Act it is the duty of each state board, department, or agency that administers or supervises state lands to manage noxious weeds on any lands under its jurisdiction. Yuma County Pest Control District may give notice to any state board, department, or agency advising of the presence of noxious weeds, and specify the best available methods of integrated management that are in compliance with state law. Yuma County Pest Control District may assist with development of a plan for the management of noxious weeds on the premises or lands within a reasonable time after receipt of notification, which shall not exceed 10 days.

If the state board, department, or agency fails to comply with the notice to manage the identified noxious weeds or to implement the management plan then Yuma County Pest Control District may enter upon such lands and undertake the management of such noxious weeds or cause the same to be done and the expense of this management will be charged against said state board, department, or agency which has jurisdiction over the lands.

1. Payment

An agreement in writing for payment shall be reached within two weeks after the date such an expense is submitted. If no agreement has been reached or the charge is not immediately paid, the charge shall be submitted to the controller who shall treat such amount as an encumbrance on the budget of the state board, department, or agency involved.

I. Enforcement on Utility Owned and State Regulated Lands

Yuma County Pest Control District will adhere to the Colorado Noxious Weed Act concerning all enforcement issues. Utility owned and State-Regulated lands, including railroads rights-of-way enforcement will follow CRS§35-5.5-109 and CRS§35-5.5-110 as appropriate. As stated in the Colorado Noxious Weed Act, each land owner, including utility board or operator on any state-regulated lands is responsible for noxious weed management on any land under its jurisdiction. Yuma County Pest Control District may give notice to any utility board or operator on any state-regulated lands advising of the presence of noxious weeds, and specifying the best available methods of integrated management that are in compliance with federal law. Yuma County Pest Control District may assist with development of a plan for the management of noxious weeds on the subject lands within a reasonable time after receipt of notification, which shall not exceed 10 days. If the utility board or operator on any state-regulated lands fails to comply with the notice to manage the identified noxious weeds or to implement the management plan, Yuma County Pest Control District may enter upon such lands and undertake the management of such noxious weeds or cause the same to be done. The expense of this management will be charged against the utility or operator which has jurisdiction over the subject lands.

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