



Landowner Basics 101: Land Stewardship, Invasive Plants, and You

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A close-up photograph of a flowering plant with clusters of small, light pink and white blossoms. The flowers are in various stages of bloom, with some showing prominent stamens. The background is a soft-focus green, suggesting foliage.

State Law

- ▶ Colorado Noxious Weed Act 35-5.5
- ▶ Signed in 1990
- ▶ Establishes that all Colorado landowners public and private must manage their noxious weeds



Local Ordinance

- ▶ Archuleta County Ordinance 20-2018
- ▶ Established fines for noncompliant landowners
- ▶ SB24-031
 - ▶ Similar to our ordinance and establishes a statewide basis for fines



Get into the Weeds

- ▶ Noxious
 - ▶ Legal term, management is required, must be an invasive plant
- ▶ Invasive
 - ▶ These plants are introduced through unnatural means and aggressively spread and disrupt native ecosystems, agriculture, and can be damaging to human health
- ▶ Non-native
 - ▶ Introduced but are not aggressive
- ▶ Native
 - ▶ Naturally occur in the area
 - ▶ Some native plants may be considered weeds or weedy by agriculture producers or lawn enthusiasts



Listing Status

- ▶ A List
 - ▶ Eradication is required
 - ▶ Limited populations in Colorado
- ▶ B List
 - ▶ Containment zones are set for these species and new populations should be eradicated
 - ▶ Widespread but localized
- ▶ C List
 - ▶ Suppression and reduction of reproduction success is the goal for these species
 - ▶ Extremely widespread and common



Who...Cares?

- ▶ Why do we care
 - ▶ Noxious weeds/invasive species tie into nearly every environmental issue from climate change to endangered species
- ▶ Who should care?
 - ▶ Landowners
 - ▶ Recreationists
 - ▶ Hikers
 - ▶ Cyclists
 - ▶ Hunters
 - ▶ Bird watchers
 - ▶ Agricultural producers
 - ▶ Non-profits
 - ▶ Government agencies



Wildlife

- ▶ Eliminate forage, habitat, reduce access to water
 - ▶ Many noxious weeds are unpalatable, like oxeye daisy which takes over subalpine meadows
 - ▶ Cheatgrass takes over sagebrush steppe habitat which is critical for species like the endangered Gunnison Sage Grouse and mule deer
 - ▶ Salt cedar can form dense thickets along riparian corridors which are difficult for animals to navigate in order to access water



Pollinators

- ▶ Reduce biodiversity, form monocultures, and reduce host plant richness
 - ▶ Different pollinators have different needs
 - ▶ Adult generalist pollinators may use plants like musk thistle, but their larvae may need a specific host plant
 - ▶ i.e. monarch caterpillars need milkweed to survive, musk thistle invades milkweed habitat



Watershed Health

- ▶ Change water movement, clarity, chemistry
 - ▶ In turn changes which aquatic animal species can live there
- ▶ Increase soil erosion



Soil Health

- ▶ Soil is the foundation for our ecosystems
 - ▶ Increase organic matter (not always a good thing)
 - ▶ Secrete chemicals to damage other plants or fungi
 - ▶ Increase leaf litter or thatch



Wildfires

- ▶ Change fire regimes
 - ▶ Increase frequency
 - ▶ Increase intensity
- ▶ Plants like cheatgrass and salt cedar effect the fire cycle in a way that the native plants cannot compete in



What Can You Do?

- ▶ Prevention
- ▶ Management
- ▶ Reporting Invasive Species



Cultural

- ▶ Plant native or non-invasive
- ▶ Clean gear after hiking
- ▶ Rotational grazing
- ▶ Waterwise practices



Mechanical/Manual

- ▶ Hand-pulling
- ▶ Mowing
- ▶ Deadheading



Biological Control

- ▶ Beneficial insects or pathogens that reduce noxious weeds competitive edge
 - ▶ Host specific
 - ▶ Will not eradicate the weed population



Chemical

- ▶ Herbicides
 - ▶ Organic does not mean safer
 - ▶ Read the label
 - ▶ One size does not fit all



Integrated Management

- ▶ Combine all appropriate control methods
 - ▶ Mix and match based on property
 - ▶ Biocontrols are not a great option for $\frac{1}{4}$ acre properties
 - ▶ Handpull small or new populations
 - ▶ Use herbicides on larger populations



Archuleta County Weed and Pest

- ▶ Core services
 - ▶ Herbicide sales
 - ▶ Herbicide application
 - ▶ Management plans
 - ▶ Seasonal biocontrol sales
 - ▶ Plant identification
 - ▶ Education

A photograph of a field of purple musk thistles. The flowers are in various stages of bloom, with some showing the characteristic spiky, globe-like structure. The background shows a rolling landscape under a bright blue sky with scattered white clouds.

Common Weeds: Musk Thistle

- ▶ Biennial
- ▶ Reproduces by seed only
- ▶ Taprooted

A photograph of a Canada Thistle (Cirsium arvense) in a field. The plant has a green, spiny stem with several white, daisy-like flowers at the top. The background shows a line of evergreen trees and a mountain peak under a cloudy sky.

Common Weeds: Canada Thistle

- ▶ Perennial
- ▶ Reproduces by seeds and root fragmentation
- ▶ Rhizomatous



Common Weeds: Oxeye Daisy

- ▶ Perennial
- ▶ Reproduces by seed and root fragmentation
- ▶ Rhizomatous



Common Weeds: Yellow Toadflax

- ▶ Perennial
- ▶ Reproduces by seed and root fragmentation
- ▶ Rhizomatous

A photograph of a Common Mullein plant (Verbascum thapsus) with a tall, dense spike of yellow flowers and fuzzy green leaves. The plant is growing in front of a corrugated metal wall. The image is partially obscured by a black and green geometric overlay on the right side of the slide.

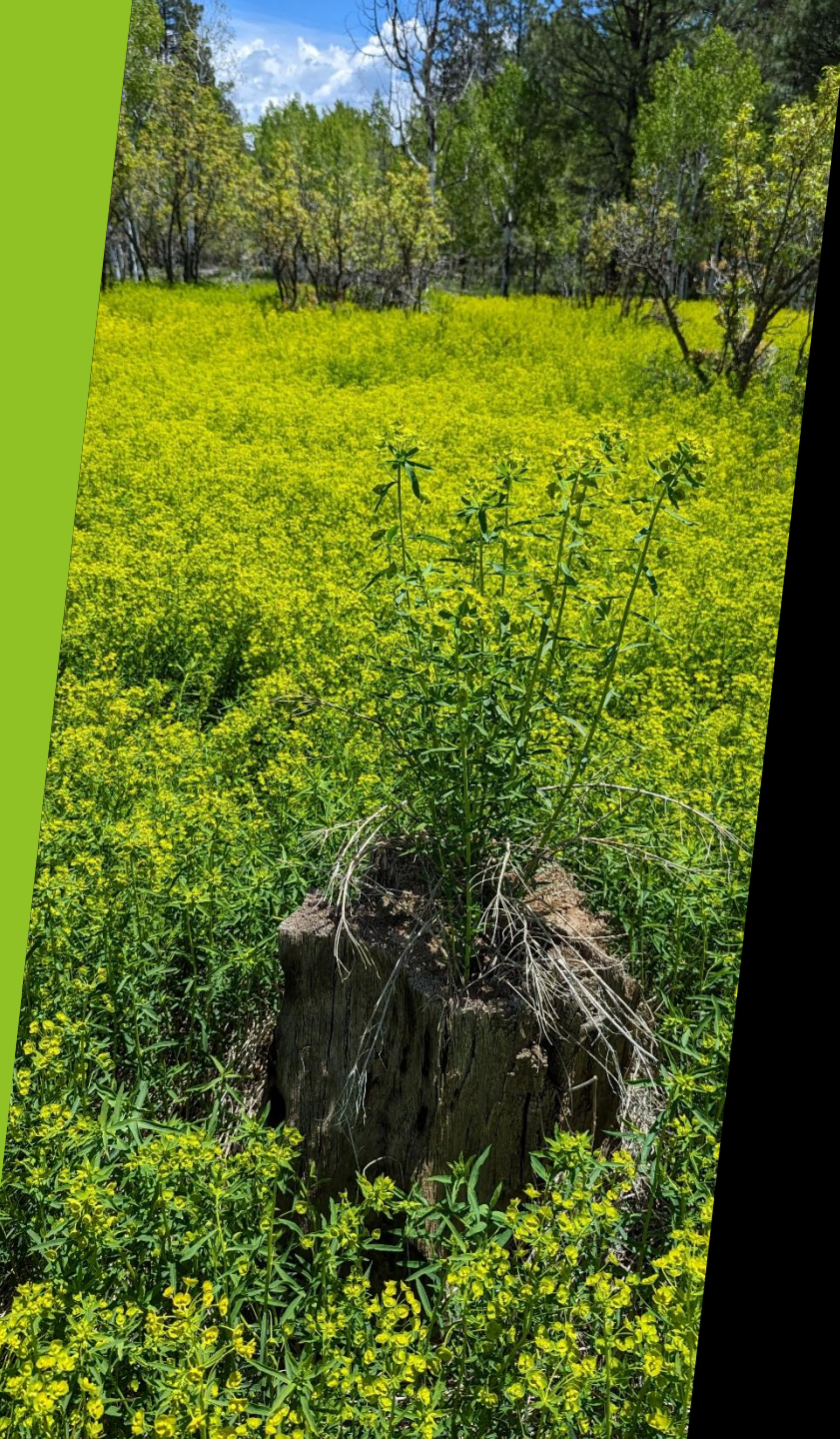
Common Weeds: Common Mullein

- ▶ Biennial
- ▶ Reproduces by seed only
- ▶ Taprooted



Common Weeds: Houndstongue

- ▶ Biennial
- ▶ Reproduces by seed only
- ▶ Taprooted



Common Weeds: Leafy Spurge

- ▶ Perennial
- ▶ Reproduces by seed and root fragmentation
- ▶ Rhizomatous



Common Weeds: Russian Knapweed

- ▶ Perennial
- ▶ Reproduces by seed and root fragmentation
- ▶ Rhizomatous



Common Weeds: Spotted Knapweed

- ▶ Biennial
- ▶ Reproduces by seed only
- ▶ Taprooted