



DRINKING WATER COMPLIANCE DIVISION
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September 30, 2016

Michael Cunningham
Colorado Division of Reclamation, Mining and Safety
Department of Natural Resources
1313 Sherman Street, Room 215
Denver, CO 80203

Subject: **Weed Plan Technical Revision for the Pioneer Sand and Gravel Property
Mine/Prospecting ID # M-1983-139 - Jefferson County / City of Arvada**

Dear Mr. Cunningham:

Enclosed is the City of Arvada's *2016 Noxious Weed Management/Action Plan Report Arvada North Parcel*.

❖ Pioneer Sand & Gravel property

- 577 acres in total - this site is currently occupied by Pioneer Sand & Gravel and includes the acre parcels bordered by Hwy 93 and the road to the Arvada Modeler Airpark.
- The main area of concern is the 20 acres leased by Pioneer Sand and Gravel from the City. The acres around their main office and material sales yard were not included in the City's Weed Management Plan.
- This area is now included in the City's Plan to conduct monitoring and application efforts for weed control in an effort to control the infestations.

Please email the Technical Revision fee invoice for payment to judy-sc@arvada.org

If you have any questions or need additional information, please don't hesitate to contact me with the City of Arvada, Utilities, Water Quality at 720.898.7802.

Sincerely,

A handwritten signature in blue ink that reads 'Judy L. Schmidt'.

Judy L. Schmidt
Water Quality Administrator

Printed on Recycled Paper

8101 RASLTON ROAD ▲ ARVADA, COLORADO ▲ 80002

2016 Noxious Weed Management/Action Plan-Report Arvada North Parcel

Prepared by Vegetation Management, Inc.

Purpose

Vegetation Management Inc. (hereafter referred to as VMI) has been conducting weed control efforts for the City of Arvada since 2006. In 2016 VMI has conducted weed control efforts on what is called the North parcel. Note: This weed plan supersedes existing plans and specific herbicides utilized will be accounted for in the City of Arvada's annual reports.

For the purposes of reporting, VMI refers to the North parcel which contains the Pioneer Sand & Gravel retail yard and is further broken down into 9 sub-areas called Areas A through I and what is called the 224 (Patridge/Lindsay parcel) parcel broken down into 6 sub-areas called Areas 1 – 6 allowing VMI to more accurately report on weed populations within those areas.

These properties consist of roads, a Modeler Airpark, a Prairie Dog area, now abandoned gravel pits, a retail yard, large flat dirt areas, several ponds and below grade areas which sometimes hold seasonal water and lots of open areas on which native grasses and plants are growing in meadow/pasture areas as well as abandoned pits.

A large portion of the properties have been infested by a variety of noxious weeds. The following weeds are present on site in varying quantities: Diffuse Knapweed, Field Bindweed, Thistles (Canada, Musk, Russian and Scotch), Common Mullein, Kochia, Dalmation Toadflax, Salt Cedar (aka Tamarisk), Russian Olive and Leafy Spurge. VMI treats all the above mentioned weeds. VMI continues to be vigilant in its efforts to contain and report new infestations of any types of weeds.

This Plan provides for critical areas of noxious weed management, assessment, monitoring and reporting on those designated areas.

Background

The authority and responsibility to formulate and implement a Noxious Weed Management Plan comes from Colorado Revised Statutes 35-5.5-101 et.seq., the Colorado Noxious Weed Act (Act). The Act states that the justification for this statute resides in the fact that certain undesirable plants represent a threat to the economic and environmental value of lands throughout the State; therefore, they must be managed where they occur. Furthermore, it is the responsibility of local governing bodies to assure that these plants are in fact managed.

Organization and Responsibilities

I. City of Arvada

A. City of Arvada Representative responsibilities

1. City of Arvada (hereafter referred to as CoA) representative communicates with the contractor as to desired activities on site.
2. CoA receives and processes Invoices for payment.

3. CoA will provide access to water for treatment purposes if necessary.

II. Vegetation Management Incorporated (VMI)

A. Contractor Responsibilities

1. Contractor performs Assessment, Management/Control, Monitoring, make Recommendations and prepare Reports of areas that have been treated.

GOAL AND OBJECTIVE

- **Goal:** Weeds left unchecked infest both private and public lands. It is the primary goal of this management plan to ensure that, as many noxious weeds as possible are either not allowed to establish a foothold or that sizeable infestations be controlled.
- **Objective:** To provide chemical treatment to designated areas as necessary to manage noxious weeds, report and make recommendations as to success and ongoing treatment.
- **Action:** Contractor will provide the tools necessary to perform chemical application to the designated areas.

ASSESSMENT

- **Objective:** To evaluate the noxious weed populations within the designated area by utilization of visual inspection by VMI staff.
- **Action:** Visually survey designated area to locate infestations, determine approximate areas in need of control and treat them with appropriate chemical application.

MANAGEMENT/CONTROL

- **Objective:** Control infestations by chemical application.
- **Action:** Evaluate effectiveness of noxious weed populations within each designated area. Treatments will occur multiple times throughout the growing season usually at least once a month from approximately May through September – weather dependent.

MONITORING

- **Objective:** Assess treatment areas in order to establish trends in success ratios.
- **Action:** The site will be visited multiple times throughout the growing season, usually at least once a month from approximately May through September.

REPORTING

- **Objective:** To provide the CoA with information detailing the areas and effectiveness of treatment.
- **Action:** Produce a report, which will provide assessment and recommendations on the populations of noxious weeds within the designated area/s. Identify appropriate management techniques for weed species on a case-by-case basis.

ASSESSMENT/SITE VISITS

Multiple Site Visits were conducted during 2016

VMI made multiple site visits most of which to determine application timing, conduct applications, view results from prior applications, and (per usual) several visits which were made with the intention of conducting spray efforts but were thwarted due to high winds.

2016 TREATMENT DETAILS

Pioneer (North Parcel)

Treatments were conducted on the following dates:

Spring:	May 21, May 28
Summer:	June 26, August 7
Fall:	September 11 with one more treatment due this fall

For a total of 158.5 Acres to be treated in 2016

The following weeds were found and treated: Knapweed, Thistles, Leafy Spurge, Kochia, Dalmation Toadflax, Tamarisk, Common Mullein and Bindweed.

Refer to Data sheet and/or Map for specific details and infestation areas and densities.

OVERALL COMMENTS/RECOMMENDATIONS

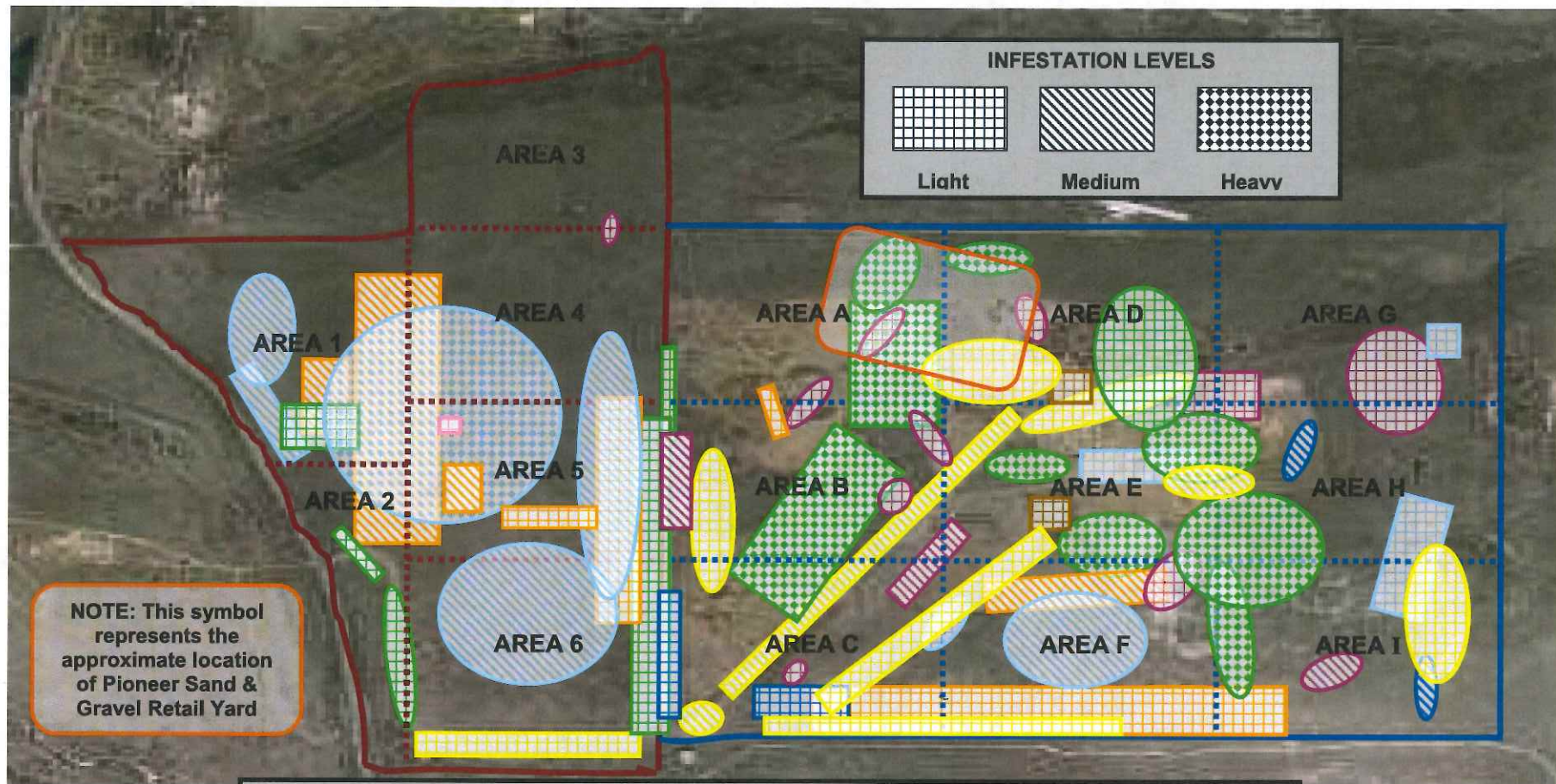
With the prior and still fairly regular soil disturbance caused by equipment traveling around this parcel it creates prime situations for weeds to thrive. VMI's methodology has been to first focus on areas along all roadways in an effort to reduce the potential seed which might be moved inadvertently by tires and the wind created by motorists. This year in particular heavy infestations of Diffuse Knapweed were present along with heavy to moderate amounts of Mullein and scattered heavy to light infestations of Thistles with Kochia & Russian Thistles appearing in mid-late summer especially along roadways and adjoining areas along with light to moderate Bindweed.

Several infestations of Tamarisk located primarily in Areas A, B, D & E were located and treated.

Prairie Dogs are re-infesting Area C along the section of fence which separates the Pioneer parcel from the Arvada/Blunn Reservoir parcel just inside the gate to the retail yard E of the Water Tank. It is highly recommended these Prairie Dogs be controlled as this colony is increasing in size.

A citizen complaint was made mid-summer regarding the amount of Knapweed surrounding the retail yard which perpetuated several meetings. It was noted that the area leased by Pioneer Sand & Gravel was to be maintained by Pioneer. It had been requested in the past that VMI stay out of the retail yard. Moving forward it has been determined that VMI will conduct weed control within the retail yard in an effort to control the infestations in that area as well on the rest of the parcel.

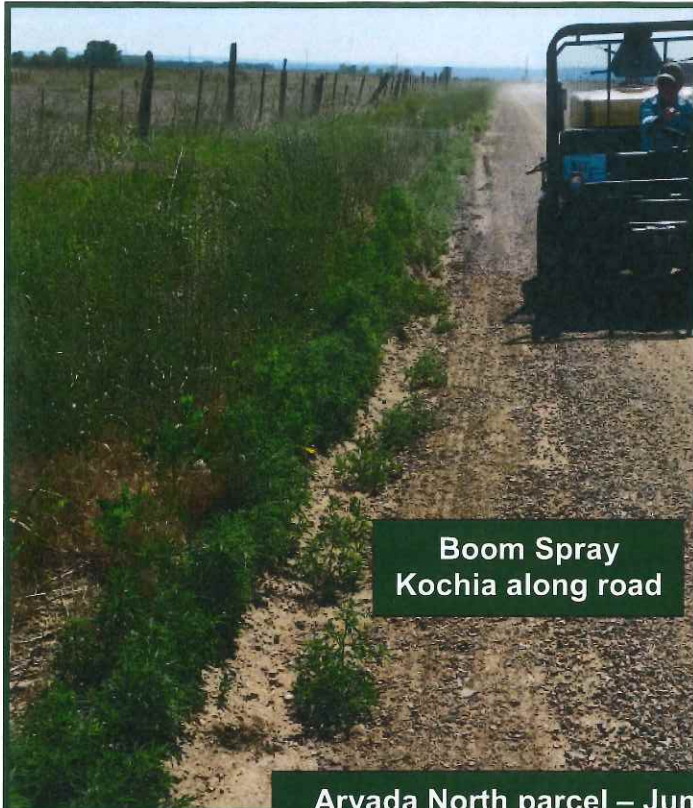
VMI takes great pride in conducting weed treatments for the City of Arvada and feels confident that with continued monitoring and application efforts reductions will be realized allowing native grasses and forbs to flourish and restoring native habitats on this Arvada parcel. Noxious weed control is an ongoing effort and with all of the uses and future plans for this parcel continued monitoring and treatment efforts are advised.



PIONEER PROPERTY (includes 224 Acre parcel) 2013 LEGEND
Pioneer boundary in Blue / 224 Acre boundary in Red

	= Thistles		= Kochia/R. Thistle		= Tamarisk		= F. Bindweed
	= Knapweed		= D. Toadflax		= L. Spurge		= C. Mullein





Boom Spray
Kochia along road



Dalmatian
Toadflax



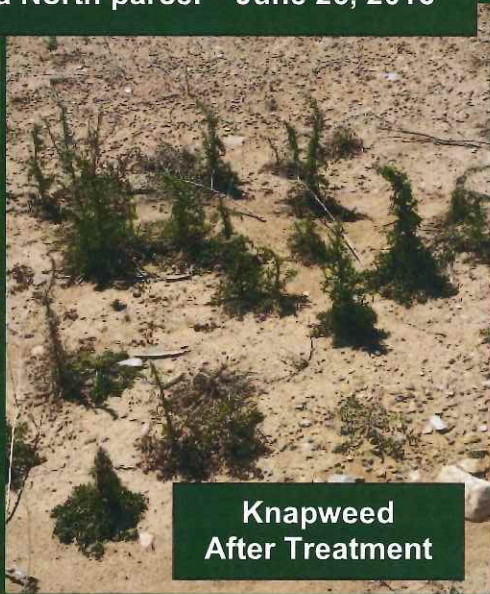
Death from spring treatment

Scotch Thistle & Mullein

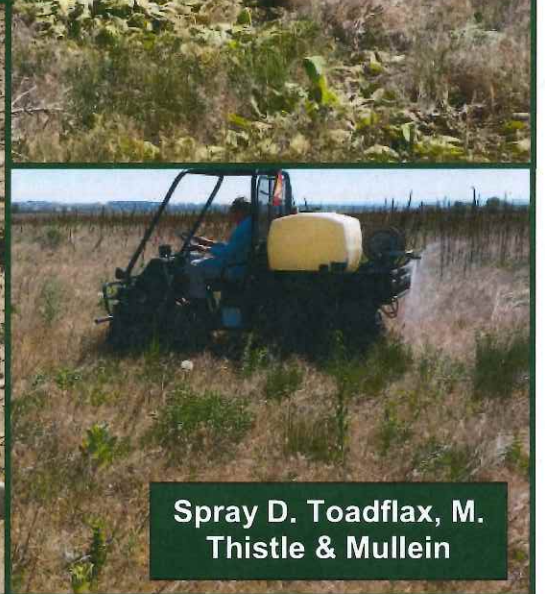
Arvada North parcel – June 26, 2016



Tamarisk



Knapweed
After Treatment



Spray D. Toadflax, M.
Thistle & Mullein



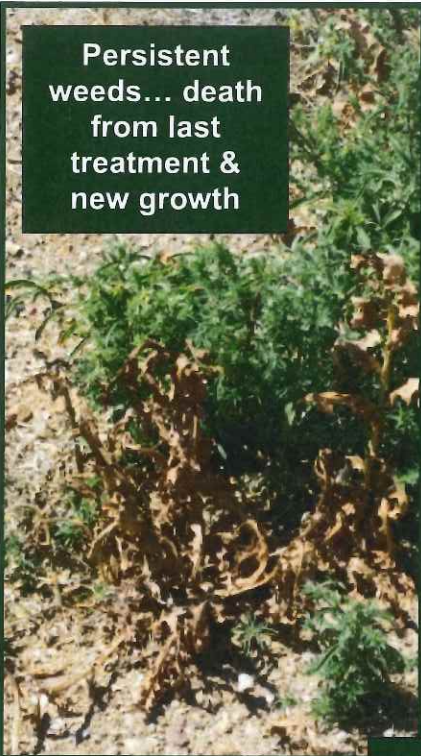
Distinct Treatment results – Right of line treated



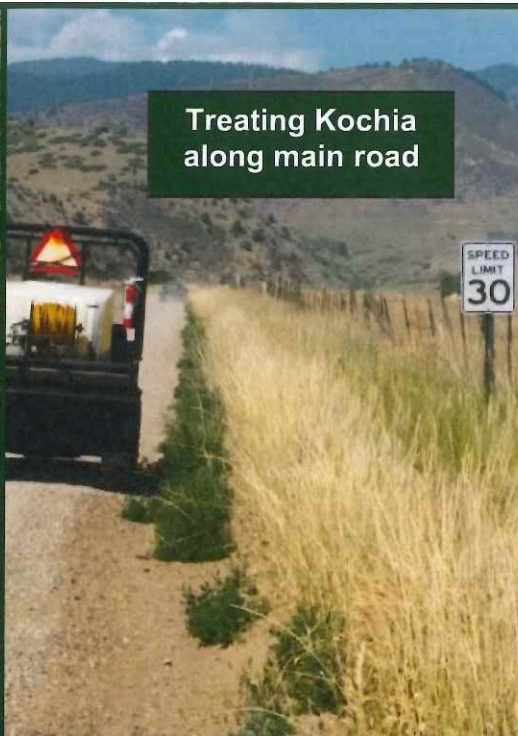
Spring/Summer 2016 Arvada North parcel (Pioneer) Knapweed control efforts



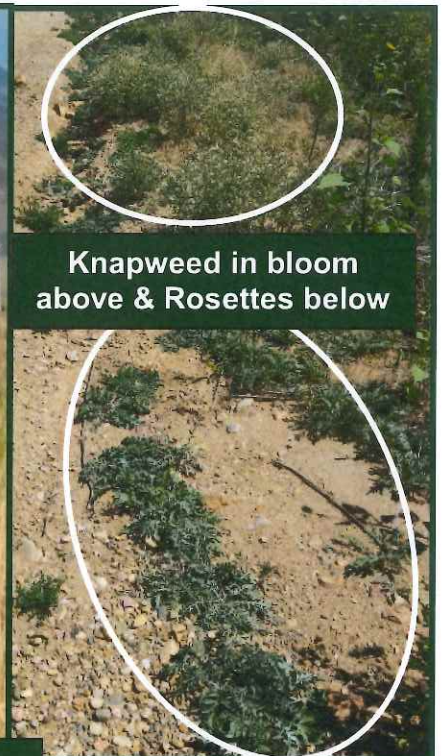
Persistent
weeds... death
from last
treatment &
new growth



Treating Kochia
along main road

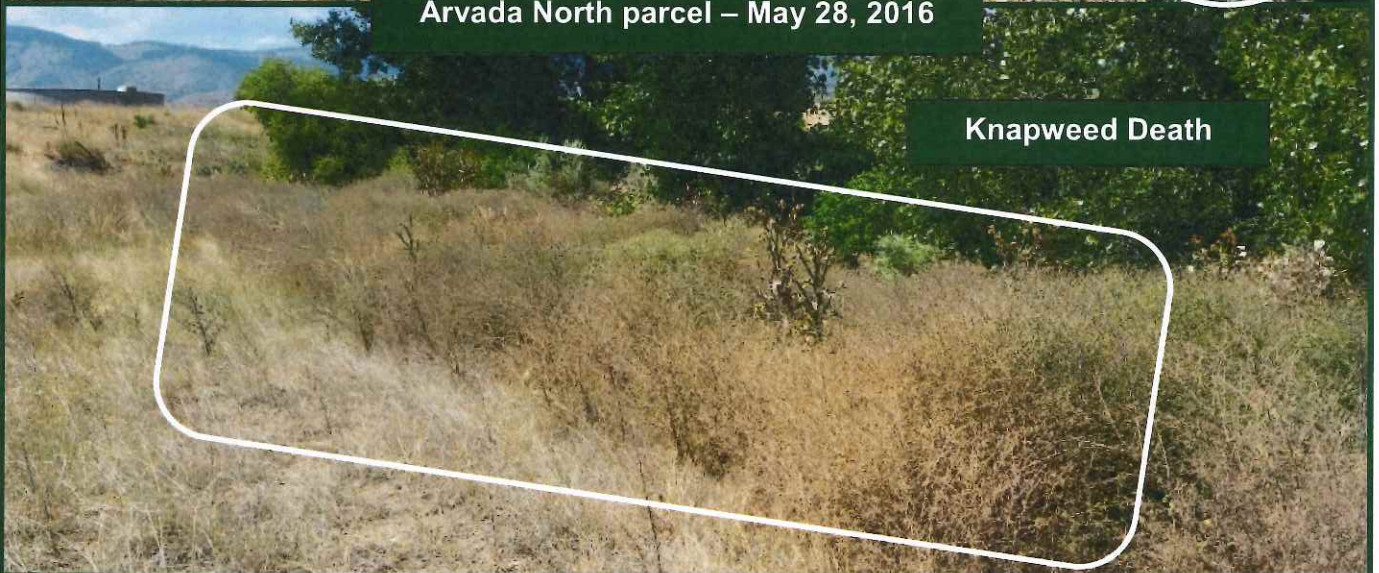


Knapweed in bloom
above & Rosettes below



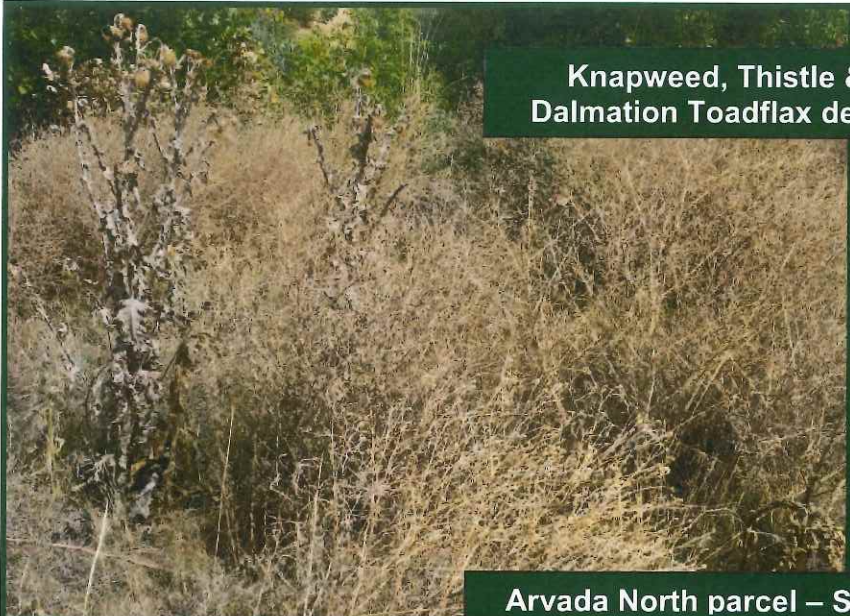
Arvada North parcel – May 28, 2016

Knapweed Death



Treating Knapweed
along ancillary road





Knapweed, Thistle & Dalmatian Toadflax death



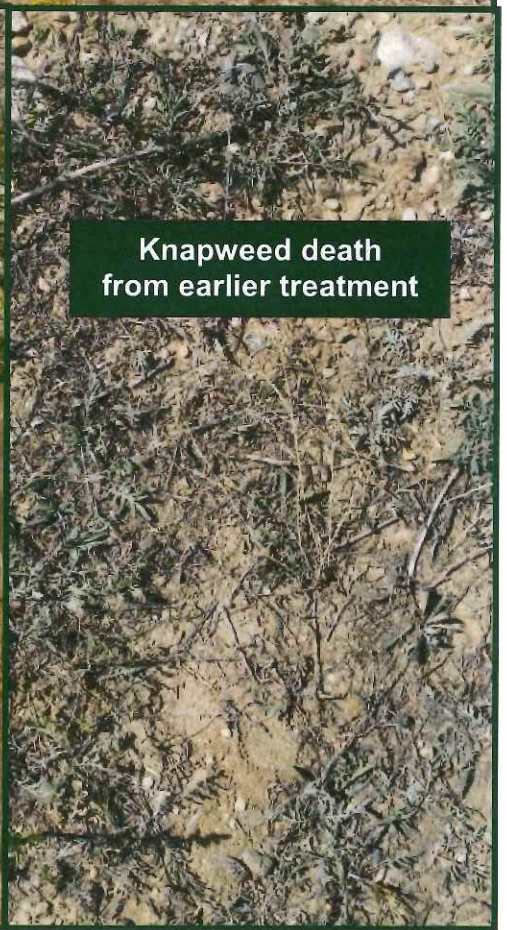
Arvada North parcel – Sept. 11, 2016



Treating rosettes at entry



Treating Tamarisk



Knapweed death from earlier treatment

