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Newmont Noxious Weed Treatment Report - 2021

Newmont – Cripple Creek and Victor Gold Mine

Teller County, Colorado

Prepared for: Newmont CC&V – September 1st, 2021

Frontier Project No.: 1104

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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.

Project Location

The Newmont Cripple Creek and Victor [CC&V] Gold mine is in Teller County Colorado, southwest of Pikes Peak Mountain. CC&V is an above ground surface gold mine. The mine first went into production in 1976 and has an approximate footprint of 7 square miles (Newmont, 2021). Within the mine site there are multiple reclaimed tailings slopes, growth medium storage areas, and critical buildings as well as infrastructure; these locations serve to aid in current mine operations and environmental mitigation.

Project Scope

The Newmont Cripple Creek and Victor [CC&V] Gold mine has scoped that this project aim to conduct a spring herbicide treatment [one week] and a second late summer/ fall herbicide treatment [two weeks]. This work is scoped to be performed on a time and materials basis, with the work being performed by three personnel without shift change during each work week.

Project-Specific Weed Management Priorities

Priority 1: Treat all CDA A list species - no list A species were observed within the project area. However, if any List A species are found, it is a priority that these species be eliminated.

Priority 2: The treatment of all B and C list species as found to be present at Newmont CC&V requested property locations [e.g., growth medium stockpiles, reclaimed areas, high traffic/ use areas]

Control

To effectively control noxious weed populations for this site chemical control methods will be used.

Chemical controls – A treatment of Milestone at 7.0 Oz/ Acre has been recommended by Frontiers Qualified Supervisor [Applicator ID #35103]. This herbicide was selected due to its high degree of effectiveness in managing Canada thistle (*Colorado State University, 2013*), the prevalence of Canada thistle at all sites, as well as its effectiveness on the majority of other inventoried and observed species within the project site.

Treatment Dates and Herbicide Application Rates

During the last week of June [6/28/21 – 7/1/2021] and the middle two weeks of August [8/16/21 – 8/19/21 and 8/23/21 – 8/26/21], Frontier's Qualified Supervisor and two technicians performed chemical [herbicide] control applications at designated sites within the mine boundary. The application sites were directed by Newmont CC&V's senior environmental coordinator [Jeana Ratcliff]. The intent of these herbicide applications was to reduce the presence and prevalence of state CDA listed A, B and C noxious weeds in critical mine reclamation growth medium storage areas and high use locations.

During these treatments, the following species were observed and recorded using the categories outlined below:

High (>70% cover) ; Medium (40 – 70% cover); Low (10-40% cover); Scattered (<10% cover).

Species [common name]	US Code	CDA Ranking	Severity [density]	Treatment type	Rate & Timing
Canada Thistle	CIAR4	B	High	Chem	Milestone [7 Oz/A]
Musk Thistle	CANU4	B	Moderate	Chem	Milestone [7 Oz/A]
Dalmation Toadflax	LIDA	B	High	Chem	Milestone [7 Oz/A]
Yellow Toadflax	LIVU2	B	High	Chem	Milestone [7 Oz/A]
Bull Thistle	CIVU	B	Scattered	Chem	Milestone [7 Oz/A]
Oxeye Daisy	CHLE80	B	Low	Chem	Milestone [7 Oz/A]
Scentless Chamomile	MAPE2	B	Moderate	Chem	Milestone [7 Oz/A]
Field Bindweed	COAR4	C	Moderate	Mech	Milestone [7 Oz/A]
Common Mullein	VETH	C	High	Chem	Milestone [7 Oz/A]

Table 1. List of Noxious Weed Species observed at the various identified site within the Newmont CC&V property during 2021 growing season application. Treatment rates and products were recommended per the recommendation of Frontiers qualified supervisor.

Treatment schedule & Sites

Week #1 [06/28/21 – 07/01/21]

06/28/2021

- No treatments performed – rain and weather conditions [CC&V onboarding]

06/29/2021

- AJAX Building
- Fuel Storage Area
- Blasting Storage Area
- High Grade Mill
- Crusher Site
- Project Building
- ADR-1 [partially completed]

06/30/2021

- ADR -1 [completed]
- ADR - 2
- Buckley Center
- Ironclad Building
- Heavy Equipment Maintenance Area
- Wood Cutting Area
- Repository #6 [lower half completed]

07/01/2021

- Repository #6 [completed]
- Shelf Road Site
- Carleton Tunnel

Week #2 [08/16/21 – 08/19/21]

08/16/2021

- GMSA #6
- GMSA #21
- GMSA #38

08/17/2021

- GMSA #11 [western edge]

08/18/2021

- GMSA #11 [southwest corner]

08/19/2021

- GMSA #11 [south edge – high winds in afternoon]
- GMSA #19

Week #2 [08/16/21 – 08/19/21]

08/23/2021

- GMSA #11 [northeast side – approximately halfway up]
- GMSA #19 [from road edge to power station]

08/24/2021

- GMSA #11 [northwest side – approximately halfway up]

08/25/2021

- GMSA #11 [south side – completed]
- Providence Reclamation Site

08/26/2021

- Reclamation Slope #11 [lower half of slope]
- Bridge Site – under ADR #2

Post Project Recommendations

Following the 2021 growing season application, Frontier Environmental recommends the following:

1. That a comprehensive Integrated Noxious Weed Management Plan [INWMP] be developed and implemented.
2. That a post treatment and effectiveness monitoring plan be drafted, implemented, and maintained.
3. CC&V consider a fall/ post frost chemical treatment of Telar or Tordon 22K at label rates in combination with competitive seeding [cultural control] prior to snowfall to better manage and mitigate toadflax populations (*Colorado State University, 2014*).
4. GMSA's be prepared for reclamation and seeding as a form of long-term cultural control in mitigating state CDA listed noxious weeds.

References

<https://extension.colostate.edu/topic-areas/natural-resources/canada-thistle-3-108/>

https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/plantsanimals/?cid=nrcs143_026853

<https://www.newmont.com/operations-and-projects/global-presence/north-america/cripple-creek-victor-us/default.aspx>

<https://extension.colostate.edu/topic-areas/natural-resources/biology-and-management-of-the-toadflaxes-3-114/>