Data Submitted (UTC 11): 4/17/2023 3:18:15 AM
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Comments: Please see attached.

I appreciate your intention of always minimizing the use of chemicals when developing an invasive plant management plan, as pesticides destroy soil microbiome health. In the context of the climate crisis, we need to protect the soil microbiome to retain water, sequester carbon, and support biodiversity and native plants. For more information on this topic you can refer to the documents referenced below.
Removing seed heads and/or fruiting bodies from invasive plants before they go seed is indeed a very effective practice to reduce the invasive plant seed bank over a small area.
On larger areas, targeted goat grazing is an approach that has been successfully implemented elsewhere in Colorado. Goat Green LLC offers an inspirational example of successful pesticide-free weed management and ?re mitigation. You can watch the inspiring presentation "Using Goats for Habitat Restoration on Public lands" by Hilary Boyd, a wildlife biologist at the BLM Colorado River Valley Field Of?ce. The Roaring Fork Transportation Authority also uses the goats from Goat Green LLC along the Rio Grande Trail to manage weeds. The video presents their efforts and goals. To address the disease transmission from goats to bighorn sheep, Hillary Boyd, the wildlife biologist of the BLM Colorado River Valley Field Of?ce, and Colorado Parks and Wildlife agreed that the herder will stay with the goats. The goats do not roam freely, but are lead by the herders and directed by electric fences to weed infested areas to avoid damaging the native vegetation. Additionally, goats are browsers. They prefer to eat brush and weeds rather than grass. Follow up treatments are obviously critical to consistently reducing the weed seed banks. Over time targeted goat grazing can remove weeds and also return the land to a healthy and natural ecosystem, a requirement for carbon sequestration in the soil. Barely any seeds survive the digestive system of goats. This is demonstrated in the research paper "Recovery and viability of seeds ingested. by goats".
In our highly ?re adopted ecosystem, prescribed burns can reduce cheatgrass infestation and favor native plant recovery, as shown in the presentation "Fire, Cheatgrass, Mammals, Birds, and Butter?ies - A Study of Ecosystem Interaction" during the Boulder County Parks & Open Space Advisory Committee meeting of December 16, 2021. These results are con?rmed by the research papers referenced below.
Please don't use toxic chemicals to control weeds when we have approaches that can address the weed problem and also restore the health of our ecosystem, including the soil microbiome. In the context of the climate crisis, we urgently need healthy soil to absorb water and carbon.
Thank you for your time.
Best,
Christel
Documents regarding the impact of herbicides on the ecosystem and the soil microbiome
Adverse impacts of Roundup on soil bacteria, soil chemistry and mycorrhizal fungi during restoration of a Colorado grassland
Weed killer use destroys Soil Life and Ecosystem, paper ?nds
Indazi?m controls nonnative Alyssum spp. but negatively affects native forbs in

sagebrush steppe conducted in Yellowstone area
Research papers regarding cheatgrass control and ?re
Seeding native species increases resistance to annual grass invasion following prescribed burning of semiarid woodlands demonstrates an increased resistance to cheatgrass invasion after ?re on higher elevation plots
Spatial Variation in Post?re Cheatgrass: Dinosaur National Monument, USA identi?ed increased altitude, increased ?re severity, and increased post-?re soil moisture as factors decreasing cheatgrass return after ?re
Prescribed Burning in the Northern Great Plains: Yield and Cover Responses of 3 Forage Species in the Mixed Grass Prairie
consistently observed decreases in cheatgrass density regardless of burn timing
Fire Rehabilitation Using Native and Introduced Species: A Landscape Trial and Long-Term Vegetation Recovery and Invasive Annual Suppression in Native and Introduced Post?re Seeding Treatments show that reseeding of native vegetation after ?re can effectively control invasive species, including cheatgrass