



2019 Highlights

- Longmont-to-Boulder (LoBo) Regional, Stearns Lake and Mayhoffer Trail upkeep
- All 44 flood buyouts were scouted and treated
- An increase in removal of three species of invasive tree; Lutz Property makeover
- Large-scale application of Esplanade on 797 acres and 7.5 miles of right of way (ROW) for effective control of cheatgrass
- Participated with volunteers in 16th Annual Wildlands Restoration Volunteers (WRV) Common Mullein Pull and Dig
- Sponsored seven projects engaging 67 volunteers for 218 hours
- Release of poison hemlock biological control
- Rabbit Mtn. aerial Esplanade treatment for fire break

Staff:

Steve Sauer, Boulder County Weed Coordinator

Joe Swanson, Resource Specialist Weeds, Open Space

Jim Sebastian, Resource Specialist Weeds, Open Space

Malcolm Wiley, Resource Specialist Weeds, Right of Ways

Invasive Plants and Weeds

Boulder County

2019 Annual Report



The Boulder County Parks and Open Space (BCPOS) Weed Management team is responsible for a large area of county-owned lands. This includes approximately 7,000 acres of agricultural property, 40,000 acres of open space lands, and over 600 miles of county road right of way. We are responsible for the eradication of all List A weed species, and control or suppression of List B and C non-native plants. To accomplish this, Boulder County implements an

Integrated Pest Management plan (IPMP) that incorporates all aspects of mechanical, cultural, biological, and chemical controls.



Better Ecology Through Invasive Plant Management!

Proper plant identification and treatment is key to ongoing monitoring and control. Consistently using diverse control methods has helped reduce or eradicate

invasive plant infestations, and is key to reclaiming our natural open spaces and returning them to their native state. This is the ultimate goal of the BCPOS Weed Management team. Within the following report are some of the actions and activities of the BCPOS Weed Management team for the 2019 season. This report will give an insight to the various methods of control used for weed management throughout the county and highlight our efforts in improving the ecology of our open spaces through invasive plant management.

Improving Habitat for Rare and Endangered Plants Of Boulder County





**Invasive Plant Control
for Better Wildlife Habitat!**

“It is the county's intent to encourage and require all appropriate and available management methods, promoting those methods which are the most environmentally benign.”



We work hard because we believe in and enjoy what we do!

What We Do

OUR MISSION :

The purpose of the Boulder County Noxious Weed Management Plan is to meet the State of Colorado-mandated law requirements, and effectively protect against the introduction and spread of designated invasive plants. Invasive plants constitute a present and future threat to the continued economic and environmental value of lands throughout the county. Control methods used and promoted need to be the most environmentally benign, practical, and economically feasible, consistent with noxious weed management objectives and all legal requirements.

BUILDING PARTNERSHIPS :

Boulder County strives to be a strong leader in invasive plant and noxious weed management. To achieve a multilevel management opportunity, the county is working to remove boundaries and build bridges with local municipalities, organizations, private landowners, and state and federal agencies. This approach enables the county to manage its IPMP to the fullest extent for optimal weed management strategies.

The county also leads the way in invasive plant and noxious weed research by opening thousands of acres to Colorado State University's

Weed Science department and Colorado University's Ecology department for continued educational opportunities. These partnerships continually improve the management and understanding of noxious weeds for the entire industry .

Taking Pride in Our Work, Creating a Better Community Through Invasive Plant Control.

The control of noxious weeds improves ecological health, and also provides a positive economical and social impact. For example, agricultural land that is weed free is more productive and requires less inputs. Additionally, trails and roads that are weed free are more accessible, safe, and enjoyable for the public.

For these reasons public engagement and education are also essential parts of the Boulder County IPMP.

Open Space Weed Control

CHEATGRASS TREATMENT

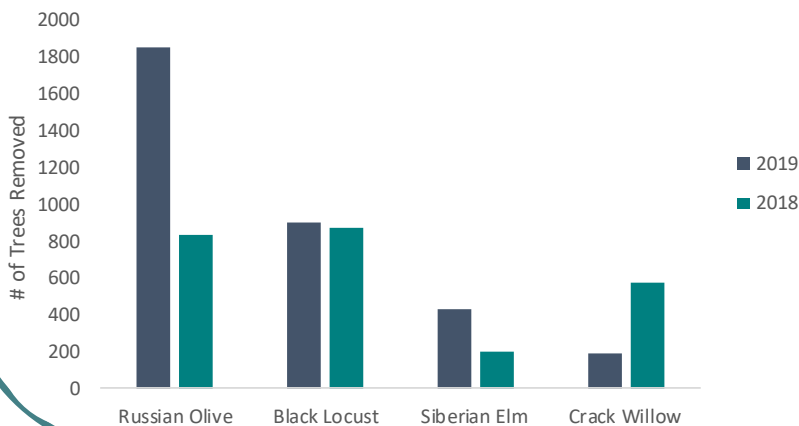
Successful Esplanade treatments for cheatgrass continued in 2019. Applications were made on 16 different Boulder County properties, while 13 properties were monitored for ongoing research on Esplanade's effect. This research has discovered an increase of native vegetation, including an increase in several rare and annual plant population.

Year	No. of Properties	Total Applications	Acres
2016	12	33	287.9
2017	9	18	277
2018	12	46	407
2019	16	47	797
Total	49	144	1768.9



Chemical and mechanical treatments were carried out across Boulder County. Due to our partnerships and responsibilities, over 109 flood buyouts, open space properties, private properties, Boulder County trails, and U.S. Forest Service lands were monitored and treated when needed in 2019.

Invasive Trees Removed from BOCO Properties



Esplanade's active ingredient, indaziflam, is applied ecology! The control of invasive cheatgrass by this biosynthesis root inhibitor allows for the release of native vegetation that is beneficial to wildlife.



Before



After



2019 List A Noxious Weed Control



Mediterranean sage: Removed mechanically and treated chemically

- Two additional sites were monitored, totaling 16 properties.
- 416 plants were removed; worker hours spent decreased as well.

Rush skeletonweed: Manually removed

- Large previously-unknown infestation found at Heil Valley Ranch.
- No estimate on the number of plants removed due to the large population found at Heil.
 - Worker hours spent doubled from 2018.



Myrtle spurge: Removed manually and treated chemically

- Four sites were treated: the Wyn, Nancy Mine, Betasso Preserve, and Heil properties.
- .56 acres of herbicide was applied with backpacks as spot treatments.
- Similar worker hours spent and roughly 4,000 fewer plants counted than in 2018.

Purple loosestrife: Flowering heads collected and plants treated chemically

- 10 sites were monitored; no plants were found at three sites that had infestations in 2018.
 - An increase from 2018 of 77 plants removed made a total of 949.
 - An additional 30 worker hours (total 86.5) were spent hunting purple loosestrife.



Orange hawkweed: Flowering heads collected and plants treated chemically

- Large previously-unknown infestation found on private property in Nederland; this finding increases the monitored sites to four.
- Over 2,000 plants were treated, an increase from 600 in 2018.

Japanese knotweed: Removed manually and treated chemically

- Four sites were treated: One site was a flood buyout, one was private property.
 - Spot treatments were made to .41 acres.



Spotted knapweed: Chemically treated

- Colorado state has as List B; Boulder County treats as List A due to low pop. numbers.
- Five sites were spot treated: One was on private land; the rest were roadside locations.

Right-of-way weed treatment is maintaining the county roads for public safety and enjoyment.



- Over 600 miles of county roads were mowed at least three times during the 2019 season
- Treatment and removal of mature Russian olive trees
- Removal of roadside debris



- Bare ground applications around guardrails across the county for public safety
- Esplanade application for cheatgrass to guardrails and medians: 6.7 acres, approximately 3.5 miles
- Additional Esplanade application to ROW: 9.5 acres, approximately 4 miles

REVEGETATION PROJECTS RECLAIMING OUR NATIVE LANDS!

During the winter months, the Boulder County Weed Management team works to help revegetate sites throughout the county. In 2019, 62 acres were seeded on seven different sites. Seed mixes contained native grasses that would be ideal and beneficial to the sites. This is an additional aspect of the job that allows the team to further improve the ecological health of our public lands.

