



Invasive Plants 2020

Boulder County 2020 Annual Report

2020 Weeds in Review

2020 provided new challenges for the Boulder County Invasive Plants Crew. The onset of Covid19 Virus in 2020 it brought a lot of uncertainty to the season. However, the Invasive Plants Crew was deemed essential, and work continued as normal as possible. March saw a 270-acre helicopter herbicide application in hopes of controlling the state's only population of Rush Skeletonweed and associated cheatgrass on the 2003 Overland Burn. And not to be out done, October brought the Cal-Wood wildfire, which burned more than 10,000 acres, 4,400 of those on Heil Valley Ranch. Through it all, the Weeds Crew made 2020 as normal as possible!



Boulder County Parks and Open Space (BCPOS) Weed Management team is responsible for a large area of county-owned lands. This land includes approximately 7,000 acres of agricultural property, 40,000 acres of open space lands, and more than 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 work, Boulder County implements an

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



Better Ecology through Invasive Plant Management!

identification and treatment are 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 state is the ultimate goal of the BCPOS Weed Management team. This report highlights some of the activities of the BCPOS Weed Management team for the 2020 season. The 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.

Department 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

Ecologically Restoring Habitat for Rare and Endangered Plants Of Boulder County





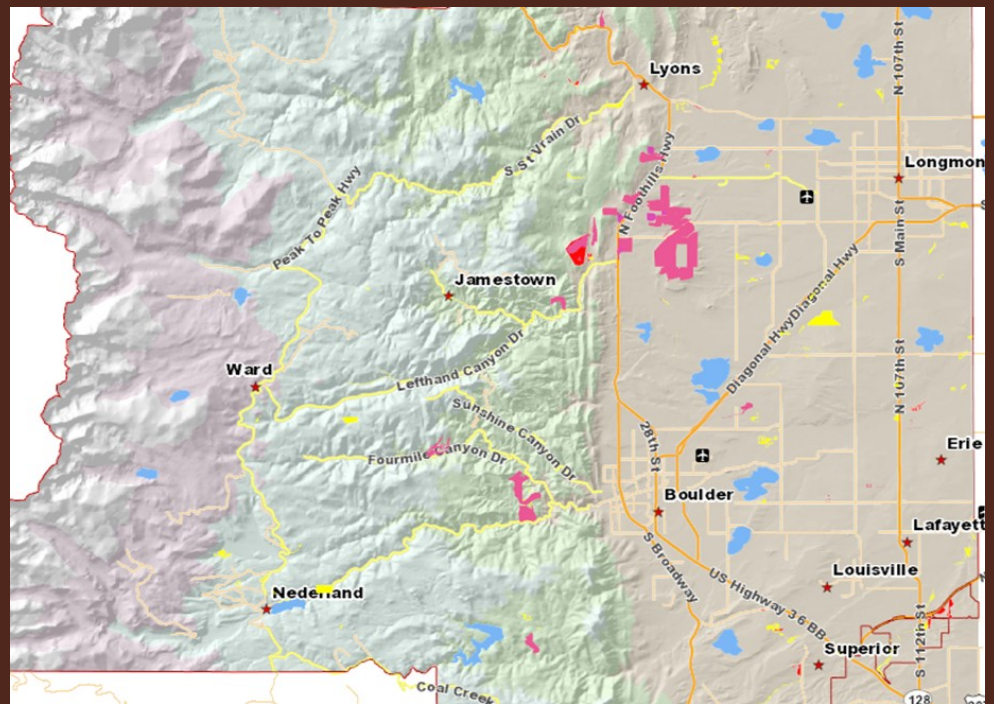
Invasive Plant Control for Better Wildlife Habitat!

OUR MISSION :

The purpose of the Boulder County Noxious Weed Management Plan is to meet 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.

2020 Treatment Map

-  List A Species
-  Rejuvra Applications
-  List B,C and unlisted species



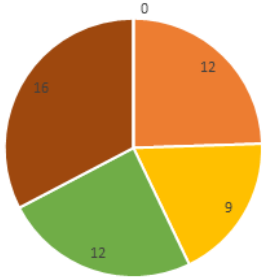
“It is the County's intent to encourage and require all appropriate and available management methods, promoting those methods which are the most environmentally benign.”

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

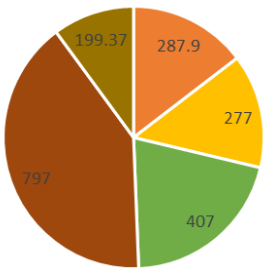
The control of noxious weeds improves ecological health and provides a positive economical and social impact. For example, agricultural land that is weed free is more productive and requires less inputs. Additionally, trails and roads that are weed free are more accessible, safe and enjoyable for the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

Open Space Weed Control

of Additional Properties added to Rejuvra studies per year



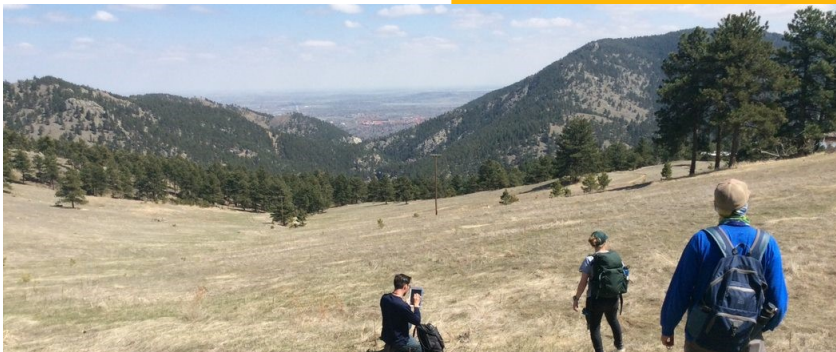
Acres Sprayed with Rejuvra per year



- 2016
- 2017
- 2018
- 2019
- 2020

Lessons from the 2020 Cal-Wood Wildfire

Areas that had been treated with Rejuvra one or more years before the wildfire burned less intensely than those not treated. Burn scars, along with surviving bush and forbs, display this finding, but further research is in progress.



In collaboration with partners, we were able to **chemically and/or manually treat 129 properties, totaling 5,7991.99 acres.** In addition to treatment, scouting of new areas allowed for the detection of new target areas and deemed others fairly weed-free. Both treatment and scouting were tracked using GIS software from AgTerra.

of Trees Removed

542 Russian Olives
31 Tamarix

Ongoing Rejuvra Studies

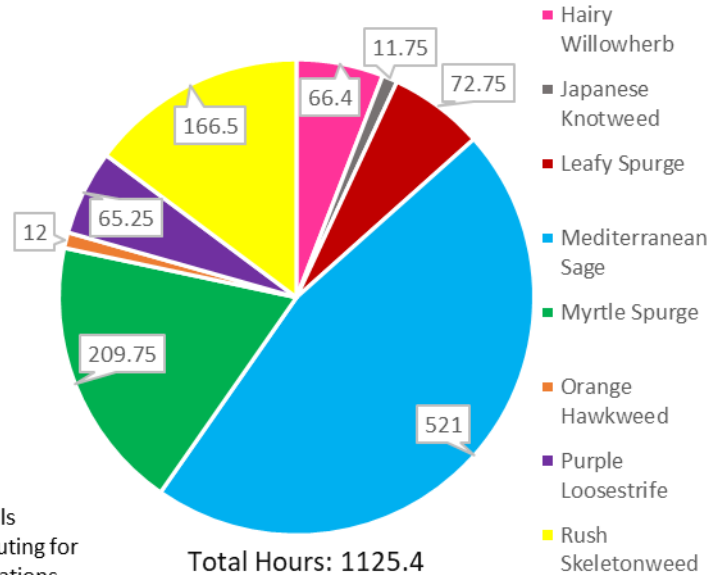
Vegetation studies on native biomass, health, and abundance in response to Rejuvra application continued in 2020. Additional studies on pollinators, nesting birds and large mammals preference and use also began. These studies will be ongoing into the next season as the Invasive Weed Department is committed to understanding and highlighting the importance of invasive winter annual grass control to enhance natural ecosystems.



2020 List A Noxious Weed Control



Hours Spent on Treatment by List A Species



*These totals include scouting for List A infestations

List A Species	# of Plants Treated in 2020
Hairy Willowherb	14*
Japanese Knotweed	215*
Leafy Spurge	0*
Mediterranean Sage	17414
Myrtle Spurge	12659
Orange Hawkweed	489
Purple Loosestrife	2125
Rush Skeletonweed	16807*
Spotted Knapweed	0*
	Decrease since 2019 Increase since 2019
*Treatments of this List A include populations that were too dense or numerous to be accurately counted in either 2020 or 2019.	

POPULATION INCREASE?

Examining an increase in List A species removed

The only species reporting a decline was for Orange Hawkweed, where the number of plants treated in 2020 compared to 2019 decreased.

However, the overall increase in number of List A plants treated does not necessarily indicate that the populations are growing across Boulder County. This increase is most likely caused by an overall increase in treatment days, scouting, acreage covered and overall hours invested. In addition, new populations were found for Hairy Willow Herb, Myrtle Spurge, and Purple Loosestrife.

Right-of-Way Weed Treatment is Maintains County Roads for Public Safety and Enjoyment



- The Roadside management group conducted three rounds of mowing on country roads, totaling approx. 1,800 miles
- More than 220 Russian Olive trees were removed along county roads rights-of-way (ROWs)
- Five acres of cheatgrass were treated along ROWs
- 2.2 miles of guardrails received bareground treatment, enhancing drivers' safety



- Late snowstorms resulted in more than four tons of downed trees and limbs removed from Sunshine Canyon.
- In addition, the Roadside Group interacted with CDOT, (Russian Olive Removal); Pine Hills HOA (Myrtle Spurge); City of Boulder (Jointed Goatgrass); Cal-Wood Education Center (General Weed Control and Revegetation)

WORK NEVER STOPS! WINTER TIME IS WORK TIME!

During the winter months the Weed Management team works to help revegetate sites throughout Boulder County. Fall and Winter time is also a great time to help out the Trails Dept. bare-grounding trails and parking lots, keeping them weed free and improving visitor experience. Controlling these weeds also helps prevent the continued dispersal of noxious weeds. Invasive tree removal and cheatgrass applications are all part of our wintertime program, along with mapping and annual reporting processes.



COUNTY COOPERATION!

AND

BEST IN PUBLIC SERVICE!



Teamwork across county departments is essential to provide the best in service to our county residents. The Invasive Plants Department does what it can to assist those departments in need of our assistance. In 2020 weeds staff assisted the water group in meeting state-required guidelines on dam and spillway preparedness. This work included removal and treatment of vegetation located in spillway areas and dam face riprap. Assistance was provided at Gaynor, Hodgson Harris, and Lake Stearns Dams. Working with our Conservation Easements Department, Ecology, and Trails provides much needed assistance in providing control and spread of noxious weeds across county open spaces. This past year saw assistance with musk thistle stands, Myrtle Spurge on CE's, newly discovered Leafy Spurge populations on the high mountain Lillian Trevarton Property. Besides working inter-departmentally, the county Roadside Group assists City of Boulder and CDOT, among others. The Weed Dept., in general, works with all county municipalities as needed, such as CSU, HOAs and private citizens.

