

Montezuma County Pheratophyte Project

2024 FINAL Report

Montezuma County Noxious Weed Department

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6/18/2024



Executive Summary:

Montezuma County Noxious Weed Department (MCNWD) developed a pheratophyte Removal Project in 2019. The project was created in response to the negative impacts Russian olives and salt cedars have on the land, such as decreased soil health, decreased wildlife habitat/forage, and water loss. Partners / supporters of this project are Colorado Department of Agriculture (CDA), Colorado Water Board Conservation (CWBC), Southwestern Water Conservation District (SWCD), Southwest Basin Roundtable, Colorado Parks and Wildlife (CPW), United States Department of Agriculture (USDA), City of Cortez, High Desert Conservation District (HDCD), the United States Forest Service (USFS), the Bureau of Land Management (BLM), and more than 100 private landowners. This project was undertaken using two additional crew members to support pheratophyte removal.

Match funding for this project included funds from the Montezuma County General Fund, and labor expenses for the two additional crew members which were used to meet the local match requirement.

The project removed non-native pheratophyte to restore Montezuma County's waterways and rangelands to their pristine vegetation and to conserve water. Since this project began in 2019, 60,566 Russian olives and 63,671 salt cedars have been removed off 595 acres, saving 4,754 acre-feet of water so far.

During the 2023 season Montezuma County has done pheratophyte removal on nine properties within the Hartman/ McElmo watershed.

Project Statistics;

- **Total Number of Russian olive Trees Removed;** 6,222 Russian olive
- **Total Number of Salt Cedar Trees Removed;** 550 Salt Cedar trees and over 550 Salt Cedar.
- **Average time to treat 1 Acre;** 3.1 hours with a two person crew.
- **Total Projected Water Savings;** 180.13 acre/ ft.
- **Average projected Water Savings;** 20.01 Acre/ft.

Project Status; The Montezuma County Pheratophyte Program has been discontinued by the Board of County Commissioners due to a combination of funding and staffing shortages. Montezuma County is experiencing a severe decline in property tax revenue and CO2 production revenues. As a result the County has been forced to scale back some of its services. At the same time the Noxious weed Department has lost three of its four personnel. While the County has been trying to hire additional staff it has not so far been successful in drawing any suitable candidates. Therefore Montezuma County is forced to withdraw from this project due to the loss of nearly all capacity to perform the necessary services.

Montezuma County sincerely thanks the South West Water Conservation Board for the opportunity to advance Pheratophyte Management in southwest Colorado. Unfortunately we must cut this project short. However we look forward to the prospect of partnering on future projects when conditions are more conducive to continuing to pursue waterway restoration in Montezuma County.

Treated Properties.

The following maps identify the property where treatments were implemented.

During the 2023 season Montezuma County has treated the following properties using the methodology described.

- Perform cut stump treatments on trees larger than three inches in RCD (Root Collar Diameter) and pile slash in appropriate areas for landowner to burn or haul to landfill.
- Use excavator with mulcher attachment to remove salt cedars and Russian olives with RCD less than three inches.

All treated properties are located within the upper McElmo/ Hartman Draw Watershed. The following map depicts the regional area in which the treatments were completed.

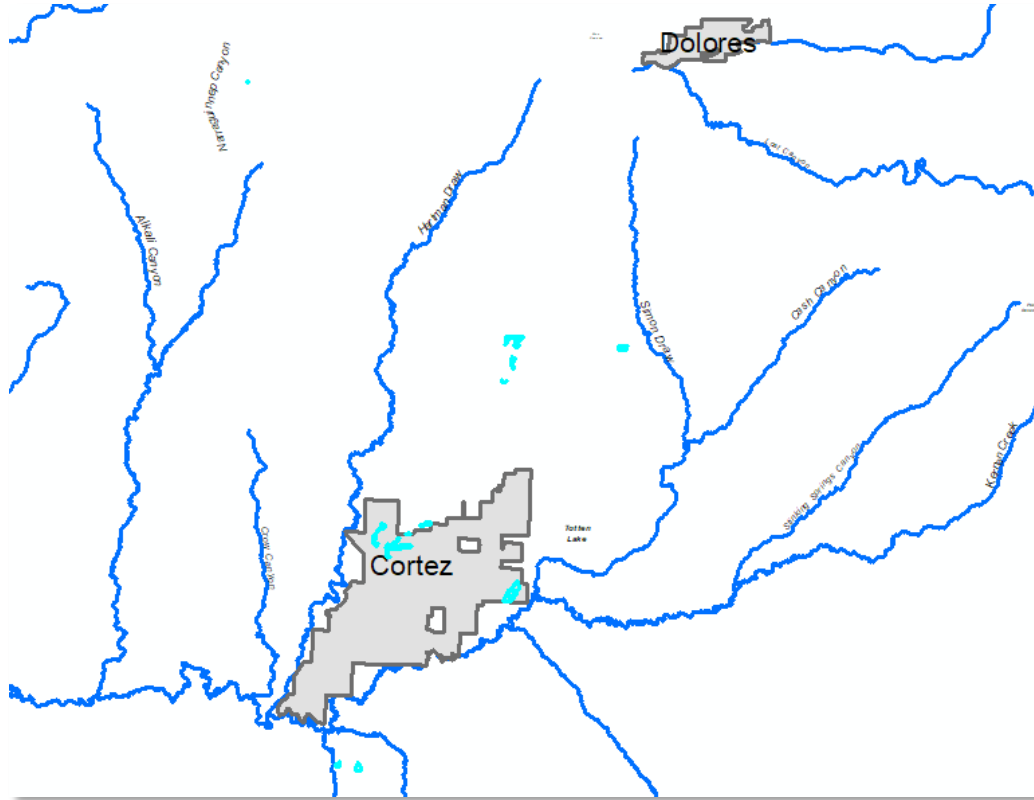


Figure 1 Upper McElmo / Hartman Draw Watershed property locations.



Figure 2 Daniel Ryan Property

Treatment was completed at the Daniel Ryan property by two members of the Noxious Weed Department work crew. Treatment focused on Russian Olives surrounding a pond at the south end of the Ryan property.

Trees Removed: 200 Russian Olive trees and 400 Salt Cedar were removed from .4 acres around the irrigation pond.

Trees Per Acre (TPA); 492

Methodology; Tree stumps were treated with a 50/50 solution of glyphosate and a crop oil onto the stump.

Estimated Water Savings; 20.65 Acre/Feet

Time to Complete Treatment: Total- 19.5 hours to treat 600 trees on .44 acres.

8-3-23: 10-3:30 (5 hours) 8-8-23: 9-3 (5 hours)

8-4-23: 10-11 (1 hour) 8-9-23: 9-11:30 (2.5 hours)

8-7-23: 9-3:30 (6 hours)

Average time per acre to complete project; 44.31 Hrs. Per acre.

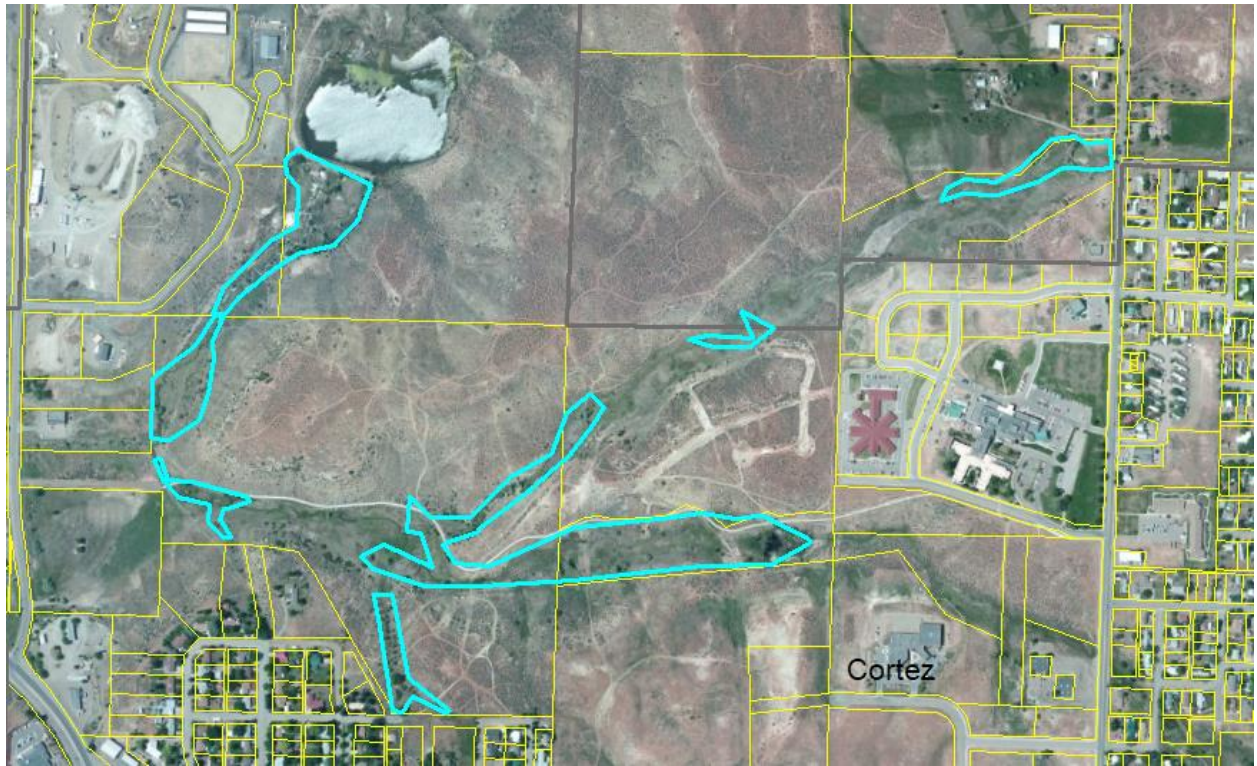


Figure 3 City of Cortez Carpenter Natural Area



Figure 4 Denny Lake

Montezuma County treated the City of Cortez Carpenter Natural Area and Denny Lake for Russian Olive and Saltcedar. These popular recreation areas are located along drainages that are infested with Russian Olive and Slat Cedar. Removal facilitates public access while reducing the spread of these invasives.

Trees Removed; 1200 Russian Olive Trees and 125 Salt Cedar trees from approximately **23.6** acres.

Methodology; Tree stumps were treated with a 50/50 solution of glyphosate and a crop oil onto the stump.

Trees Per Acre (TPA); 70

Estimated Water Savings; 28.68 Acre/Feet

Time to Complete Treatment; 108 Hours

9/5 (4 hours)	9/12 (4 hours)	9/20 (6 Hours)	9/29 (5 Hours)
9/6 (6 hours)	9/14 (6 hours)	9/21 (6 hours)	10/4 (6 Hours)
9/7 (3 hours)	9/15 (6 hours)	9/26 (6 hours)	10/5 (6 hours)
9/8 (3 hours)	9/18 (6 hours)	9/27 (6 hours)	10/6 (5.5 hours)
9/11(6 hours)	9/19 (5.5horse)	9/28 (6 hours)	10/10 (6 Hours)
Total- 108 hours			

Average time per Acre to complete project; 4.5 Hrs per acre.



Figure 5 Tommy Valdez Property

Montezuma County Treated the Tommy Valdez Property. This property was heavily infested with Russian Olives along the drainage that crosses the property.

Trees Removed; approximately 148 Russian Olive Trees on approximately .5 acres.

Methodology; Tree stumps were treated with a 50/50 solution of glyphosate and a crop oil onto the stump.

Trees Per Acre (TPA);296

Estimated Water Savings; 4.06 Acre Feet

Time to Complete Treatement; 12 Hours

7-12-23: 9-3:30 (6 hours)

7-13-23: 9-3 (5.5 hours)

7-14-23: 8:30-9 (.5 hours)

Total- 12 hours

Average time per acre to complete project; 24 Hrs.per acre



Figure 6 Donald Story Property.

Montezuma County Treated the Donald Story Property removing 68 Russian Olive Trees on 1.4 acres along waterways located on the property.

Donald Story
970-739-3824
27203 Road N
Dolores, Co 81323

Trees Removed; approximately 68 Russian Olives on 1.4 acres

Methodology; Tree stumps were treated with a 50/50 solution of glyphosate and a crop oil onto the stump.

Trees Per Acre (TPA); 143

Estimated Water Savings; 38.23 Acre Feet

Time to Complete Treatement; 12 Hours

Date/Times

7-31-23: 12:00-3:30 (3.5hours) 8-1-23 9:00-3:30 (6 hours)

8-2-23: 9:00-3:00 (5.5 hours)

Total Hours: 15

Average time per acre to complete project; 8.5 Hrs.

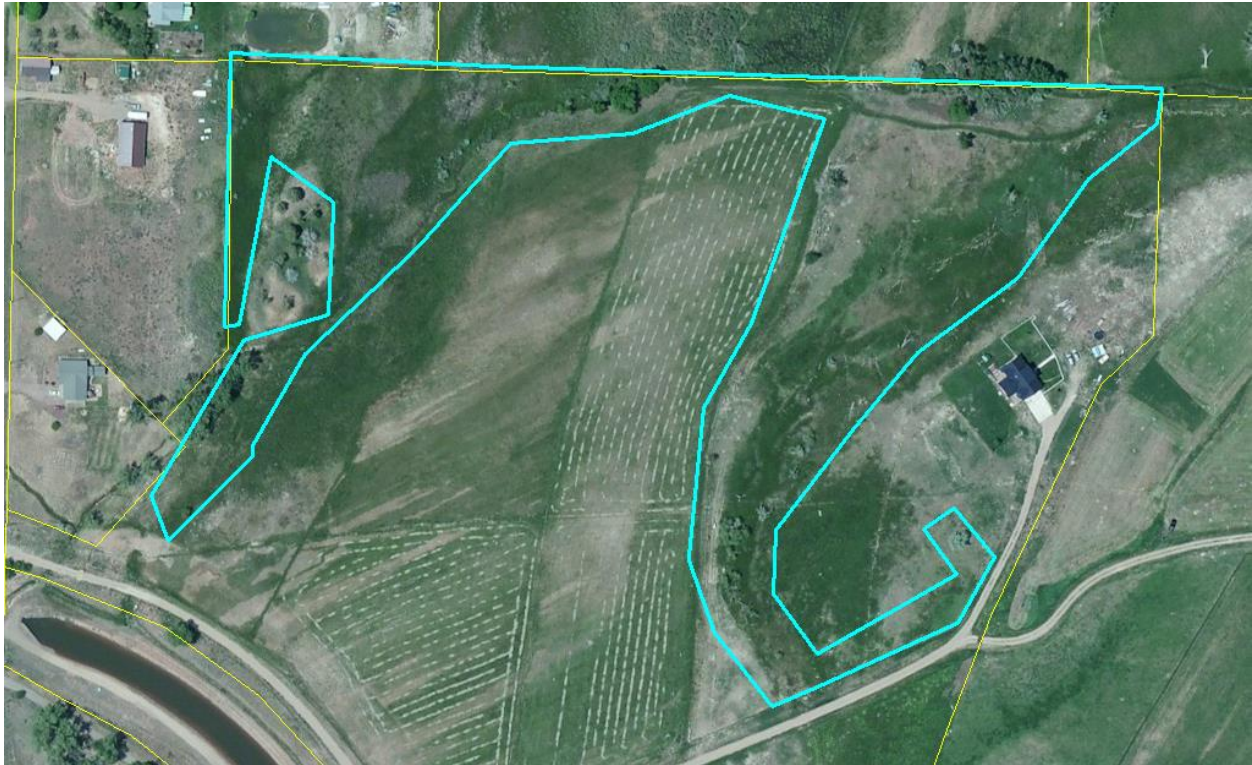


Figure 7 Donald Story Property

Montezuma County treated the Donald Story Property at 13400 Hwy145 removing approximately 1483 Russian Olive Trees on approximately 9.16 Acres.

Donald Story
13400 Hwy Rd 145
970-739-4656

Trees Removed; approximately 1483 Russian Olive Trees on approximately **9.16** acres.

Methodology; Tree stumps were treated with a 50/50 solution of glyphosate and a crop oil onto the stump.

Trees Per Acre (TPA); 85

Estimated Water Savings; 4.28 Acre Feet

Time to Complete Treatement; 51.5 Hours

Date/Times

6-26-23: 11:30-3:30 (6 hours)	7-3-23 9:00-3:30 (6 hours)
6-27-23: 9:00-3:30 (6 hours)	7-5 9:00-3:30 (6 hours)
6-28-23: 9:00-3:30 (6 hours)	7-6-23 9:00-3:30 (6 hours)

6-29-23 9:00-3:30 (6 hours)
6-30-23 12:00-3:30 (3 hours)

7-10-2023 8:30-3:30 (6.5 Hours)

Total Hours: 51.5

Average time per acre to complete project; 5.6Hrs.

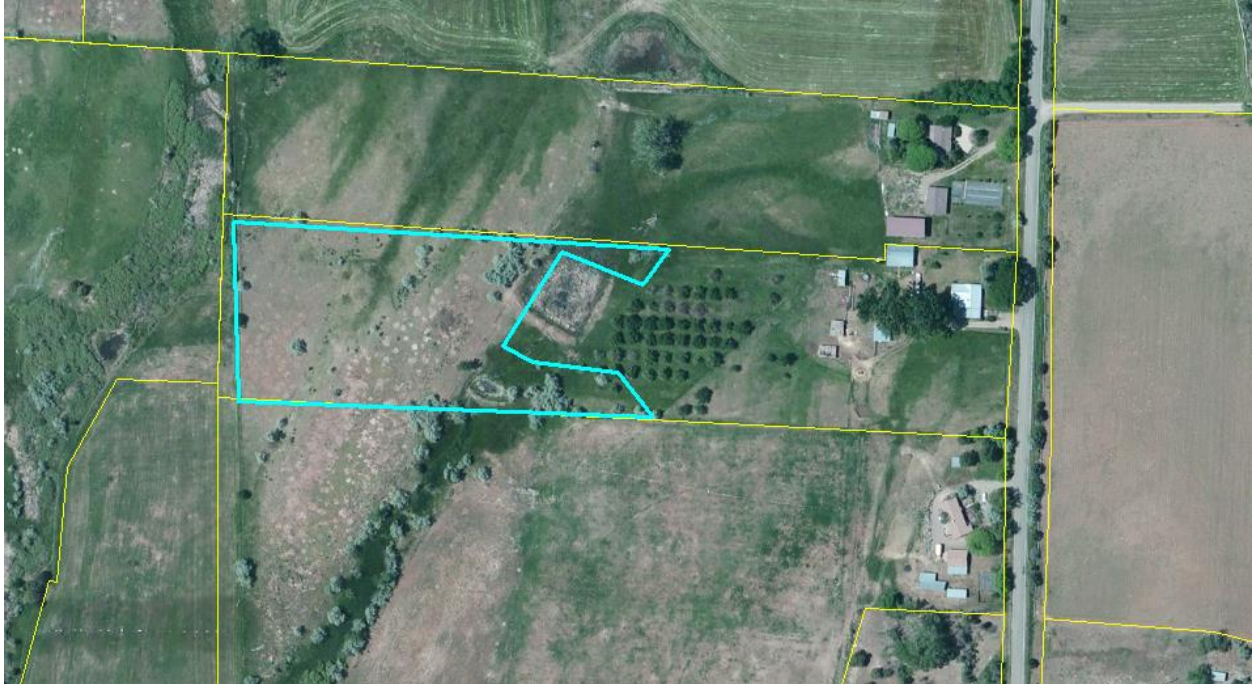


Figure 8 Ver Eecke Property

Montezuma County Treated the Ver Eecke property at 13449 Road 29.

Trees Removed; approximately 890 Russian Olive Trees on 3.7 acres.

Methodology; Tree stumps were treated with a 50/50 solution of glyphosate and a crop oil onto the stump.

Trees Per Acre (TPA); 234

Estimated Water Savings; 29.4 Acre Feet

Time to Complete Treatement; 45 Hours

7-17-23: 12-3 (3 hours)	7/24/23 9-3:30 (5.5)
7-18-23: 9-3:30 (6 hours)	7/25/23 9-3:30 (5.5)
7-19-23: 9-4 (6 hours)	7/26/23 9-3:30 (5)
7-20-23: 9-4 (6)	7/27/2023 9-3 (5)
7/21/23 9-11 (1.5)	7/28/23 10-2:30 (4.5)

Total- 45 hours

Average time per acre to complete project; 12.1 Hrs.



Figure 9 David Lepkojus Property

Montezuma County treated the David Lepkojus property at 6926 Road 24.5 removing approximately 708 Russian Olive Trees on 1.6 acres of property.

Trees Removed; approximately 708 Russian Olive Trees on 1.6 acres.

Methodology; Tree stumps were treated with a 50/50 solution of glyphosate and a crop oil onto the stump.

Trees Per Acre (TPA); 416

Estimated Water Savings; 25.04 Acre Feet

Time to Complete Treatement; 20 Hours

8/29/23 12-4 (4) 8/30/2023 10-3:30 (5)

8/31/2023 9-3:30 (6) 9/1/2023 9-3(5)

Total- 20

Average time per acre to complete project; 12.5 Hrs.



Figure 10 Lewis McInnes property

Montezuma County Treated the Lewis McInnes property at 25074 Road G removing approximately 1000 Russian Olive Trees on 4.8 acres.

Trees Removed; approximately 1000 Russian Olive Trees on 4.8 acres.

Methodology; Tree stumps were treated with a 50/50 solution of glyphosate and a crop oil onto the stump.

Trees Per Acre (TPA); 200

Estimated Water Savings; 29.79 Acre Feet

Time to Complete Treatment; 47 Hours

8/14/23: 12-3 (3 hours)	8/15/2023 9-3:30 (6)
8/16/2023: 9-2:30 (5)	8/17/2023 9:30-3:30 (6)
8/18/2023 9:30-3:30 (4)	8/21/2023 9:00-3:30 (3)
8/22/2023 9:00-3:30 (4)	8/23/2023 9-3:30 (6)
8/24/2023 10-3:30 (5)	8/25/2023 9-2:30 (5)

Total- 47

Average time per acre to complete project; 9.7 hrs.