# A little about Mountain Studies Institute

- Founded in Silverton in 2002
- Currently have offices in Durango and Silverton
- Research and education non-profit
- Mission Statement: To empower communities, managers, and scientists to innovate solutions through mountain research, education, and practice.

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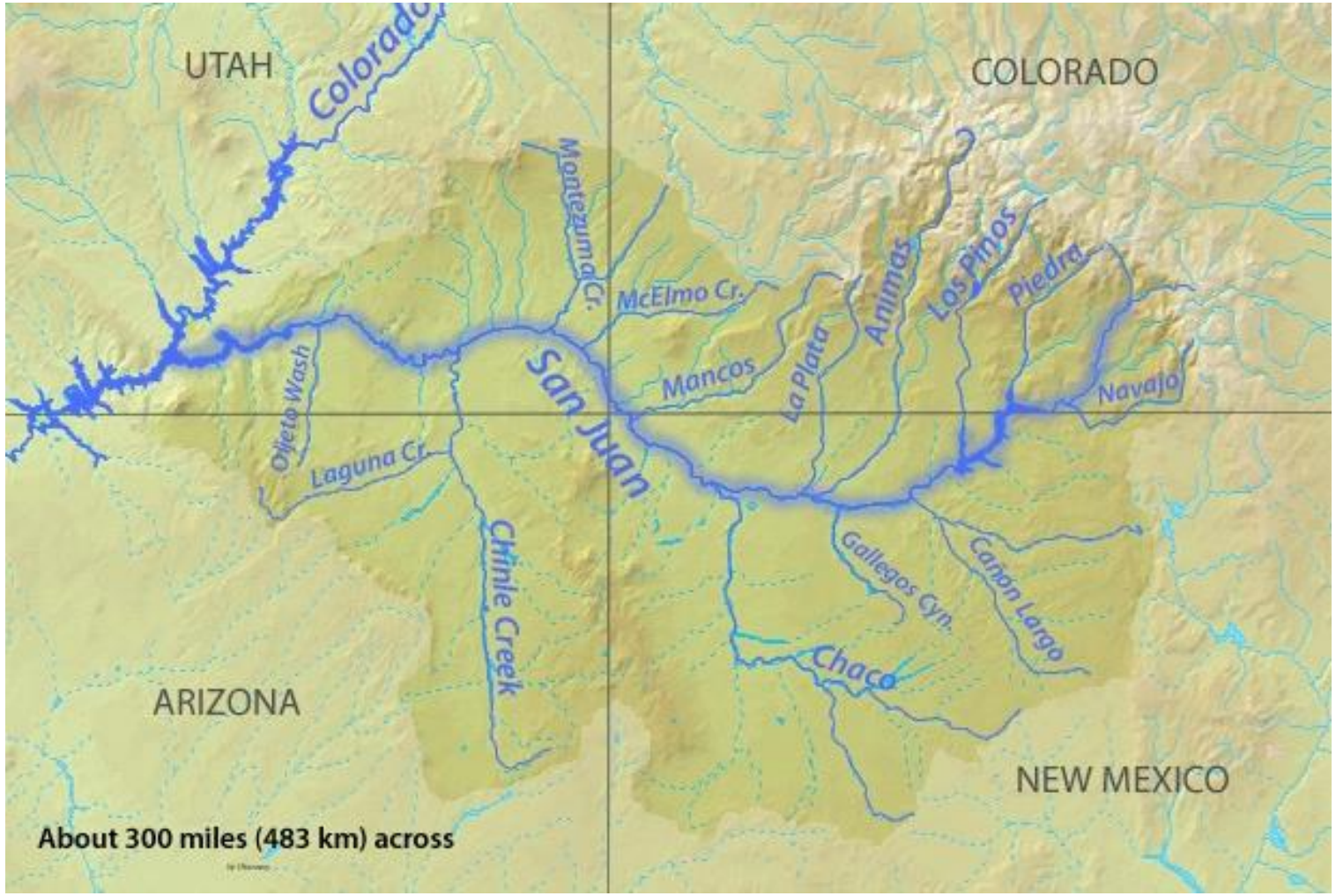



The Animas River is part of the San Juan Watershed

# Our Project Goals:

- To remove/reduce Russian Olive throughout the Animas River Valley
- Reduce the seed sources from trees that are not within the river corridor
- Enhance wildlife habitat
- Cost-share with landowners for removal and replacement of trees
- Plant native willows and non-invasive ornamentals

# Our project partners:

Southwest Conservation Corps

Animas WATERSHED Partnership

CITY of DURANGO

NRCS

SOUTHERN UTE TRIBE DIVISION OF WILDLIFE RESOURCE MANAGEMENT

LA PLATA OPEN SPACE CONSERVANCY

La Plata County Colorado

Bird Conservancy of the Rockies

# Our funders:

Colorado Parks and Wildlife – Wetlands Program

Colorado Water Conservation Board

COLORADO
Colorado Water Conservation Board
Department of Natural Resources

# Background

- The City of Durango, CDOT, La Plata County, and a few motivated, private citizens have prevented the Animas River watershed from becoming thickly infested
- The key to invasive plant management – is to start while the infestation is MANAGEABLE!

# Our challenges

- Russian olive can spread through the entire watershed, therefore **we're all in this together**
- Leaving pockets of Russian olive throughout the watershed means the seed source will continue to re-populate the Animas Valley
- Durango is in the upper part of the watershed. Our seed source can spread throughout the San Juan Watershed and into the Colorado River.
- Warming climate.

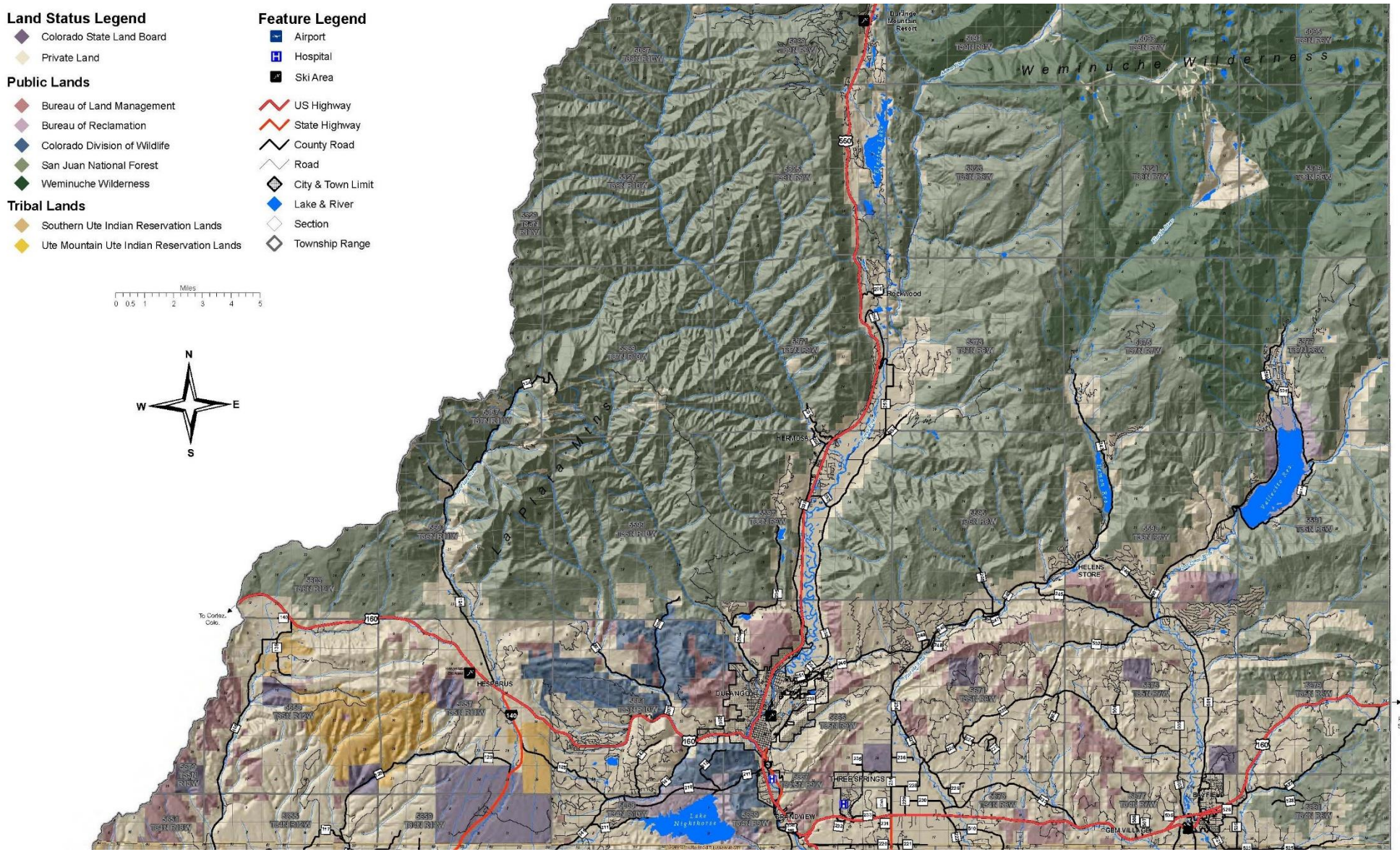
Today: Russian Olive in the Animas River Valley are **managable!**

If we don’t address Russian olive now, we will have a far more difficult problem to address in the future.

Pro-active management and good stewardship of our watershed is the best approach.

Lands within La Plata County are like a checkerboard of ownership.

Therefore, we need public land agencies and private landowners alike to work together for watershed health.



# Southwest Conservation Corps

# Control Methods:

- “Hack and Squirt” or Frill Cut (Like Girdling but doesn’t go all the way around the tree)
  - Leave tree standing – Dead trees are great for wildlife!
  - Most effective – least chance for resprouting
  - Use hatchet, machete, or similar device to make frill or cut at a downward angle
  - After strike, pull the hatchet backwards to produce a “cup” to hold the  herbicide.
  - Cuts should penetrate through the bark into living cambium tissue (the wood next to the bark).
  - Spray herbicide (Garlon 4 or Rodeo) mixed with JLB oil, according to label, into cuts using squirt bottle or sprayer.
  - Use for trees greater than 5 inches in diameter.

# Control Methods:

- Cut Stump
  - Cut the tree to ground level
  - Spray stump with the herbicide (Garlon 4 or Rodeo) and JLB oil using hand-held spray bottles, sprayers, or “painted on”.
  - The herbicide must be applied to the stump immediately following cutting to maximize the herbicide soaking into the trunk.
  - Most effective in the fall – least chance of resprouting

# Control Methods:

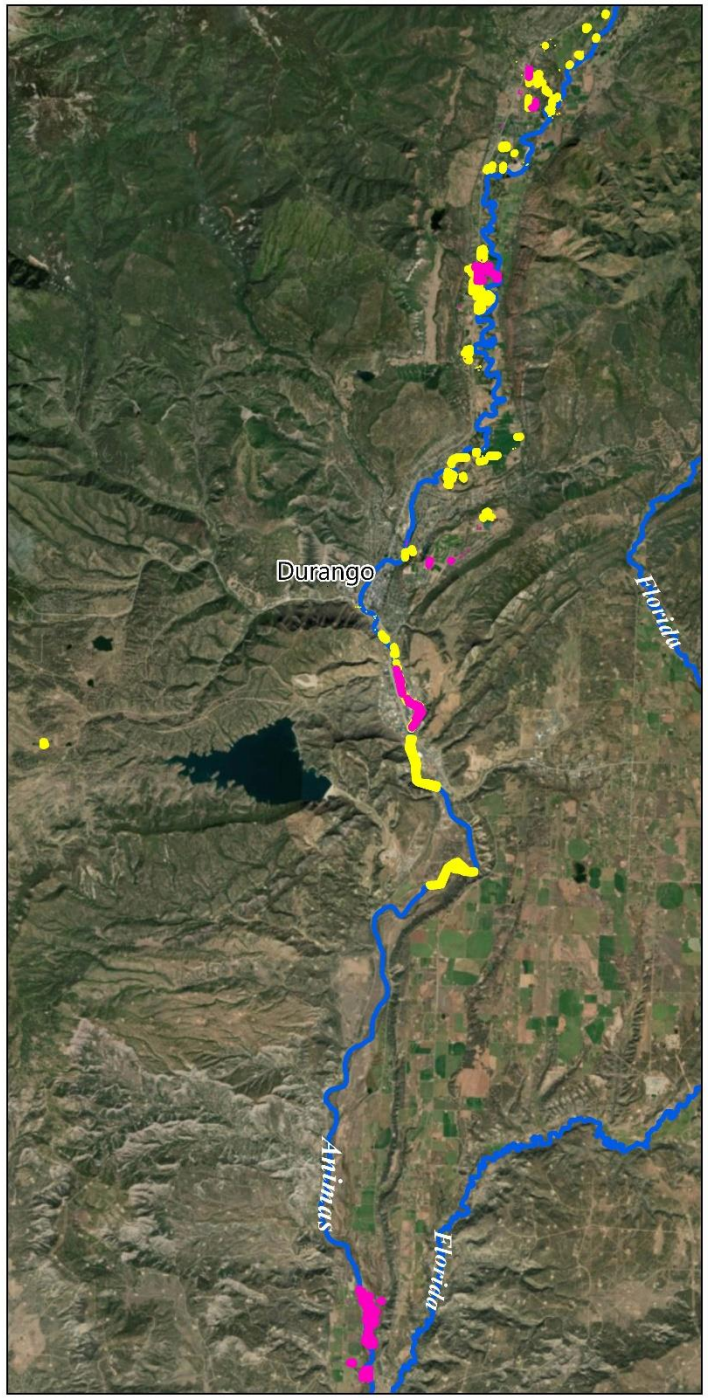
- Basal Bark Spraying
  - Great method for maintenance and follow-up treatments from the prior methods.
  - Best for younger plants with stems no larger than 6 inches in diame-ter.
  - Spray herbicide 12-15 inches of bark around entire stem near the base of the plant.
  - Spray until bark is wet, but do not let it runoff.  Do not apply to bark that is wet.

# Phase I
# 2016-2018 Program

- Initial contacts were with La Plata Open Space Conservatory members that hold conservation easements
- Neighbors talking to their neighbors!
- Southwest Conservation Corps crews did the removal work
- Participants were invited to apply for a $300 reimbursement for replacement trees

# Phase I Accomplishments!

- Removed 288 acres of Russian olive and 2.7 acres of tamarisk
  - Approx. 4000 stems of Russian olive
  - Approx. 350 stems of Tamarisk
- Worked with over 60 individual landowners – HOA's, ranches, single family homes, City of Durango, etc
- **Planting Riparian Vegetation**
- In Spring 2017, 10 days planting native willows on approximately 4 acres
- In Spring 2018, 4 days planting native willow on approximately 2 acres.




# Russian Olive Removal Project

Treatment sites where invasive plant species *Elaeagnus angustifolia* (Russian olive) and *Tamarix spp* (Tamarisk) were removed

Phase I Treatment

Phase II Treatment

N
W
E
S


Km
0 2 4 8
0 1 2 4 6
Mi



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# Phase II
# 2019-2020

- Focused on the south portion of the Animas Valley and in the Hermosa Valley

- Working with private landowners, Southern Ute Indian Tribe, and the City of Durango

Community Partners:
One of the biggest logistical challenges was what to do with the wood.

Durango Daybreak Rotary to the rescue!

Rotarians have donated approximately 70 hours of service time to collect the wood from Russian olive removal sites – helping approximately 25 families each winter!

# Phase I

10 cords of wood distributed

# Phase II

6 cords of wood collected so far

- and landowners are chipping in with delivery!

# Additional Project Work – made possible by the Colorado Tree Coalition

- MSI worked with Fort Lewis College to apply for a Colorado Tree Coalition grant to remove Russian olive from a campus parking lot and replace them with non-invasive trees
- We received $2000 for the project, which will be used as teaching tool

# Partners:

- Amanda Kuenzi - Community Science Director, Mountain Studies Institute
- Greg Sykes – City of Durango Arborist
- Ryan Cox – Colorado State Forest Service, Community and Urban Forester
- Peter Schertz – volunteer citizen and tree advocate responsible for assisting in management of project
- Dr. Ross A. McCauley, Associate Professor of Biology and Curator, Fort Lewis College Herbarium (FLD) – responsible for creating the Tree Campus USA curriculum and guides
- Dr. Cynthia Dott, Co-Chair and Associate Professor of Biology – responsible for integrating this project into biology department curriculum
- Environmental Center Coordinator– responsible for integrating this project into the Environmental Center's extracurricular programming

# Looking Forward – Continuing restoration through strong partnerships and community outreach!

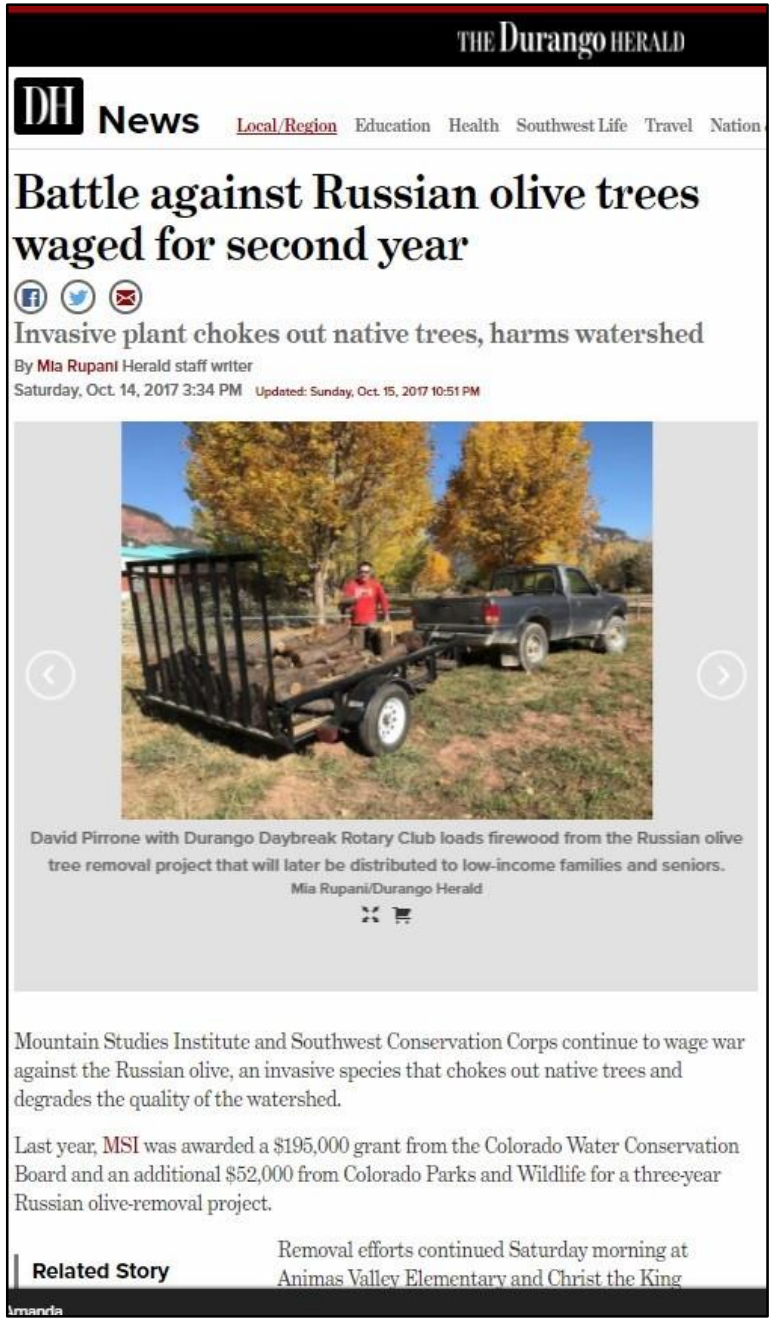
- Strategic Plan – Remotely Sensed data for mapping
- Gaining support from local entities now that we can show our success
- Continuing to work with the City of Durango and Southern Ute Indian Tribe
- Expand beyond mainstem Animas River
- Getting the word out! Empowering landowners to do their own mitigation work and planting natives!

# Local Publicity

Durango Herald Articles and Videos

Outreach to service organizations

- Lyon's Club
- Rotary
- Colorado Native Plant Society
- Animas Valley Grange



THE Durango HERALD

DH News Local/Region Education Health Southwest Life Travel Nation

## Battle against Russian olive trees waged for second year

### Invasive plant chokes out native trees, harms watershed

By Mia Rupani Herald staff writer

Saturday, Oct. 14, 2017 3:34 PM Updated: Sunday, Oct. 15, 2017 10:51 PM

David Pirrone with Durango Daybreak Rotary Club loads firewood from the Russian olive tree removal project that will later be distributed to low-income families and seniors.

Mia Rupani/Durango Herald

Mountain Studies Institute and Southwest Conservation Corps continue to wage war against the Russian olive, an invasive species that chokes out native trees and degrades the quality of the watershed.

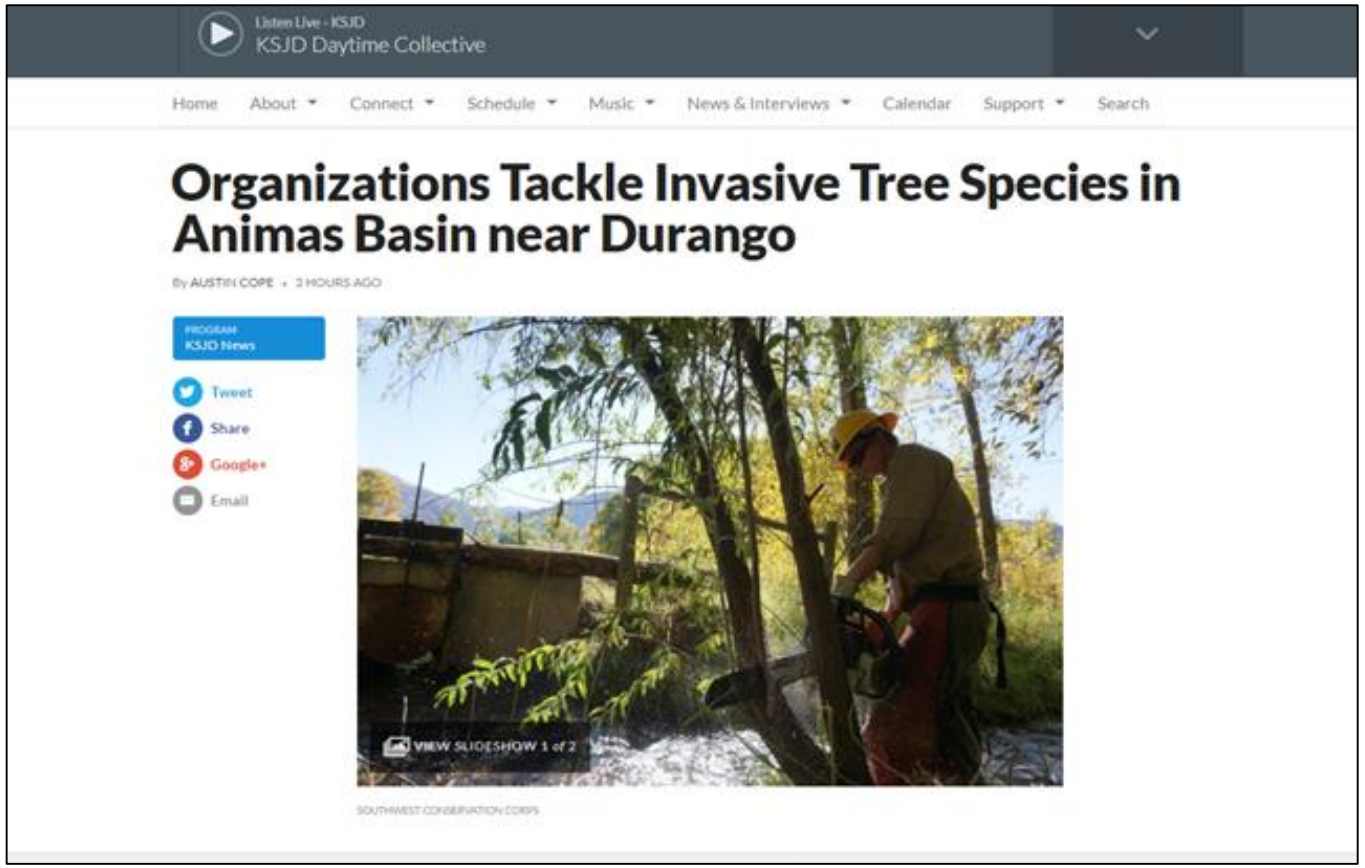
Last year, MSI was awarded a $195,000 grant from the Colorado Water Conservation Board and an additional $52,000 from Colorado Parks and Wildlife for a three-year Russian olive-removal project.

Related Story

Removal efforts continued Saturday morning at Animas Valley Elementary and Christ the King

# Radio coverage

- Interviewed by KSJD for a series focused on solutions
- To be played across Rocky Mountain Community Radio stations



# Lessons learned:

- Clear agreements
- Even though people sign – they didn't read it
- Set expectations
- Be flexible!
- Communicate, communicate, communicate!
- Track accomplishments!!

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Cost-Sharing Document for the Russian Olive Program
Name: Patty Zink
Address: [redacted]
Financial Contributions:
Slash Disposal (examples: equipment rental, dump fees, paying staff)
Planting (examples: cost of trees, irrigation equipment)
Retreatment (examples: cost of herbicide, hiring people to spray resprouts)

| | Description of Expense - brief | | Dollar amount |
|---|---|---|---|
| 1 | Use of truck & trailer | Amount: | |
| 2 | to take cuts to the | Amount: | 200.00 |
| 3 | burn pile | Amount: | |
| 4 | | Amount: | |
| 5 | 6 hours | Amount: | |
| 6 | | Amount: | |
| 7 | | Amount: | |
| 8 | | Amount: | |
| 9 | | Amount: | |
| 10 | | Amount: | |
| Please add another sheet if needed | | TOTAL | |

Time Contributions:
Slash Disposal (examples: time spent hauling slash, burning piles)
Planting (examples: time spent planting trees, installing irrigation equipment)
Retreatment (examples: monitoring for re-sprouts, spraying herbicide)
* If there are multiple people working, please multiply hours by number of people
*Ex: 4 people working for 2 hours = 8 hours spent*

| | Description of Time Spent | | Hours Spent |
|---|---|---|---|
| 1 | Marking trees w/ ribbons | Hours: | 8 |
| 2 | | Hours: | |
| 3 | Assisting the crew with | Hours: | |
| 4 | finding my ribbons & | Hours: | 8 |
| 5 | undone by the process | Hours: | |
| 6 | | Hours: | |
| 7 | Burning the pile | Hours: | 2 |
| 8 | | Hours: | |
| 9 | Respray cactus in the green | Hours: | 4 |
| 10 | | Hours: | |
| Please add another sheet if needed | | TOTAL | 22 |

# Questions?

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