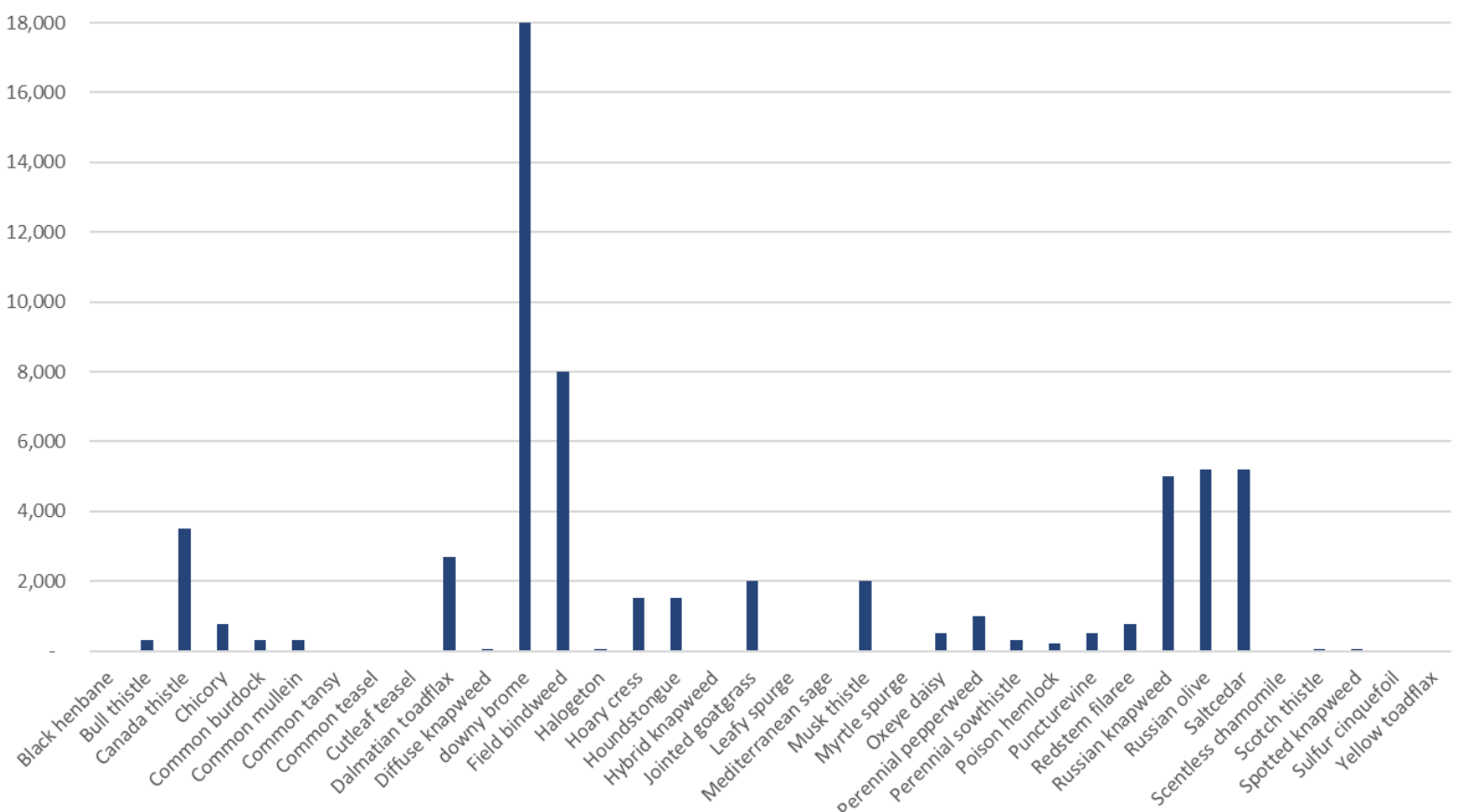


By Bonnie Loving



How much money is MC losing from decreased crop yield and crop quality?
\$3,710,189.16

Data Sources: Multiple Sources that can be found on original Economic Assessment Document

[illegible]

Economic Impacts of Noxious weeds on Rangeland?

\$131,447.68

Data sources: CSU Livestock and Range App

Rangeland Acres	Average Forage Production Level AUM per acre	AUM per acre Decreased From Weeds	Total Loss of AUM due to Weeds	AUM for Cow/Calf 185 days	Loss in Cows Supported	Pounds of Hay Needed for a Cow/Calf for 185 Days	Cost of 7,400 lbs of Cow Hay	Cost of Hay Needed for Loss in Cows
22,870	0.2045	0.12	1842.64	7.78	236.84	7400.00	550	\$ 131,447.68



Possible Economic Impact on Hunting?

\$97,206.47

Data sources: Parks and Wildlife Data;
CSU Livestock and Range App

Forest Acres	Palatable lbs/acre/year	PalatableVeg With Weeds lbs/acre/year	Deer Annual Intake (pounds)	Deer Supported With No Weeds	Deer Supported With Weeds	Loss of Deer Due to Weeds
4,141	385	220	1725	924.22	528.13	396.10

Year	Deer Population Pre Hunt	# of Hunters	# of Deer Harvested	Ratio of Deer Harvested to Population #	Ratio of Hunters to Deer Population
2020	8180	1031	530	6.48%	13%
2019	7506	1076	546	7.27%	14%
2018	7027	931	547	7.78%	13%
2017	6886	987	596	8.66%	14%
2016	7066	988	606	8.58%	14%
Average	7333	1002.6	565	8%	14%

Loss of Deer Due to Weeds	Average Herd Size + Deer Loss (7333+396)	# of Hunters With Additional Deer (7729*14%)	Difference in Hunter #'s (1057-1003 (avg # hunters))	Average Revenue Per Hunter	Loss In Revenue
396	7729	1057	54	1795.37	\$97,206.47

What is the economic value of water savings by removing Russian olive and saltcedar?

\$1,163,651.46

Saltcedar (SC) and Russian olive (RO) combined acreage	Estimated Water Consumption of RO and SC - in acre feet per year
7800	11544

How much water actually salvageable after removing trees?

It depends on site ecology, hydrology, and the species of replacement vegetation. It is complex, and no study will ever be able to come up with an accurate number because the variables change drastically. For this assessment we will be using an estimate of 20% of the water being salvageable.

11,544 X 20% = 2,308 acre feet

One share of water gives 3-4 acre feet of water per year, depending on the year.

acres to support on cow calf on rangeland for 185 days	cost of hay to support a cow calf pair for 185 days	Average profit per acre of rangeland for grazing	Average profit from grass hay - 2 cuttings per season	Hay Profit - Rangeland Profit per acre	Acreage that Could be Irrigated From Water Savings	Farming Expenses 50% of income	Profit from addition water
96	\$550.00	\$5.73	\$1,017.60	\$1,011.87	\$2,300.00	\$1,150.00	\$1,163,651.46

Disclaimer

Bonnie Loving is not an economist, however she felt it was important an economic assessment was done in Montezuma County to show the impacts of noxious weeds. There are many variables that can still be taken into account.

These are all reserved numbers based off MCNWD inventory data, USDA Land Type, CSU, Parks and Wildlife, along with dozens of studies. A full report of this assessment, including sources and the steps taken to calculate these numbers, can be found at: www.montezumacounty.org/noxious-weed-program.

Variables that have not been analyzed by Bonnie are impacts on recreation, wildlife, aesthetics, land value, infrastructure (road, irrigation canal, waterway damage, etc...), and species that can increase frequency and intensity of wildland fires.

	2015-2020 Noxious Weed Acreage	Total Acreage in Montezuma County	Loss of Revenue due to weeds
Wheat	3,786	13,547	\$ 157,360.55
Other Crops	468	6,214	\$ 91,351.26
Rangeland	22,870	641,280	\$ 131,477.68
Corn	278	3,348	\$ 40,226.16
Alfalfa	5,705	42,659	\$ 1,621,589.20
Grass Hay	4,218	14,259	\$ 1,799,662.00
Forest	4,141	519,335	\$ 97,206.47
Water	7,800	N/A	\$ 1,163,651.46
Total			\$ 5,102,524.78



