



---

## Table of Contents

I.	Introduction.....	Page 1
II.	Purpose .....	Page 1
	1. Goals	
III.	Horsefly WMA Description.....	Page 4
IV.	Objectives.....	Page 7
V.	Weeds of Concern in the Horsefly WMA.....	Page 8
	1. List of High Priority Species	
	2. List of Other Priority Species	
	3. Species on Early Detection List	
VI.	Priorities for Horsefly WMA.....	Page 10
VII.	Integrated Weed Management Techniques.....	Page 11
	1. Implement Weed Prevention Best Management Practices	
	2. Keep Inventoried Weed Free Areas – Weed Free	
	2. Early Detection – Rapid Response	
	3. Eradicate or suppress roadside, ditches, gravel pits, utility Row's, livestock concentration areas, high use areas and critical areas	
	4. Eradicate or suppress inventoried isolated, small infestations of High Priority species	
	5. Eradicate or suppress inventoried isolated, small infestations of Other Priority species	
	4. Manage large infestations of High Priority species by area	
	5. Manage large infestations of Other Priority species by area	
VIII.	Appendix.....	Page 22
	1. Best Management Practices Flyer	
	2. Early Detection Flyer	
	3. Resources and References	
	4. List of Invasive Species – Best management strategies for each species	
	5. Contacts for team members	
	6. Integrated Weed Management Techniques	
	7. Annual Operating Plan	
	8. Monitoring Techniques	
	9. Reporting Form	
	10. Cost Share Program for Montrose County West End	
	11. Maps	
	a. Boundary of Horsefly WMA	
	b. High Priority Areas	
	c. Map of current infestations by species	
	1. Spotted knapweed	
	2. Russian knapweed	
	3. Tamarisk	
	4. Oxeye daisy	
	5. Houndstounge	
	6. Musk, Bull and Canada thistle	
	7. Chicory	
	8. Burdock	
	9. Cheatgrass	

## **Horsefly Coordinated Weed Management Area Plan**

### **I. Introduction**

The Horsefly Weed Management Area is 148,303 acres located on the southwest part of the Uncompahgre Plateau in western Colorado. The Horsefly watershed, the main drainage of the Weed Management Area (WMA), starts on the west side of Horsefly Peak at 10,350 feet and drains westerly for over 30 miles into the San Miguel River at 6,100 feet in elevation.

The Horsefly WMA is located in Montrose County and contains 27,595 acres of private lands. The majority of the private land is located at the top of the watershed making this unusual compared to the typical situation of federal lands at the higher elevations and private in the valley bottoms. The Uncompahgre National Forest makes up the majority of the area at over 70%. The Bureau of Land Management lands are located at the lower elevation of the watershed along the San Miguel River.

The watershed is very popular for outdoor activities, receiving abundant traffic from local, recreational and industrial uses. The private lands have been managed as rangelands for livestock and wildlife for several decades. An estimated 86% of private land is still classified as agriculture lands. In the last decade, the highest and best value for the private land has trended toward subdividing ranches into 40 acres or less for second home development. The majority of the private lands owners are absentee owners. Four subdivisions currently exist that contain around 50 homes with two others in the development stage. It is estimated that there will be more than 600 homes in the next 20 years in the WMA.

The Uncompahgre Plateau itself is the watershed to four major drainages of the Colorado River: the Dolores, Gunnison, San Miguel and Uncompahgre Rivers. The Uncompahgre Plateau (UP) Project is attempting to understand the impacts of human activity on the 1.5 million acre landscape and focus on ecosystem restoration in a manner that involves and best serves the interests of the local communities. Invasive species are a major non-native intrusion that prevents effective land restoration. The vision for the Uncompahgre Plateau is to divide it into weed management areas that control and suppress the invasive species populations that are currently established, as well as to prevent new infestations.

### **II. Purpose of the WMA Plan**

In 2005, a Uravan Mill Natural Resources Damage Fund Grant was awarded through Montrose County for natural conservation and reclamation through weed management. Additional benefactors of the grant money include: the US Forest Service, the Nature Conservancy and the Bureau of Land Management. The Uncompahgre Plateau (UP) Project received grant money from the National Forest Foundation and the USDA Forest Service to develop a Collaborative Weed

Management Area Plan and Treatment Program. Because of the varied land status of the Uravan Area and the awarding of funds to the different land managers, it was agreed that resources would be pooled for a collaborative effort.

The area of interest determined by the partners was over a half million acres. In order to develop a site specific plan and be able to start a program by 2006, the area was divided up into four WMAs with the Horsefly WMA being the first. The boundary of the areas were developed using hydrologic divides and geographic features that had similar landscape characteristics, eliminating jurisdictional barriers.

The establishment of the WMA enhances and unites the partners for a weed program. The partners collaboratively established the goals, objectives, and priorities for treatment in the WMA. The partners are committed to helping each other accomplish a Coordinated Weed Management Area Plan using Integrated Weed Management techniques.

Integrated Weed Management (IWM) is a systems approach to the management of undesirable plants. It involves the use of the best control techniques described for the target weed species in a planned, coordinated program to limit the impact and spread of the invasive species. An IWM (as defined in the Federal Noxious Weed Act) is a: "system for the planning and implementation of a program, using an interdisciplinary approach, to select a method for containing or controlling an undesirable plant species or group of species using all available methods including: education, prevention, physical or mechanical methods, biological control agents, herbicide methods, cultural methods and general land management practices.

The value of using an IWM approach in a WMA is to make more efficient and effective use of limited resources by creating one weed management plan that focuses time, money and resources toward agreed upon priorities. By pooling resources available from the different partners in the group and eliminating political boundaries, we hope to prevent, contain, reduce, suppress, or eradicate invasive species in the Horsefly WMA.

Weed infestations are widespread and affect many aspects of our lives. Weeds can drastically alter the ecological checks and balances that have developed over thousands of years.

**The Horsefly WMA Partners include:**

- Montrose County
- Montrose County Weed Commission
- Uncompahgre Valley Pest Control District
- Grand Mesa, Gunnison, Uncompahgre National (GMUG) Forest – Norwood District
- Bureau of Land Management – Uncompahgre Field Office
- CO State University Extension
- The Nature Conservancy
- The Uncompahgre Plateau (UP) Project
- Private Landowners

**Advantages of a Coordinated Weed Management Area Plan:**

- Encourages cooperation between agencies, private landowners, organizations, and interest groups.
- Increases the effectiveness of weed management by basing control efforts on biological and geographical factors rather than legal divisions.
- Creates the most effective and environmentally sound weed management plan for a geographic area.
- Establishes priority weed species within the individual WMA.
- Increases public awareness of the seriousness of invasive species.
- Facilitates the prevention of future weed infestations within the WMA.
- Combines the knowledge and resources of agencies, organizations and individuals involved.
- Identifies and prevents the spread of weeds into the WMA from neighboring areas.
- Offers a channel of communication for everyone involved.
- Provides the ability to secure and pool funds for weed programs.

Cheatgrass has so altered the fire regime of the Great Basin that re-establishing native plant communities in some areas is essentially impossible (Mosely et al. 1999). One study showed that runoff increased by 56% on areas infested by spotted knapweed and that sediment yield increased by 192% (Lacey et al. 1989). A Montana study showed a 98% decrease in elk use of a bunchgrass range and a 67% decline in carrying capacity after spotted knapweed took over (Hakim 1979). It is estimated that Russian knapweed has pushed out native plant species on more than a million acres of land in the United States (Whitson 1999). Some non-native species release substances in the soil that prevent re-establishment of native species. For example, tamarisk can increase the salinity of soils to the point that native willows and cottonwoods can no longer grow.

Numerous invasive species presently not found in the WMA are within striking distance. With the easy access to this WMA and the general increase of all types of activities, introduction of these invasive species will occur. A typical occurrence will be along roads and waterways, soil disturbances at construction sites, areas affected by wildfire, areas affected by resource management activities, residences, feeding areas for livestock, cultivated fields, recreation trailheads, and areas affected by improper grazing resulting in the decline of the healthy vegetation. It will take the eyes of everyone to protect the quality of life that we have enjoyed.

The Horsefly WMA contains an estimated 12,656 acres of inventoried invasive species. Many studies have documented the rate of spread to be 8 – 12 % per year for many invasive species. This translates to over 1,000 acres of additional lands being infested by invasive species annually within the WMA.

**Goals for the Horsefly WMA**

- Restore the species, age diversity and quality/productivity of native plant and animal communities by removing or preventing invasive species establishment.
- To facilitate a better understanding of the social and economic impacts of noxious weed invasions for the users, community leaders, landowners, developers, and resource managers.

- Increase and expand community, landowner and inter-agency involvement, education and collaboration regarding invasive species management.
- Develop and instill the understanding that Weed Prevention Best Management Practices need to be part of everyone's daily land ethics.
- Retain a healthy landscape that provides the goods and services that benefit our communities today and in the future.
- Be a good neighbor and contribute to accomplishing the objectives of the weed management plan.

### III. Horsefly WMA Description

Horsefly Peak is the tallest peak on the Plateau at 10,350 feet and is the headwaters of the Horsefly WMA that flow to the west into the San Miguel River. The Horsefly WMA also contains the following watersheds that flow directly into the San Miguel River: Clay Creek, Cottonwood Creek, and Little and Big Bucktail Creeks. All of these drainages feed into the San Miguel River with the Horsefly drainage being the largest watershed. Each of these drainages has created canyons that dissect the landscape at the lower elevations and form large mesas. Over 17 miles of the San Miguel River flow through the west part of the WMA. The river's elevation at Montrose County line is 6,400 feet and 5,150 feet in elevation at the confluence of Big Bucktail Creek where it leaves the WMA.

The slope aspect of this landscape is west to southwest and this aspect has a strong influence on the moisture regime and therefore the vegetation. Along the San Miguel River pinyon pine and Utah juniper are generally the dominant vegetation types. Pinyon-juniper (PJ) communities give way to sagebrush, mountain shrub, and Gamble oak plant communities by 7,000 feet in elevation. Ponderosa pine dominates the over story on the mesas above 8,000 feet. Pine and Gamble oak are communities that are commonly found together and transition into aspen and open meadows at higher elevations. Slopes at the higher elevations that have the south and southwest aspect have a much drier moisture regime allowing the typical lower elevation plant communities to thrive. Even though Horsefly Peak is the highest point on

#### **WMA Boundary Description:**

Starting at Horsefly Peak the WMA follows the Horsefly hydrologic divide NW along the top of the Uncompahgre Plateau. When it intersects with the South Divide Road (FDR 402) it follows this road until it intersects with the Hooser Road (FDR 603); then follow this road until it intersects with the Delta – Nulca Road (FDR 503); then it follows west along this road for approximately three miles until it intersects the main drainage of Big Bucktail Creek; then it turns south following down the creek bottom to the San Miguel River. The boundary crosses the river to the top of the ridge just above the river on the South side. It follows the river up on the SW side until it intersects with Montrose / San Miguel county line. It then follows the county line east for 10 ½ miles where it intersects with the Horsefly hydrologic divide and follows it back to the top of Horsefly Peak.

(See map in Appendix 9a.)



































