

Idaho Weed Awareness Campaign

Pulling Together

Against Invasive Weeds

Lower Gem Cooperative Weed Management Area

2009

Year End Report



Introduction

The Lower Gem Cooperative Weed Management Area was developed to facilitate effective treatment and coordinate control efforts over the long term. The Lower Gem CWMA has developed common management objectives, set realistic management priorities, and identified priority weed species.

The goals of the Lower Gem CWMA are to: Prevent the introduction, reproduction and spread of noxious weeds and invasive exotic plants; Reduce the extent and density of established noxious weeds to levels that are acceptable; Implement the most economical and effective methods for target weeds; Implement an integrated management system using appropriate methods of treatment and control; Educate the public as to the importance of proper weed management and get the needed media coverage to show what is being done.

The area covered by this Agreement includes the southern half of Gem County.

The major weeds of importance in the area include Scotch Thistle, Hoary Cress, Purple Loosestrife, Eurasian Watermilfoil, Rush Skeletonweed, Canada Thistle, Poison Hemlock, Field Bindweed, Parrotfeather Milfoil, Houndstongue and Puncturevine. Major efforts are being made to control these weeds each year.

The Chairperson of the Lower Gem CWMA is “Jake” M.P. Wyant, with Jack Stevens as Vice and Marie Miller as secretary. Cooperators in the CWMA include private landowners, county government, university, state and federal land management agencies, as well as interested individuals and organizations.

Summary of Year 2009 Projects

This was the sixth year for the Lower Gem CWMA. The program was a big success and our reputation is spreading. The following were the primary accomplishment this year.

Coordination Meetings

Several coordination meetings were held to establish objectives, goals, finalize the annual operating plan, receive direction from the Idaho State Department of Agriculture, and plan the summers’ events. Three coordination meetings were held.

Priority #1

Landowner Cost-Share

The Lower Gem CWMA and Gem County Weed Control worked with over 45 private landowners to treat many acres of noxious weeds such as Puncturevine, Poison Hemlock, Scotch & Canada Thistle, Rush Skeletonweed, Perennial Pepperweed, Houndstongue, White Top, and Field Bindweed. Each landowner’s property is inspected and receives a weed identification booklet and is given advice on land management practices on weed prevention. An appropriate amount of proper herbicide is issued for the species of noxious weed and the type of land in exchange for application information when completed. Some landowners use Gem County Weed Control to do the application at a reduced rate. The Lower Gem CWMA provides the herbicide.

Acres Treated: by Private Landowner **429**
by Gem County Weed Control **233**
Total Acres Treated: **662**

Acres Surveyed: by Private Landowner **566**
by Gem County Weed Control **1230**
Total Acres Surveyed: **1796**

Public Educational Contacts made: 70

Priority #2

City of Emmett Puncturevine

The Lower Gem CWMA worked with the City of Emmett to reduce the amount of Puncturevine on the city right-of-ways. Herbicide was furnished by the Lower Gem CWMA and the City hired a professional applicator who spot treated throughout the city four times during the summer.

Acres Treated: 220 ***Acres Surveyed: 345—four times***

Public Educational Contacts made: 30

Priority #3

Railroad Right-of-Ways

The Lower Gem CWMA worked with the Idaho Northern and Pacific Railroad to reduce noxious weeds growing along their tracks. The Lower Gem CWMA supplied the herbicide and railroad personnel did the applications.

Acres Treated: 48 ***Acres Surveyed: 240***

Public Educational Contacts made: 20

Priority #4

Bissel Creek Rush Skeletonweed

The Lower Gem CWMA worked with Gem County Weed Control, the Rush Skeletonweed Task Force, BLM, and a private landowner to bring a 400-acre site of RS under control.

In 2008, 56 acres of private land was treated with Milestone. Another connected 60 acres was treated with Tordon on BLM land under contract by Gem County Weed Control. Both areas were monitored throughout the Summer of 2009 and both had excellent results. By Fall, neither area had a need for retreatment yet, so another 27 acres of BLM land was treated. Milestone has been purchased and will be applied to private land that needs retreatment or we will expand into new areas as soon as conditions allow in Spring of 2010.

The BLM is committing an additional \$10,000 in 2010 to expand this project to the north and east on their property.

Acres Treated: BLM Land – 27 Acres

Acres Treated: Private Land – 0 (45 acres will be treated in March, 2010)

Acres Surveyed: BLM Land – 600

Acres Surveyed: Private Land – 400

Public Educational Contacts made: 40



Pre Milestone



Post Milestone 2008



BLM Land Treated In 2009



BLM Land Post Tordon 2008

Priority # 5

Drain Ditch Parrotfeather

The Lower Gem CWMA worked with Gem County Weed Control and four private landowners to treat 2.5 miles of wide drain ditches infested with Parrotfeather Milfoil, an aquatic noxious weed that grows above and below the water, causing frequent drainage problems. This is the second year for this project with good results initially last season after treatment in August. By Fall there was re-growth coming back on submerged stems. For 2009, the Parrotfeather Milfoil was treated with an aquatic glyphosate in June and again in October. A survey in November showed a great reduction but did find regrowth on submerged stems. This battle is not over yet.

Acres Treated: 22

Acres Surveyed: 9 miles of drain ditch = 40 acres

Public Educational Contacts made: 25



2008 Parrotfeather Before Treatment



2009 After 1st Glyphosate Treatment



Another Parrotfeather Drain Ditch



Re-growth After 1st Treatment

Priority # 6

Capital Equipment

The Lower Gem CWMA and Gem County Weed Control are working together to purchase a Polaris Sportsman and ATV spray tanks and pump to use for the 2010 season. The Lower Gem CWMA deposited funds with the dealer in December and Gem County will complete the purchase in January.

Priority # 7

Bio Control

The LG CWMA and Gem County Weed Control worked with the Nez Perce Bio Control Center to release Puncturevine seed head weevil, *Microlarinus lareynii*, in an infested field near the city of Emmett. Gem County Weed Control also assisted the University of Idaho with the monitoring of their Rush Skeletonweed release of *bradyrrhoa* using a net tent.



Puncturevine Microlarinus Release



Rush Skeletonweed Bradyrrhoa Tent

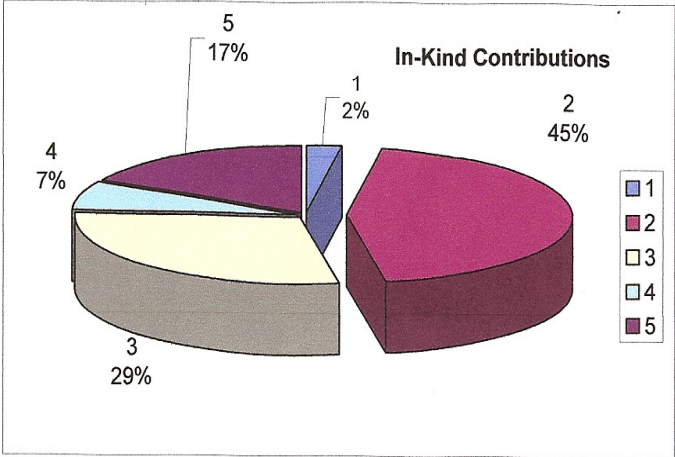


Purple Loosestrife Galarucella are still working

Lower Gem CWMA 2009 Funding

1	Federal Govt	\$ 1,449.00
2	Landowner/Private	\$ 27,225.00
3	Gem County WC	\$17,470.00
4	Other (Railroad)	\$ 4,218.00
5	City of Emmett	\$ 10,425.00
Total		\$ 60,787.00

In Kind Total	\$ 60,787.00
ISDA Cost Share	\$ 20,921.00
Total Program Cos	\$ 81,708.00



In Kind Total		\$ 60,787.00
ISDA Cost Share	\$ 20,921.00 Minus Capital Equipment \$7150.00	\$ 13,771.00
		<u>\$ 74,558.00</u>
<i>\$4.41 of In Kind dollars match for every Cost Share dollar spent.</i>		

Lower Gem CWMA Next Year

With the success we had this year, the Lower Gem CWMA will continue with all projects.

2010 Plans Include:

- The Landowner Cost-share allows us to meet private landowners, evaluate their weed problems, and offer management advice that teaches prevention and awareness. They learn weed identification and herbicide selection as well as get rates for their particular spray equipment. The education and financial relief combine to allow private landowners to correctly treat noxious weeds now and in future years.
- The City of Emmett will continue reducing the populations of Puncturevine.
- The Railroad will again treat a variety of noxious weeds on their right-of-way.
- Gem County Weed Control will continue to treat Rush Skeletonweed on private and BLM lands in the Bissel Creek area.
- Gem County will continue treating Parrotfeather Milfoil in several drain ditches.

Our overall goal includes: educating the public, fighting weeds effectively, involving as many individuals and organizations as possible, and to be able to show positive results.

Appendix I Lower Gem CWMA Steering Committee

Chairman

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Appendix II Project Summaries

Project	Weed Species	Approximate Acres Treated
<i>Landowner Cost Share</i>	Scotch Thistle	25
	Poison Hemlock	98
	Puncturevine	151
	Field Bindweed	58
	Canada Thistle	104
	Rush Skeletonweed	34
	White Top	25
	Houndstongue	12
	Perennial Pepperweed	8
<i>City of Emmett</i>	Puncturevine	220
<i>Rail Road Right of Way</i>	Poison Hemlock	30
	Canada Thistle	13
	Scotch Thistle	5
<i>Bissel Creek</i>	Rush Skeletonweed	27
<i>Drain Ditch</i>	Parrotfeather	22
<i>Public Contacts</i>		185

Appendix III
Map of Lower Gem
Cooperative Weed Management Area

LG CWMA Boundaries

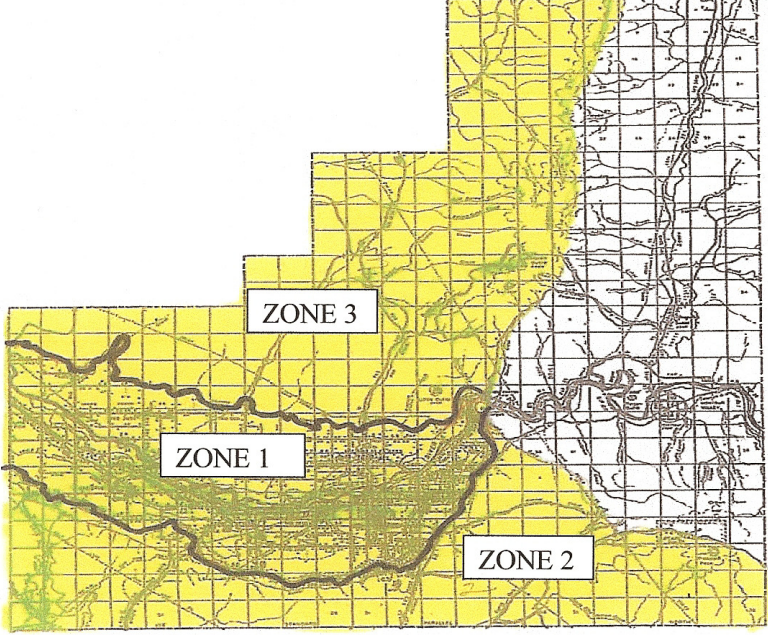
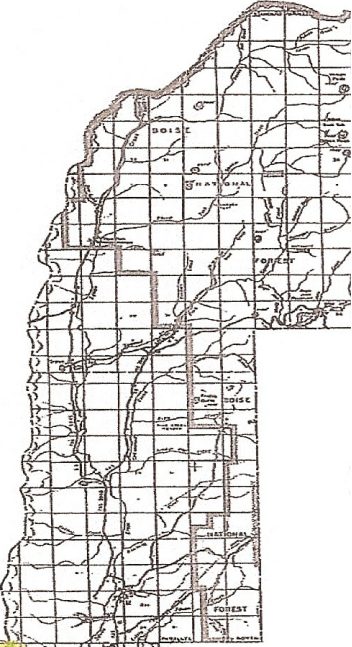
The Lower Gem CWMA is the geographic area encompassed within the Payette River Watershed from Black Canyon Dam southeast to the Gem County Line. The Lower Gem on the north, west, south, and southeast are the borders of Gem County. The rest of the eastern border would be a ridge north of Pearl to Black Canyon Dam then up Squaw Butte to Squaw Ridge to the County line.

ZONES

Zone 1: This area includes the valley floor and the bench from Black Canyon Dam west to the county line. The boundary on the north is the Northside Main Canal. The south boundary is the Black Canyon Big Canal.

Zone 2: This area includes the foothills and high desert from the drainage of Sand Hollow Ck., up the ridge of Crown Point to the county line, to the south along Gem Co. to the corner of the county and north to the Black Canyon Canal. The boundary then follows the Big Canal on the south side back to the east to Sand Hollow Ck.

Zone 3: This area includes all land within Gem County, north of the Northside Canal that drains into the Payette River below Black Canyon Dam.



APPENDIX IV

Lower Gem CWMA Infested Acres 2009 End of Year

	Common Name	Scientific Name	Gross Acres	(%) of Gross Acres Infested	Average Density (%)
1.	Black Henbane	<i>Hyoscyamus niger</i>	0		
2.	Bohemian Knotweed	<i>Polygonum bohemicum</i>	0		
3.	Brazilian Elodea	<i>Egeria densa P.</i>	0		
4.	Buffalobur	<i>Solanum rostratum</i>	0		
5.	Canada Thistle	<i>Cirsium arvense</i>	8,700	60%	29%
6.	Common Crupina	<i>Crupina vulgaris</i>	0		
7.	Dalmatian Toadflax	<i>Linaria genistifolia ssp. dalmatica</i>	0		
8.	Diffuse Knapweed	<i>Centaurea diffusa</i>	0		
9.	Dyer's Woad	<i>Isatis tinctoria</i>	0		
10.	Eurasian Watermilfoil	<i>Myriophyllum spicatum</i>	100	40%	20%
11.	Field Bindweed	<i>Convolvulus arvensis</i>	5,000	55%	30%
12.	Giant Hogweed	<i>Heracleum mantegazzianum</i>	0		
13.	Giant Knotweed	<i>Polygonum sachalinense</i>	0		
14.	Hoary Alyssum	<i>Berteroa incana</i>	0		
15.	Houndstongue	<i>Cynoglossum officinale</i>	200	25%	20%
16.	Hydrilla	<i>Hydrilla verticillata</i>	0		
17.	Japanese Knotweed	<i>Polygonum cuspidatum</i>	10	10%	20%
18.	Johnsongrass	<i>Sorghum halepense</i>	0		
19.	Jointed Goatgrass	<i>Aegilops cylindrica</i>	10	30%	20%
20.	Leafy Spurge	<i>Euphorbia esula</i>	0		
21.	Matgrass	<i>Nardus stricta</i>	0		
22.	Meadow Knapweed	<i>Centaurea pratensis</i>	0		
23.	Mediterranean Sage	<i>Salvia aethiopsis</i>	0		
24.	Milium	<i>Milium vernale</i>	0		
25.	Musk Thistle	<i>Carduus nutans</i>	60	10%	15%
26.	Orange Hawkweed	<i>Hieracium aurantiacum</i>	0		
27.	Oxeye Daisy	<i>Chrysanthemum leucanthemum</i>	1	10%	10%
28.	Parrotfeather Milfoil	<i>Myriophyllum aquaticum</i>	200	20%	10%
29.	Perennial Pepperweed	<i>Lepidium latifolium</i>	80	30%	40%
30.	Perennial Sowthistle	<i>Sonchus arvensis</i>	0		
31.	Plumeless Thistle	<i>Carduus acanthoides</i>	0		
32.	Poison Hemlock	<i>Conium maculatum</i>	5,000	30%	35%
33.	Policeman's Helmet	<i>Impatiens glandulifera</i>	0		
34.	Puncturevine	<i>Tribulus terrestris</i>	6,000	40%	45%
35.	Purple Loosestrife	<i>Lythrum salicaria</i>	4,000	20%	10%
36.	Rush Skeletonweed	<i>Chrodrilla juncea</i>	9,000	75%	55%
37.	Russian Knapweed	<i>Acroptilon repens</i>	30	60%	10%
38.	Saltcedar	<i>Tamarix</i>	40	5%	5%
39.	Scotch Broom	<i>Cytisus scoparius</i>	0		
40.	Scotch Thistle	<i>Onopordum acanthium</i>	5,000	30%	35%
41.	Silverleaf Nightshade	<i>Solanum elaeagnifolium</i>	0		
42.	Skeletonleaf Bursage	<i>Ambrosia tomentosa</i>	0		
43.	Small Bugloss	<i>Anchusa arvensis</i>	0		

APPENDIX IV continued
 Lower Gem CWMA
 2009 End of Year

	Common Name	Scientific Name	Gross Acres	(%) of Gross Acres Infested	Average Density (%)
44.	Spotted Knapweed	<i>Centaurea maculosa</i>	50	5%	10%
45.	Squarrose Knapweed	<i>Centaurea squarrosa</i>	0		
46.	Syrian Beancaper	<i>Zygophyllum fabago</i>	0		
47.	Tall Hawkweed	<i>Hieracium piloselloides</i>	0		
48.	Tansy Ragwort	<i>Senecio jacobaea</i>	0		
49.	Toothed Spurge	<i>Euphorbia dentata</i>	0		
50.	Vipers Bugloss	<i>Echium vulgare</i>	0		
51.	Water Hyacinth	<i>Eichhornia crassipes M.</i>	0		
52.	White Bryony	<i>Bryonia alba</i>	0		
53.	Whitetop	<i>Cardaria draba</i>	600	20%	55%
54.	Yellow Devil Hawkweed	<i>Hieracium glomeratum</i>	0		
55.	Yellow Hawkweed	<i>Hieracium caespitosum</i>	0		
56.	Yellow Starthistle	<i>Centaurea solstitialis</i>	0		
57.	Yellow Toadflax	<i>Linaria vulgaris</i>	0		

APPENDIX V

Chemical Purchases Made with ISDA Cost-Share Grant Funding

<i>Chemical/Description</i>	<i>Quantity</i>	<i>Purpose</i>
Milestone/Herbicide	4.5 Gallons	Landowner, Rail Road, Bissel Creek, Rush Skeletonweed Projects
2,4-D amine/Herbicide	240 Gallons	Landowner, City of Emmett Puncturevine Projects
Banvel + 2,4-D/Herbicide	55 Gallons	Landowner, Rail Road Projects
Telar XP/Herbicide	4 Lbs	Landowner Cost-share Projects
Curtail/Herbicide	30 Gallons	City of Emmett, Landowner Projects
Aqua Neat/Herbicide	30 Gallons	Drain Ditch Parrotfeather Projects
Spreader 90/surficant	165 Gallons	All Projects
Insist 90/Surficant	30 Gallons	Landowner Projects
HiLight/Dye	15 Gallons	Rush Skeletonweed, Landowner Projects

Opinion

Gem County's priorities on noxious weeds

Gem County definitely has its problems with noxious weeds, but things could sure be worse. About 25 years ago, landowners worked with the county to stop an outbreak of Yellow Star Thistle in the hills above Sweet.

We are still fighting small outbreaks yearly at one ranch. If not for observant ranchers realizing the dry-land grain seed they had planted was contaminated with Yellow Star Thistle seed and taking action to remove this weed, it would be widespread across the county. When we finally find no more plants at that ranch, it will be a small success story.

There have been new introductions since and several small battles are still ongoing to keep this weed out of the county. This noxious weed is very invasive to rangelands and has needle-like spines surrounding each seed head. We are in-between two giant infestations of hundreds of thousands of acres in northern California and northern Idaho.

One key to having a successful eradication of new invaders is finding and recognizing problem plants before they can spread. Gem County Weed

Control is working to inform the public about this threat and provide information on which plant to report.

Not all of our noxious weeds have the same happy ending as in the story mentioned above. About 45 years ago, a truck in the hills above Banks lost its load of seed grain in an accident. A couple years later the Idaho State Department of Agriculture looked at some strange new plants reported at the site and decided they were harmless. No action was taken and the next year the state asked Gem County Weed Control to do some herbicide trials. In that letter from 1966, the ISDA had realized its mistake. Excerpts from that letter include: "to preserve rangelands in this entire area," "while economically and physically possible," "tremendous seed spread and uncontrol-

Guest Opinion

By Jake Wyant
Gem County Weed supervisor

lable infestation will ultimately result."

To shorten a long story, it got away. The non-action at the critical time is the difference between the two stories.

The second weed is Rush Skeltonweed, which is now the county's most plentiful noxious weed. At the time of discovery this strange, leafless plant, the ISDA had it identified but not much was known about its invasiveness. This plant has no spines or thorns and looks harmless.

When the Yellow Star Thistle was found by ranchers to be growing with the grain, they were immediately concerned. This plant has nasty spines and its invasiveness is well documented.

Also, in the 20 years difference in these weed outbreaks, the ISDA had a much broader

knowledge of which weeds are invasive and a potential threat. But without action in the early stages, these noxious weeds are impossible to stop. The ISDA watched as Spotted Knapweed walked across Montana. Weed battles raged across the parhandle of Idaho but Spotted Knapweed headed south and is now knocking on our door. This is another plant that has no spines or thorns. Like Rush Skeltonweed, it just takes noxious weeds push their way across the land, they replace grasses and good plants that our wildlife and livestock could use, as well as fouling our recreation areas. Within a few years, they totally dominate.

My point to the story is that when a new noxious weed invades our county, we have a short time to recognize it and take action. We now have a fantastic amount of information on most plants available on the Internet. The ISDA has compiled a list of noxious weeds — Idaho's Noxious Weeds — which is the minimum of invasive plants that have been determined to be harmful to agriculture. They have recently

gone further in prioritizing this list, adding new weeds that are not in Idaho but are present in surrounding states. This priority level is known as EDRR — Early Detection, Rapid Response. According to state law, when these weeds are located, they must be treated the same season. The ISDA realizes that we must act quickly or learn to live with another invading species.

In Gem County, we also have a list of priorities. The highest priority noxious weeds are the ones we do not have yet. Just like the state list EDRR, we want to act quickly when they appear. The county's priorities are often higher than the state's. Yellow Star Thistle is common in northern Idaho and is rated in the statewide containment category. As in the story of the landowners mentioned earlier were very successful at removing Yellow Star Thistle from Gem County properties, it is in our "Eradicate" category. Leafy Spurge is a huge problem to many areas of the state and is rated as "contain." There is only a small amount known to be in Gem County, therefore it is rated "Eradicate," e.g. the less

present, the higher the priority rating.

The County's system ranks noxious weeds as follows:

1. Prevent — no known populations
2. Eradicate — work towards eradication
3. Control — work to reduce and keep from spreading
4. Contain — keep from spreading

This priority list can be found by following the links on the Gem County Web site, www.co.gem.id.us. You may also stop by Gem County Weed Control located at 125 E. Dion St. and receive an Idaho's Noxious Weeds booklet to help you identify noxious weeds. We want to help the public learn which noxious weeds need to be reported to the weed department, whether located on your property, alongside a road or moving into your favorite hunting area. Some noxious weeds are aquatic and may be invading your favorite fishing or boating area. By learning which weeds need to be reported, the public could help with early detection, so we could have happy endings to all new invasions.

APPENDIX VII Lower Gem CWMA

Bissel Creek
Rush Skeletonweed Project
Lower Gem CWMA

THE RANCHING PERSPECTIVE

Jim Little, Rancher, Emmett, ID

BACKGROUND

Jim Little is a third generation rancher in southern Idaho. His family has been part of the Idaho ranching community since the late 1800s. The 27,000-acre Van Deusen Ranch near Emmett, Idaho, was purchased by the Little family in the 1920s. It had been overgrazed by sheep prior to the purchase. An intensive effort to manage livestock grazing (subsequently switched to cattle) began in the 1960s with the implementation of rest-rotation grazing. As part of this process, pastures are utilized in the early part of the growing season of the first year, late in the season of the second year following seed production, and are completely free of livestock during the third "resting" year. Though progress has been slow, this approach has led to a marked improvement of the watershed and general health and productivity of the range.

MANAGEMENT EFFORTS

Rush skeletonweed (RSW) was first observed infesting the South Fork of the Payette River during the 1970s and has since spread extensively. The nearby Van Deusen Ranch was still RSW-free in the 1980s. Land managers advised the Littles not to change their land management practices; his efforts appeared to be keeping RSW away. Never the less, RSW invaded the ranch in the 1990s.

Rush skeletonweed populations have increased on the Van Deusen Ranch, though not exponentially as they have elsewhere in the RSW-invaded range. The plant can be found in scattered patches throughout various pastures. Cattle seem to feed well enough on it; however, given the nature of proper grazing management they do not have a permanent impact on the plant's survival. If cattle are left on RSW-invaded land long enough to significantly impact the RSW population, adverse effects on other vegetation are likely. Furthermore, despite its beneficial effects on desired pasture species, the resting stage of the rotational grazing method allows RSW to recover and re-sprout from its extensive root system. Consequently, other means of control are necessary.

The bulk of the RSW infestation occurs in a series of alluvial fans at the base of BLM-owned hills to the west of the ranch. Here, the south-facing, moisture-holding soils create ideal conditions for RSW growth (Fig. 48). Since 2001, numerous herbicide trials have been conducted on these alluvial fans with the cooperation of the Littles, Gem County Weed Control, and Wilbur-Ellis, Inc. Preliminary results suggest that Tordon 22K® (1 quart /acre)

APPENDIX VII *continued*

Lower Gem CWMA

is the most effective of the chemicals used. While spot treatment in spring and summer is partially effective on RSW aboveground biomass, a near complete kill of RSW occurred after an aerial application (airplane) in December.

CONCLUSION

Effectiveness aside, there is a downside for utilizing Tordon 22K®, namely its relatively high cost. The current high cost of controlling RSW cannot be justified when there are more pressing weed and other rangeland issues at hand. Heavy deer and elk movements as well as regular wind patterns serve to spread RSW seed onto the Little property, making routine or on-going herbicidal treatments necessary. In addition, there are other invasive and undesirable species on and entering the Van Deusen Ranch. Cattle find these invasives even less palatable than RSW, making them difficult to control through grazing. Whitetop and western water hemlock both require annual treatments. Scotch thistle is considered the toughest, most labor-intensive, and most expensive weed species for ranch workers to stay ahead of; assistance from Gem County Weed Control is needed to keep this weed at bay.

New herbicide trials (some of which include novel compounds new to weed control) and biological control feeding trials are underway. It is the hope of Jim Little and other ranchers that a more cost-effective solution to the RSW problem will be discovered.



Figure 48. Healthy rush skeletonweed. Rachel Winston, MIA Consulting.