

Bridger-Teton National Forest

The Bridger-Teton National Forest (BTNF) and Teton County Weed and Pest (TCWP) had their most successful year ever. We treated 960 acres of noxious weeds on National Forest lands that lie within the Jackson Hole Weed Management Area.

We were able to access new infested terrain to treat weeds that have never been treated before however, we still have a lot of noxious weeds. Again, musk thistle presents our biggest work load and continues to elude our best efforts. We are seeing reductions of musk in areas that have been continually treated over the years. We are still hoping for "T-Horridus" to reach population levels that will slow down musk thistles' march. Canada thistle, our oldest established noxious weed, has really advanced over that past two seasons. This is thought to be a result of the previous five-years of drought, but that has not yet been proven.

We seem to be holding levels of other noxious weed species in check. The leafy spurge patch near Munger Mountain is looking great with native grasses. Aggressive action on Dalmatian toadflax in 2004 with 2005 follow-up seems to have halted its' spread with help from a contracted horse pack sprayer. We have expanded the contractor's coverage to our heaviest musk thistle areas in 2005. This important tool is working well and we plan to expand the use of horse pack sprayers in 2006.

In 2005, there were a total of five, two person crews that treated weeds on the BTNF. There were two TCWP crews, one committed to the National Forest and the other was dispatched when needed along the Snake River and Togwotee Pass highways. We had three Forest Service crews that were assigned to Blackrock, the Gros Ventre, and the Snake River Canyon, respectively. Each Forest Service crew had multiple functions such as recreation maintenance, removal of old fence materials and noxious weed control. Crews got to know their assigned country well which afforded multiple treatments upon most weed patches throughout the season.

Crews were assigned an atlas of USGS quad-range maps where their task was to draw polygons where they treated while labeling each site with a work order number. The atlas's are currently being transferred into the new Forest Service system known as Natural Resource Information System Terra - Invasives. Next year, we are planning on refining and adding new data with a \$13,000 dollar grant that we received from the FS Regional Office for conducting *Early Detection-Rapid Response* work.

Finally, we had our first "All Forest Weed Day". FS personnel joined TCWP, National Elk Refuge and Teton Conservation District personnel and treated noxious weeds in the lower Gros Ventre and around Shadow Mountain. This was a great success in terms of education and getting folks interested in the noxious weed problem.

National Elk Refuge

This was the fifth year that the refuge provided funding to the Teton County Weed and Pest Department under a cooperative agreement to hire one full time summer employee to work exclusively on the refuge for weed management. The refuge supplied housing, a vehicle, and an ATV with spray tank attached. Jordan Day started in this position in late May and finished in mid-August. Jordan did an excellent job this summer and this cooperative agreement continues to work very well for the refuge.

This was the seventh year that extensive effort has been put into hand chopping of musk thistle on large acreages of the refuge using volunteer and staff labor. We had a crew of 12 high school students and one leader from Landmark Volunteers assist the refuge over about 5 days with chopping virtually thousands of musk thistle plants on about 425 acres of the refuge in mid-July. This method does seem to keep the majority of the plants from going to seed.

Intensive effort was again placed on controlling spotted knapweed in the Gros Ventre River bottom. This year the Jackson Hole Weed Management Association sponsored a cooperative Gros Ventre River Spray Days on July 6 and 7. In this very successful effort about twenty people spent 284 hours spraying spotted knapweed along the river on both the Grand Teton National Park and the National Elk Refuge, mostly using backpack sprayers. The crews treated nearly all of both the north and south sides, beginning at the Gros Ventre River Ranch and working downstream below Highway 89. About 15 solid acres of spotted knapweed were treated. Grand Teton National Park, the National Elk Refuge, the Bridger Teton National Park, and Teton County Weed and Pest donated equipment, herbicide, and crews to this project.

The refuge has continued to place emphasis on controlling the relatively new invasion of diffuse knapweed in the Chambers irrigated fields on the eastern edge of the refuge. This plant showed up about 5 years ago and continues to spread in these irrigated fields. Chemical control this year was used on a total of 12 acres.



Teton County Weed and Pest

The summer of 2005 was arguably the most successful summer in the history of weed control in Teton County. For the first time in nearly five years, Teton County Weed and Pest (TCWP) was fully staffed with full time and seasonal employees. TCWP was kept busy this summer providing noxious weed consultations for 167 landowners who applied for the cost share program provided by Teton Conservation District (TCD). This program not only allowed access to never before seen private lands where critical noxious weeds were located including purple loosestrife and leafy spurge, but it finally helped prompt some larger landowners to begin a noxious weed program.

The hay certification program continues to be strong. This year, contacts were made and attempts to update law enforcement were made early in the year. 1,656 acres were certified in Teton County, Wyoming while 1,237 acres were certified in Teton County, Idaho for a total of 2,893 acres.

This is the second year that we have been able to contract a horseback sprayer. The total cost for his services was around \$17,000, which includes \$3,000 in herbicides provided by TCWP for his use. The cost of the horseback sprayer is covered by TCD, TCWP, and grant funds. He was able to do work for the BTNF (Grizzly Lake, Horsetail Creek, Shadow Mountain, Slate Creek, and all Creek), on the Dalmatian toadflax hillsides in town, and for Grand Teton National Park (Granite, Poker Flats, Bear Paw areas).



The Gros Ventre River became an area of focus this year. For the first time ever, all crews available in the JHWMA teamed up for two full days of spotted knapweed treatments along the River. Twenty people each day covered nearly all 11.5 miles of river on both sides. Grand Teton National Park, TCWP, the National Elk Refuge, and the Bridger Teton National Forest all contributed. In all, approximately 3,680 acres were treated.

This year, a two person mapping crew spent time mapping Flat Creek through the Town of Jackson, in the Hoback Canyon and on the Hoback River, and four weeks on the National Elk Refuge. They helped map Evans Gravel pits and the Game and Fish Feedgrounds. They collected 1,400 weed points. Aaron Foster and Travis Ziehl mapped 1,600 weed points for the Solitude Subdivision and will be producing detailed maps for their use. This information will be critical to keeping our control efforts up to date and insure that our time and resources are being directed to the correct places.

Biocontrol efforts continued as our new Assistant Supervisor, Aaron Foster, did an excellent job picking up where Brett Richardson left off. Thanks to the cost share program, some new release sites were identified. Releases were done on private lands, BTNF, South Park Feedground, GTNP, and on the Snake River for Canada thistle, musk thistle, and Spotted knapweed. *Mecinus janthinus* for Dalmatian toadflax was released in four new locations. Three releases of a new species, *Urophora carduri*, for Canada thistle were done. Thirty-two releases were done with *C. litura* on Canada thistle on the Broken Arrow Ranch and Snake River Ranch, and ten releases of *Larinus minutus* were done on Spotted knapweed.



With the hiring of our new IPM Coordinator, Travis Ziehl, we were able increase the amount of acres treated on BLM (10.1 acres) and Parks and Recreation lands (78.1 acres up from 33.8). Travis stepped right in and allowed TCWP to give more attention to interface areas between towns and federal lands. He contacted landowners within the town of Jackson with noxious weed problems and focused on weed issues in these areas.

The 2005 summer season in the Weed and Pest office was a busy one. Thanks to the Conservation District's Cost share program, more homeowners than ever have contacted us for advice on noxious weed control, to purchase chemical, borrow backpacks, and reserve four-wheelers. With the purchase of four new solo backpacks for the lending purposes, a total of 15 backpacks were in rotation in 2005. As a result, a total of 84 residents sprayed their weeds through the use of Weed and Pest backpacks. In all, a total of 46 landowners were fortunate enough to use these four wheelers on the weekends.

The levees along the Snake River were treated with herbicides twice and crews were directed to chase the knapweed further onto private land than ever before, treating a total of 63 acres, a 15 acre increase over last year. Float days were not as numerous as in previous years due to liability issues, but all sections were floated and mapped/treated for perennial pepperweed and

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A special **Thank you** to the following JHWMA contributors:

National Fish and Wildlife Foundation
Old Bill's Fun Run
USDA, Private Land Forestry
Teton Conservation District

All photos courtesy of **Amy Lerch**

For more information on the JHWMA or for a copy of the brochure, please call Amy Lerch at (307) 733-8419 or email at alerch@tcweed.org



The Annual Weed



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Jackson Hole Weed Management Association (JHWMA)

This report is a summary of JHWMA member agency accomplishments in 2005.

The JHWMA is a collaboration of various federal, state, local, and private organizations that was formed in 1997. Its primary purpose is to prevent, control, and eventually stabilize the ecosystem from further spread of noxious weed invasions.

The area of the JHWMA is approximately three million acres consisting mostly of Forest Service and National Park lands.

Teton Conservation District - Noxious Weed Cost Share Program

With a season starting May 1st and ending October 31st, The Teton Conservation District (TCD) began a cost-share program to help private landowners control the spread of noxious weeds on their property. TCD reimbursed participants up to 50% for the treatment of noxious weeds if they were approved for the program (based on TCD's application criteria) and completed the requirements. Requirements include: being a private landowner in Teton County, treating specific noxious weeds recognized by Teton County, having a Teton County Weed and Pest approved Integrated Weed Management Plan for the area to be treated, an agreement for a follow-up visit when treatment is complete, and submission of proper cost documentation.

This year's program has proven to be a success with 167 applicants enrolled in the program, over 18,000 acres treated, \$110,056.18 dollars reimbursed from 7 different towns; Jackson, Wilson, Alta, Moose, Moran, Kelly, and Teton Village. Many private landowners appreciated the program. One woman who owns property on Ely Springs Rd in Jackson said, "I feel this is a very important program for weed awareness. This has been a good program to get my neighbors involved with weed control who were unaware of the problem."

Issues have arose such as chemical use/storage, clarity of program requirements, targeting only the listed noxious weeds, and pace of initial consultations to pace of private spray companies schedules. The TCD looks forward to improving these issues for next years program. Improvements such as an extra staff member, mapping of noxious weeds on select properties, and increased enrollment will also be considered.



Teton Science School

The Conservation Research Center continued its aggressive weed control program on the Kelly Campus and Jackson Campus of Teton Science Schools. Weed control efforts focused on Canada thistle, musk thistle, and houndstongue although small infestations of toadflax and knapweed were identified and aggressively treated. Mechanical methods (i.e., pulling, mowing) were also used for weed control. Student groups assisted with 8 weed pulls focusing on houndstongue and a high school group participated in a weed pull held with Teton County Weed and Pest and the Jackson Hole Land Trust. More than 300 man hours of chemical treatment occurred on the Jackson Campus.

Student groups participated in monitoring projects to determine the efficacy of our chemical weed control program around the pond area of the campus. These monitoring projects will be expanded in 2006. The Conservation Research Center also participated in the noxious weed cost-share program sponsored by the Teton



Yellowstone National Park

Resource Management staff was again responsible for the Exotic Vegetation Program which included preventing, monitoring, and controlling non-native plants. An aggressive effort continued involving over 100 park staff, more than 100 volunteers and a total of nearly 8,000 person hours. In 2005, approximately 3,500 acres were surveyed with a majority of control efforts occurring along roadways and in developed areas and the remainder occurring in the park's backcountry. Forty-one species were treated at nearly 2000 park locations totaling 723.59 acres and an additional 175.31 acres of areas treated on multiple occasions. An integrated weed management approach was used including mechanical and chemical controls. The majority of control efforts were directed at twenty-three priority 1 and 2 species including spotted knapweed, toadflaxs, thistle species, ox-eye daisy, houndstongue, St. Johnswort, and field bindweed. Early detection and eradication efforts continued on leafy spurge, diffuse knapweed, sulfur cinquefoil, tansy aster, plumeless thistle, black henbane, scentless chamomile, and bladder campion. Overall, it was another successful year of weed control despite another

Wyoming Game and Fish

The Wyoming Game and Fish Department (WGFD) continues to work in cooperation with the Teton County Weed and Pest (TCWP) on educational efforts throughout the year. Educational talks were given on elk migrations and feedgrounds and their impacts on noxious weed management. Due to extensive amounts of hay purchased for the elk feedgrounds, and the potential for noxious weed spread from extensive elk movements, the WGFD is aware of the potential of the feedgrounds as a noxious weed source and vector.

This year was the JHWMA subcommittee planned and initiated the first annual weed extravaganza. The event was hosted by the WGFD at the South Park Feedground, where participants helped pulling weeds in exchange for rides on the mechanical bull. Employees from Wyoming Game and Fish Department continue to sit on the JHWMA subcommittee for education. The Department would like to utilize South Park feedground for future weed pull events because of its location and weed infestations.

The department continues to purchase certified weed free hay for our 22 state feedgrounds however, it's not always clean. WGFD personnel are also responsible for maintenance of several horse pastures that have had problems with noxious weed infestations in the past. The department has a contracted individual (\$3,000/ yr.), who works at the South Park feedground pulling henbane, houndstongue, and spotted knapweed and takes care of other maintenance activities. New infestations of spotted knapweed were found just to the south of the entrance to South Park and on two of the dikes. In addition, the WGFD contracts with the TCWP (\$3,800/yr) for noxious weed control on South Park, Camp Creek and Horse Creek.

Next year this contract is expected to double due to increased efforts by WGFD and TCWP to address the South Park noxious weed problem. The continual encroachment on this wildlife habitat management area from development not only reduces available wildlife habitat, but increases the spread of noxious weeds from migrating big game to disturbed soils.

Department employees' monitored and removed noxious weeds at the South Park, Patrol Cabin, Fish Creek, Alkali, Dell Creek, and Greys River feedgrounds. Biologists also look for weeds and GPS their location when working in the field.

The WGFD solicits funding for the JHWMA. This past year these efforts were unsuccessful on grants through the Rocky Mountain Elk Foundation. Potential new sources may have to be examined for future grants to help fund weed control efforts and maintain healthy crucial wildlife winter ranges.

Jackson Hole Land Trust

The Jackson Hole Land Trust (JHLT) contributed to the control of noxious weeds in Jackson Hole in a number of ways in 2005. As part of our ongoing conservation easement stewardship program we have continued many of the noxious weed control efforts from the past, as well as increased these efforts with new tasks in 2005.

Over the last year, we met individually with 86 conservation easement landowners and helped raise noxious weed control awareness through assistance with identification and by discussing methods of control. During these meetings we walked the properties and visually monitored and identified the noxious weeds on the property; recorded our observations in our annual monitoring report; and documented the status of the noxious weeds for all of our easement properties, which is tracked through time. Each of the JHLT's Land Stewards have and will continue to serve on subcommittees for the Jackson Hole Weed Management Association. The JHLT also continues to include provisions for follow-up weed control prior to land disturbing activities that require JHLT approval, on protected properties.

The JHLT added two more properties that the JHLT is responsible for maintaining, which are chemically treated for noxious weeds. This increased the total number of hours spent chemically controlling noxious weeds on JHLT properties to 71. We also sponsored two volunteer weed pulls on the two new properties. We promoted the Teton Conservation District's Private Landowner Noxious Weed Control Cost-Share Program in two ways. First, we highlighted the program in our spring newsletter, the Land Steward, which was sent to each protected property landowner. Second, through our meetings with each landowner we ensured each landowner was aware of the program, provided interested landowners with a copy of the application, and offered our assistance in completing and submitting the applications. More than a dozen of our landowners, as well as the JHLT, successfully participated in this program. We consider the program a great partnership and look forward to continuing to promote it next year.

Finally, we sent our summer Stewardship Intern to the Jackson Hole Weed Management Association's two day spring training seminar and he participated in the cooperative weed control effort along the Gros Ventre River.



Grand Teton National Park

In 2005 Grand Teton National Park weed management crews spent over 3,500 person hours on chemical and mechanical treatment of noxious weeds and invasive plants throughout the park and the John D. Rockefeller, Jr. Memorial Parkway. Focal areas included riparian zones such as the Gros Ventre River, the Snake River and Cottonwood Creek, as well as backcountry trails and canyons, and continued efforts to reduce seed production and spread from infested acres on the valley floor. The park worked cooperatively with Teton County Weed and Pest and remains active in the Jackson Hole Weed Management Association. Park personnel were also assisted by a number of volunteers who gave generously of their time working on mechanical treatment and native plant seed collection.

The shoreline and islands of the Snake River within the park and south to the Wilson bridge were re-inventoried in 2005 including checking all previously mapped and treated salt cedar infestations for regrowth. No saltcedar plants were located in any of the previously treated sites – indicating that mechanical treatment has been effective. A total of 4 new saltcedar infestations were found and treated, along with 26 infestations of perennial pepperweed south of the Park boundary. The above-ground biomass of these plants was removed mechanically, however these sites will likely require chemical treatment in 2006 due to perennial pepperweed's extensive root system and resprouting ability.

Surveys and mechanical treatments were conducted in Granite Canyon, Death Canyon, and Cascade Canyon. Weeds found and treated in the canyons include musk thistle, yellow toadflax, mullein and St. Johnswort. The Hidden Falls and Inspiration Point areas were treated in a cooperative effort in which Exum Mountain Guides staff worked alongside park and county personnel. Volunteers were responsible for discovering new infestations of rush skeletonweed along the Jackson Lakeshore. These were the first documented sightings of this species in the Park and this type of early detection and eradication is essential to achieving our overall weed management goals.

Caribou-Targhee National Forest

The Palisades and Teton Basin ranger districts are both located in Wyoming and Idaho. Each ranger district has a weed crew that treats weeds both in Wyoming and Idaho. Both districts are also equipped with horse pack sprayers when needed for backcountry treatments. We treated 1,048 acres of weeds in the Jackson Hole WMA during 2005. Weeds treated were spotted knapweed, Canada thistle, yellow toadflax, leafy spurge, musk thistle, St. Johnswort and Mullen. Good news is we could not find any leafy spurge in the South Fork of Big Elk Creek. We have been treating this area for many years and this is the first year we have not found any plants. The bad news is St. Johnswort has been found on the forest in Teton Canyon. It was treated this past summer and we will keep treating it as well as looking for other infestations.

Education and Landscaper Subcommittees

In 2005, the JHWMA subcommittees reached a lot of people and places. The education subcommittee jumped into the summer season with the 2nd annual Wildlife Expo for valley 4th graders. The big event for this summer season was the Noxious Weed Extravaganza. Local businesses and agencies donated over \$3,000 in food, prizes, and other items for the event. Tickets were given out for each bag of noxious weeds that were brought in. The tickets were then used to ride the mechanical bull. Many prizes were also given out to participants of the games and contests. Thanks to all of the JHWMA members who helped to make this a successful event.

Other activities continued throughout the summer with Elkfest, Kids Fishing Day, 4th annual Poster Contest, Old West Days Parade, Teton County Fair, and Old Bills Fun Run. TCWP Education Coordinator, Amy Lerch visited 23 classrooms from first through 9th grade, seven real estate companies, eight guest ranches, five local law enforcement agencies, one fishing guide company, the Backcountry Horsemen group and many others to spread the word about noxious weeds and certified hay. There has also been a continuing education course approved through the State for real estate agents and appraisers. Dates will be advertised in the weekly newspaper so keep and eye out.

This year the landscaper subcommittee lead by Aaron Foster, TCWP Assistant Supervisor, took another step in requesting an update to the town of Jackson Noxious Weed Ordinance. A special thanks to Budge Lawn Care, Firewise, Green Turf, JH Landscaping, Naturescape Design, Rainmaker, and Terra Firma for their continued dedication to the JHWMA.



Pinto Ranch

In 2005, the Pinto Ranch focused on several small spot spraying projects. This focus took place after having all of the hay fields sprayed during the previous year. The concentration was on the continued resurgence of the Musk Thistle plants during the wet and cool summer. Patches seemed to be developing in areas where we hadn't seen any plants during the drier years. All of the work was done with backpacks and took about three weeks.

The spotted knapweed problem at the lower ranch, along the highway, continues to have several plants each year that need to be addressed. We continue to see positive results in the lower number of plants each year. Some field bindweed was also treated in the same area. This seems to be a small patch and the area will be surveyed next year for additional patches.

The yellow toadflax patches continue to be in only two areas and they are getting smaller each year. Continued pressure to them should eliminate the patches within the coming years. Along with the yellow toadflax, the oxeye daisy problem seems to be disappearing also but a new problem has come about with the shasta daisy plants in our flower beds. These plants seem to be popping up outside the yard fence lines in several areas. It has been discovered through some literature that the shasta daisy can show some signs of reverting back to some of its parent genetics (oxeye daisy) and start to spread. It may come down to the total eradication of any daisy plant in the flower beds if this problem continues.

In 2006, the ranch will look at some inventory of the Canada thistle plants and what effects the biological controls are having on the plants. We are also looking at some control on some other grasses that are starting to show up, such as a couple of patches of bulbous bluegrass and cheatgrass. These grasses are found in some small patches and we will explore some control methods to see how they will work in our program.