



# Why Should I Care

## about Noxious Weeds?

*Restoring native wildlife habitat  
for today and tomorrow.*

### HOW NOXIOUS WEEDS AFFECT

Hunting

Fishing

Wildlife

Farming

Visitors

Landowners

Myths/Facts



# So Why

## Should you care?



*Spotted Knapweed*

The following are statements of Fact that you should be aware of!

- \* Noxious Weed species are getting a foothold on almost all private and public lands in the Greater Yellowstone Area.



*Yellow Toadflax*

- \* Noxious Weed species left unchecked will limit many uses on lands now and for future generations.

- \* Noxious Weed species can negatively alter water systems, wildlife habitat, and recreation areas forever.

- \* The longer we ignore noxious weeds the more expensive they will be to eradicate.



*Saltcedar (tamarisk)*

- \* You, can be a part of the solution by being aware. Otherwise, you are part of the problem.

- \* To learn more,

Please read on!



## What is the GYCC Noxious Weed Subcommittee?

The Greater Yellowstone Coordinating Committee (GYCC), Noxious Weed Subcommittee was formed to address the management of noxious weeds across land ownership boundaries in the Greater Yellowstone Area (GYA). It is composed of noxious weed personnel from the National Parks, National Forests, State Parks, Game and Fish, Bureau of Land Management, National Wildlife Refuges, and County Weed Districts. These are the people directly responsible for identifying new infestations, monitoring spread, and developing control strategies. The managers of these units have identified noxious weeds as one of their top management priorities.

In 1975 the GYA estimated 10,809 acres infested with noxious weeds. By 1999 when mapping efforts were established, it was estimated that 222,437 acres were infested. In last few years, over \$3,000,000 was spent on noxious weed management in this area. An important part of this strategy has been the increase in public awareness through education.

**To truly make an impact and save the Greater Yellowstone Area from being invaded by noxious weeds, the GYCC needs help from all residents and visitors to this precious ecosystem.**

If I am a

# wildlife enthusiast

why should I care?

The Greater Yellowstone Area is comprised of a large variety of habitats such as grasslands, forests, sagebrush flats, riparian and alpine. These habitats support one of the largest diversity of plant, animal, and bird species in the lower forty-eight states. However, noxious weeds have already destroyed some of these habitats in areas along rivers, streams, and roadsides. Weeds such as spotted knapweed and Dalmatian toadflax have pushed out all native plants, making undesirable habitat for animals and birds. Loss of native plants to noxious weeds can mean less palatable forage for wildlife which can result in less wildlife viewing opportunities. Waterfowl and other birds, including trumpeter swans, rely on native vegetation for nesting, food, and cover. Bald eagles and osprey rely on the river systems as their main habitat.



Noxious weeds threaten all of this by altering the natural communities that these animals depend upon to produce food and cover. Larger animals are also affected. Saltcedar easily pushes out willows which moose rely upon. In one study in Montana, dense spotted knapweed populations were found to reduce available winter forage for elk by 50 to 90 percent. If noxious weeds win, wildlife lose.

If I am a

# recreationalist to the GYA

why should I care?

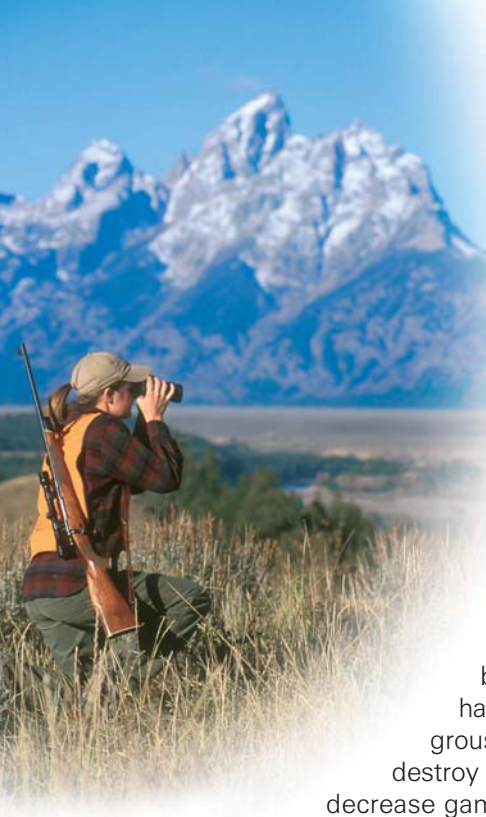
The grandeur and solitude of the mountains and rangelands within the Greater Yellowstone Area are enjoyed by many recreationalists. Unfortunately, the natural beauty and native communities of this diverse landscape can be degraded by hikers, campers, mountain bikers, and motorized recreation users who unknowingly introduce noxious weeds. Weed infestations started by the accidental transport of seed into remote places and ecologically sensitive habitats such as meadows, wetlands, lakes, and streams, can permanently damage the natural resources we value.

Recreationalists can help prevent new weed infestations in many simple ways. Learn how to identify noxious weeds that may be in or near your favorite recreation areas. Check for weed seeds that may be attached to your camping gear and clothing, especially socks and hiking boot tread, and even the family dog! Place seeds in a plastic bag and dispose in a trash can. Examine your mountain bike tires and chain, or your ATV/ORV tires and undercarriage for weed seeds and plant parts. Boaters and kayakers can easily spread noxious weeds from river to river if failing to take proper precautions such as washing boats between trips. Noxious weeds can become more easily established on sites where vegetation is trampled or burned so please stay on designated trails.



*Common Monkey flower adds a native burst of beauty in wet areas of the GYA*





If I am a

## hunter/outfitter

why should I care?

The Greater Yellowstone Area is well known for its scenic beauty, and it is also a popular attraction for hunters. Lush vegetation and healthy forests combine to provide habitat for big game such as elk, mule deer, moose, bighorn sheep and antelope. River systems, sage brush meadows, and aspen also provide habitat for sage grouse, ruffed and blue grouse, ducks, and geese. Noxious weeds destroy wildlife habitat and thus directly decrease game populations.

Plants such as spotted knapweed can spread very quickly and releases its own herbicide that kills surrounding plants. A single knapweed plant can produce over 4.7 billion plants and over 5.1 trillion seeds over a 10-year period which, if left unchecked could cover nearly 40,000 acres. Less nutritious forage and the loss of habitat translates to a corresponding reduction in wildlife populations.

Fewer animals in an area, means fewer hunting licenses issued, which means a decrease in opportunities for hunters and a loss of revenue for outfitters. Purchasing noxious weed free forage for livestock is required in all national forests and most other areas. Taking this simple step can greatly reduce the spread of noxious weeds.



If I am a

# fisherman

why should I care?

The lake and river systems of the Greater Yellowstone Area provide world class scenery and vital habitat for native cutthroat trout species. The spread of noxious weeds is changing this. Some species of invasive plants such as saltcedar and purple loosestrife grow in shallow water, ruining spawning grounds for trout. Noxious weeds can also increase the risk of flooding and soil erosion which means cloudy water, lower water quality and silted spawning beds. Thick stands of noxious weeds such as mullein, musk thistle, saltcedar, purple loosestrife, and houndstongue can make access to rivers very difficult. Also, just as fishermen spread whirling disease they can also spread noxious weed seeds from river to river if the proper precautions are not taken. Boat launches and fishing access areas are often unknowingly contaminated by fisherman and other recreationalists.

Fishermen have the opportunity to access many areas that no one else sees. Adopt your favorite section of river, pull invasive species as often as possible, and report any other infestations to area weed control organizations.

If I am a

# landowner

why should I care?

Noxious weeds on private property are a growing concern in the Greater Yellowstone Area (GYA). Often times, landowners do not even realize that these invaders are slowly choking out their native plant community. Noxious weeds are reducing the resale value of land all over the West, and they are very expensive to control if not detected early. As people become more and more aware of noxious weeds and their treatment costs, individuals will find it more difficult to sell property contaminated with weeds. And even the reduced price does not reflect the future cost of weed control.



Noxious weeds also increase soil erosion and the impacts of flooding. By displacing native species, noxious weeds reduce the land's ability to absorb the impacts of floods and hold the soil in place. Erosion is always a concern for property owners living along the many rivers in the GYA, allowing noxious weeds to prosper on your property will only increase the likelihood of flood damage.

So what can you do if you are a landowner? Early detection and eradication of small infestations are the most cost effective way to manage weeds. You can help by taking on the responsibility of weed control on your property and educating your neighbors about impacts of weeds. There are numerous Federal, State and County agencies, as well as local groups willing to look at your property with you and consult you on what the best methods of weed control. Many counties also provide herbicides at a reduced cost, and loan out spray equipment to make the job easier for you. If asked, they will also supply a list of weed control businesses in the area.



If I am a

# rancher/farmer

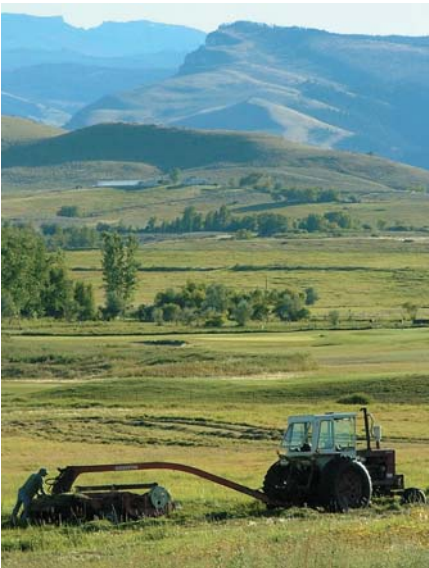
why should I care?



Noxious weeds should be of concern to every farmer or rancher because they reduce yields in crops, in pastures and on the range. They spread easily and very rapidly.

On rangelands noxious weeds compete with native grasses and forbs. They reduce range and pastureland for use by livestock. Some weeds such as leafy spurge and poison hemlock are toxic to livestock. Most livestock will not eat noxious weeds but if they do, the seeds can be spread through the animals manure and droppings. This will even accelerate growth of the seeds.

Farmers should be concerned about noxious weeds in their fields, on ditch banks and in fallow areas around the fields. Noxious weeds consume fertilizer, water and crowd out desirable plants. Without control they will spread throughout the field infesting crops and reducing yields. They can even make some crops unmarketable.



Noxious weeds in crops are expensive and time consuming to control. However, starting with control measures will eliminate the necessity of quarantining crops that contain noxious weeds in the future.

Controlling noxious weeds is a state law. Farmers and ranchers need to act early to prevent the spread of noxious weeds. In the long run, early detection and a fast treatment program can save you a lot of time and money.

# noxious weeds

to be aware of

## Saltcedar or tamarisk (*Tamarix ramosissima*)



Saltcedar is a deciduous, evergreen plant that grows from about 5 to 20 feet tall. Its bark is a reddish-brown and it has small scale like leaves. Saltcedar is native to Eurasia and Africa. It was planted as an ornamental bush in the early 1800's, and is now widespread throughout the United States covering more than a million acres of river banks and streams. Its long tap roots allow the plant to obtain water from deep water tables while interfering with natural riparian systems and transpiring up to 200 gallons of water per day. Salt secreted from salt glands falls to the ground around the plant, killing surrounding vegetation.

The frequency of wildfires and floods increase in dense stands of saltcedar. Dense stands of saltcedar contribute to a heavy fuel load for fires and as their density increases, they also narrow river channels and decrease

water depth. All of these factors together make the riparian area more susceptible to fires and floods.

Saltcedar is spreading into all of the GYA headwaters and many agencies are working on its eradication. Please be on the lookout for this extremely invasive bush. Take precautions if you have brought any equipment or a boat from an infested area and take time to wash your gear down before traveling to any lake or river. Please be on the lookout for saltcedar as you enjoy the river and contact the appropriate agency if you find this plant.

MORE **noxious**  
weeds TO BE ON  
THE LOOKOUT FOR...

**Spotted knapweed** (*Centaurea maculosa*)

Spotted knapweed is a biennial or short-lived perennial that grows 1 to 3 feet tall. It has pinkish-purple flowers and the bracts underneath the flowers have dark spots tipped with fringe.

Originally from Eurasia, knapweed was introduced in the early 1900's as a contaminant of alfalfa and clover seed. It prefers disturbed soil where they out compete other plants for moisture and nutrients. It now covers millions of acres of land, and is the number one weed problem on rangeland in western Montana. Methods of control for spotted knapweed include herbicide application, mechanical control such as hand pulling, and biological control. It has been found that it is most effective to use a combination of these three methods when controlling spotted knapweed. Along with the other two methods, biological control on spotted knapweed is becoming an integral part of the GYA.

According to the Washington State Noxious Weed Board, "Knapweed infestations increase production costs for ranchers, impair the quality of wildlife habitat, decrease plant diversity, increase soil erosion rates on valuable watershed areas, decrease the visual quality and appeal of recreational lands, and pose wildfire hazards."

Spotted knapweed is the most prevalent noxious weed along the Snake River in the GYA. You can find it growing and thriving on most of the islands. This plant can be pulled, but gloves are recommended. Spotted knapweed is particularly invasive due to its production of a chemical in its roots that kills all plants around it, creating more room for it to thrive.



**Perennial pepperweed** (*Lepidium latifolium*)



A perennial from southern Europe and western Asia, perennial pepperweed grows 1 to 3 feet tall. The flowers are white and in dense clusters near the end of the branches. It is declared noxious in a number of western states including Wyoming. Deep roots make this weed very difficult to control. Perennial pepperweed invades roadsides and cropland, but is a particular threat to riparian areas and rangelands. This plant also forms dense patches that destroy plant biodiversity and wildlife habitat.

**Purple loosestrife** (*Lythrum salicaria*)



Growing 6-8 feet tall, this perennial prefers moist or marshy sites. Rose-purple flowers have 5-7 petals. It was introduced as an ornamental from Europe and has escaped, reducing wildlife habitat, particularly waterfowl habitat. Dense patches of loosestrife in shallow water have been known to ruin fish spawning grounds. A single plant can produce 2.5 million seeds annually. Purple loosestrife has been found on the eastern edge of the GYA. Fireweed, a native plant, is often mistaken for purple loosestrife. If found this plant must be eradicated at once! Please report any possible infestations to the appropriate agency immediately.



## Also watch for these invaders.....



### **Leafy spurge** (*Euphorbia esula*)

Leafy spurge is a perennial that grows up to 3 feet tall with yellowish-green flowers arranged in heart-shaped clusters. When the seed heads explode they can project seeds as far as 15 feet. In North America leafy spurge infests almost 2.5 million acres! This species has been reported to cause severe irritation of the mouth and digestive tract in cattle which may result in death. The economic impact of leafy spurge in Montana, North and South Dakota, and Wyoming is approximately \$144 million per year (USDA-ARS TEAM Leafy Spurge).



### **Oxeye daisy** (*Chrysanthemum leucanthemum*)

Oxeye daisy is a perennial with daisy-like flowers that grow 10-24 inches tall. This species is a native of Eurasia that has escaped cultivation and was introduced as a seed contaminant. Most large herbivores avoid eating oxeye daisy and feed instead on grasses, increasing exposed soil for further infestations. Oxeye daisy is being sold in wild-flower seed mixes. Make sure to check the label carefully before purchasing so you will not contribute to its spread.



### **Houndstongue** (*Cynoglossum officinale*)

Houndstongue is a biennial that grows 1 to 4 feet tall. Introduced from Europe, houndstongue is toxic and contains a pyrrolizidine alkaloid that causes liver cells to stop reproducing. Animals may survive 6 months or longer after consuming a lethal amount.

Due to its Velcro-like seeds, houndstongue spreads easily and is highly invasive. If your clothes or pets become covered with these seeds, please pick them off and dispose of them in the garbage or a fire. Throwing them on the ground will only start a new infestation.





### **Dalmatian toadflax** (*Linaria genistifolia*)

Dalmatian toadflax is a perennial that can grow up to 3 feet tall. It is commonly misnomered as “butter and eggs”. It reproduces by seed and extensive root systems. One plant can produce up to 500,000 seeds annually. Dalmatian toadflax was introduced from southeastern Europe as an ornamental. It is aggressive and has become a serious problem throughout the West. The extensive root system combined with a waxy leaf make it extremely difficult to control. Hand pulling this weed species will only encourage its spread therefore, biological and chemical control are the best treatment.



### **Yellow toadflax** (*Linaria vulgaris*)

This is a perennial that grows 1-2 feet tall. Its flowers are yellow and resemble snap dragons. It reproduces by seeds and extensive roots. Also known as “Butter and Eggs”, this plant was originally brought from Eurasia as an ornamental. Its extensive root system makes this plant extremely difficult to control. Please do not plant yellow toadflax in your yards because it can easily spread into our wild environments.



### **Russian knapweed** (*Centaurea repens*)

A native of Eurasia, this creeping perennial was probably introduced to North America around 1898. The flowers can be pink, purple, or white. Russian knapweed is widely established in the western United States. It spreads by black, deep growing roots which can penetrate to a depth of over 8 feet. Russian knapweed is toxic to horses, causing nigropallidal encephalomalacia or “chewing disease” when sufficient quantities are consumed. Russian knapweed does not spread as quickly as the other knapweeds, however the deep root systems make it more difficult to control.

# noxious weeds

## MYTHS AND FACTS

**MYTH #1:** By not taking care of the noxious weeds on my property, I'm letting nature take its course and leaving my land "natural."

**FACT:** Ignoring the situation will only make it worse. Land must be managed correctly or the most aggressive, non-native plants will move in, displacing native plants, wildflowers and grasses.



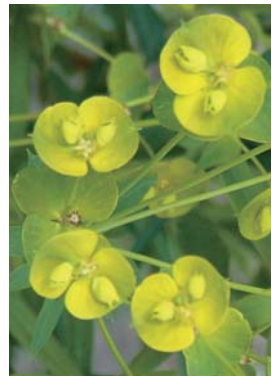
*musk thistle*

**MYTH #2:** Thistles such as musk and Canada are examples of the worst noxious weeds.

**FACT:** Although the thorns on these plants make them especially annoying, they are not the most difficult to control or the most invasive. Some of the most serious weeds have pretty flowers and no thorns such as the knapweeds, leafy spurge, and yellow and Dalmatian toadflax.

**MYTH #3:** Wildlife will eat noxious weeds.

**FACT:** This depends on the animal and type of noxious weed. Elk prefer native plants and grasses, and will starve to death on range infested with spotted knapweed and leafy spurge. Deer and cattle will graze spotted knapweed, but leafy spurge and houndstongue are poisonous to cattle.





*oxeye daisy*

**MYTH #4:** Oxeye daisies are beautiful wildflowers that do not cause serious damage to landscapes or wildlife.

**FACT:** This perennial plant can spread very quickly. In pastures it increases when large herbivores avoid eating oxeye and more pressure is put on grasses. The ungrazed oxeye daisy is then free to expand, while the grasses are decreased. Instead of oxeye daisy, which is illegal to plant in Wyoming, plant Shasta daisy or blanket flower.

**MYTH #5:** Thick weed infestations help hold soil and prevent erosion.

**FACT:** Research has proven this assumption is misleading. In one study conducted in Wyoming on native prairie bunch grass and spotted knapweed, native bunch grass lost 12.5 pounds of soil per acre in a simulated thunderstorm, while spotted knapweed lost over 125 pounds per acre. Tap rooted weeds will always increase soil erosion when compared to healthy stands of grass.



*perennial pepperweed*

**MYTH #6:** Cutting, hand-pulling, or mowing are the best ways to control noxious weeds.

**FACT:** This is true in some instances. Plants such as musk thistle can be chopped off at the base of the plant. However, perennials such as Dalmatian toadflax and Canada thistle should not be cut or pulled; this will only stimulate growth and produce more plants.

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**MYTH #7:** Biological control methods such as insects are the answer to noxious weed problems.

**FACT:** There is no one miracle fix for the problem noxious weeds pose. Never rely on a single method to control weeds. The best approach is an integrated management plan that includes a combination of chemical (herbicides), biological (insects), and mechanical (pulling/cutting) control methods.

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**MYTH #8:** Biological controls are bad because non-native insects are released on a non-native plant, and thus the insect could damage native plants too.

**FACT:** This might be true except for the fact that biological controls are highly regulated and tested prior to their release in the U.S. All biological controls are tested on plants native in the U.S. over a period of years in a lab on foreign soil. If the potential biological control does not feed on native plants and shows itself to be specific to the target weed species, then it is approved. If however, it feeds on a native plant during the tests, the insect is banned from release in the U.S.



*St. Johns Wort  
is another  
noxious weed.*

## Here's how you can help...

- \* Learn how to identify the weeds that are in this brochure.
- \* Make sure that seeds are not stuck to your clothes or gear. You don't want to introduce or spread these plants to other areas!
- \* Do not camp in weed infested areas.
- \* Wash mud or dirt off your vehicle before going onto public lands.
- \* Wash your boat before going to a new river.
- \* Drive on established roads and hike on designated trails.
- \* Pass it on!!! Tell your friends and family about this problem.
- \* Early detection and eradication of small infestations and prevention of new infestations provide the most cost effective ways to manage weeds. We need your help locating and eradicating the weed species that have been described on the previous pages. Be on the lookout for these plants while enjoying your time in GYA and help fight the "War on Weeds."

To report infestations in your area please contact...

## Wyoming

**National Forests:** Bridger-Teton National Forest: 307-739-5500; Shoshone National Forest: 307-527-6241

**Bureau of Land Management:** Cody Field Office: 307-578-5900; Lander Field Office: 307-332-8400; Pinedale Field Office: 307-367-5300

**County Weed and Pest Organizations:** Park County Weed and Pest: 307-527-8884; Fremont County Weed and Pest: 307-332-1052; Hot Springs County Weed and Pest: 307-864-2278; Sublette County Weed and Pest: 307-367-4728; Teton County Weed and Pest: 307-733-8419

**National Parks and Refuges:** Yellowstone National Park: 307-344-2003; Grand Teton National Park: 307-739-3486; National Elk Refuge: 307-733-9212

**Department of Agriculture:** Wyoming Weed & Pest Coordinator: 307-777-6585



this brochure was produced by  
Greater Yellowstone Coordinating Committee

## Montana

**National Forests:** Custer National Forest: 406-446-2103; Gallatin National Forest: 406-587-6702; Beaverhead-Deerlodge National Forest: 406-682-4253

**Bureau of Land Management:** Dillon Field Office: 406-682-2337;  
Butte Field Office: 406-533-7600

**County Weed Districts:** Carbon County Weed District: 406-962-3967; Park County Weed District: 406-222-4156; Gallatin County Weed District: 406-582-3265; Stillwater County Weed District: 406-328-4165; Madison County Weed District: 406-843-5594

**National Parks and National Wildlife Refuges:** Red Rock Lake Refuge: 406-276-3536

**Department of Agriculture:** MT Weed Coordinator: 406-444-3140

## Idaho

**National Forests:** Caribou-Targhee National Forest: 208-557-5791

**Bureau of Land Management:** Idaho Falls Field Office: 208-524-7500

**State Parks:** Harriman State Park: 208-558-7368; Henrys Lake State Park: 208-558-7532

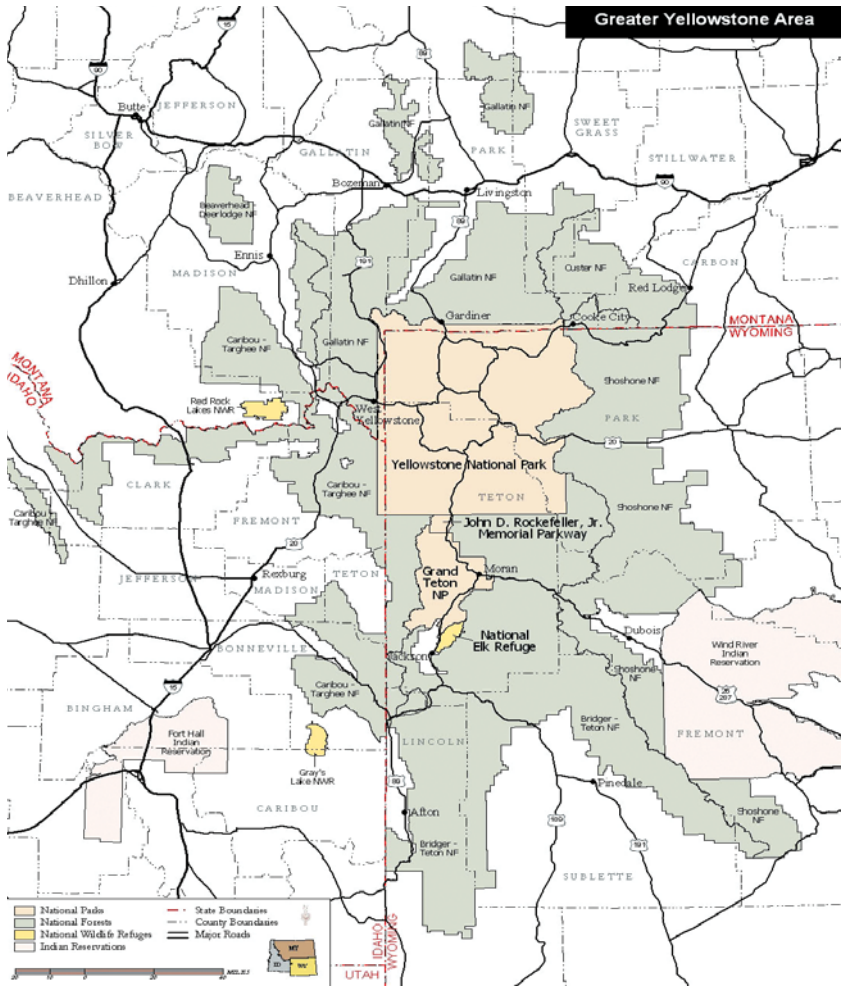
**Idaho Department of Fish and Game:** Sand Creek Wildlife Management Area: 208-624-7065; Idaho Falls-Upper Snake Region: 208-525-7290

**County Weed and Pest:** Fremont County: 208-624-3102; Teton County: 208-354-2961

**Department of Agriculture:** ID Weed and Pest Coordinator: 208-332-8667

*Photos courtesy of: Jim Gores, Amy Lerch and Weeds of the West*





special thanks goes to the  
 following contributors  
 who made this brochure possible...

- GYCC partners: USDA Forest Service,**
- USDI National Park Service,**
- USDI Fish and Wildlife Service,**
- USDI Bureau of Land Management,**
- Center for Invasive Plant Management,**
- Montana Statewide Noxious Weed Awareness and Education Campaign,**
- Rocky Mountain Cooperative Ecosystem Studies Unit.**