



featured

Residents of rural subdivision

Nestled comfortably at the base of the Tetons and bordering Grand Teton National Park is a unique subdivision – Solitude.

This property is not unique in size or how it is divided or even in the diversity of ownership. What makes Solitude unique is the cooperation of its residents on the management of a valuable, often-overlooked natural resource – its native plant community in their 780-acre subdivision.

Native plant community...sounds simple, right? Not necessarily.

According to subdivision resident Dick Howard, who is responsible for helping control weeds and pests for the Solitude Homeowners Association (SHOA), the challenge of the stewardship of this plant community knows no boundaries. It doesn't end at a property line, or a neighbor's, or even SHOA's biggest neighbor, the Grand Teton National Park, because the effort all put forward is mutually beneficial.

"Solitude is a unique location," says Howard. "With the Snake River as our western boundary and nearly surrounded by the park, it isn't hard to convince people to take care of their property."



Solitude subdivision with Mount Hunt in the background.

These efforts are exemplified by Solitude's program to manage noxious, invasive plant species – weeds. These plants are removed from their natural enemies, and they have often developed advanced survival



Spotted knapweed

techniques, including secreting chemicals that inhibit plants around them. These advantages allow these weeds to invade and then out compete desirable species for water, nutrients, sunlight, and space. To further aggravate the problem, most noxious weeds are unpalatable or poisonous to both livestock and wildlife. These weeds are very often avoided for forage, putting even more grazing pressure on the more desirable species.

Spotted knapweed is a prime example. This plant occurs in very limited infestations in Solitude and is considered a threat to the native plant community. Spotted knapweed secretes chemicals through its roots that inhibit growth of other plants nearby.

SHOA formed in the late 1970s, and it was at this time members decided to preserve the beauty of their plant communities' biodiversity. They initially expected everyone to take care of their own property. Members later decided to manage in a group effort and organized in the early '90s. With help from the Teton County Weed and Pest District (TCWP), a subdivision-wide weed management plan was produced.

The homeowners designated someone to shoulder the weed management responsibility. "It was very aggressive, and we've kept it that way," says Howard, who was not the designated person at the time.

landowners

cooperate to battle weeds

Howard, with roots in southeastern Idaho, purchased his lot 30 years ago while in southern California, but he didn't move to the area until 10 years ago, then he built his home about five years ago.

While a distant landowner, control of weeds intrigued him. "What really got my attention was about 10 years ago I was looking for property in Montana, and I was shocked at how much property was worthless as a result of knapweed," he says. "Hundreds of parcels every year are taken off the tax rolls because they were infested with noxious weeds. You'd see whole fields just gone. That is when I started to educate myself about the problem."

When he became a full-time resident, he volunteered to take over the weed management responsibility.

A good weed management plan consists of several important parts – mapping or cataloguing, developing goals, using an integrated approach, and evaluating management strategies.

In the fall of 2005, two employees from TCWP mapped noxious weed infestations on all Solitude's 106 lots over three days. There are multiple ways to map infestations, from a sketch on a piece of paper to satellite imagery. For this project, TCWP used hand-held Global Positioning System (GPS) units and a computer program from MapInfo Corporation.

They were able to produce maps with all the infestations they catalogued, including spreadsheets with information about each point. Maps give an idea of what weeds are present, even the ones residents never knew were weeds. These same maps help the property owners be more efficient in control efforts. When owners know what to expect on their property, they know where to go and how to treat the problem.



TCWP Assistant Supervisor Aaron Foster uses a Global Positioning System unit to map weed infestations.

“I think the residents of Solitude have become more attuned to the natural environment.” — Dick Howard

“The maps were very useful at the homeowner’s meeting. It gave property owners a report card on their progress and educated them and their landscapers to the variety of weeds needing control,” says Howard.

After the entire subdivision was mapped, residents developed goals. TCWP helped make controlling weeds easier by pointing out weeds that invaded similar areas with devastating results.

A highlight was finding two small infestations of St. Johnswort, a very aggressive, root-spreading perennial weed that, after ingestion, can cause painful lesions and blisters on light pigmented animals.

Another goal was to reduce the costs associated with hiring a commercial applicator to treat the roadsides, the common areas, and lots without houses. SHOA tried to keep its weed management goals simple so results could be easily measured.



St. Johnswort

Since Solitude has a diverse array of weeds, members attempt to use a diverse approach of control. The TCWP worked closely on the development of this integrated approach.

Integrated weed management includes using multiple control techniques such as mowing, pulling, or chopping, then spot treating with a selective

herbicide. Timing is also very important. Acting while plants are growing can be more effective or, in some situations, treating in the fall can be extremely effective as perennial weeds are actively preparing for winter by taking nutrients to their roots. The goal of using integrated tools is to apply multiple stresses to the targeted weed while reducing the impacts to the more desirable species.

Evaluating success on 106 lots and more than 780 acres isn’t always easy, according to Howard, but subdivision residents have a pretty good idea how to measure future success.

“In four years, we’ll have TCWP map it again,” says Howard. “Comparing progress on our maps with the help of the spreadsheets they gave us and with infestation size and percent coverage will give us a real good idea of where we are ‘winning’ against the weeds.”

The weed management effort has had other benefits besides controlling undesirable plants.

“I think the residents of Solitude have become more attuned to the natural environment,” says Howard. “With the National Elk Refuge southeast of us, we cohabitate with thousands of elk that migrate through here and dozens of moose, deer, fox, and coyotes, a few bear, an occasional mountain lion, and strutting sage grouse and a multitude of other birds. I believe our responsibility, while we are here, is to maintain a healthy native plant environment for the wildlife here now and, I hope, will be here long after we are gone.”

For help in developing a subdivision weed management plan, contact a local weed and pest control district (www.wyoweed.org/wp_dist.html), or an excellent template is available through The Nature Conservancy’s “The Global Invasive Species Initiative” at <http://tncweeds.ucdavis.edu/products.html>.

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