

## Watershed Council Continues Its Weed Battle

*Contributed by The Upper Merced River Watershed Council  
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A California Department of Corrections crew hand-pulls yellow starthistle along the Merced River. Watershed Council | Contributed The Upper Merced River Watershed Council joined forces again this spring and summer with the Bureau of Land Management, US Forest Service, and California Department of Corrections to battle invasive nonnative weeds that threaten the river canyon's renowned wildflowers, wildlife and recreation areas. Two grants from the Sierra Nevada Conservancy funded the work.

According to the California Invasive Plant Council, in the United States invasive species are the second greatest threat to endangered species, after habitat destruction. An especially noxious invasive yellow starthistle (YST), originally imported in the 1800s on alfalfa from Chile, is estimated to have invaded 22 million acres in California. YST has increased dramatically in the Merced River Canyon.

It is a common belief that the cost of prevention and removal isn't worth the millions of taxpayer dollars invested in invasive plant management. But, prevention and early removal efforts are actually wise investments for California. If infestations are allowed to spread, the cost of control increases exponentially.



This picture was taken in 2005 of the yellow starthistle infestation at BLM's Willow Placer area. Watershed Council | Contributed Invasive plants harm the habitat they invade environmentally, economically, and ecologically. Lacking control from their natural predators, invasives rapidly spread, out-competing wildflowers and other native vegetation. By forming extensive monocultures, invasives degrade wildlife habitat.

Many invasives increase fuel loads, raising the risk of fire frequency and potentially catastrophic fires. In addition, economic impacts are felt when invasives take over crop and rangeland (YST is highly toxic to horses). The Upper Merced River Watershed may not have as much range or crop land as other areas in California, but visitors from all over the world come to observe the amazing diversity of native wildflowers and wildlife. If the spread of invasives goes unchecked, access for activities such as fishing, rafting, hiking, and photography will be difficult, impacting these and other recreational opportunities.



This year, the same area of Willow Placer is shown, where only one yellow starthistle plant was found. Watershed Council | Contributed In 2003, the Upper Merced River Watershed Council first partnered with the Bureau of Land Management to remove yellow starthistle along the Briceburg Road and the Merced River Wild & Scenic Trail in the Merced River Canyon. Funding awarded by the Sierra Nevada Conservancy in

2008 enabled the Watershed Council to expand its invasive weed management project to address the removal of Italian thistle which is also spreading at an alarming rate.



Sierra National Forest Botanist, Joanna Clines, explains the scope of work to the American Conservation Experience crew. Watershed Council | Contributed Using money from state grants, the Watershed Council continues to enlist California Department of Corrections crews to carry out the task of invasive weed removal under the guidance of Watershed Council, CAL-Fire, and Bureau of Land Management personnel. Occasional volunteer “Weed Warrior Days” enhance

this work in the river canyon.

The Watershed Council received a new grant this year from the Sierra Nevada Conservancy allowing for the expansion of the invasive project by supplementing the Forest Service and National Park Service invasive weed work in the El Portal area. Under the guidance of Sierra National Forest Botanist, Joanna Clines, an international crew from the American Conservation Experience (ACE) was hired to manually remove YST between the road and river along approximately seven miles of Incline Road.

Consistent hand pulling and mowing has had good results, significantly reducing the YST within designated areas between Briceburg and the North Fork of the Merced including along the Wild and Scenic Trail. When the work began in 2005, it took an entire crew over a week to remove YST from this two-mile trail. This year, the crew only needed two days to accomplish this task.

There has been a reduction in Italian thistle present within the transects on BLM land; however this was only the second season of Italian thistle removal work performed by the CDC crew.

As with any control method, work must be performed at the optimum time and be consistent year after year in order to deplete the seed bank. Buried YST and Italian thistle seeds can be viable for

up to ten years. Timing is critical. For both these invasives, hand pulling plants (including roots) before flowering has been effective; once flowering starts, flowerheads must be disposed of in thick plastic bags or they will produce seeds. One YST plant can produce 30,000 – 80,000 seeds; Italian thistle can produce up to 20,000 seeds per plant.

Mowing large populations has proved effective if done when plants are at about two to five percent bloom, or about two blossoms per plant. If mowed too early, the plants resprout and produce more seeds; often producing flowers when plants are only a couple of inches tall (and difficult to see). Mowing too late, when plants are in full bloom, only helps disperse the seed.

Everyone can help by

- buying only certified weed-free livestock feed, fill, gravel, and dirt
- not letting seeds hitch-hike on clothes, boots, and tires
- learning to identify the difference between invasive and native thistles
- removing invasive plants from their property.
- not planting a pest, and learning which attractive alternatives can be used in home landscapes. Invasive plants (such as crepe myrtle and pampas grass) are often sold at nurseries and can also spread quickly and out-compete native vegetation.

To see examples of native plant gardens, community members can visit the Landscaping for Water Conservation Project and the Native Plant Demonstration Garden. Both are located at the Sierra Nevada Conservancy Office, 5039 Fairgrounds Road.

The following are sources of more information on invasive plants as well as the use of grazing, native plants and other control methods:

California Invasive Plant Council, [www.cal-ipc.org](http://www.cal-ipc.org); California Native Plant Society, [www.cnps.org](http://www.cnps.org); California Department of Food and Agriculture, [www.cdfa.ca.gov](http://www.cdfa.ca.gov); University of California Davis Weed Research Center, <http://wric.ucdavis.edu>; Mariposa County Agricultural Department at 966- 2075

For more information on the Council's invasive weed management projects, contact the Upper Merced River Watershed Council at 966-2221, [watershed@sti.net](mailto:watershed@sti.net) or [www.merced-river.org](http://www.merced-river.org).