



... a UC resource for vegetation management in Southern California

Welcome to Wildflowers!

The Inaugural Issue #1

What is Wildflowers?

Wildflowers is a virtually amazing quilt of information patching together different pieces of land management resources in Southern California. Wildflowers is a unique newsletter that provides an unmet resource for Southern Californians, regardless of whether they manage 10 square feet or 10 square miles. With this newsletter and website I hope to pull those disparate high quality pieces of information together so we can improve our lands and ourselves.

.....
The purpose of this newsletter is to provide you with information that will help improve management skills and foster communication among colleagues.
.....

Is red brome a management problem? Did you know the seeds of red brome only live 1 year?

Do you have an invasive grass problem? Did you know there is an herbicide that only kills grasses?

Is Sahara mustard threatening to invade your property? Did you



know there is a team of researchers working on eradication methods? There are many questions regarding vegetation management and I know we can work together to solve our problems.

In this issue:

Welcome	1
Southern California	2
Weed Disposal Techniques	3
Strategic Plans	4

Why Wildflowers?

Because when I see those remaining fields of wildflowers, I am reminded of how beautiful our landscapes can be, and how with a little bit of coordination and work, our gardens, backyards, parks, forests, rights of ways, and preserves can mimic those landscapes. And besides most of Southern California was filled with spring-blooming wildflowers; it is what Southern California was and could be: Wildflowers!



Wildflowers Resources

Visit the home site of
Wildflowers at
wildflowers.ucanr.org

At the site you will find information about

- The Wildflowers Newsletter
- Research Information
- Natural History Stories
- Vegetation Management Symposia
including Advances in Desert
Weeds
- Tools to create a Buzzing Garden
- Wonderful pictures of wildflowers
- The Sahara Mustard Consortium
- And add your stories to the site
too!



Copyright Chris McDonald

California buckwheat
Eriogonum fasciculatum



Copyright Chris McDonald

Southern California is special!

Southern California is special, or at least some people from other parts of the country label us as 'special.' We have a unique climate, geography and a unique land ownership pattern; over 15 million people live in the inland valleys while just over 1 million live in the eastern parts of Southern California. In addition, large portions of the California deserts are managed by public agencies or are significant agricultural centers. Those open spaces in the inland valleys are increasingly set-aside as reserves or are developed. Large tracts of the desert and inland areas are covered with invasive plants. I have walked in fields where my boots touch neither soil nor native plants; I have walked on carpets of weeds.

Because of our unique attributes, we sometimes need unique ways of managing our properties. Landscapes in Southern California usually 'produce' homes and businesses as well as open space, species reserves, and recreation opportunities, this may sound mundane but this pattern is very unique in our nation. In other parts of the U.S. open spaces are used to produce food or timber or some other commodity. Our half of the state even differs from northern California where the open spaces are range or harvested for timber.

What works in other parts of the country, sometimes doesn't work in Southern California; for better or worse we are special.

Weed Disposal Techniques

Now that it's Winter I start to think about all the weeds that are going to be removed or are being removed, one way or another, and I'm excited. Weed disposal is a topic that is often left for the very end, mostly because selecting a location to treat, organizing the labor and then doing the work naturally take precedence. For a weed removal project to be successful *and* efficient we should include the cost and time of weed disposal. Like many topics that sound simple, there are entire textbooks written about specific methods of weed disposal. I will provide a summary to get your creative juices flowing.

Piles, burning and bags, oh my!
The dirty work is done and there is this massive pile of leftover weed material that needs to be properly disposed. What to do? The basic methods are to: leave in place, make piles, chip, mow, bag, haul off site, burn, and solarize.

The easiest problems to solve are those never encountered
A significant step to efficient weed management is timing. Controlling weeds when the phenology (natural cycle) of the plant is optimal can reduce investments in labor and can increase efficiency. That being said, reality does sometimes get in the way of theory so it's not always possible to treat your weeds before seeds mature. One might ask, it is worth the extra

effort to treat it later rather than sooner?

When weeds are pulled and left in place, before seeds mature, disposal becomes less of an ecological issue and more of an aesthetic issue. Will the dead material look bad? Will anyone care if it does look bad? If you can answer no to either of those two questions leave it there. Many herbaceous (non-woody) weeds will naturally decay after about one, sometimes two years and when placed in a dry area they are not likely to re-root and grow. This is an efficient and low cost way of controlling many annual and biennial weeds: pull and leave in place.

If you are working in a wet area where the weeds could re-sprout, then pile them in an area that is dry, maybe just outside the creek bed or canyon. This will still save you time if you do not have to retreat sprouting weeds in moist soil.

Piles of weeds to the sky
If the seeds of the weeds have already matured another technique is to pile the plants and then put something heavy on top of the pile if the weeds will blow away (an old tire or scrap piece of plywood and rocks). The seeds will fall down into the pile but if the pile is thick enough many seeds will not germinate. Those seeds that fall just outside the pile will make a 'halo' of new growth around the pile next year. Pulling this circle of weeds in the next year is sometimes easier than bagging all the pulled plants this year. In essence you are

concentrating the seeds into a few areas rather than allowing them to disperse across the whole landscape. Don't forget that you left the pile there, go out and kill the new 'halo' of weeds next year.

How to tell if seeds are mature?
The easiest way is to open up a fruit and squeeze the seed. If it is moist and easy to squish its not ripe. Light green is another good sign; fruits and seeds tend to turn a darker color when ripe. There are also many different species that don't follow these general rules so unfortunately it can be difficult to determine, there is no cut and dry rule, nature is complex.

Perennial issues
When working with perennial weeds, there are more and also less options; a duality if you will. The trunks of trees can be chipped into mulch (depending on stem diameter). They can also be cut into logs and hauled off or left in piles to decay. Some perennial trees can resprout if left in moist soil (like tamarisk) so they need to be piled on dry ground. Perennial grasses can be placed in piles, perennial shrubs can be crushed in place or chipped or mowed. Some ingenious people are even building mobile kilns where weeds can be safely burned onsite.

Speaking of burning, with proper permits and the help of a fire crew, piles of wood can be burned in the open. This method is not for everyone as the pile will need to be relatively dry, burned on a calm day and one

must always follow all laws and regulations. Make sure you contact the local fire department for help with this method.

Here comes the sun

Solarizing weeds is gaining in popularity, as it is an efficient method of reducing weed waste. Despite its apparent youth it is a well-tested technology and somewhat old technique; researchers have been solarizing soil to kill weed seed with plastic tarps for over 30 years. It is being used on many thousands of acres of desert agricultural areas in California for the production of organic vegetables including lettuce, broccoli and carrots.



In the field, you can use tent solarization to kill plant propagative material (weed seed, rhizomes, stolons, bulbs, etc) on site instead of having to haul them out of the area. A slide show explaining tent solarization is available at <http://ucanr.org/sites/socalinvasives/files/90103.pdf>. (10mb file)

There are several different variations using tents, rows, pots and piles, so you may have to do some research or customize the technique for your specific application. We can help you with this process. For more information on solarization visit:

<http://solar.uckac.edu/>

<http://ucanr.org/sites/Solarization/>

<http://www.ipm.ucdavis.edu/>
(enter search term "solarization")

With assistance from:

Carl Bell
Invasive Plant Advisor
University of California
Cooperative Extension
cebell@ucdavis.edu

<http://ucanr.org/sites/socalinvasives/>

Strategic Planning in Borrego Springs

Land managers, non-governmental organizations, county government officials, local organizations and researchers from across Southern California have been meeting to discuss the future of Borrego Springs. More specifically they have been meeting to discuss the lack of a future for Sahara mustard in Borrego Springs.

Borrego Springs is a small community located between the Salton Sea and San Diego. The small town of about 4,000 residents is completely surrounded by Anza-Borrego Desert State Park. There is enough rainfall in Borrego

Springs such that in a year with average precipitation the wildflower bloom is good, in years with above average precipitation the blooms are spectacular.

The problem is that the invasive Sahara mustard is outcompeting the wildflowers and turning once brilliant fields into weedy fields. The town also relies on spring wildflower visitors to spend a weekend in the city to take a hike and explore the local restaurants.

Local residents have realized what this weed will do to their beloved wildflowers and what it will do to their economy. Instead of sitting back they have decided to band together and not let this invasive plant reduce their wildflowers to a few relic populations.

Their valley-wide strategic plan is unique in that there are not directly trying to protect an endangered plant or animal, as is the reason for most habitat conservation plans, nor are they developing a plan just one landowner, they are trying to preserve their landscape. The goal is to develop a plan where everyone can pool their limited resources to treat and clear the most valuable locations in the valley and then move out constantly eradicating Sahara mustard.

The strategic plan takes a lot of work and already shows great potential. All the major landowners have a place at the planning table, and to ensure progress is efficient a facilitator

We need you to contribute to the next Wildflowers issue! Tell everyone about your management success, or your next big plan,

or save a colleague money and share your non-successes. We can include your article in the next issue. Feel free to provide feedback on this issue.

Wildflowers is published semi-quarterly by UC Cooperative Extension. UCCE distributes materials without discrimination. cjmcdonald@ucdavis.edu

from the Steve Alexander Group is involved. The draft plan will be discussed throughout the town and at a public hearing where the community can voice their ideas as to improve the plan.

Most importantly after the plan is finalized the removal work will begin. Normally, volunteers and professional managers often work without communicating with each other, removal progress is not well monitored and efficiency is not measured.

The plan will help show to potential funding sources that Borrego Springs is serious about sticking together and making long-term progress. The plan will also allow volunteers to coordinate their efforts with land managers, to monitor post-treated areas and researchers can measure the effectiveness of different removal methods. In the future this community of workers will discuss how to keep up the effort and what needs to be changed.

As work progresses the town hopes to have weed-free areas that are filled with wildflowers.

Can this planning effort relate to your management activities? I

hope so, the ideas in this plan can be incorporated in a reserve that is large or small, and volunteer groups, "friends of" organizations and managers can often work together to improve invasive plant management. All it takes is a plan.

.....
Thanks for reading and keep your weeds to yourself,

Chris

Chris McDonald PhD
Natural Resource Advisor
University of California
Cooperative Extension
cjmcdonald@ucdavis.edu

Outdoor Notes:

January Rains

Inland Valleys

Winter rains were significant enough to start germination in the foothills of the inland valleys, many of the bromes and wild oats are out in these areas turning hillsides green and flowering. Wildflowers in many areas are lacking.

Deserts

Germination in many areas of the Southern California desert has been patchy or hasn't started due to low rainfall. This holds true for both weeds and wildflowers. Local results can vary over relatively short distances.

UNIVERSITY OF CALIFORNIA
COOPERATIVE EXTENSION
SAN BERNARDINO COUNTY
777 E. RIALTO AVE.
SAN BERNARDINO, CA 92415