

San Luis Obispo County

Weed Management Area

To better serve the SLO WMA community in efforts to educate, coordinate, promote & implement special and ongoing pest management projects.

Upcoming Events



- **SLO WMA Meeting (Zoom)**

July 21, 2022
1:00-3:00 pm
Email to request link, if needed.

- **Cal Poly Strawberry Center Field Day**

July 28th, 2022
Check-in opens at 7:30 a.m.
530-400-0444

[More Info & Register Here](#)

- **Invasive Plant Management from Cities to Wildlands**
2022 CAL-IPC Symposium
Online, Nov. 1-3

[More Info & Register Here](#)

Dune Protected Areas Network: A Blueprint for Conservation in the Guadalupe Nipomo Dunes, a project of The Dunes Collaborative (excerpt)



Veldt grass treatment area in foreground April 2021. Live veldt grass can be seen in the distance outside the Dune Protected Area.

by Jon Hall, Land Conservancy of SLO

Background

The 22,000-acre Guadalupe Nipomo Dunes Complex (GNDC) is an ecological treasure which provides important habitats for hundreds of coastal species. In 1974, the US Secretary of the Interior designated the GNDC as a National Natural Landmark for containing the largest, relatively undisturbed coastal dune tract in California and exhibiting one

of the highest rates of endemism of any dunes in North America. Following this, a 1980's inventory of sensitive resources within California, produced by the U.S. Fish and Wildlife Service, described the GNDC as "the most unique and fragile ecosystem in the state..." and ranked it 1st on a list of 49 habitat areas in need of protection statewide (U.S. Fish and Wildlife Service, 2000).

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The GNDC is home to a wide diversity of species and provides protection for 63 federal and state listed species.

Although there are many threats to these fragile ecosystems, one of the most pervasive threats to the GNDC is the loss of habitat to invasive species. The greatest impact has been the rapid and widespread invasion from South African veldt grass (*Ehrharta calycina*), European beachgrass (*Ammophila arenaria*), and iceplant (*Carpobrotus spp.*). With blowing sands, strong winds and salty air the native dune condition provides successional stages from heavily disturbed/pioneer near the ocean to stabilized back-dunes and oak woodlands farther inland. These successional processes allow for an incredibly diverse community. Unfortunately, widespread invasion by non-native plants is altering these successional processes. Figure 1 shows an excellent example of the effect *E. calycina* has on the coastal scrub community.

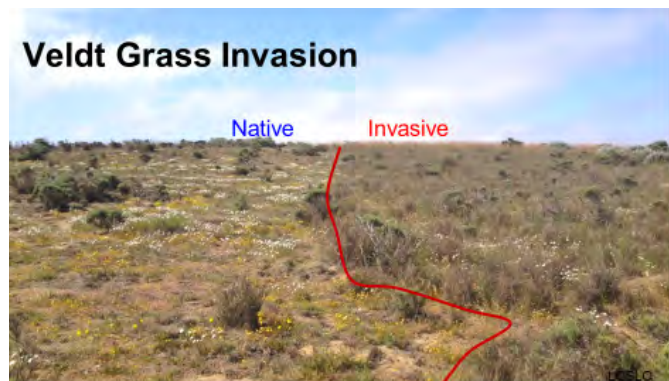


Figure 1: South African veldt grass invasion of coastal scrub habitat (on right) and under treatment (on left) releasing the native biodiversity.

Concept and Approach

Although there are continual new invasive species introductions into the GNDC that make early detection and rapid response a high priority, the population size of the three most aggressive invaders has made the possibility of focusing solely on eradicable species infeasible.

According to the invasive species growth curve, widespread species fall under a control strategy termed “asset-based protection” (Figure 2).

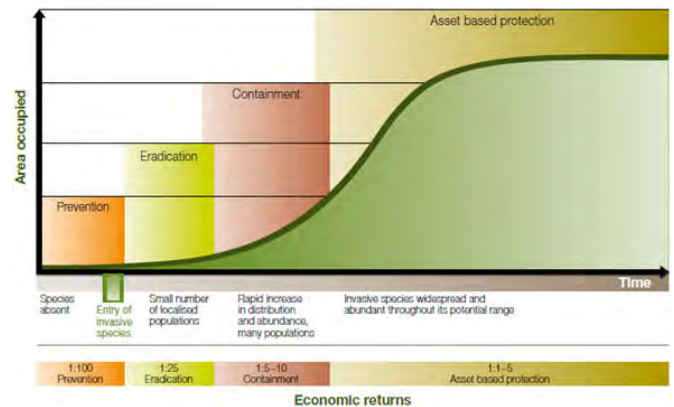


Figure 2: Phases of invasive species invasion and control (the S-curve) and associated management categories. Adapted from Agriculture Victoria, 2002.

Asset-based protection means controlling only those invasive species populations that directly threaten high-value conservation targets. This is typically the approach with widespread invasive species, for which the only cost-effective approach is localized control to protect nearby valued assets.

In 2014, the Dunes Collaborative set out to identify which areas in the GNDC would be the focus for this asset-based protection approach. What they came up with was a conservation strategy that identified a network of high priority conservation areas designed to preserve and promote native biodiversity; maximize resiliency to a changing climate; maintain ecological processes that promote the dynamic nature of the dunes; preserve and promote wetland and upland habitat quality and connectivity. They termed this conservation strategy the Dune Protected Areas, or DPA Network (The Land Conservancy of San Luis Obispo County, 2018).

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The DPA Network is based loosely on the “Green Infrastructure Network” concept (Figure 3) used in urban environments to protect natural habitats and pathways. It is an interconnected system of protected natural areas that conserve ecosystem functions while providing benefits for wildlife (Benedict, Edward, & McMahon, 2002). Each DPA consists of core areas and hubs, which are connected by linkages.



Figure 3: Green Infrastructure Network. The Dune Protected Areas Network is roughly based on the Green Infrastructure Network used to create wildlife pathways through urban areas.

Core areas are the nucleus of the network and are chosen by their biological significance or pristine example of unique habitat. The core areas were first selected using conservation modeling software; a tool being used around the world to efficiently select unbiased areas for conservation. Consultation with the Dunes Collaborative Restoration Task Force, professional recommendations and available occurrence data of rare and listed species finalized the selection of each core area. These selected core areas are relatively undisturbed and have low invasive species intrusion.

Hubs buffer the core areas to offer additional protection against invasion and disturbance. These extensions of the core areas allow for less fragmentation of habitat types and

offer continuous native cover. Hubs may contain multiple core areas, connecting them together as a unit.

Linkages are linear features connecting hubs together to facilitate wildlife movement, seed dispersal, and gene flow between core area freely. Connectivity between hubs is essential for preservation of species in perpetuity. Connectivity was analyzed using Linkage Mapper software specifically designed to support regional wildlife habitat connectivity analyses (McRae & Kavanagh, 2011). The output of the software was modified to meet the needs of each DPA.

Figure 4 shows the location of these Dune Protected Areas.

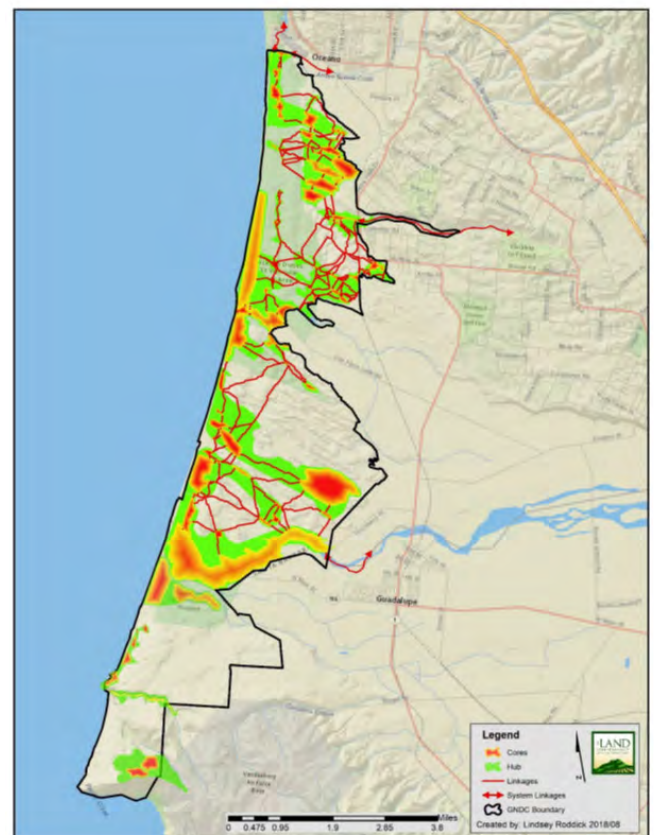


Figure 4: Dune Protected Areas Network in the Guadalupe Nipomo Dunes Complex.

To read the entire article, please visit www.cal-ipc.org/solutions/wmas/san-luis-obispo-wma

SLO County Parks & Integrated Pest Management (IPM)

by Craig Duprey ● ● ● ●

In recent years San Luis Obispo County Parks has placed more focus on implementing IPM concepts into our management goals. Our team defines IPM as a long-term management strategy that integrates biological controls, mechanical controls, and cultural controls to reduce pesticide use in our parks, golf courses, and grounds' properties. Although pesticides continue to play an important role in controlling pests, our staff continually seek best practices to reduce environmental impacts and improve public perception often associated with the use of pesticides.

Weed control serves multiple purposes in our department and is especially important for improving aesthetics and reducing fire risks. Our most common forms of weed abatement are mechanical controls and pesticide applications, but cultural and biological controls are equally important to our efforts in managing our properties. Coordinating mulch drops with other entities, such as Bunyon Brothers and Public Works, has proven valuable. Parks can strategically place free mulch to reduce the growth of unwanted vegetation while improving the aesthetics around buildings, trees, and parking lots. Our department has successfully used sheep grazing at Dairy Creek Golf Course to combat weeds and help reestablish native plants around the perimeter of the course.

Although we have made advances with IPM in weed management, our most impactful environmental contribution thus far is our reduction in rodenticide use. We have specialized carbon monoxide machines in each district and golf course that have been effective at reducing rodent outbreaks – especially of squirrels. Our golf courses have several raptor perches, swallow boxes, and owl boxes to help with rodent and mosquito control.



Carbon monoxide machine

We use various trapping methods as well to control gophers and moles. One such method, initiated and perfected by Park Ranger Specialist Tim Faes, has a 100% success rate and 0% chance of sending poisons through the food chain. The “Dead End” trap requires a little extra elbow grease to install, but ultimately is more effective and safer than other traps.

SLO Co Parks and Rec hopes to continue collaboration with the rest of the WMA team to reduce noxious weed outbreaks and implement IPM strategies in SLO County.



Tim Faes, Park Ranger Specialist

If you are interested in learning more about some of our strategies and equipment, please reach out to Park Ranger Specialist Craig Duprey. cduprey@co.slo.ca.us

Tree of Heaven & Spotted Lantern Fly

by Zella Redus, SLO Co Ag Tech



4th instar nymph SLF. Photo: Stephen Ausmus



Adult SLF. Photo: PA Dept of Agriculture

The spotted lanternfly (SLF), *Lycorma delicatula*, is an invasive insect recently introduced to the eastern United States. Although it feeds on many economically significant agricultural commodities, one of its preferred food plants is the tree-of-heaven (TOH), *Ailanthus altissima*, an invasive weed that is widespread throughout San Luis Obispo County and beyond. Adult SLF prefers TOH as food and as a site for laying its eggs.

A native of China and Taiwan, TOH is extremely prolific, fast growing, and can grow up to 90 feet tall. It can spread both

by suckers and by seeds and is found in disturbed areas and natural areas alike. Due to its fast growth, high rate of reproduction, and ability to thrive in a wide range of habitats, TOH can easily outcompete native vegetation. It also poses a structural threat to buildings and sidewalks due to its deep taproots.

Some SLF hosts that are important to agriculture include grapes, hops, apple, stone fruit, maple, poplar, and walnut. Its method of feeding can “reduce photosynthesis, weaken the plant, and eventually contribute to the plant’s death”.

Although the SLF has not yet reached our coast, its eventual

arrival is a distinct possibility. If it appears here, the TOH will be a readily available food source and site for oviposition, and thus, be a useful indicator for tracking the spread of the SLF. This would most likely manifest as a county trapping program that places traps in or near TOH. Those traps would be closely monitored for SLF. The County Agricultural Commissioner (CAC) has been surveying and mapping TOH sites throughout the county in anticipation of some such future program.

The CAC’s TOH surveys have resulted in an internal record of areas surveyed and a publicly available survey record through CalFlora.org. CalFlora provides the opportunity to upload pictures and locations of specimens which can be viewed regionally.

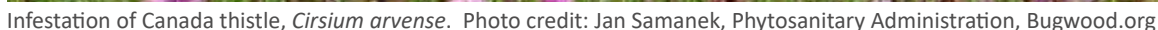
<https://calflora.org/entry/observ.html>.

Source: www.aphis.usda.gov/publications/plant_health/alert-spotted-lanternfly.pdf



Tree of heaven, *Ailanthus altissima*
Photos: Patrick Wall

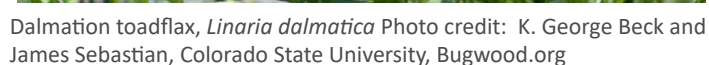




by Zella Redus, SLO Co Ag Tech

Obispo CAC collaborated to create a “regional weed prioritization list” pertaining to important weeds in the south central coast region. This document consists of lists that categorize invasive plant species in our area in several ways. One list identifies plants that would be priority targets for EDRR.

This spring, the California Department of Food and Agriculture (CDFA), California Invasive Plant Council (Cal-IPC), Santa Barbara County Agricultural Commissioner (CAC), and San Luis





Scotch thistle, *Onopordum acanthium*

Photo credit: Bonnie Million, Bureau of Land Management, Bugwood.org

The identified plants in the South Central Coast region are leafy spurge (*Euphorbia virgata*); foxtail restharrow (*Ononis alopecuroides*); dalmatian toadflax (*Linaria dalmatica*); Scotch thistle (*Onopordum acanthium*); Canada thistle (*Cirsium arvense*); European sea lavender (*Limonium duriusculum*); and devil's thorn (*Emex spinosa*).

There are many other invasive plants of concern that were evaluated and identified for management throughout California utilizing Regional Priorities Compilation. Additional information about the statewide CDFA EDRR and regional priorities can be found at the following links:

- [EDRR for Invasive Plants Oct 2021.pdf](#)
- [Stewarding California's Biodiversity](#)

Canada thistle, *Cirsium arvense*

Photo credit: Ohio State Weed Lab The Ohio State University, Bugwood.org



Source: Regional Invasive Plant EDRR Targets
October 2021. CDFA & Cal-IPC

South Central Coast Region: San Luis Obispo and Santa Barbara Counties CDFA Rated Regional Targets Present in Less Than 10% of the Region

Common Name	Species	CDFA Rating	Cal-IPC Rating	CAC Regional Target*	WMA Regional Target
leafy spurge	<i>Euphorbia virgata</i>	W	High	Control	
foxtail restharrow	<i>Ononis alopecuroides</i>	W	Limited	Containment	
dalmatian toadflax	<i>Linaria dalmatica</i>	W	Moderate	Containment	
Scotch thistle	<i>Onopordum acanthium</i>	W	High	Containment	
Canada thistle	<i>Cirsium arvense</i>	W	Moderate	Containment	
European sea Lavender	<i>Limonium duriusculum</i>	B	Moderate	Control	
devil's thorn	<i>Emex spinosa</i>	-	Moderate	Control	

* Containment: We do not allow any net spread of this plant.

Control: We control this plant, but not enough for region-wide containment.

Update: California Invasive Species Action Week 2022

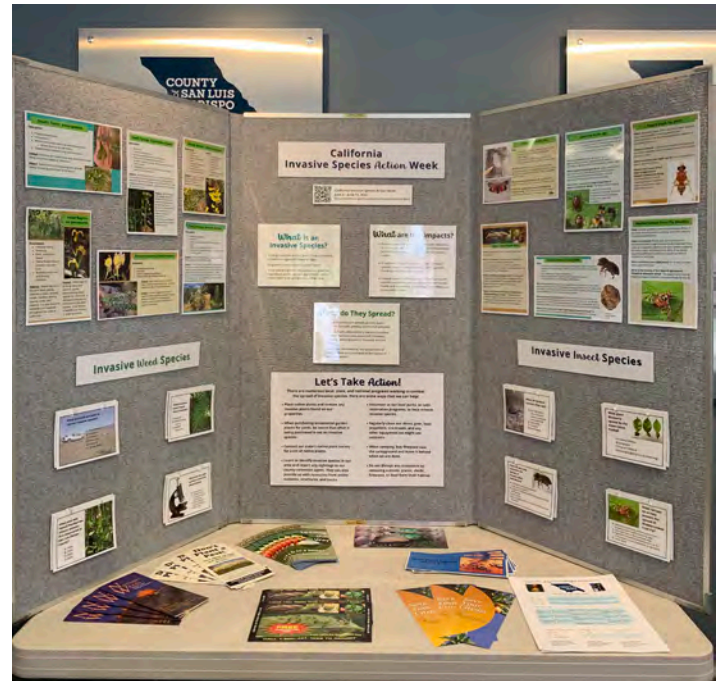
by Jocelyn Prieto-Garcia, SLO Co Ag Tech

The CA Invasive Species Action Week was held June 4th-12th. The purpose of this week is to raise community awareness about taking action against the spread of invasive species. Invasive species are one of the leading threats to native wildlife, agriculture, bodies of water, and our economy. These species alter the food web and destroy native wildlife habitats essential for the survival of many species, including our own.

This year, the County of SLO Agriculture/Weights and Measures' Weed Abatement and Pest Detection Programs created a display to highlight 10 invasive species the department targets and simple ways the community can take action against the spread of invasive species.

The University of California Agriculture and Natural Resources hosted Lunchtime Talk webinars highlighting important issues surrounding different invasive species.

Recordings of these webinars can be found through their website under **2022 Invasive Species Action Week Lunchtime Talks** (ucanr.edu).



Visit the California Department of Fish and Wildlife website and search "California Invasive Species Action Week" to find information about invasive species and how to continue to take action in your community.

Update: *Cortaderia jubata* Control Efforts

by Karen Lowerison, SLO Co Deputy Ag Comm.



Jubata grass, *Cortaderia jubata* Photo: SLO CAC

The California Department of Food and Agriculture designates jubata grass (*Cortaderia jubata*) as a B-rated weed. The County of San Luis Obispo Department of Agriculture/Weights and Measures (SLO CAC) has completed work on a recent grant targeting jubata grass within the Morro Bay and Los Osos areas. In doing this work, several remote populations

were discovered. Although the grant which initially prompted this work has ended, some work in the area to control jubata grass continues. The SLO CAC has recently gained permission to access new populations of jubata grass in remote regions of the Morros and have treated those populations. Follow up will be ongoing over the next several months and years.

SLO CAC Spring Survey and Treatment Work

Yellowstar Thistle: Conducted roadside treatments on over 154 miles of San Luis Obispo County roads.

Artichoke Thistle: Treated over 162 gross acres over 39 locations including follow-up treatments at the Mainini Ranch, which was treated in 2021

Foxtail Rest Harrow: conducted 4 surveys over Spring and hand removed 20 small plants.



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Thank you to Rusty Hall!



The County of San Luis Obispo Department of Agriculture congratulates Rusty Hall

on his upcoming retirement. Rusty's career as an Agricultural Inspector/Biologist spans 37 years and two counties where he brought a caring, positive attitude to each office and to each program. Rusty has been an integral member of the department and has been a mentor to many. His kind, calm and thorough method of teaching was a benefit to many growers and business operators through the years.



Rusty was assigned to lead the department's Weeds program for the last few years and brought many enhancements to our database, safety measures, equipment, and internal documentation, including diving down the rabbit hole of permitting *Arundo donax* treatments in the Salinas River. His contributions to the department are many and will always be valued and remembered. His hard work, commitment and dedication are worthy of admiration, and he will be greatly missed.

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Thank you SLO WMA
members and readers!

Reach out to us to be part
of our next newsletter or
to join our mailing list!

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