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 In Person!

October 20, 2022 UCCE Auditorium 2156 Sierra Way SLO, CA 93401

Cal-IPC Symposium Online November 1-3 Register: www.cal-ipc.org/ resources/symposium/register/

 Vote in the 2022 Cal-IPC Photo Contest Oct 1 - Nov 2 www.cal-ipc.org/ resources/symposium/photocontest/

CDFA Noxious Weeds Tour by Patrick Wall

The CDFA noxious weeds tour was a weeklong road trip that focused on A-rated and rare noxious weeds in California. The tour's goal was to educate county staff on weed identification and served as a networking opportunity for County Agriculture departments. The counties were divided into three groups based on geography and weed species found throughout the state. The San Luis Obispo County Agricultural Commissioner's office took part in the southern California tour, which spent three days identifying weeds in Fresno, Tulare, Kern, Ventura, and San Luis Obispo counties. Weeds focused on were alligator weed, scotch thistle, spotted knapweed, sea daffodil, artichoke thistle, and other CDFA rated species. Along with identification, current management tactics and ongoing eradication projects were





Sea Daffodil (*Pancratium maritimum*) in coastal dune habitat, Ventura County. Photo Credit: Patrick Wall



Above: Artichoke thistle (*Cynara cardunculus*) along Highway 1, San Luis Obispo County.

Photo Credit: Patrick Wall Left: Photo credit, David Kratville

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discussed by the county representatives. The San Luis Obispo County tour focused on identification and management tactics of artichoke thistle and jubata grass. Work conducted in our coastal chaparral and rangeland to control these weeds was highlighted because of the impact they have on agricultural lands and native Left: Alligator weed (*Alternanthera philoxeroides*) invading canal system, Tulare County. Photo Credit: Patrick Wall

Below: Spotted Knapweed (*Centaurea stoebe*) near Pine Mountain, Kern County. Photo Credit: Patrick Wall



plant communities. As we drove through the county, the tour also made stops to identify Russian knapweed, French broom, skeleton weed, tree of heaven, oblong spurge, and purple starthistle. Overall, the CDFA noxious weeds tour was a successful endeavor because it aided in the identification of many problematic weeds in California, discussed ongoing management plans and eradication projects, and connected the staff of neighboring counties. It was a pleasure to represent San Luis Obispo County, and we all owe a big thank you to David Kratville and CDFA for facilitating the tour.





Amy Smart, Conservation Specialist

Upper Salinas-Las Tablas Resource Conservation District March 2021

Funded by the California Department of Food and Agriculture's 2019 Noxious Weeds Grant Program

Purpose and Need

Program Background

In August 2019, the Upper Salinas-Las Tablas Resource Conservation District (USLTRCD) was awarded funding from the California Department of Food and Agriculture's Noxious Weeds Grant Program for the "Salinas River Watershed Arundo Eradication Program" (Program). The goal of the Program was to identify and map populations of invasive Arundo donax (Arundo) within the Upper Salinas River and improve overall ecosystem health of the river through partnerships with landowners, farmers, and local agencies. Agencies actively pursuing *Arundo* eradication programs are often limited to jurisdictional boundaries. For example, Resource Conservation District of Monterey County (RCDMC) has been working with farmers and stakeholders in Monterey County to remove approximately 430 acres of invasive Arundo, without the ability to identify potential populations occurring upstream in San Luis Obispo County. Camp Roberts has commenced with mapping Arundo on the base, though they have not done any surveying or mapping beyond the base boundaries. Arundo reproduces vegetatively by rhizomes and by stems that are dislodged during flooding events. As a result, Arundo populations upstream contribute significantly to populations downstream. The first step to Arundo eradication in the entire Salinas River is identification and mapping to assess the extent of infestation within the Upper Salinas watershed. Once populations are identified and recorded, the best cost-effective methods for treatment and removal can be determined. USLTRCD assisted the

efforts already underway in Monterey County and Camp Roberts by working with the San Luis Obispo County Agricultural Commissioner's Office and the Weed Management Area partners to identify and map populations of *Arundo* in the Upper Salinas River Watershed.

Ecosystem Services

Arundo stands use significant water, far more than native vegetation, reducing available water for aquifer recharge, agricultural producers (who operate using groundwater wells) and native species. Limited water supply is an ongoing fact of life in California, which will only be exacerbated by the changing climate. Water availability for aquifer



Figure 1. *Arundo* rooting at nodes along the stalk can easily become dislodged and establish new stands. Photographs taken by USLTRCD staff of *Arundo* in the Upper Salinas River on March 4, 2021.

recharge, agricultural producers and wildlife are critical issues that require both conservation of resources and complicated balancing of benefits. Reducing populations of *Arundo* in the Salinas River may result in an improvement of ground water reserves as well as provide a benefit to flora and fauna. *Arundo* stands not only reduce available water during drought years, but also increase flood risk in wet years by blocking and diverting flows during high

flow events. By trapping sediment, mature Arundo stands raise the streambed elevation. Additionally, Arundo stands have a significantly higher roughness versus the mix of values that would occur with native vegetation as the dominant species composition. The effects of these impacts are flooding of adjacent agricultural fields as well as additional sediment trapping in the river profile, further reducing flow conveyance. Flooding, soil erosion and/or soil deposition in production areas pose significant economic threats to local producers. Fresh vegetable crops, such as those dominant in the Salinas Valley's \$4.5 billion agricultural industry, must be destroyed if contacted by flood water and inundated fields are barred from production for months until floodwaterborne pathogens posing human food safety risks are no longer evident. While this is not a stated resource priority for this program, it is the over-riding concern for landowners along the river and a primary motivator for conducting the proposed habitat improvement work on their lands.



Figure 2. *Arundo* identified by USLTRCD staff in Atascadero Creek, a tributary to the Salinas River.

Biology

Habitat for species of concern, including South-Central California Coast steelhead trout, California red-legged frog, least Bell's vireo, San Joaquin kit fox, California tiger salamander and arroyo southwestern toad, are severely impacted in the Salinas River watershed by invasion of *Arundo* and other non-native plant species. *Arundo* is a very fastgrowing plant that forms dense stands of vegetation. *Arundo* degrades habitat value by displacing native vegetation, modifying fluvial geomorphic processes, and impacting water availability for multiple federally and state listed species, most notably steelhead trout. The Salinas River supports steelhead and is considered a Core 1 Watershed by the National Marine Fisheries Service in the 2013 South-Central California Coast Steelhead Recovery Plan (Plan). The Plan specifically identifies *Arundo* control on the river as a critical task towards population recovery in the watershed (NMFS, 2013). With the removal of *Arundo* and improvement of habitat quality, these listed species could extend their distributions into a more functional riverine system.

Project Methods

USLTRCD built upon the previous mapping efforts done by other agencies, such as San Luis Obispo County Agricultural Commissioner's Office and the California Invasive Plant Council, as well as historical information uploaded into the Calflora database, to develop a comprehensive map of the Upper Salinas River watershed. Eight points on Calflora were identified as *Arundo* within the Upper Salinas River. Each point from Calflora was assigned a number for tracking and verification, from the Monterey County Line south to the headwaters of the Salinas River at Santa Margarita Lake.

Aerial imagery analysis

USLTRCD staff performed an extensive search for the best available aerial imagery and remote sensing technologies to begin mapping Arundo in the Upper Salinas River. Map layers from government databases such as the National Agricultural Imagery Program and United States Geological Service were uploaded to GIS and reviewed extensively. Agricultural mapping software on a program called Agrian that accesses data from the multispectral imagery captured by the Sentinel-2 satellite was utilized by USLTRCD staff. Cloud cover and resolution proved to be sub-optimal for Arundo identification at this scale. A helicopter survey was proposed but proved to be cost-prohibitive. Staff determined the most cost-effective and user-friendly approach to identifying Arundo from aerial imagery is through Google Earth. Although the imagery date is from September 2018 for the Upper Salinas, cross-referencing Arundo points from Calflora and obtaining directions to access points was straightforward and less time consuming through the Google Earth platform. Staff uploaded verified Calflora points to Google Earth to key in on what Arundo looks like from aerial imagery and how to identify potential stands in the Upper Salinas

(Figure 3). Staff then examined vegetation in the Upper Salinas from the headwaters to the San Luis Obispo County line. Plants that were identified as potential *Arundo* stands were then verified in the field.



Figure 3. Aerial imagery through Google Earth utilized to determine locations of *Arundo* stands in the Upper Salinas.

Field verifications

Points logged in the Calflora database were field surveyed to determine if *Arundo* was in fact present or absent, the density of population, and landowner access (private, public, other). If a historic population was present, a GPS pin was set, and information updated in Calflora. To determine if the population had spread, a site-survey and aerial survey of two (2) mile radius from known populations was conducted. Windshield surveys were performed in locations where roads provided a good vantage point of the river. Access was limited in many sections of the Upper Salinas, therefore continued outreach to local landowners proved to be essential in areas where staff could not safely survey.

Outreach

Coordination with local agencies

USLTRCD staff maintained on-going correspondence with staff at the San Luis Obispo County Agricultural Commissioner's Office and Camp Roberts to stay up to date on treatment records and eradication efforts. As co-chair for the San Luis Obispo Weed Management Area (SLO WMA), USLTRCD Project Manager Andrew Johnson, met biannually to discuss the Program and collaborate with partners in the SLO WMA. A site visit was held with the City of Paso Robles staff and Congressman Salud Carbajal to discuss potential funding opportunities for invasive species management within the Salinas River corridor. Outreach via email blasts to the USLTRCD listserv of approximately 1,000 individuals was conducted. Targeted outreach to local advisory groups, municipalities, stakeholders, recreational groups, and landowners along the Salinas River was conducted throughout the length of the Program.

Community engagement

An informative flyer was generated to conduct outreach to landowners along the Salinas River. The "UN-WANTED" poster was created by USLTRCD staff and posted to physical message boards throughout the community and virtual social media channels (Figure 4).

Figure 4. UN-WANTED poster distributed throughout the community via message boards and social media posts.



Virtual Workshop

A vitrual workshop (due to COVID-19 restrictions) was held to increase awareness and education about *Arundo* eradication programs in the Salinas River and develop a resource network to disseminate resources and information. A panel of guest speakers

was assembled for the workshop, including representatives from the San Luis Obispo Agricultural Commissioner's (SLOCAC) Office, Camp Roberts and the RCDMC. Workshop flyers were posted on community message boards and in local businesses adjacent to the Salinas River. Virtual workshop announcements were posted on US-LTRCD's social media channels and sent to the organization's listserv of approximately 1,000 individuals. A total of 14 participants attended the workshop. A pdf of the workshop presentation as well as a recording of the virtual workshop is available on the USLTRCD website and YouTube for those who were unable to attend.

Results

River mile summary

New *Arundo* populations that were identified in surveys performed by USLTRCD staff were documented and uploaded to the Calflora database. Survey results were summarized by river mile. River miles were identified using the Add Path feature inGoogle Earth. River miles were broken into five (5) mile sections and results were consolidated in an Excel spreadsheet (Figure 6). Based on the river mile results summary, it was determined the greatest concentration of *Arundo* in the Upper Salinas river occurs between river miles 30 and 35 within the City of Paso Robles boundaries (Figure 7). The largest individual stands of *Arundo* in the Upper Salinas were identified on privately owned property also within this river segment.

Next Steps

The USLTRCD will continue to maintain an Arundo database, via Google Earth and Calflora, and update points as needed. USLTRCD will continue to collaborate with stakeholders and landowners regarding Arundo eradication opportunities within the Upper Salinas Watershed. RCDMC and USLTRCD were awarded a Regional Conservation Partnership Program (RCPP) through Natural Resource Conservation Service (NRCS). The funds are provided for the RCDs to enroll participating landowners in NRCS programs such as Environmental Quality Incentive Program (EQIP) to provide a cost-share opportunity for invasive species removal and habitat restoration on working lands. USLTRCD is working with SLOCAC to update the mapping information of Arundo in the Upper Salinas River watershed in preparation for additional treatment moving forward. Both Camp Roberts and the SLOCAC office have committed their own funds for the vegetation management work they conduct. USLTRCD is currently discussing potential funds for invasive species removal with the City of Paso Robles for both fire safety and riparian habitat improvement. Funds from the City of Paso would be directed towards treatment and removal of the largest stands of Arundo (Figure 7) identified during this Program.



River Miles	<i>Arundo</i> Y=1 N=0	Notes (features, access, ownership, date of site visit, etc.)
15	0	Access to Santa Margarita Lake dam to Las Pilitas Road limited, accessed all public roads during 1/31/2020 survey, correspon- dence w park rangers to gain access to county road, outreach to landowner for access to Truck Trail Road, extensive aerial imagery search
510	0	Highway 58 bridge, populations of common reed, private landown- ership access very limited, public access roads during 1/31/2020 survey, extensive aerial imagery search
1015	0	Hanson Quarry site visit 10/5/2020, exten- sive aerial imagery search
1520	*1	Sparse riparian vegetation to just beyond Halcon road, windshield survey of Rocky Canyon Road to Templeton and accessed riverbed from Juan Bautista de Anza trail- head at Aragon Street conducted 2/12/21, Hwy 41 overpass windshield survey 10/21/2020. *Atascadero Creek tributary: <i>Arundo</i> identi- fied 8/27/2020.
2025	1	Calflora point (CF8), survey 5/15/2020 from Ferrocarril Park/Juan Bautista de Anza to gain access to CF8, water too high to safely cross, find alternate route, sparse vegetation to Graves Creek/Paso Robles Creek tributaries, abundant Phragmites population throughout segment as seen on Martinelli property during Tem- pleton survey 1/17/2020, possible Arundo fragment in channel (mapped on Google Earth)
2530	1	Accessed river to locate CF7 on 1/17/2020 survey, point not found, extensive aerial imagery search
3035	1	CF6 - CF1, Largest concentration of <i>Arundo</i> stands, City of Paso Robles and privately owned land, 1st - 13th street bridges, surveyed 1/10/2020 and 3/4/2021, added CF9
3540	0	Extensive aerial imagery search, wind- shield/vantage point survey performed 10/22/2020 to field verify potential <i>Arundo</i> stands
4045	*1	<i>Arundo</i> in residential area of San Miguel adjacent to river (recorded on Calflora), windshield/vantage point survey to County Line/Camp Roberts 10/22/2020, extensive aerial imagery search

Above: Figure 6. *Arundo* survey results by river mile.

Left: Figure 7. Largest stands of *Arundo* identified by USLTRCD staff in the Upper Salinas River, Paso Robles, CA

Rerinted with permission from Amy Smart and the USLTRCD.

Find this article online at <u>www.us-ltrcd.org/files/e9c56082b/</u> <u>Arundo+in+the+Upper+Salinas+River_Results_FINAL.pdf</u>

Section 18 Emergency Exemptions

Excerpted from the DPR Section 18 Emergency Exemptions Guide to Understanding Section 18 Emergency Exemptions, PDF

Section 18 of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) authorizes the U.S. Environmental Protection Agency (U.S. EPA) to allow an unregistered use of a pesticide for a limited time if U.S. EPA determines that an emergency condition exists.

Title 40, Code of Federal Regulations (40 CFR), part 166, defines "emergency condition" as an urgent, nonroutine situation that requires the use of a pesticide. It allows for the time-limited use of a pesticide product (not registered or not registered for that use) to control the emergency.

Such uses are often referred to as "emergency exemptions," "Section 18s," or simply "exemptions."

FIFRA Section 18 also authorizes U.S. EPA to allow a federal or state agency the ability to grant the use of a pesticide product without registration if an emergency condition exists.

There are four types of Section 18 emergency exemptions from registration:

1) Specific Exemptions

- Specific Exemptions form most Section 18 requests.
- Requested to avert a significant economic loss or a

significant risk to endangered or threatened species, beneficial organisms, or the environment.

- Growers or agricultural research scientists identify a pest situation that registered pesticides cannot control.
- May be authorized for up to one year.

2) Quarantine Exemptions

- Requested to control the introduction or spread of an invasive pest not previously found in the U.S.
- "Emergency" rests on the potential of an invasive species to cause a significant economic loss.
- May be authorized for up to three years.

3) Public Health Exemption

- Requested to control a pest that will cause a significant risk to human health.
- "Emergency" based upon the risk to human health from the pest to be controlled.
- May be authorized for up to one year.

4) Crisis Exemption

- May only be issued when there is an immediate need for a specific, quarantine, or public health exemption involving an unpredictable emergency where the time from discovery of the emergency to the time when the pesticide use is needed is insufficient to allow for the authorization of an exemption through normal means.
- The California Department of Pesticide Regulation (DPR)

must confer with, and receive verbal authorization from, U.S. EPA before issuance. U.S. EPA performs a preliminary review to ensure there are no concerns, and to determine if the appropriate safety findings required by the Food Quality Protection Act (FQPA) can be made.

- If authorized by U.S. EPA, a state or federal agency may issue a crisis exemption allowing the use for up to 15 days.
- An applicant may follow up the crisis exemption with a request for a specific, quarantine, or public health emergency exemption. This allows the use to continue until U.S. EPA makes a decision on the corresponding exemption requested.
- This follow up request is usually done simultaneously in California.

Who can apply for a Section 18?

- University of California (UC) Extension personnel, county agricultural commissioners, grower groups and others may apply.
- Prior to submitting an application, DPR recommends applicants contact the designated Section 18 staff person at DPR to ensure all requirements are clearly understood.
- Product registrants cannot submit a request for a Section 18.

How to apply for a Section 18

The applicant must submit the following information to DPR. If DPR approves the submission, it is then forwarded to U.S. EPA for review and approval.

1) DPR's application form DPR-REG-003; Application for Section 18 Emergency Exemption.

- A complete description of the emergency pest problem.
- Contact information for knowledgeable experts who can confirm the emergency.
- A detailed explanation of why currently registered pesticides or cultural practices are not adequate to address the situation.
- Product label instructions describing how to apply the product to control the pest problem.
- Documentation that a significant economic loss has occurred, or is about to occur,

due to a pest problem.
The economic history (typically three to five years of information) of the crop, including information on annual production, price of commodity and cost of production before the pest problem occurred or became significant.

2) Scientific data to support the Section 18.

- Efficacy, residue chemistry, and phytotoxicity data.
- If pest resistance is the basis for the exemption, field data to demonstrate resistance to currently registered products is required. It is important that data be collected in the region where the pest problem is occurring.
- If the product is not registered in California, acute toxicology and product chemistry data are also required.

3) A letter of authorization from the product registrant.

4) A draft product label and product formulation sheet if the product is not federally registered, or a copy of the U.S. EPA-accepted label and confidential statement of formula if the product is federally registered.

"In retrospect, the likelihood of a weed meeting the requirements for application for a Section 18 exemption of a herbicide, especially one in a non-production agricultural setting, is pretty unlikely; however, with weeds beginning to show resistance to certain active ingredients in herbicides, it may be something to consider in the future."

www.cdpr.ca.gov/docs/ registration/guides/section18.pdf

Drone Application of Pesticides • by Zella Redus



2017 The Regents of the University of California.

When and how will we be able to use drones to apply pesticides? We looked into the complicated process for becoming certified as a drone applicator.

Each pathway to certification has multiple steps, starting with Federal Aviation Administration (FAA) requirements, and, when those have been met, continues with requirements set by the California Department of Pesticide Regulation (CDPR).

One method is to obtain an FAA commercial pilot's license and medical certification, after which the CDPR will allow the applicant to take the Manned Pest Control Aircraft Pilot exam.

Manned Pest Control Aircraft Pilots are certified to perform unmanned aircraft applications as well as manned ones. While this is a more straightforward path in terms of steps, some may find the process of obtaining a commercial pilot's license in the pursuit of permission to deploy pesticides by drone to be overkill.

For a more drone-oriented approach, applicants must first obtain a Remote Pilot Certificate for small unmanned aircraft systems (sUAS) per Code of Federal Regulations 14 CFR part 107. Importantly, those who wish to use drones weighing over 55 pounds must also apply for an exemption under the Special Authority for Certain Unmanned Systems, 49 U.S.C. §44807.

The next step is to acquire FAA certification to use drones agriculturally by obtaining an Agricultrual Aircraft Operator certificate, per 14 CFR part 137. Those working for a public agency may be eligible for a Public Agency Certificate of Authorization, which exempts the applicant from some of the above requirements. However, they come with extremely strict rules that may make the designation more restrictive than it is worth.

Finally, applicants must meet CDPR's requirements. Candidates can choose to either take the UAS Apprentice exam, followed by the UAS Journeyman exam; or, if already certified by the Department of Public Health as a vector control technician, may simply take the Vector Control Technician Pilot exam. Applicators must also be licensed and registered with CDPR as a pest control business if they perform applications for hire.

These processes may be even more onerous than they appear here. For example, obtaining Journeyman Pilot certification entails a year-long apprenticeship under a certified Journeyman Pilot, and include a minimum of 50 hours of operation supervised by that pilot. While this requirement clearly calls for significant investment of time and expense, its biggest hurdle might be securing the services of a Journeyman Pilot. According to CDPR's web site, there are currently only three certified Journeyman Pilots in California. Instead of certification, one can retain the services of a commercial UAS pesticide application service. Several exist, and they have the certifications and technical knowledge that someone starting out may lack. When we spoke to Chris Greer of UC ANR on the subject, he mentioned the businesses UAV-IQ and Parabug. Troy Gibbs, who has presented at Cal-IPC Symposia on the subject of drone applications of pesticides, founded T&T Endeavors, which contracts with Rantizo, an agricultural drone spraying business, to apply pesticides. Working with these or other such businesses may be a more expedient solution under current requirements.



Photo source: https://www.realagriculture.com/2020/01/herbicide-application-via-drone-still-in-holding-pattern/



Excerpted from www.cdpr.ca.gov/docs/license/pdf/UAS_cert_info.pdf

Informative links:

- Federal Aviation Administration <u>www.faa.gov/uas/</u> <u>commercial_operators/part_107_waivers</u>
- Dr. Brandon Stark's Presentation at the 2021 Cal-IPC Symposium entitled 'Drone Regulations and Safety': PowerPoint Presentation <u>cal-ipc.org</u>
- CDPR's Unmanned Pest Control Aircraft Pilot Cert page <u>www.cdpr.ca.gov/docs/license/uas.htm</u>
- Unmanned Pest Control Aircraft Pilot Certification Brochure www.cdpr.ca.gov/docs/license/pdf/UAS_cert_info.pdf



Weed of the Quarter by James Moore

In this edition we are beginning a new series highlighting weeds that are either limited in distribution or are not yet known to occur in our management area but are on Cal-IPC's watch list and are present in nearby counties. *Oncosiphon piluliferum*, commonly called stinknet, is one such weed.

Stinknet is an herbaceous annual in the Asteraceae family, is non-native to California, being native to South Africa and Lesotho, and is considered invasive by Cal-IPC. It has a High rating from Cal-IPC and is currently Q rated by CDFA. Stinknet is currently spreading across Southern California and making its way across the Southwestern U.S. In its native habitat it grows from coastal climates to arid desert. As the name suggests, the plant has a pungent turpentine, pine-like scent. Many who experience this plant consider it to stink. Stinknet is a relatively new plant to North America, being discovered in the Riverside area in the early 1980's. Within 20 years of its discovery, large populations were present in most Southern California counties. Seeds are spread through human activities, such as on footwear, on the coats and paws of pets, on tools and vehicles, and even on clothing, as well as by machinery. Seeds also appear to be dispersed through high wind events and by wildlife, although this seems to be less common.



3,000-5,000 seeds are produced per plant, with larger plants producing even more. Seeds survive in the soil for up to 5 years.

Stinknet creates a monoculture when established, growing in dense stands of up to 10,000 plants per square meter, creating large amounts of persistent litter.



Photo Source: content.govdelivery.com/accounts/AZPIMA/ bulletins/2cc057e

This litter, which can persist for 2 years, prevents and diminishes the growth of native wildflowers, likely creating a positive feedback cycle. The dense, persistent litter produced by this plant increases the fuel load of an infested landscape and promotes the risk of fire conveyance from roadsides to wildlands.

It is clear from this brief outline that this is a weed we should keep our eyes open for and bring to the attention of our partners should it be discovered in the county. Please review the pictures, and visit the links below for more information on this weed.



Photo Source: www.pinterest.com/pin/oncosiphon-pilliferum --194428908900906982/

Cal-IPC Plant Assessment: <u>www.cal-ipc.org/plants/paf/</u> <u>oncosiphon-pilulifer/</u>

Cal Flora map of dispersal: <u>www.calflora.org/app/</u> taxon?crn=13639

Cal-IPC Dispatch update on Stinknet: <u>www.cal-ipc.org/wp-</u> <u>content/uploads/2019/04/Cal-IPC_Dispatch_Spring_2019_</u> <u>FINAL.pdf#page=6_</u>

UC Weed Science Article: <u>www.ucanr.edu/blogs/blogcore/</u> postdetail.cfm?postnum=27499

SLO CAC Summer Survey, Treatment & Removal Work

The County of SLO Department of Agriculture spent the summer months working on diverse weed species throughout the county.

- Treatments were performed on stinkwort, castor bean, Canada thistle, jubata grass, and *Arundo* on 9.24 gross acres.
- Surveys were conducted on these same species as well as Phragmites, tree of heaven, yellow starthistle, wooly distaff thistle and artichoke thistle on 420.43 gross acres.
- Hand removal of stinkwort, yellow starthistle, castor bean, jubata grass, and oblong and leafy spurges was conducted on 9.15 gross acres.

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

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