



HLB Detection, Delimitation, and Tree Removal Updates

Southern District

July 6, 2022

HLB Delimitation Survey I

Areas	Total Properties	Properties Surveyed	No Host Properties	Refusals/No Contact	Completion Percentage
Paramount (10 -13)	460	177	116	1/3	38%
Carson (1,2)	256	230	125	0/8	93%
South Gate (2)	193	168	86	2/23	87%
Duarte (3 -7)	64	58	17	4/3	100%
Montebello (2,19)	61	57	46	0/4	100%

HLB Delimitation Survey II

Areas	Total Properties	Properties Surveyed	No Host Properties	Refusals/No Contact	Completion Percentage
Riverside (8)	24	2	0	0/0	8%
Corona (10,12)	212	157	64	0/2	74%
Westminster (1)	292	214	70	4/71	73%
Santa Ana (15)	454	127	75	0/53	28%

Citrus Canker Survey

Areas	Start Date	End Date	Total Properties	Properties Surveyed	No Host Properties	Refusal Properties	No Contact Properties	Samples Collected
Chino	4/6/22	5/12/22	2,392	1,554	1,241	27	811	198
San Diego	4/6/22	5/9/22	1,627	895	503	49	680	18
Hunt. Beach	5/2/22	On going	2,408	815	722	30	814	1

Quadrant Survey 2022

(Find sites, Adjacent, Inconclusive samples)

County	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Los Angeles	228	220	51	278	556	122						
Orange	1,057	773	702	644	454	237						
Riverside	69	50	4	9	101	111						
San Bernardino	224	109	219	103	24	0						
San Diego	29	0	18	0	0	0						
Imperial	0	0	0	0	0	0						
Total	1,607	1,152	994	1,034	1,135	470						

HLB Positive Trees – May and June 2022

County	Trees Detected	Trees Removed	Cumulative Pending
Los Angeles	31	29	37
Orange	104	113	33
San Bernardino	10	13	0
Riverside	3	3	0
TOTAL	148	158	70



California Department of Food & Agriculture Plant Pest Diagnostics Center HLB Testing Program 2022

Total number of plant and ACP samples per month – Fig. 1

HLB yearly totals – Fig. 2

Tally of positive detections by county and city – Tables 1-3

Tally of positive detections by city per year – Tables 4

If you have any questions, please call or email me at 916-738-6710 lucita.kumagai@cdfa.ca.gov.

Fig 1. 2022 - Total number of plant and ACP samples submitted per month.

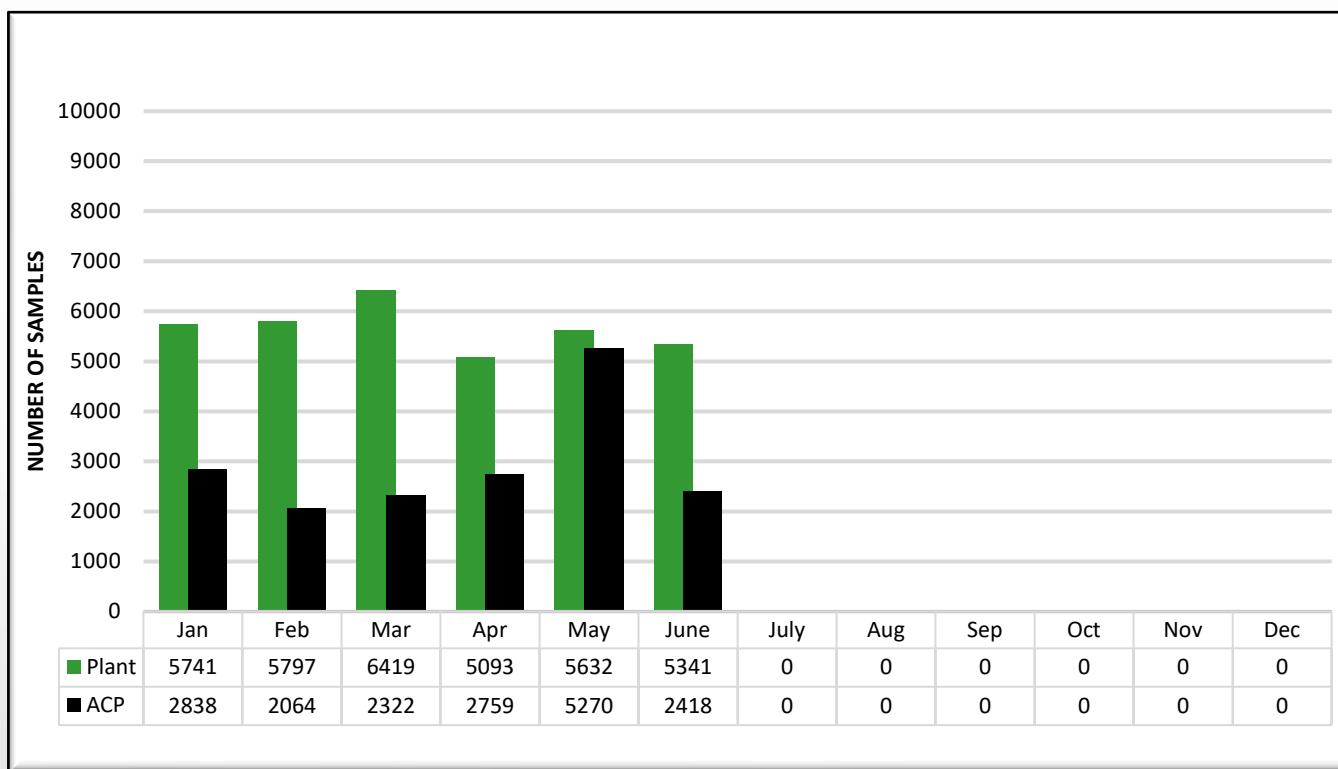
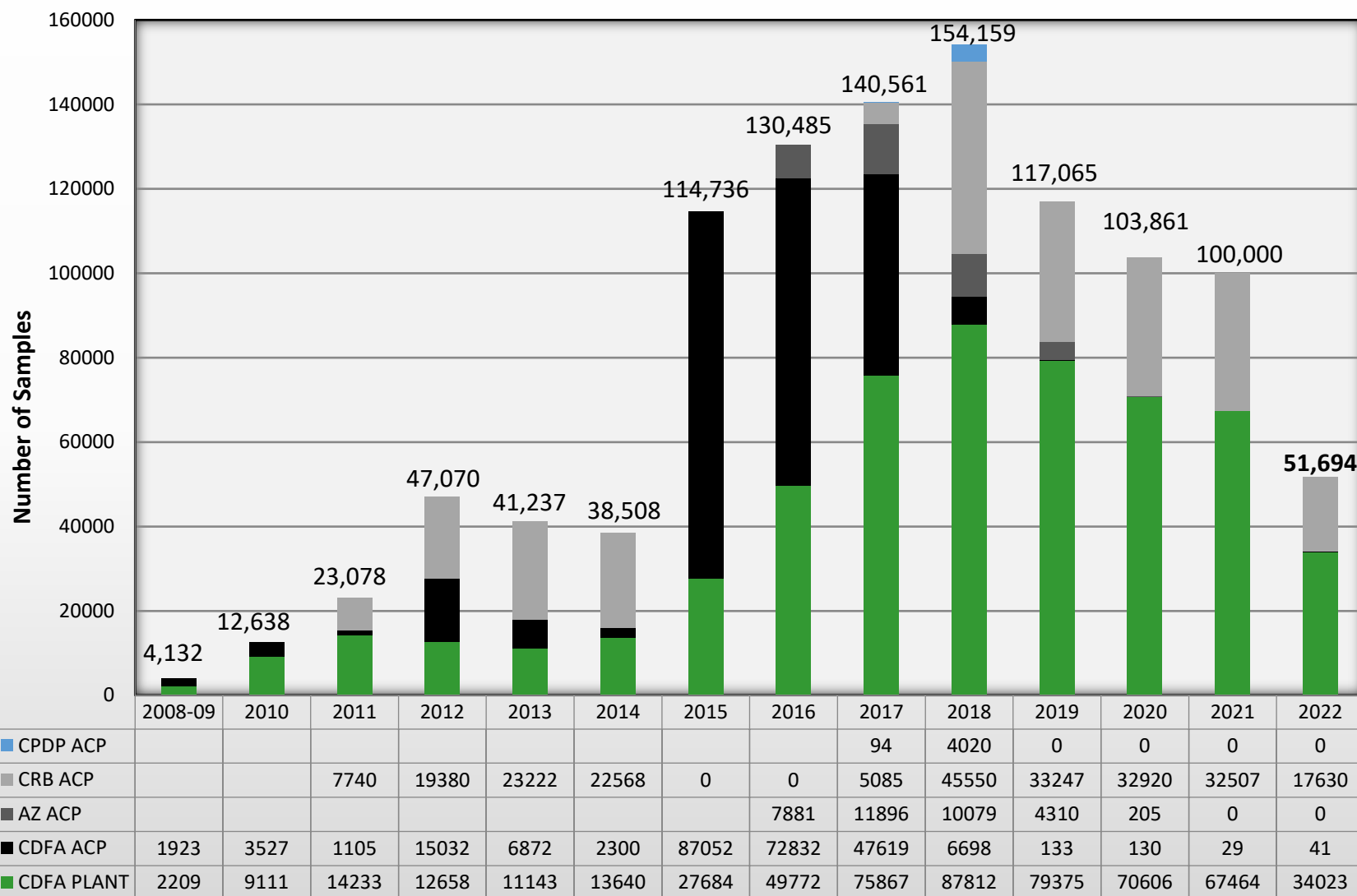


Fig 2. Number of samples tested for HLB per year from 2008 - June 2022.



Combined total of plant and ACP samples tested from 2008 – 2022 is 1,079,224.

Table 1. Tally of positive detections by county and city from 2012 to 6/27/2022.

City	# Sites	# Trees	# ACP samples
Orange County			
Garden Grove	429	660	64
Santa Ana	412	574	55
Anaheim	451	723	103
Westminster	292	462	20
Orange	97	129	17
Tustin	12	15	3
Fountain Valley	6	10	2
Huntington Beach	22	25	2
Placentia	9	7	3
La Habra	2	3	1
Fullerton	4	2	3
Yorba Linda	3	2	2
Irvine	3	2	2
Total	1742	2614	277
Los Angeles County			
Whittier	146	179	24
Pico Rivera	108	132	38
Montebello	70	98	1
San Gabriel	65	82	6
Rosemead	23	28	4
Paramount	28	34	3
La Mirada	27	37	4
La Puente	4	3	1
Norwalk	7	4	4
Cerritos	3	2	2
Hacienda Heights	2	2	1
Lakewood	5	6	0
Duarte	18	21	3
El Monte	3	2	1
Alhambra	1	1	0
Temple City	1	1	1
Compton	1	1	0
Glendora	1	0	1
South Gate	7	4	4
Long Beach	4	2	2
Los Angeles	1	0	1
Downey	5	7	1
Carson	4	3	1
Monrovia	8	13	0
Rowland Heights	1	0	1
Total	543	662	104
Riverside County			
Corona	27	37	14
Riverside	24	26	4
Eastvale	1	1	0
Jurupa Valley	3	1	3
Moreno Valley	1	1	0
Total	56	66	21
San Bernardino County			
Rancho Cucamonga	3	7	2
Montclair	6	6	0
Colton	6	11	3
San Bernardino	2	1	1
Ontario	52	108	18
Fontana	1	0	3
Total	70	133	27
San Diego			
Fallbrook	1	0	1
Oceanside	4	9	4
Pauma Valley	1	0	1
Total	6	9	6
Grand Total	2417	3484	435

Table 2. Percent positives per county

County	Sites	Trees	ACP
Orange	72.1%	75.03%	63.7%
LA	22.5%	19.00%	23.9%
Riverside	2.3%	1.89%	4.8%
San Bernardino	2.9%	3.82%	6.2%
San Diego	0.2%	0.26%	1.4%
Total	100%	100%	100%

Table 3. Tally of positive samples from Risk-based and HLB Response surveys.

Sample type	Trees		ACP	
Risk-based Survey	122	4%	201	46%
HLB Response	3362	96%	234	54%
Total	3484	100%	435	100%

Table 4. Annual tally of positive trees per city from 2012 – 2022

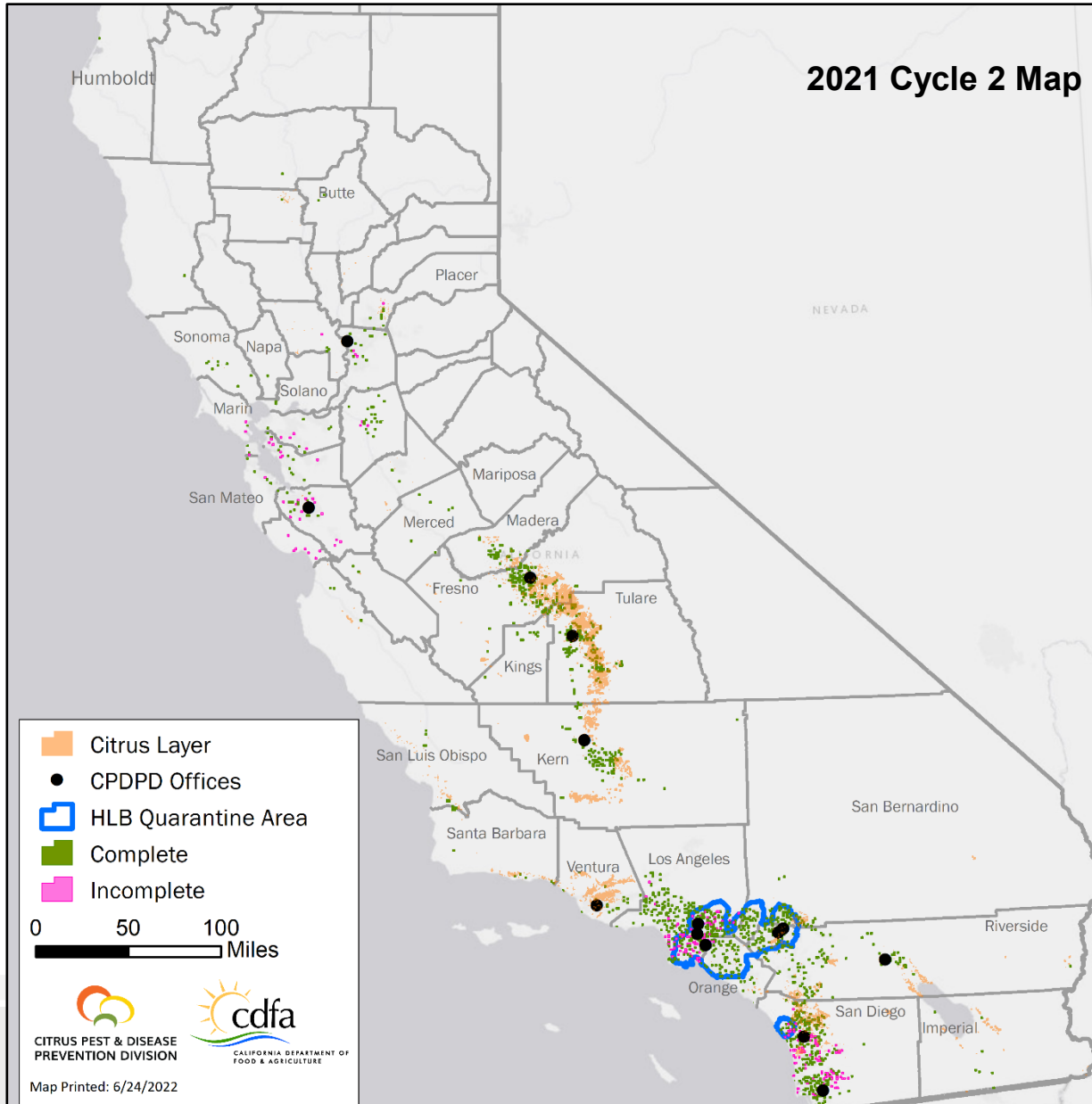
County	Total
Orange	2614
Los Angeles	662
Riverside	66
San Bernardino	133
San Diego	9
Grand Total	3484

HLB Positive Tree Detections										
City	2012	2015	2016	2017	2018	2019	2020	2021	2022	Total
Anaheim				132	109	90	21	200	171	723
Garden Grove				13	348	115	116	34	34	660
La Habra				1	0	2	0	0	0	3
Fullerton				1	0	0	0	0	1	2
Santa Ana					44	168	217	99	46	574
Westminster					15	175	3	39	230	462
Yorba Linda					1	0	0	1	0	2
Orange					31	14	36	43	5	129
Tustin					5	8	1	0	1	15
Huntington Beach						6	2	17	0	25
Placentia						7	0	0	0	7
Fountain Valley							10	0	0	10
Irvine							1	1	0	2
Hacienda Heights	1	0	1	0	0	0	0	0	0	2
San Gabriel		10	17	33	10	6	0	1	5	82
Cerritos			1	1	0	0	0	0	0	2
Pico Rivera				67	35	18	10	1	1	132
Whittier				18	80	23	21	35	2	179
La Puente					0	3	0	0	0	3
Lakewood					1	1	0	4	0	6
Norwalk					1	0	2	1	0	4
Rosemead					17	11	0	0	0	28
Duarte					2	0	0	0	19	21
Temple City						1	0	0	0	1
Montebello						84	4	0	10	98
El Monte					1	1	1	0	0	2
Compton						1	0	0	0	1
Alhambra						1	0	0	0	1
La Mirada							7	6	24	37
Paramount							11	8	15	34
Long Beach								2	0	2
South Gate								2	2	4
Downey									7	7
Carson									3	3
Monrovia									13	13
Glendora										
Rowland Heights										
Los Angeles										
Riverside				3	0	4	6	8	5	26
Corona						15	4	11	7	37
Eastvale							1	0	0	1
Moreno Valley							1	0	0	1
Jurupa Valley								1	0	1
Montclair						2	2	2	0	6
San Bernardino							1	0	0	1
Ontario							1	64	43	108
Colton							4	7	0	11
Rancho Cucamonga							5	2	0	7
Fontana										
Oceanside								9	0	9
Fallbrook										
Pauma Valley										
Total	1	10	19	269	699	756	488	598	644	3484



Risk Research Survey Update
Operations Subcommittee Meeting
July 6, 2022

2021 Cycle 2



- Began November 2021
- 86% Complete
- Survey Complete in 24 of 37 Allocated Counties
- 49,531 Properties Visited
- 24,589 Properties Sampled
- 12,123 Entomology PDRs
- 16,974 Plant PDRs

2021 Cycle 2 – Northern California

Citrus Layer

Risk Survey Staff / Office

HLB Quarantine Area

Complete


Incomplete

0


20

40

Miles




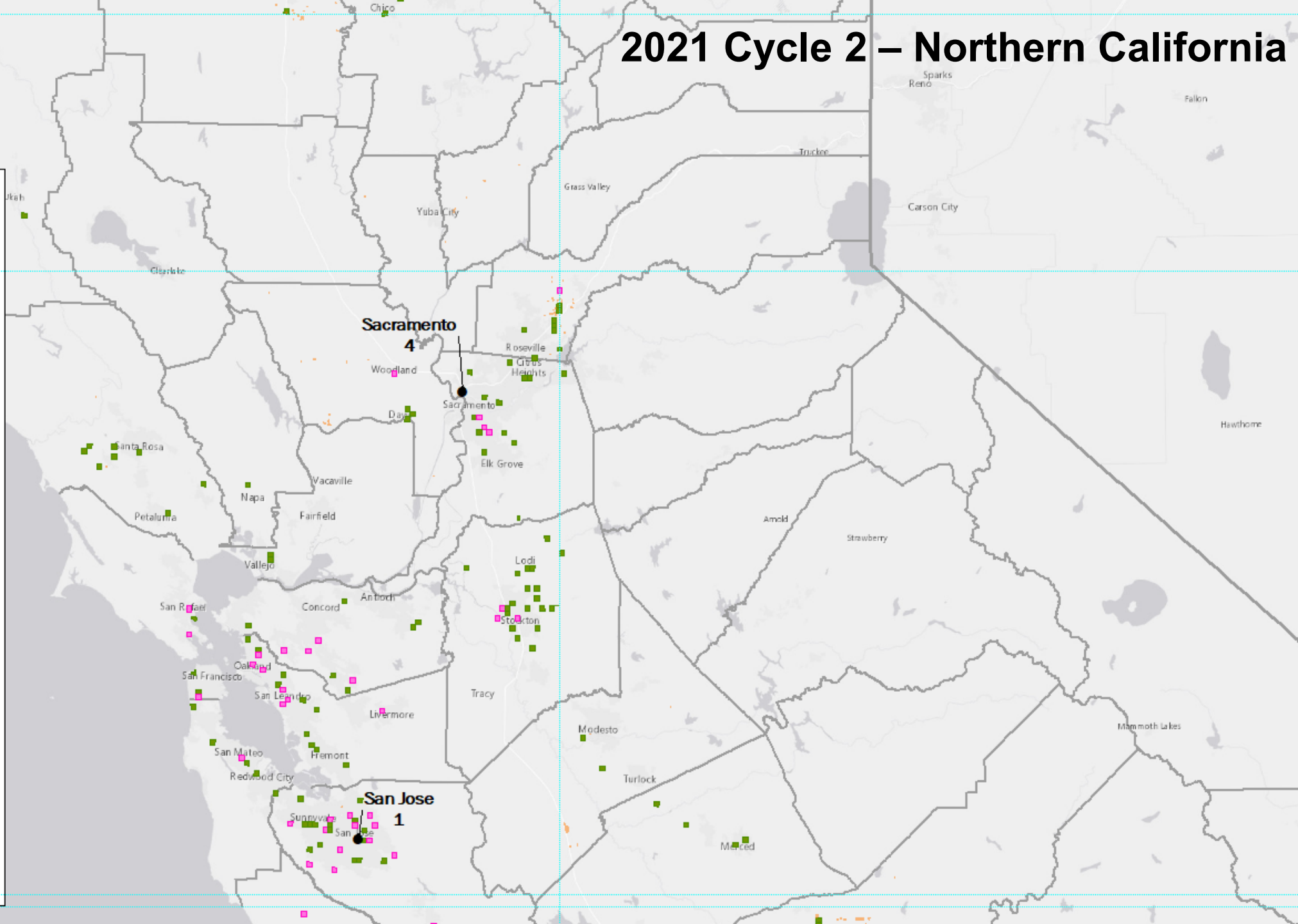
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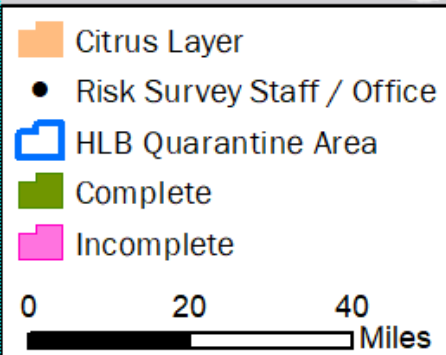
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CALIFORNIA DEPARTMENT OF
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Map Printed: 6/29/2022

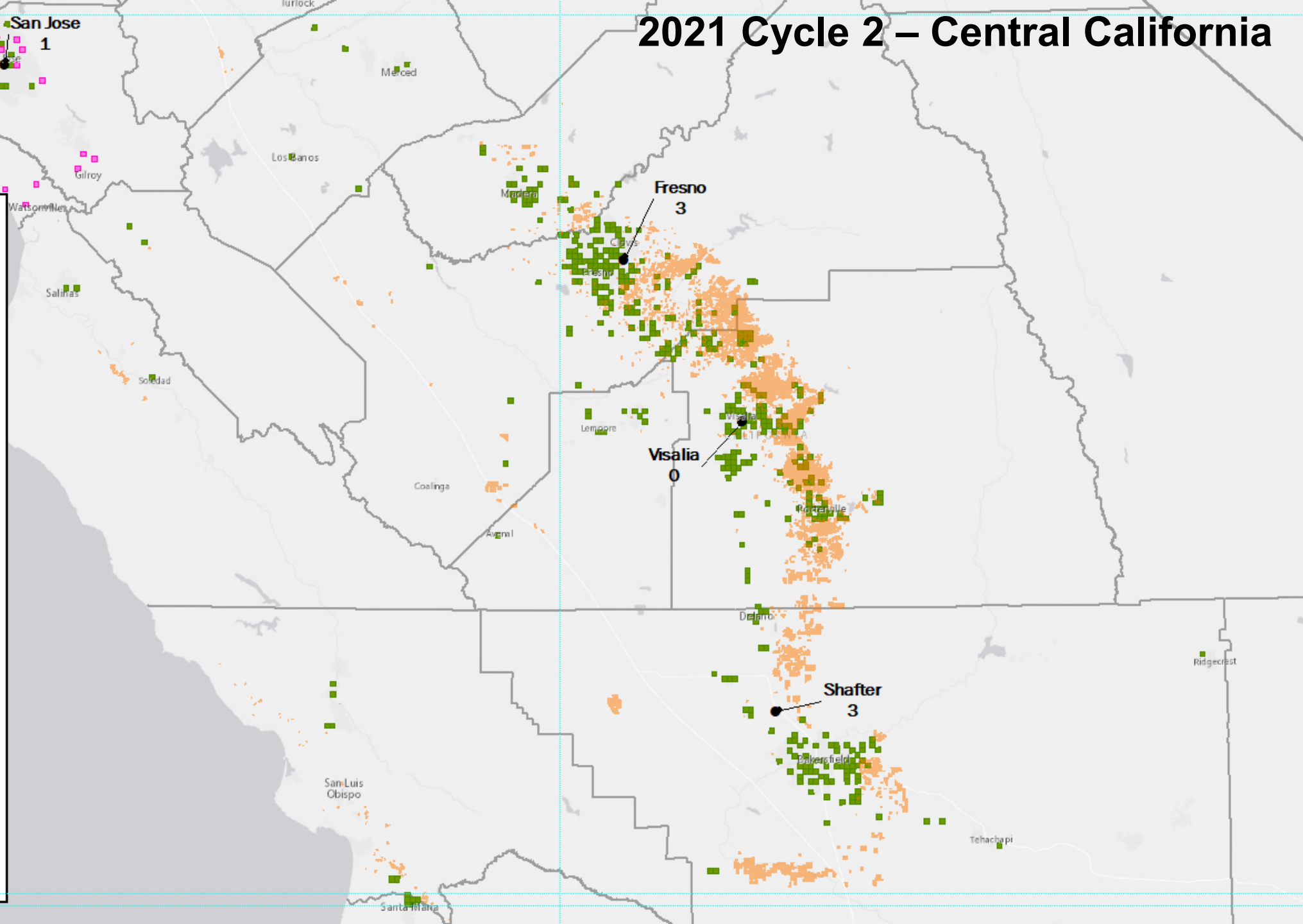




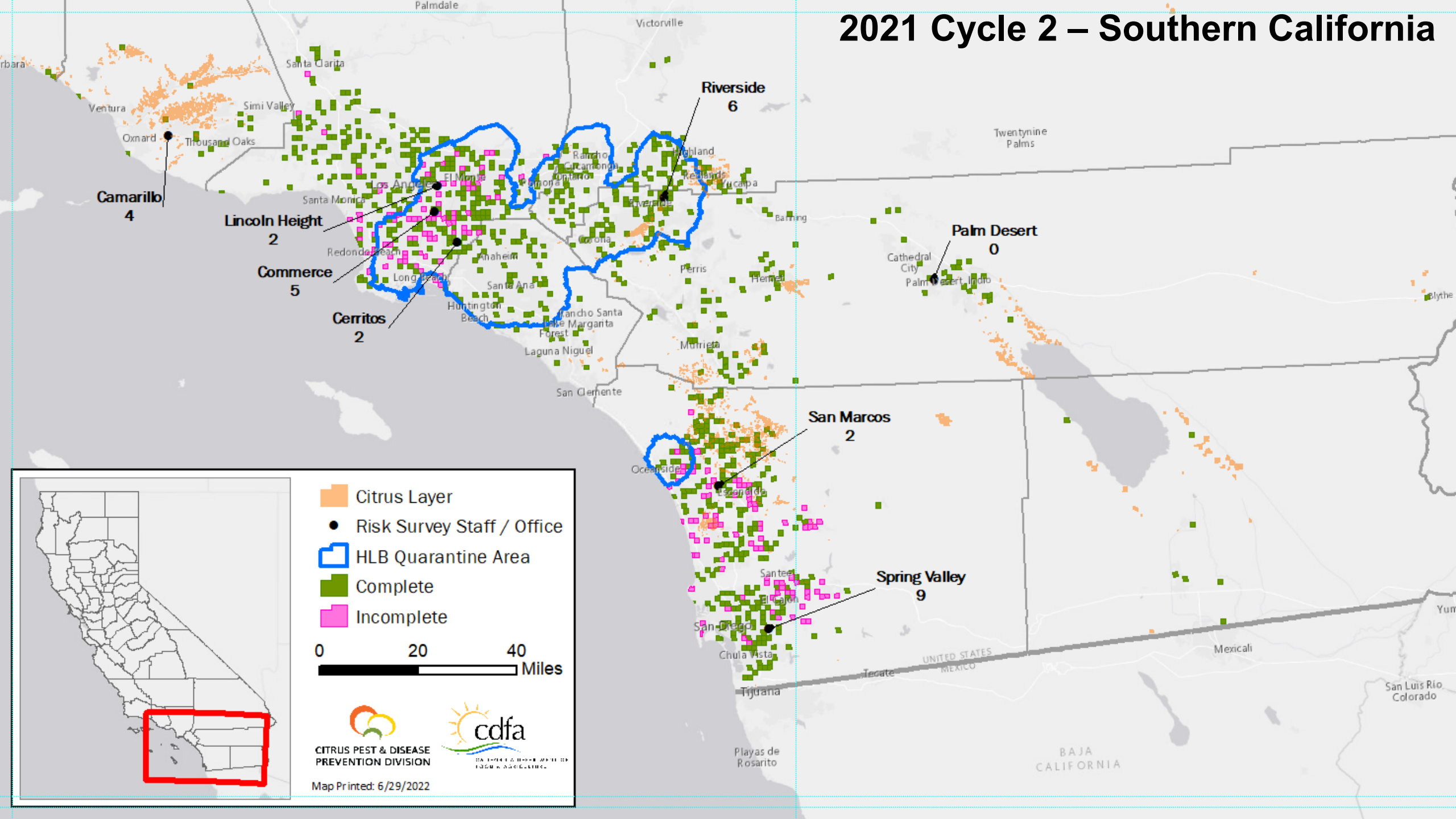
2021 Cycle 2 – Central California



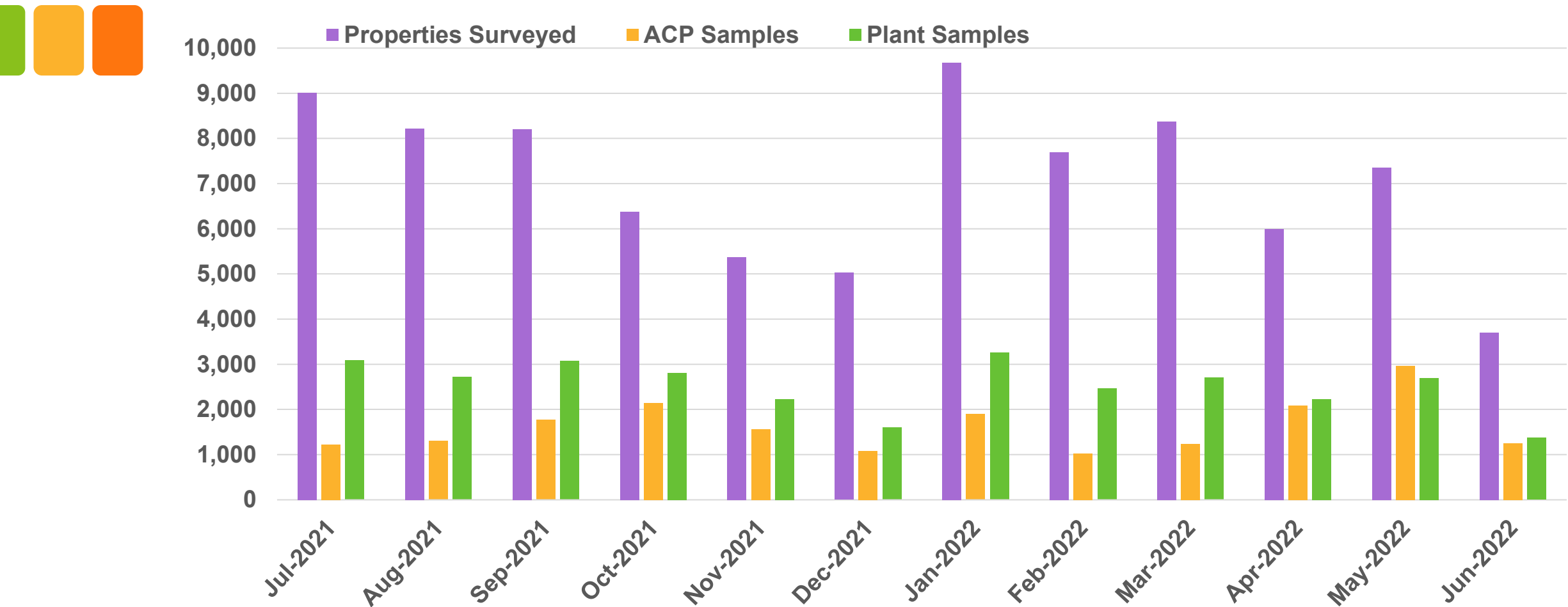
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2021 Cycle 2 – Southern California



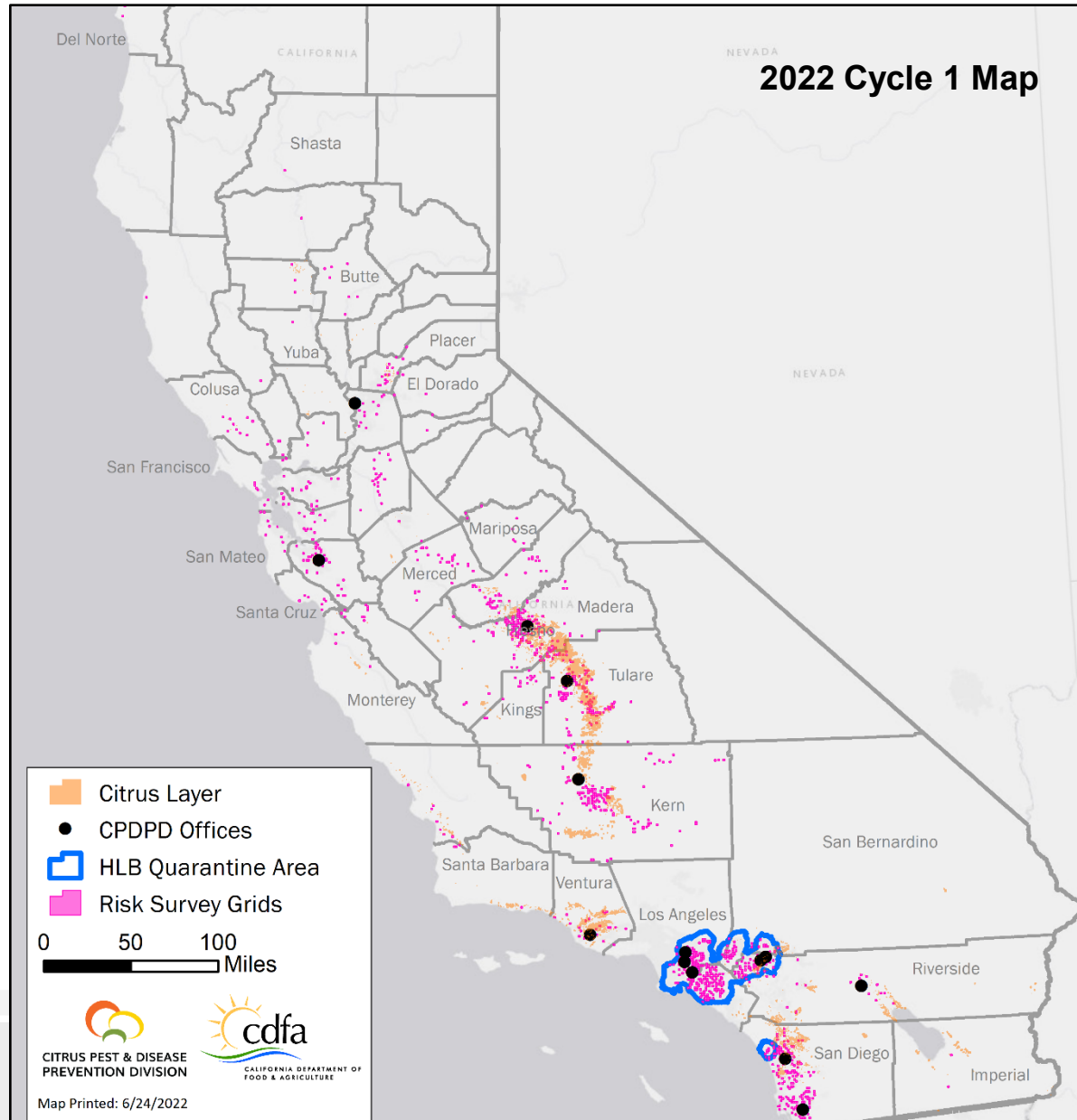
Statewide Trends (2021 Cycle 1 and 2, and 2022 Cycle 1)



*Data current as of 06/27/2022



2022 Cycle 1



- June – December 2022
- 42 Counties
- 1,246 Survey Grids

County Regulatory Activity
July 2021 - April 2022

County	FY 2021-22 Budget Amount	Percent Expended	CAs Issued	Grower Inspections	Transporter Inspections	Packer/Processor Inspections	Fruit Seller Inspections	NOVs	NOPAs
Fresno	\$93,419.64	100%	59	0	408	0	0	60	0
Imperial	\$49,682.53	55%	1	14	15	1	0	1	0
Kern	\$75,000.00	96%	17	15	767	2	2	4	0
Kings	\$26,138.94	96%	2	0	0	15	8	0	0
Los Angeles	\$271,839.35	92%	0	2	0	359	57	0	0
Monterey (*1)	\$16,171.55	46%	0	75	0	0	0	0	0
Orange	\$86,712.60	85%	9	84	10	1	0	0	0
Riverside (*1)	\$752,709.87	88%	22	202	1,731	7	13	8	0
San Bernardino (*1)	\$25,557.50	58%	19	7	2	1	0	0	0
San Diego	\$680,841.88	70%	36	159	155	64	32	5	0
San Luis Obispo	\$10,970.71	73%	7	3	0	0	0	0	0
Santa Barbara	\$19,886.44	88%	10	12	1	0	10	0	0
Tulare	\$380,000.29	68%	161	3	3,029	1	0	140	26
Ventura (*4)	\$146,007.26	71%	35	10	294	0	0	15	0
Total	\$2,634,938.56	78%	378	586	6,412	451	122	233	26

(*#) = number of invoices missing from reporting period

Grate Cleaning Inspections

FY 2021-2022

Month	County	Total Grates Inspections	0 10 Leaves	11 40 Leaves	41 51+ Leaves
July 2021	Riverside	1	1	0	0
	Ventura	1	1	0	0
August 2021	Riverside	2	2	0	0
	Ventura	12	11	1	0
September 2021	Riverside	2	2	0	0
	Ventura	1	1	0	0
October 2021	Riverside	2	1	1	0
November 2021	Riverside	5	4	1	0
December 2021	Riverside	8	8	0	0
January 2022	Riverside	8	6	1	1
	Ventura	1	1	0	0
February 2022	Riverside	5	4	1	0
	Ventura	11	11	0	0
March 2022	Riverside	14	14	0	0
	Ventura	6	6	0	0
April 2022	Riverside	2	2	0	0
	Ventura	12	12	0	0
May 2022	Riverside	5	5	0	0
	Ventura	1	1	0	0
June 2022	Riverside	2	2	0	0
Total		101	95	5	1



HLB Treatment Updates

Southern District

July 6, 2022



Treatment Updates

- Delimitation treatments were completed in the areas of Carson, Montebello, South Gate, Duarte, Paramount, Anaheim, Westminster, Garden Grove, Santa Ana, and Corona.
- Public meetings held in May and June:
 - Los Angeles and Orange counties delimitation areas on May 18, 2022.
 - Riverside county delimitation areas on June 9, 2022.
 - Los Angeles and Orange counties delimitation areas on June 21, 2022.

HLB Delimitation Treatments I

Areas	Total Properties	Properties Treated	No Host Properties	Refusals/ No Contact	Completion
Carson (1,2)	252	116	117	5/12	100%
South Gate (2)	193	85	96	1/11	100%
Paramount (1,2,3,10,11,12,13)	625	183	427	8/14	100%
Pico Rivera (37,46)	275	148	112	8/7	100%
La Mirada (1,4,7)	125	42	78	2/3	100%
Duarte (6-10)	190	106	67	6/11	100%
Montebello (1,2,5,6)	51	15	33	0/3	100%

HLB Delimitation Treatments II

Areas	Total Properties	Properties Treated	No Host Properties	Refusals/ No Contact	Completion
Corona (10)	129	69	52	1/7	100%
Garden Grove (1,2,12,25,64)	1,268	354	901	8/6	100%
Westminster (1)	288	182	91	10/8	100%
Anaheim (5, 94)	353	62	279	6/5	100%
Huntington Beach (4,13,11)	218	104	97	8/8	100%
Santa Ana (4,5,7,15,28,31)	458	224	195	16/21	100%
Santa Ana (82-84)	184	105	62	6/12	100%

Southern District Staffing - Updates

County	Permanent	Seasonal	Pending Hiring	Hiring Status
Los Angeles	29	87	Two PPA I and four PPA I (LT)	Reviewing applications for one PPA I. Need additional postings for 4 PPA I's (LT).
Orange	12	5	One PPA III, two PPA I, five PPA I (LT)	Reviewing applications for PPA I. Need additional postings for PPA III, and 5 PPA I's (LT).
Riverside and San Bernardino	18	18	Four Ag Tech I and one ES	ES –Interviewed, checking reference Ag Tech I - Waiting for applications/Interviewing
San Diego and Imperial	15	6	One-Ag Tech I One – PPA I Five – PPA I (LT)	One-Ag Tech I starting July 5th Waiting for PPA I and PPA I (LT) postings.

Staff Distribution By Projects

Counties	ACP/HLB and other Surveys	ACP/HLB Treatments and Tree Removals	ACP/HLB Regulatory
Los Angeles and Orange	31	18	4
Riverside and San Bernardino	18	9	4
San Diego and Imperial	16	2	2



Central District Update

Operations Subcommittee Meeting

July 6, 2022



Central District Update

Tulare County

- **May 3 – Visalia**
 - Juice facility county trap with one adult ACP
 - 50-meter visual survey completed; no additional ACP observed
 - Regulatory incident, and no further action needed by CDFA
- **May 3 – Woodlake/Lemon Cove**
 - A total of five packing house county traps with multiple adult ACP
 - 50-meter visual survey
 - Additional ACP adults/nymphs on packing house property citrus trees
 - Rural residential properties with ACP
 - 400 m delimitation
 - Treatment completed June 1





Central District Update

Kern County

- **May 13 – Bakersfield**
 - Two residential properties, each with one trapped adult ACP
 - 50-meter visual survey; no additional ACP
 - Detection site and adjacent properties treated June 1
- **May 17 – Bakersfield**
 - Residential property with one trapped adult ACP
 - 50-meter visual survey; no additional ACP
 - Public meeting held June 6
 - Treatment was scheduled for June 9, refusal – no treatment



Central District Update

Kern County

- **June 3 – Bakersfield**
 - Residential property with one trapped adult ACP
 - 50-meter visual survey; no additional ACP
 - One homeowner no contact, public meeting held June 20
 - Treatment scheduled for June 28
- **June 15 – Arvin***
 - Two residential properties, each with one trapped adult ACP
 - 50-meter visual survey; no additional ACP
 - Treatment scheduled for June 28



Central District Update

Kern County

- **June 17 – Mettler**
 - Residential property with two trapped adult ACP
 - 400-meter visual survey; no additional ACP
 - Treatment scheduled for June 28
- **June 22 – Arvin***
 - Residential property with one trapped adult ACP
 - Find site scheduled for June 28
 - Public meeting will be held July 12
 - 400-meter treatment area



Central District Update

Fresno County

- **May 26 – Orange Cove**
 - One county packing house trap with two adult ACP
 - 50-meter visual survey resulted in additional nymphs and adults on packing house trees
 - 400-meter delimitation and treatment area
 - Dog team found additional ACP on May 31. Packing house agreed to treat again with a conventional product
 - Public meeting held June 8
 - Treatment completed June 23



Central District Update

Fresno County

- **June 8 – Fowler**
 - Two county packing house traps with one adult ACP each
 - 50-meter visual survey completed with no additional ACP
 - Regulatory incident, and no further action needed by CDFA
- **June 15 – Fresno**
 - Residential property with five adult trapped ACP
 - 50-meter visual survey resulted in four additional live adults, plus one trapped adult on the delimitation trap at initial detection site
 - 400-meter delimitation and treatment area
 - Find site and 8 out of 11, 50-meter properties with hosts treated June 23
 - Public meeting scheduled for July 7 (remaining 400-meter properties)



Central District Update

- **Trapping (Detection and Delimitation)**
 - Status quo in Fresno, Madera, Kern, and Tulare counties
 - San Luis Obispo – no additional detections since December, delimitation trapping status quo
 - Santa Maria (in Santa Barbara County) (as of May 31, 2022)
 - 24 traps total; only four of the traps had one ACP each
 - Traps were serviced at the end of June; results pending



Central District Update

- **Biocontrol releases**

- Woodlake/Lemon Cove – released on May 26; ~8,000 *Tamarixia*
- Kern County *Tamarixia* released week of June 13; ongoing
- Santa Barbara *Tamarixia* released in April, May, June

- **HLB Risk Research Survey**

- Staff were assisting with risk survey and citrus canker survey in SoCal in May and June
- Central District began the next cycle of risk survey in local offices



Central District Update - Projects

Office	Survey	Trapping	Treatment
Fresno	4	4	3
Visalia	9	2	0
Shafter	3	4	1
Camarillo	6	2	0



Central District Update - Staffing

County	Total Perm Staff (current)	Pending Hiring (vacancies)	Hiring Status
Fresno County (Fresno)	11	1 APCS 1 PPA II	1 APCS job accepted, PPA II to be announced
Kern County (Shafter)	7	1 PPA I 1 PPA III	1 APCS hired 6/1 1 PPA I in screening process; PPA III to be announced
Tulare County (Visalia)	9	0	Fully Staffed!
Tulare County (Visalia Regulatory)	1	--	--
Ventura County (Camarillo)	9	2 PPA II 1 PPA I 1 Sr. ES supervisor	PPA's were readvertised Sr. ES supervisor starts 7/11



Northern District Update
Operations Subcommittee Meeting
July 6, 2022

Northern District Update | Trapping and Biocontrol

Detection Traps

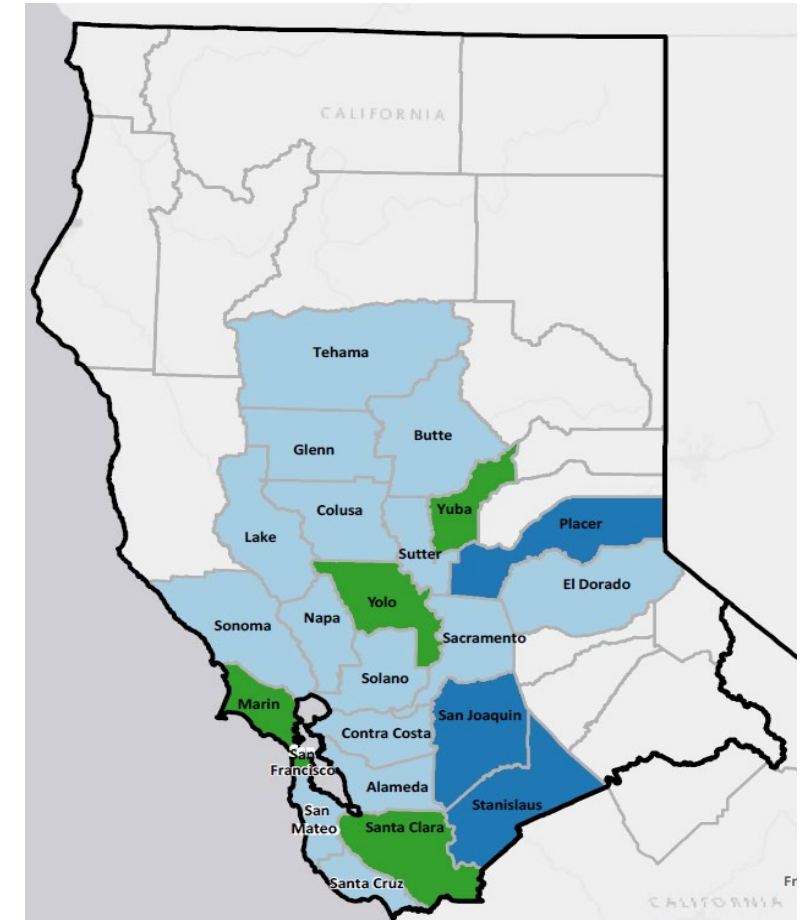
Winter trapping will resume in November in 20 counties.
Year-round trapping continues in 3 counties.

Delimitation Traps

Alameda County	126
Santa Clara County 3 ACP detected in June 2022. No expansion to existing delimitation area.	591

Biocontrol

Number of <i>Tamarixia radiata</i>	147,900
Number of Properties	336
Data current as of 6/28/22.	



ACP Trapping

- CDFA
- County (Winter)
- County (Year-round)

CPDPD
Administrative
District

Northern District Update | Risk Survey 2021 Cycle 2

Completed	In Progress
Butte	Alameda
Glenn	Contra Costa
Humboldt	Marin
Mendocino	Placer
San Francisco	Sacramento
Stanislaus	San Joaquin
Tehama	San Mateo
Placer	Santa Clara
Sacramento	Santa Cruz
Solano	Yolo
Sonoma	



Northern District Update | Staffing



Activity	Number of Staff
Risk Survey	8
ACP Detection and Delimitation	4
Biocontrol	1
Regulatory	3





Grower Liaison Updates
CPDPC Operations Meeting
July 6, 2022



CITRUS PEST & DISEASE
PREVENTION DIVISION
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE



Central District: Grower Liaison Updates

Fresno, Madera, Northern Tulare: Teri Blaser

- There was a total of eight detections, five trap finds and three finds of live psyllids around Lemon Cove/Woodlake at an organic packing house.
- All growers have treated in the area.

Southern Tulare: Jessica Leslie

- Jessica has continued to send out her monthly e-mail updates to all interested parties as well as reaching out to current and prospective PMA team leaders.





Central District: Grower Liaison Updates Continued

Kern County: Judy Zaninovich

- There have been **eight** ACP detections in Kern County as of June 26.
- All these detections occurred in residential or rural residential properties in Bakersfield, Mettler, Shafter, and Arvin.
- There is no commercial citrus within at least a mile of any of these finds.
- Judy continues to keep the Kern citrus industry apprised of the recent detections through her email updates and meeting reports.
- She reminds growers history shows that low ACP trap detections in the spring can possibly lead to high populations by fall if conditions are right.
- She continues to urge growers and PCA's to stay vigilant by not moving leaf and stem material from the orchard and consider using an ACP-effective material when treating other citrus pests.



Central District: Grower Liaison Updates Continued

Santa Barbara County Update: Cressida Silvers

- Fall 2021 and Winter 2022 ACP area-wide treatment percentages have been reported to CDFA.
- The upcoming area-wide treatment window for Fall 2022 is Sept 4 - 24.
- The CRB citrus layer for the county was recently updated.

San Luis Obispo County Update: Cressida Silvers

- There have been no new ACP detections in the county.
- The CRB citrus layer for the county was recently updated.

Ventura County: Sandra Zwaal & Cressida Silvers

- On May 31st, a Ventura Co. Task Force meeting was held and facilitated by the new Farm Bureau CEO.
- The annual Grower Meeting to announce the upcoming ACP area-wide treatments is planned for August. Both Grower Liaisons will work with the Farm Bureau CEO to provide recommendations for topics and help coordinate speakers.
- The 2022 Fall ACP area-wide treatments are scheduled to begin in July. The new treatment schedule remains routine and like the previous years' schedule.



Central District: Grower Liaison Updates Continued

San Diego County – Sandra Zwaal

- The San Diego fall ACP area-wide treatments are scheduled for August.

San Bernardino County– Sandra Zwaal

- The Fall ACP area-wide treatments are scheduled to begin in July.
- Treatment reminders are being distributed by Sandra.
- In preparation for the upcoming treatments, Sandra will update the grove and grower contact data for both counties.
- A Field Day is being planned to include San Bernardino, San Diego and Riverside growers to show how to identify, monitor, and manage ACP.
 - Sandra is working with the UC and this event may include additional UC presentations related to other citrus pests and diseases.





Southern District: Grower Liaison Updates Continued

Imperial County: Curtis Pate

- There have been few ACP detections by PCD personnel, PCA's and canine scouts.
- In mid May there were *Tamarixia* releases in the neighborhoods on the west side of Calipatria and Brawley.
- They have been unable to find parasitized ACP nymphs. The PCD is releasing lacewings in those areas.



Grower Liaison Updates: CPDPC Full Committee Meeting: April 13, 2022

Northern Tulare County, Fresno County, and Madera County:

In Northern Tulare County the first detection was at a juice north of Visalia at the beginning of May. There was no commercial citrus within 800 meters of the find deeming it a regulatory find. During the same time there were several finds around Lemon Cove/Woodlake at an Organic packinghouse. There was a total of eight detections, five trap finds and three finds of live psyllids. The live psyllids were found during a survey of host material on the packinghouse grounds and houses nearby. All growers have treated in the area.

There were three 25+ tree properties, two within the 400-meter residential treatment area and one just outside of that but within the 800-meter commercial citrus treatment area. All have been treated. Two of the properties were treated with the aid of the Tulare County Pest Control District, Commissioner Tucker's office, and Judy Zaninovich. Funding for the cost for the treatments was shouldered by the Tulare County Pest Control District and the Tulare County Ag Commissioner's office. The third property was able to reduce the number of trees to 24 and was treated by CDFA.

In Fresno County there were also several finds. The first two finds were at an Organic packinghouse in the Orange Cove area. It consisted of a trap find towards the end of May and finds of live psyllids at the beginning of June in nursery trees stored outside of the packinghouse.

Teri is working with the Fresno Ag Commissioner's team to ensure that all growers treat within the 800-meter area. There was only one 25+ tree property which was surrounded by the property owner's commercial citrus. Both will be treated at the same time. There is a block of abandoned trees just north of the packinghouse which is scheduled to be pushed. The owner is working on hiring a company to do the work, but there is a backlog of work for the tree removal company. Libby Ouellette, the Fresno County Deputy Ag Commissioner, has her team monitoring that block and bringing in the ACP detection dogs until the trees are completely removed. There were two additional trap finds at a packinghouse in Fowler early in June. Both are regulatory and there is no commercial citrus within 800 meters of the finds. The city of Fresno has also had a trap find confirmed on June 15, 2022 in the Sunnyside area. There is no commercial citrus near this new find.

Teri also continues to reach out to growers through monthly and as needed updates for all areas.

Southern Tulare County:

Jessica has continued to send out her monthly e-mail updates to all interested parties as well as reaching out to current and prospective PMA team leaders. If anyone who is not currently receiving her monthly e-mail updates is interested, please e-mail or call Jessica.

Kern County:

There have been **8** ACP detections in Kern County in the last month. All of these detections occurred in residential or rural residential properties in Bakersfield and Arvin. There is no commercial citrus within at least a mile of any of these finds. CDFA has already treated all residential citrus hosts within 50 meters for most of these detections areas and will be treating the recent detection areas very soon.

Judy continues to keep the Kern citrus industry apprised of the recent detections through her email updates and meeting reports. She reminds growers history shows that low ACP trap detections in the spring can possibly lead to high populations by fall if conditions are right. So, she continues to urge growers and PCA's to stay vigilant by not moving leaf and stem material from the orchard and consider using an ACP-effective material when treating other citrus pests.

Santa Barbara County:

- Fall 2021 and Winter 2022 ACP area-wide treatment percentages have been reported to CDFA.
- The upcoming area-wide treatment window for Fall 2022 is Sept 4 - 24.
- The CRB citrus layer for the county was recently updated.

San Luis Obispo County

- There have been no new ACP detections in the county.
- The CRB citrus layer for the county was recently updated.

Imperial County:

The Canine Detection Team has been less active in Imperial this past month. There have been few ACP detections by human and canine scouts. A primary reason for lower detections is likely due to extreme heat and hardening of mature trees with much lower flush levels. ACP has been detected on new plantings near residential plantings.

In mid-May there were *Tamarixia* releases in the neighborhoods on the west side of Calipatria and Brawley. Following up on those releases, we have been unable to find parasitized ACP nymphs. The PCD is releasing lacewings in those areas currently.

Ventura County:

- On May 31st, a Ventura Co. Task Force meeting was held and facilitated by the new Farm Bureau CEO. New Task Force members have replaced those members that have retired with future meetings occurring either monthly or quarterly.
- The annual Grower Meeting to announce the upcoming ACP area-wide treatments is planned for August. Both Grower Liaisons will work with the Farm Bureau CEO to provide recommendations for topics and help coordinate speakers.
- The 2022 Fall ACP area-wide treatments are scheduled to begin July. The new treatment schedule remains routine and like the previous years' schedule.

San Diego County:

- The San Diego fall ACP area-wide treatments are scheduled for August.
- In preparation for the upcoming treatments, Sandra will update the grove and grower contact data.
- A Field Day is being planned to show how to identify, monitor, and manage ACP. Sandra is currently working with the PCD Manager and with UC to identify a grower cooperator and site. The Field Day may include UC presentations related to other citrus pests and diseases.

San Bernardino Co. Update – Sandra Zwaal

- The Fall ACP area-wide treatments are scheduled to begin July. Treatment reminders are being distributed by Sandra.
- In preparation for the upcoming treatments, Sandra will update the grove and grower contact data.
- A Field Day is being planned to include both San Bernardino and Riverside growers to show how to identify, monitor, and manage ACP. Sandra is also working with UC and this event may include additional UC presentations related to other citrus pests and diseases.

Asian Citrus Psyllid Biocontrol Update



July
2022

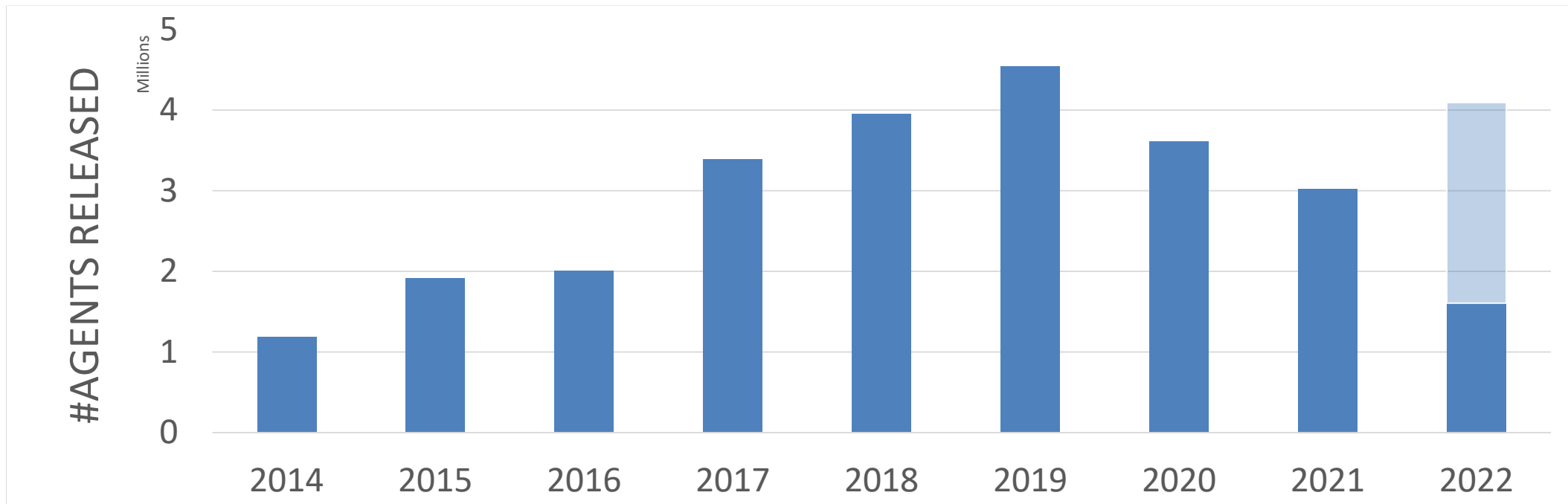


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Tamarixia Releases in California

Total Releases by Year

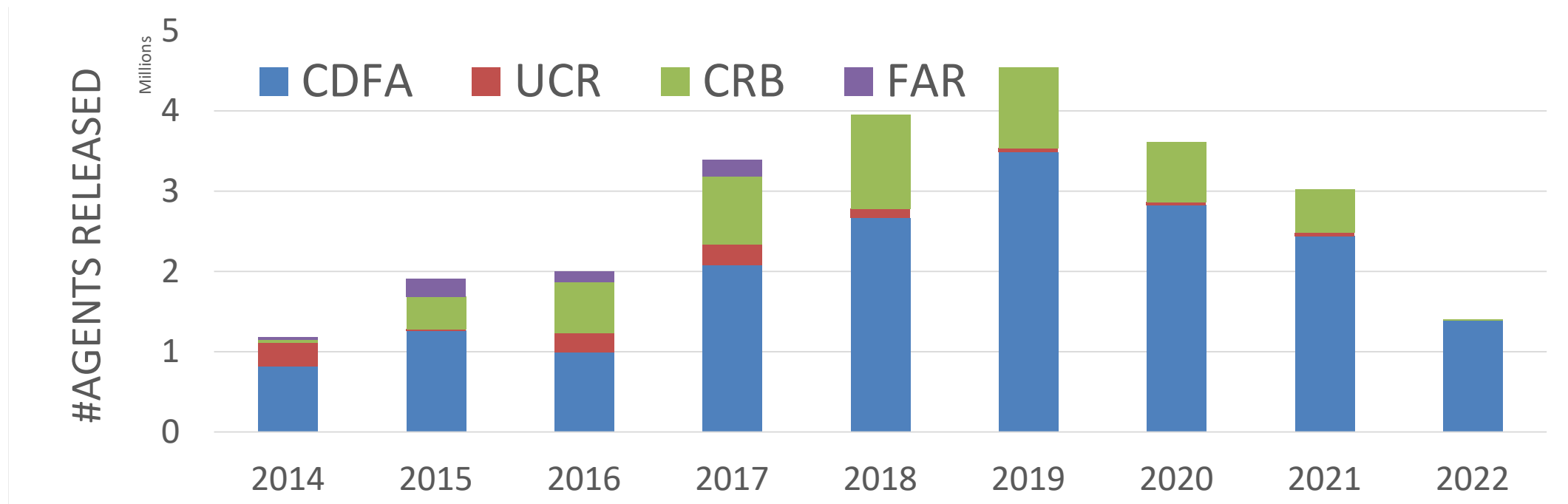
With Estimate of Remainder of This Year's Release



Tamarixia Releases in California

Multiagency Participation

- CDFA (2012 – Present)
- Citrus Research Board (2014 – Present)
- Foothill Agricultural Research (2014 – 2017)
- UC Riverside (2010 – 2021)



Biological Control Agent Releases

December 2011 – July 2022

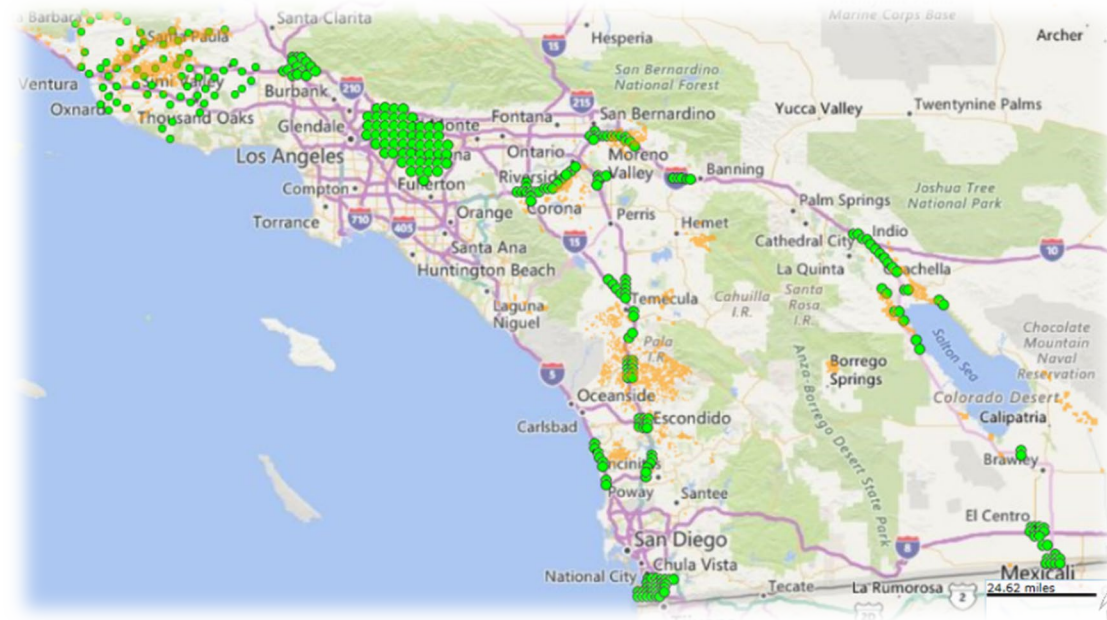
County	Releases, 2022	Releases 2011-2022	
	<i>T. radiata</i> Released	Tamarixia Released	<i>D. aligarhensis</i> Released
Imperial	55,200	574,343	10,295
Los Angeles	361,004	6,943,519	107,734
Orange	388,800	5,352,676	71,179
Riverside	170,200	3,702,802	127,739
San Bernardino	115,700	1,919,375	57,252
San Diego	147,800	2,872,088	86,403
Ventura	112,000	2,142,056	16,830
Santa Barbara	64,600	295,082	12,012
Kern	48,400	272,564	0
Santa Clara	46,200	181,337	0
Placer	0	3,400	0
San Luis Obispo	0	109,500	0
Tulare	7,200	43,200	0
Monterey	0	14,400	0
Arizona	12,100	172,200	0
Mexico	0	306,000	0
TOTAL	1,529,204	24,904,542	489,444
	TOTAL (2011-2021):		25,393,986



Biological Control Agent Release Areas

Releases in:

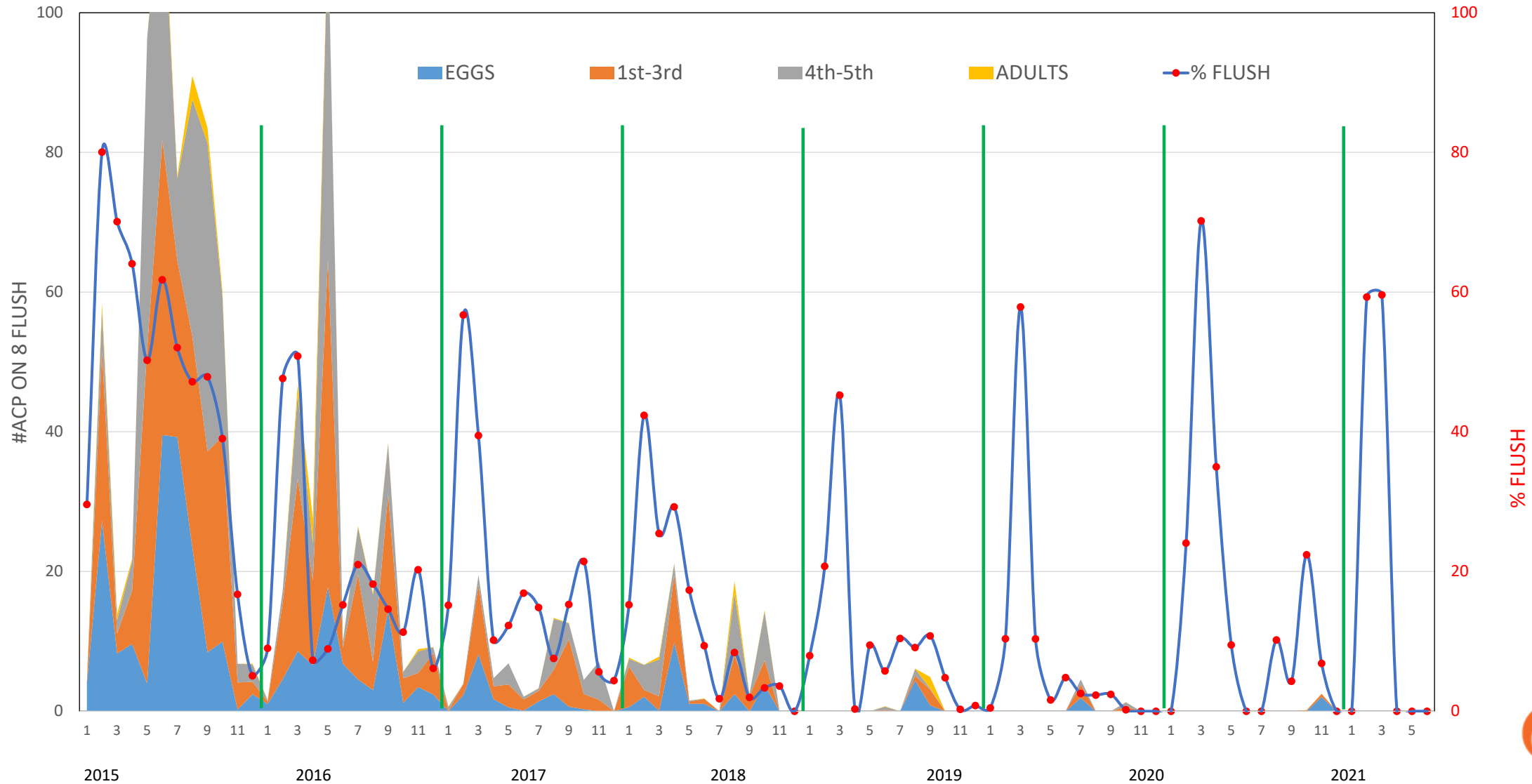
- HLB Quarantine areas
- Borders
- Trade routes
- Area-wide management
- Newly established ACP



Release Type	2021		2022	
	# Agents	%	# Agents	%
Borders	92,634	3	67,300	5
HLB	2,456,592	81	992,500	76
New	135,355	4	88,400	7
Routes	339,244	11	154,200	12



Region-Wide Urban Monitoring 2015 - Present



Publication on ACP Biocontrol in California

Contributions of
CLASSICAL BIOLOGICAL CONTROL
to the U.S. Food Security, Forestry, and Biodiversity

Edited by
Roy G. Van Driesche, Rachel L. Winston, Thomas M. Perring, and Vanessa M. Lopez

[Contributions of Classical Biological Control to the U.S. Food Security, Forestry, and Biodiversity \(bugwoodcloud.org\)](https://bugwoodcloud.org)

URL: <https://bugwoodcloud.org/resource/files/23194.pdf>

CHAPTER
12

**Successful Biological Control of Asian Citrus Psyllid,
Diaphorina citri, in California**

Mark S. Hoddle^{1*}, Christina D. Hoddle¹, David J. W. Morgan², and Ivan Milosavljević¹

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² California Department of Food and Agriculture, Mt. Rubidoux Field Station, Riverside CA david.morgan@cdfa.ca.gov



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ACP DETECTOR CANINES UPDATE

Presentation for CPDPC Operations Sub-Committee

July 2, 2022

WHERE MAN'S BEST FRIEND FINDS IT!

PEST CONTROL – AGRICULTURE – FOOD SAFETY

Overall Summary

1/1/2022 - 6/27/2022

Residential

Item	CA	AZ
Number of Trees with ACP	55	6
Total Number of Trees Inspected	1,541	300
Number of Doors Answered	316	66
Number of Doors not Answered	239	9
K9 Inspection	269	71
Visual Only	202	0
No Permission	27	3

Commercial Orchards

Item	CA	AZ
Number of Trees With ACP	260	0
Total Number of Trees Inspected	58,078	3,985
Number of Clients	30	3
Number of Blocks	288	15

K9 Performance

Naturally Occurring ACP

Total K9 Alerts	375
Alerts With ACP Visually Confirmed	319
% Visually Confirmed	85%

Training Aids (Live and Pseudo)

Total K9 Alerts	176
Alerts At Tree With Training Aid	165
Accuracy	94%

Kern County

Arvin & Bakersfield

1/10/22- 1/13/22

- Number of Trees with ACP- 0
- Total Number of Trees Inspected- 128
- Number of Doors Answered- 35
- Number of Doors not Answered- 47
- K9 Inspection- 31
- Visual Only- 31
- No Permission- 20

Kern County Bakersfield 5/18/22

- Went to 6 houses with CDFA
- 5 no answer
- 1 answered but had Covid
- No canine deployed

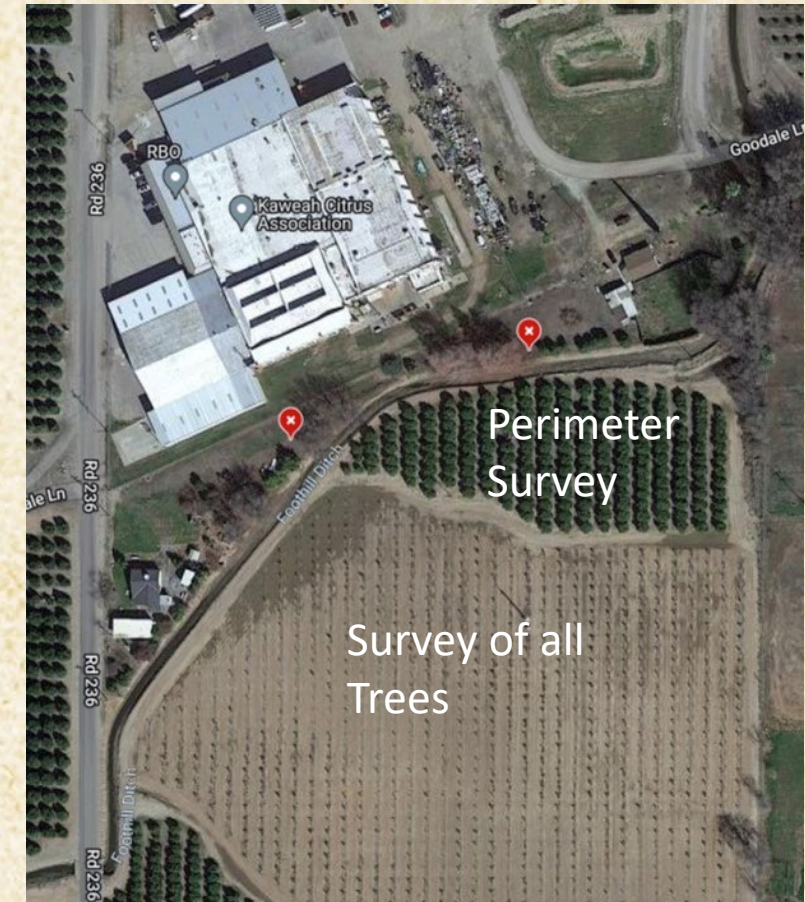
Tulare County

Lemon Cove- Around Packinghouse



Initial 5/15-5/17

- Trees Surveyed- 1,753
- Trees K9 Located ACP- 0
- While visually inspecting residential trees we couldn't take dogs into, we located live ACP (N). Collected by CCTEA.



After Treatment 6/13-6/14

Tulare County

Lemon Cove- Residential Sites

Survey after Treatment 6/13 & 6/14

- Invited by Jim Gorden.
- Accompanied by CDFA staff Vanessa to locations of interest to growers.
 - Sniffed residential sites within treatment area which were not accessible to canines on first trip.
 - Found that a residential site within the orchard had a few nursery stock trees not yet planted which were then surveyed by CDFA.
 - Several residential sites outside of treatment area that were of interest to growers.
 - Discovered the school has citrus trees which were surveyed by Vanessa.

Fresno County

Orange Cove

Packinghouse 6/6-6/10

- Trees Surveyed- 3,704
- Trees K9 Located ACP nymphs and eggs - 4
 - All on potted plants next to packinghouse.
- Trees treated 5 days prior with conventional and organic products.
- I showed owner ACP and he said he would treat again that evening with a conventional product.
- Fresno County Deputy Ag Commissioner came out and confirmed they were ACP. County Entomologist came to collect.
- Sending county staff regularly to shadow the dog teams.
- Trees planted in bins stored 2 and 3 wide are too dense to access.
- Canine team will survey these potted trees weekly.
 - As of July 24 no further ACP located.

Fresno County

Orange Cove

6/16-6/17

Item	CA
Number of Trees With ACP	0
Total Number of Trees Inspected	2,835
Number of Clients	1
Number of Blocks	3

- Commercial blocks surrounding packinghouse were scouted.
- Potted trees were re-inspected: No live ACP found, a few dead nymphs were seen
- Owner is happy for the dogs to come anytime. We agreed I would let him know the day before and he will inform me of any pesticide treatments.

Packinghouse & K9s inspecting bins

- Fresno County Deputy Ag Commissioner
 - We offered to send canine team with county inspectors.
- SJV Organic Growers Group
 - Would like canines to inspect bins coming into packinghouse and before leaving orchard of origin.
 - Seek permission from food safety certifying body before starting.
- Doc's Organics- Imperial County
 - Will cooperate in grant research (if granted) of canines inspecting bins of fruit as they arrive.

Budget

	Fed Sup	No-FSup	No-FSup
	6/2022-5/2023	6/2022-5/2023	4/2023-3/2024
Salaries	401,275	401,275	588,794
Benefits (15%)	60,191	60,191	88,329
Training Base-Riverside County	45,742	45,742	48,945
Travel	117,949	117,949	126,204
Canine	72,638	72,638	70,761
Administration	38,464	38,464	41,156
Contingencies (5%)	36,813	36,813	50,209
Total	773,071	773,071	1,012,388
Federal Support ¹	509,517	0	0
Amount Needed	263,554	773,071	1,012,388
Annual Price per Team	131,777	379,579	253,097 ²
Number of Canine Teams	2	2	4

Staffing

	4/2022-3/2023	4/2023-3/2024
Canine Teams	2	4
Trained Dogs ³	5	9
San Joaquin Valley	1	2
Desert Region	1	2

Notes:

1- USDA APHIS PPQ also will provide \$118,548 for items not in this budget. Scope of work is supplying 2 teams and overhead for one last year.

2- Price per team goes down as overhead is shared by more teams

3- One backup dog in reserve as a substitute.

Future Canine Program Costs

June 2023-May 2024

- \$1,012,388 annual program cost
- \$253,097/ team / year - 4 teams
- \$973/day
- \$1.79/ tree

Note:

This does not include the 40,000 needed for procuring 4 new dogs.

Calculations used:

545 average commercial trees/day/team in 2022.

260 working days/year.

Pending Grant Applications

Full Proposal Requested

Funds Cannot Be Used To Support ACP Canine Teams Providing Services

CRB Objectives

1. Determination of relative effectiveness of canine teams and human scouts in detecting ACP at low population densities in commercial citrus.
2. Determination of net benefits of canine detection teams relative to human scouts when ACP populations are low.
3. Determination of net benefits of canine detection teams relative to human scouts in identifying the duration of effectiveness of Imidacloprid under new regulations limiting the level of active ingredient in Imidacloprid.

PI: Lisa Finke, CO-PI: Jonathan Kaplan
Collaborators: Neil McRoberts, Curtis Pate

USDA-NIFA-ECDRE Objectives

1. Analyze data from farm-level implementation of proven ACP detector canine technology to optimize regional management or eradication of ACP in commercial groves and residential settings in CA and AZ .
2. The increased efficacy of detecting ACP when using ACP detector canine teams versus human scouts reduces the consequences of HLB by slowing the establishment of ACP more than increased detection increases ACP treatment costs.
3. Determine if detector canines can be utilized in citrus greenhouses to detect prior ACP feeding on plants after breaches, such as a tear in the greenhouse or after a hurricane.
4. ACP detector canine teams increase citrus industry knowledge of the duration of effectiveness of the systemic pesticide Imidacloprid, leading to greater vector control that more than offset the additional costs from possibly treating more frequently.

PI: Lisa Finke, Co-PI Neil McRoberts, Jonathan Kaplan

Data Department Update

Rick Dunn

CRB Director of Data and Information Management

7/6/2022

Data Management Department Activity,

July 6, 2022

Richard Dunn - Data, Information & Management Director

UCKAC GIS Facility

- Robert Johnson continues to assist with Statewide Citrus Layer maintenance and keeping the UCANR interactive web map updated with ACP, Biocontrol, CLas+ACP, and HLB detection data. <http://ucanr.edu/acpmap>

CRB Data Department

- Director is supporting Psyllid Management Area group activities and regional ACP / HLB Task Force groups in various counties with mapping support services. Revising the Statewide Commercial Citrus Layer as information is received. Santa Barbara and Ventura counties have been completed. Permit Data has been requested for additional counties. Director is collaborating with CDFA PDAS and CPDPD GIS staff on development of a NOMAD replacement system.
- GIS Analyst Nancy Ying is conducting routine data scrubbing, quality control, and map production tasks.
- Search for new DATOC Program Manager continues. Former DATOC Analyst Dr. Sandra Olkowski is helping out in the interim.
- Staff continue to support the CPDPP commercial grove trapping / sampling program. Supplying trappers with individualized GIS Trapsite and Samplesite layers updated weekly for use on their NOMADs. We produce and distribute ACP / HLB detection overview maps, PDR 800M maps, Biocontrol Workgroup activity maps, CPDPP Trapping progress maps, CPDPP Sampling progress maps, Trapping catch per day maps, Sampling close-up maps, and ArcGIS Online detection / collection heat maps, as well as monthly summary data, ACP situation data, and statistical reports.



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Santa Barbara County Citrus Layer



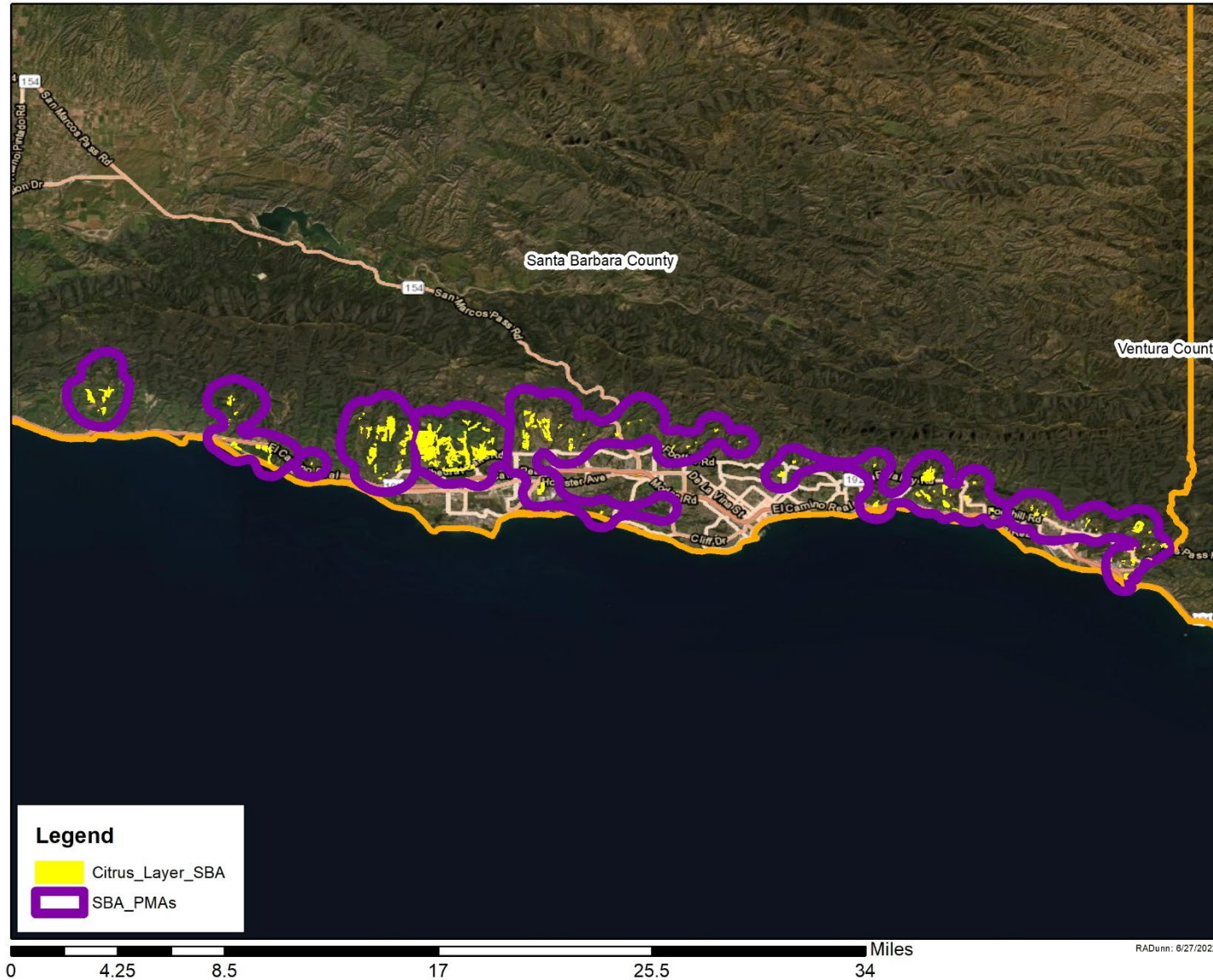
- 321 blocks mapped
- 1,758 acres total (based on GIS)
- 102 Pesticide Use Permits

RA Dumm: 8/27/2022



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Santa Barbara County Citrus Layer

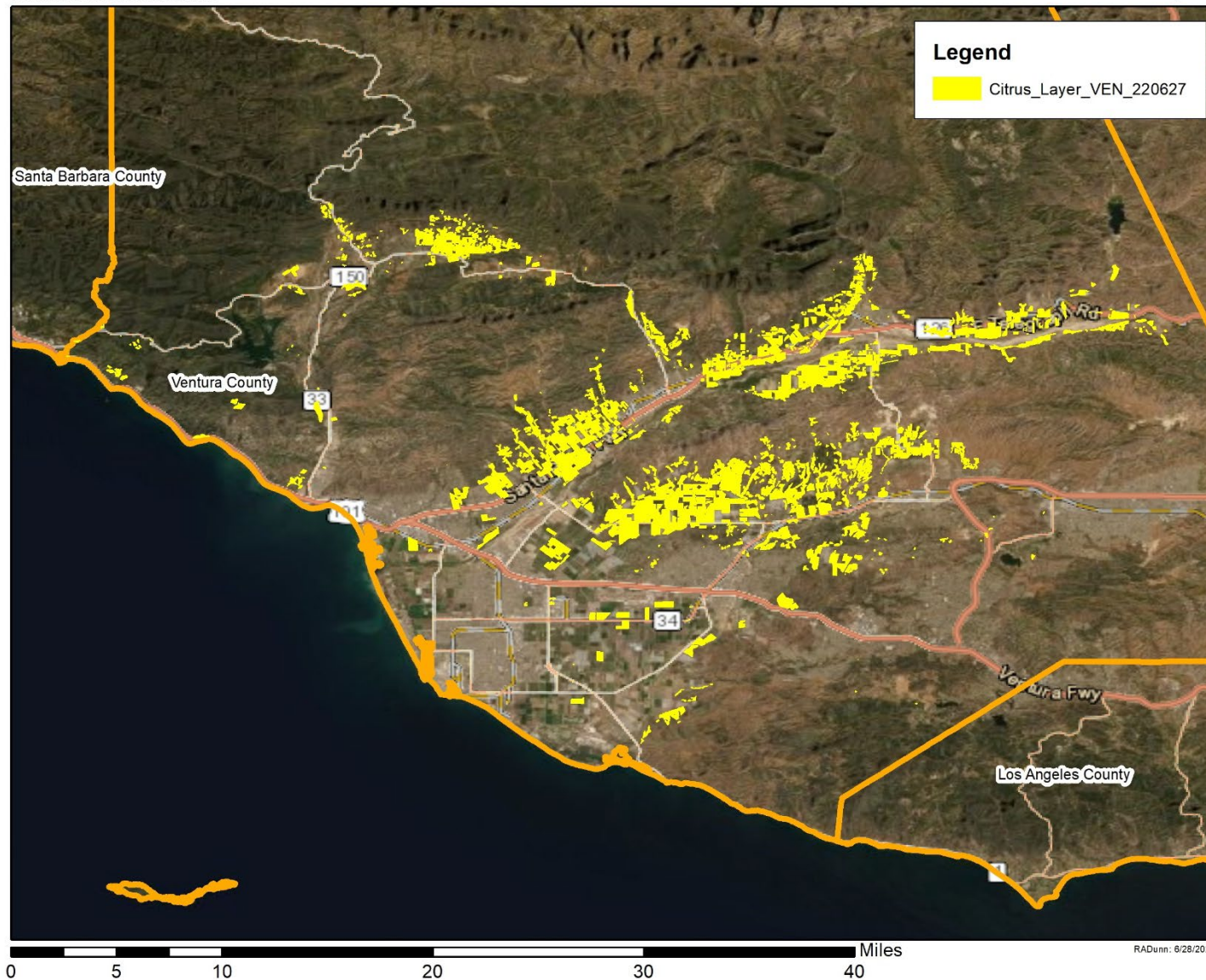


- 7 Psyllid Management Areas (PMAs)



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Ventura County Citrus Layer

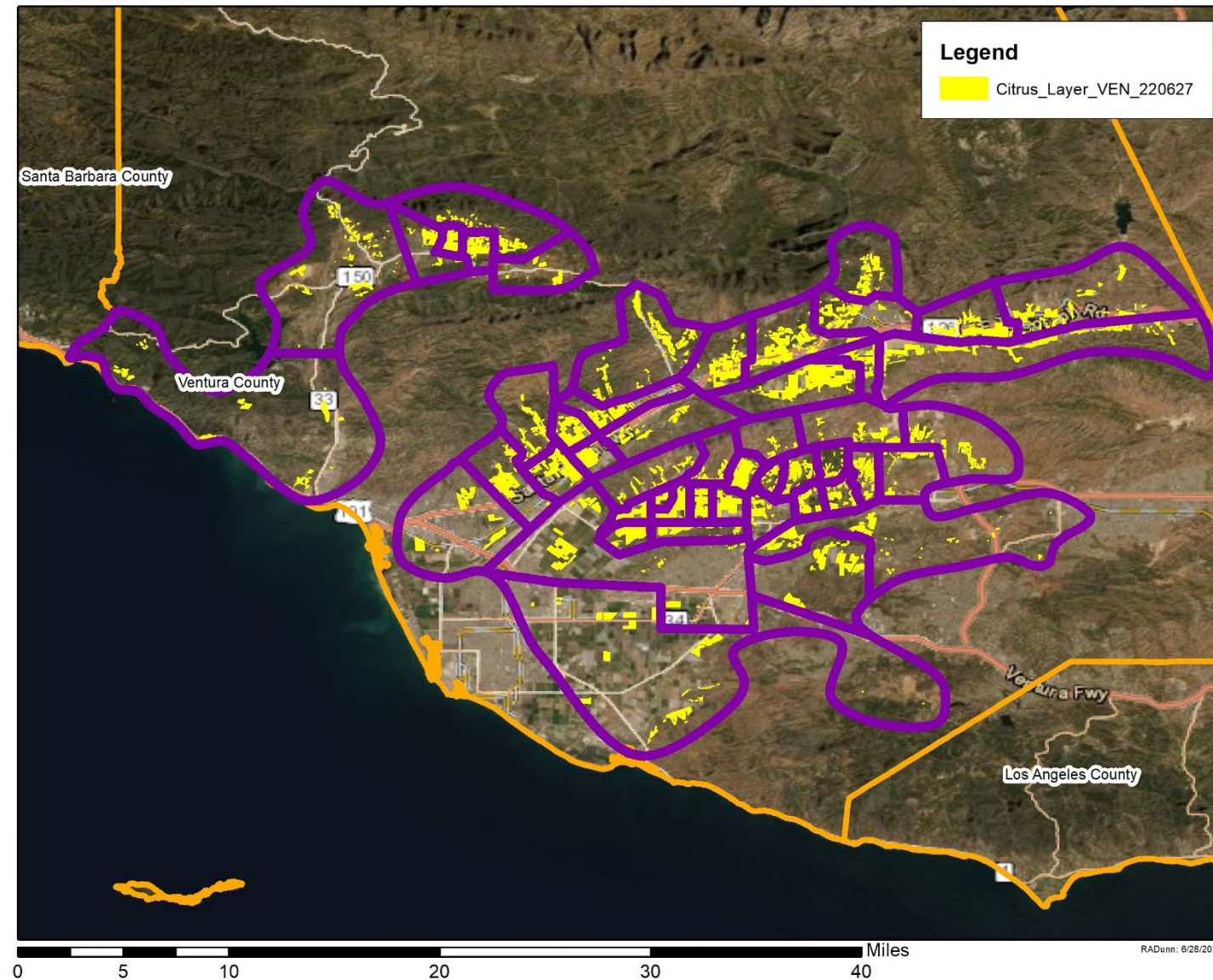


- 3,146 blocks mapped
- 26,037 acres total (based on GIS)
- 390 Pesticide Use Permits



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Ventura County Citrus Layer

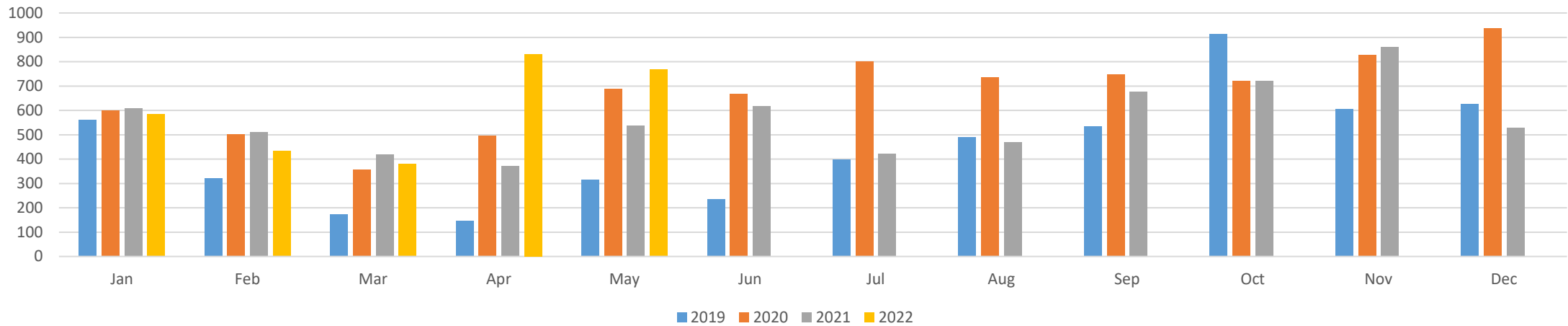


- 50 Psyllid Management Areas (PMAs)

CPDPD Commercial Grove Sampling Program

May 2022 update

Suspect ACP Collection Events



Suspect ACP Collected for Testing

