

**2018 Asian Citrus Psyllid/Huanglongbing
AP18PPQFO000C048
Semi-Annual Accomplishment Report**

Survey Report

Year:	2018
State:	California
Cooperative Agreement Name:	Asian Citrus Psyllid/Huanglongbing
Cooperative Agreement Number:	AP18PPQFO000C048
Project Funding Period:	October 1, 2017 – March 31, 2018
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Cooperators Project Coordinator:	Sara Khalid
Name:	Victoria Hornbaker
Agency:	CA Department of Food and Agriculture
Address:	1220 N Street, Room 221
City/ Address/ Zip:	Sacramento, CA 95814
Telephone:	(916) 654-0317
E-mail:	victoria.hornbaker@cdfa.ca.gov

Quarterly Report	<input type="checkbox"/>
Semi-Annual Accomplishment Report	<input checked="" type="checkbox"/>
Final Accomplishment Report	<input type="checkbox"/>

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A. Background

The first Asian Citrus Psyllid (ACP) was detected in San Diego County in 2008. Since the initial detection, the California Department of Food and Agriculture (CDFA), in conjunction with the United States Department of Agriculture (USDA), County Agricultural Commissioners (CAC), industry and other stakeholders have worked to implement basic Citrus Health Response Program (CHRP) principles. The purpose of the project is to survey for the presence of ACP and HLB, determine the extent of the ACP/HLB infestation(s), control/eradicate infestation(s), establish and enforce quarantine regulations, restrict the movement of hosts as necessary upon the detection of ACP/HLB while the status of the infestation is being determined, enlist the assistance of the public through various outreach activities, perform immediate ACP/HLB identification and prepare, search for, rear and release biological control organisms. These coordinated activities are to meet the goals of CHRP, sustain the United States' (U.S.) citrus industry, to maintain grower's continued access to export markets, and to safeguard the other citrus growing states against a variety of citrus diseases and pests.

These pests present a major threat to citrus grown within the State. California is the top citrus-producing state in the U.S., with total 2014 production valued at over \$3.3 billion. Additionally, the establishment of ACP in California would increase the need for pesticide use by commercial and residential citrus producers, as well as require enforcement of quarantine restrictions. A 2016 study by the University of Florida showed that the presence of HLB in Florida has resulted in a loss of over \$7.8billion and 7,51300 jobs over the previous five years. Because HLB has been detected in Mexico and in Los Angeles, Orange and Riverside Counties, the establishment of ACP in California will pave the way for HLB to spread. HLB would have severe consequences to both the citrus industry and to the urban landscape via the decline and the death of citrus trees.

Early detection of these pests is critical to the ability to eradicate or suppress incipient infestations. Funding this survey and related activities increases the likelihood that these pests will be found at low population levels and will allow for successful eradication/control. Additionally, enforcing quarantine regulations will mitigate the spread of ACP and HLB. Negative survey data will also be beneficial because it will determine the success of the eradication project and it supports the validity of existing state and federal regulations while promoting California's export program.

Since the first detection of ACP in San Diego County in 2008, ACP has since been detected in additional counties (as of March 31, 2018): Alameda, Contra Costa, Fresno, Imperial, Kern, Kings, Los Angeles, Madera, Merced, Monterey, Orange, Placer, Riverside, San Benito, San Bernardino, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Solano, Stanislaus, Tulare, Ventura and Yolo.

On March 23, 2012, HLB was detected in Los Angeles County. On July 10, 2015, a second HLB-positive tree was detected in San Gabriel, Los Angeles County. For the previous reporting period, new areas were identified. On February 24, 2017, HLB was detected in a third location in Orange County. On July 10, 2017, HLB was detected in a fourth location in Riverside County. HLB is established in areas with climates like California and is the most devastating of all citrus diseases. Because HLB has been found in California, CDFA continues to control the ACP population to

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slow its spread throughout the state. To determine whether these pests are spreading and to detect new infestations, trapping and visual survey are ongoing in counties that have commercial citrus production and in residential areas throughout the state. Additionally, the following operations have increased: pesticide applications, enforcement of quarantine regulations, biological control development, laboratory services, and outreach.

B. Activities

1) ACP Survey (See Attachment 1 and 2¹ for details)

Table 1. Number of Traps by County

County	Maximum # of Traps Deployed
Alameda	1,297
Butte	157
Contra Costa	1,125
Fresno	6,428
Glenn	50
Kern	5,483
Kings	254
Lake	47
Los Angeles	630
Madera	803
Merced	520
Monterey	415
Napa	119
Placer	393
Riverside	15
Sacramento	1,303
San Benito	355
San Joaquin	2,182
San Luis Obispo	370
San Mateo	683
Santa Barbara	123
Santa Clara	1,322
Santa Cruz	275
Solano	503
Sonoma	377
Stanislaus	1,068
Sutter	150
Tulare	18,326
Ventura	423
Yolo	121
Total	45,317

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2) Huanglongbing Survey

a) Visual Survey

- (1) Performed a risk-based residential survey for HLB (Table 2).
- (2) Number of sites to survey per square mile is determined by using the risk-based factors developed by Dr. Gottwald (USDA).
- (3) Survey continued in Northern California, Central California, and with the majority in Southern California.
- (4) Performed delimitation surveys in counties not under an area wide treatment program (Table 3).
- (5) Surveyed and collected ACP and symptomatic plant tissue from ACP detection sites during delimitation surveys.
- (6) The USDA performed a quality control check on all HLB data prior to submission to Dr. Gottwald.

Table 2. HLB Risk-based Survey Data

County	Cycle	Survey Dates		# of STMS		# of Survey Sites		# of Sites with Entomology Samples	# of Sites with Plant Samples	# of Sites Negative for Entomology and Plant Samples
		Start	End	Trapped	Completed	Trapped	Completed			
Alameda	2	10/8/2017	12/30/2017	6	6	525	300	0	6	294
Butte	2	2/25/2018	3/31/2018	1	1	5	5	0	0	5
Calaveras	2	4/1/2018	4/7/2018	2	2	20	1	0	0	1
Contra Costa	2	-	-	0	-	-	-	-	-	-
Del Norte	2	11/26/2017	12/2/2017	2	2	10	0	0	0	0
El Dorado	2	4/1/2018	4/7/2018	1	1	10	1	0	0	1
Fresno	2	7/24/2017	12/1/2017	72	73	5595	3739	0	327	3412
Glenn	2	12/17/2017	12/23/2017	1	1	10	3	0	0	3
Humboldt	2	11/26/2017	12/2/2017	2	2	30	6	0	0	6
Imperial	2	9/17/2017	9/30/2017	6	6	85	76	3	38	37
Kern	2	8/28/2017	1/18/2018	62	62	3775	2730	0	202	2528
Kings	2	11/20/2017	12/15/2017	9	9	270	259	0	89	170
Los Angeles	1	4/17/2017	1/12/2018	304	304	19340	15778	8844	2458	5443
	2	12/18/2017	Ongoing	334	96	22265	7314	4669	1266	2724
Madera	2	10/9/2017	11/17/2017	15	15	290	280	0	20	260
Marin	2	-	-	0	-	-	-	-	-	-
Mariposa	2	8/21/2017	8/25/2017	1	1	5	2	0	0	2
Mendocino	2	12/5/2017	12/11/2017	1	1	5	0	0	0	0
Mercut	2	8/14/2017	8/18/2017	2	2	10	10	0	1	9
Monterey	2	7/12/2017	8/24/2017	2	2	110	100	0	13	87
Nevada	2	3/25/2018	3/31/2018	2	2	10	1	0	0	1
Orange	2	12/18/2017	Ongoing	84	71	8675	4664	3833	1466	395
Placer	2	1/21/2018	Ongoing	11	10	500	314	0	7	307
Plumas	2	-	-	0	-	-	-	-	-	-
Riverside	2	8/31/2017	Ongoing	76	70	9720	6136	3404	1689	1601
Sacramento	2	8/27/2017	1/20/2018	20	20	965	878	0	39	839
San Benito	2	8/14/2017	8/18/2017	4	4	20	19	0	0	19
San Bernardino	2	8/31/2017	Ongoing	46	44	5760	3661	1981	1047	1134
San Diego	2	8/20/2017	Ongoing	156	75	13200	7091	3029	2785	2348
San Francisco	2	12/30/2017	1/20/2018	4	4	275	40	0	4	36
San Joaquin	2	7/17/2017	9/15/2017	27	27	925	734	0	26	708
San Luis Obispo	2	8/7/2017	8/10/2017	2	2	35	26	0	5	21
San Mateo	2	1/14/2018	2/17/2018	3	3	220	143	0	6	137
Santa Barbara	2	6/28/2017	8/10/2017	2	2	150	120	0	14	106
Santa Clara	2	6/18/2017	12/9/2017	9	9	925	516	0	40	476
Shasta	2	12/17/2017	12/23/2017	6	6	75	26	0	1	25
Sonoma	2	12/31/2017	12/31/2017	2	2	15	0	0	0	0
Stanislaus	2	7/31/2017	10/6/2017	16	16	975	629	0	19	610
Tehama	2	12/18/2017	12/18/2017	2	2	10	3	0	0	-
Trinity	2	-	-	0	-	-	-	-	-	-
Tulare	2	8/21/2017	1/19/2018	70	70	3985	2966	0	278	2688
Tuolumne	2	8/21/2017	8/25/2017	5	5	70	4	0	0	4
Ventura	2	8/13/2017	Ongoing	18	18	1365	792	184	197	470
Yolo	2	12/31/2017	1/27/2018	3	3	130	130	0	2	128
Yuba	2	3/18/2018	3/31/2018	1	1	200	53	0	1	52
Totals				1,392	1052	100,565	59,550	25,947	12,046	27287

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*County survey cycles have been separated into their respective reporting periods, by bulk work completed, accounting for temporal overlap.

Table 3. Delimitation Visual Survey

County	# of Sites Surveyed
Fresno	19
Kern	187
San Luis Obispo	368
Tulare	55

Initial HLB response in California included survey of the March 30, 2012, USDA confirmed HLB positive citrus tree area in Hacienda Heights, Los Angeles County. Dr. Gottwald's risk-based survey also continued in San Gabriel, Los Angeles County from the July 2015 detections. The affected San Gabriel area began to expand; while more HLB-infected trees were detected in San Gabriel and Cerritos, Los Angeles County. Between October 1, 2016 and September 30, 2017, CLas infected ACP were collected and confirmed from several cities in Orange County: Anaheim, La Habra, and Fullerton. These CLas-positive psyllid finds and their subsequent HLB-positive host tree detections required quick response with an 800-meter survey, treatment, and removal of positively identified host material. Though relatively distant from the majority of HLB activity, HLB was detected in the city of Riverside, Riverside County. Within the city of Anaheim, several HLB-positive detections occurred, resulting in separate project areas. To keep track of different areas within the same city, street names were used identifying newly created project areas; streets S Flore and S Oertly were used to signify the new Anaheim areas. Detections for CLas-positive psyllids and HLB-positive host trees were also made in Whittier and Pico Rivera, Los Angeles County. These new areas also prompted 800-meter survey and treatment around positive detection sites. All infected trees were treated, removed, bagged, and disposed of at a nearby landfill. From October 1, 2017 through February 23, 2018, efforts continued in Hacienda Heights and San Gabriel with the cluster survey and subsequent treatments (Tables 4 & 5).

Table 4. Hacienda Heights Cluster Survey Data

	Cycle 5	Cycle 6	Cycle 1	Cycle 2
Survey Dates	10/30/17-10/31/17	12/9/17-12/27-17	1/2/2018-2/20/18	3/1/2018-3/31/18
# of Sites Visited	28	166	128	0
Plant Samples Collected	3	17	8	0
ACP Samples Collected	28	166	128	0
Sites Negative for ACP/Plant Samples	1	6	8	0

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Table 5. San Gabriel Cluster Survey Data

	Cycle 3	Cycle 1
Survey Dates	10/2/2017 - 12/28/17	1/10/18 – 2/23/18
# of Sites Visited	562	214
Plant Samples Collected	39	26
ACP Samples Collected	546	208
Sites Negative for ACP/Plant Samples	67	26

Positive HLB tree detections in the project area of San Gabriel were light during the period of October 1, 2017– March 31, 2018, with only one positive tree detection. Survey was conducted following previous detections (Table 6). During the same time, 72 HLB-positive trees were detected in Whittier, expanding the project area (Table 7); three CLas-positive psyllid sites were also added. CLas-positive psyllids were collected from the city of Norwalk on the 5th and 7th of December 2017; 800-meter survey and treatment followed (Table 8). Six HLB-positive trees were identified after the collection of a CLas-positive psyllid southwest of the San Gabriel project area, creating the new Rosemead project area (Table 9).

Table 6. San Gabriel Expansion (10-20) 800 Meter Survey Data

	Partial 800m
Survey Dates	10/4/17 - 1/18/18
# of Sites Visited	647
Plant Samples Collected	389
ACP Samples Collected	49
Sites Without Hosts	249

Table 7. Hacienda Heights Expansion (2-16) 800 Meter Survey Data

	Partial 800m
Survey Dates	12/13/17-Ongoing
# of Sites Visited	615
Plant Samples Collected	264
ACP Samples Collected	53
Sites Without Hosts	273

Table 8. Norwalk 800 Meter Survey Data

	800m
Survey Dates	12/6/17-Ongoing
# of Sites Visited	1,213
Plant Samples Collected	358
ACP Samples Collected	83

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Sites Without Hosts	787
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Table 9. Rosemead 800 Meter Survey Data

	800m
Survey Dates	12/18/17-Ongoing
# of Sites Visited	754
Plant Samples Collected	412
ACP Samples Collected	166
Sites Without Hosts	276

Pico Rivera expanded gradually over the six-month period from 10/1/2017– 3/31/2018, though there was a significant number of both CLas-positive psyllid and HLB-positive host detections (Table 10). The 63 positive hosts were treated, removed, bagged, and taken to a local landfill. Eighteen additional sites contained CLas-positive adult psyllids, and seven of those sites contained nymphs.

Table 10. Pico Rivera Expansion (2-28) 800 Meter Survey Data

	Partial 800m
Survey Dates	10/1/17-Ongoing
# of Sites Visited	2,389
Plant Samples Collected	2,330
ACP Samples Collected	654
Sites Without Hosts	2,184

The Anaheim project area increased substantially (Tables 11 & 12), with expansions connecting previously detached project areas. HLB-positive host detections amounted to 127 detections during the same period (10/1/2017– 3/31/2018). Another 25 detection sites were added with the collection of CLas-positive adult and nymph samples. A single CLas-positive psyllid detection occurred in the Fullerton project area collected January 18, 2017 (Table 13).

Table 11. Anaheim Expansion (1-29) 800 Meter Survey Data

	800m
Survey Dates	3/24/17-Ongoing
# of Sites Visited	10,290
Plant Samples Collected	4,689
ACP Samples Collected	2,734
Sites Without Hosts	5,920

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Table 12. Anaheim Expansion (30-50) Meter Survey Data

	Partial 800m
Survey Dates	10/25/17-Ongoing
# of Sites Visited	1,754
Plant Samples Collected	1,100
ACP Samples Collected	550
Sites Without Hosts	759

Table 13. Fullerton Expansion (2) 800 Meter Survey Data

	Partial 800m
Survey Dates	1/23/18-Ongoing
# of Sites Visited	43
Plant Samples Collected	23
ACP Samples Collected	16
Sites Without Hosts	24

Initial Garden Grove detections occurred in August 2017, with 115 HLB-positive hosts detected by the end of March 2018; 35 CLas-positive psyllid detection sites were also included (Table 14). The project area of Westminster soon became adjacent to the project area of Garden Grove, although it was originally separate with a CLas-positive psyllid site detected on the September 19, 2017. Nine HLB-positive host sites were identified within the area of Westminster; expansion 2 has not yet started (Tables 15 & 16).

Table 14. Garden Grove Expansion (1-16) 800 Meter Survey Data

	800m + Expansions
Survey Dates	10/19/17-Ongoing
# of Sites Visited	319
Plant Samples Collected	380
ACP Samples Collected	134
Sites Without Hosts	84

Table 15. Westminster 800 Meter Survey Data

	800m
Survey Dates	11/29/17-Ongoing
# of Sites Visited	193
Plant Samples Collected	185
ACP Samples Collected	80
Sites Without Hosts	39

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Table 16. Westminster Expansion (3) 800 Meter Survey Data

	Partial 800m
Survey Dates	3/6/18-Ongoing
# of Sites Visited	164
Plant Samples Collected	126
ACP Samples Collected	97
Sites Without Hosts	49

Further east in Orange County, three HLB-positive hosts and three CLas-positive psyllids were detected beginning in late September 2017. Expansion 3 has not yet started (Tables 17, 18, & 19).

Table 17. Santa Ana 800 Meter Survey Data

	800m
Survey Dates	11/29/17-Ongoing
# of Sites Visited	126
Plant Samples Collected	100
ACP Samples Collected	38
Sites Without Hosts	24

Table 18. Santa Ana Expansion (2) 800 Meter Survey Data

	Partial 800m
Survey Dates	11/30/17-Ongoing
# of Sites Visited	293
Plant Samples Collected	175
ACP Samples Collected	44
Sites Without Hosts	126

Table 19. Santa Ana Expansion (4) Meter Survey Data

	Partial 800m
Survey Dates	2/7/18-Ongoing
# of Sites Visited	105
Plant Samples Collected	86
ACP Samples Collected	61
Sites Without Hosts	21

The city of Riverside, Riverside County experienced only slight expansions with a CLas-positive adult and nymph psyllid site located in early September 2017 (Tables 20 & 21).

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Table 20. Riverside Expansion (4) 800 Meter Survey Data

	Partial 800m
Survey Dates	10/1/17-12/2/17
# of Sites Visited	366
Plant Samples Collected	243
ACP Samples Collected	121
Sites Without Hosts	134

Table 21. Riverside Expansion (4) 800 Meter Survey Data

	Partial 800m
Survey Dates	11/21/17-12/21/17
# of Sites Visited	260
Plant Samples Collected	135
ACP Samples Collected	72
Sites Without Hosts	121

The project area for the city of San Bernardino, San Bernardino County was created with the detection of a CLas-positive psyllid on September 24, 2017. The identification of this psyllid prompted treatment and an 800-meter survey around the detection site (Table 22).

Table 22. San Bernardino 800 Meter Survey Data

	Partial 800m
Survey Dates	1/4/2018-2/6/18
# of Sites Visited	1,186
Plant Samples Collected	374
ACP Samples Collected	132
Sites Without Hosts	721

Table 23. HLB Cluster Survey Totals for the period of 10/1/2017– 3/31/2018

Area	# of Sites Visited	Plant Samples Collected	ACP Samples Collected	Sites Negative for ACP/Plant Samples
Hacienda Heights	322	28	322	15
San Gabriel	776	65	754	93
Total	1098	93	1076	108

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Table 24. HLB Delimitation Survey Totals for the period of 10/1/2017– 3/31/2018

Area	# of Sites Visited	Plant Samples Collected	ACP Samples Collected	Sites Without Hosts
San Gabriel 10-20	647	389	49	249
Whittier 2-16	615	264	53	273
Norwalk	1213	358	83	787
Rosemead	754	412	166	276
Pico Rivera 2-28	2839	2330	654	2184
Los Angeles County Subtotal	6068	3753	1005	3769
Anaheim 1-29	10290	4689	2734	5920
Anaheim 30-50	1754	1100	550	759
Fullerton 2	43	23	16	24
Garden Grove 1-16	319	380	134	84
Westminster	193	185	80	39
Westminster 3	164	126	97	49
Santa Ana	126	100	38	24
Santa Ana 2	293	175	44	126
Santa Ana 4	105	86	61	21
Orange County Subtotal	13287	6864	3754	7046
Riverside 3	366	243	121	134
Riverside 4	260	135	72	121
Riverside County Subtotal	626	378	193	255
San Bernardino	1186	374	132	721
Total	21167	11369	5084	11791

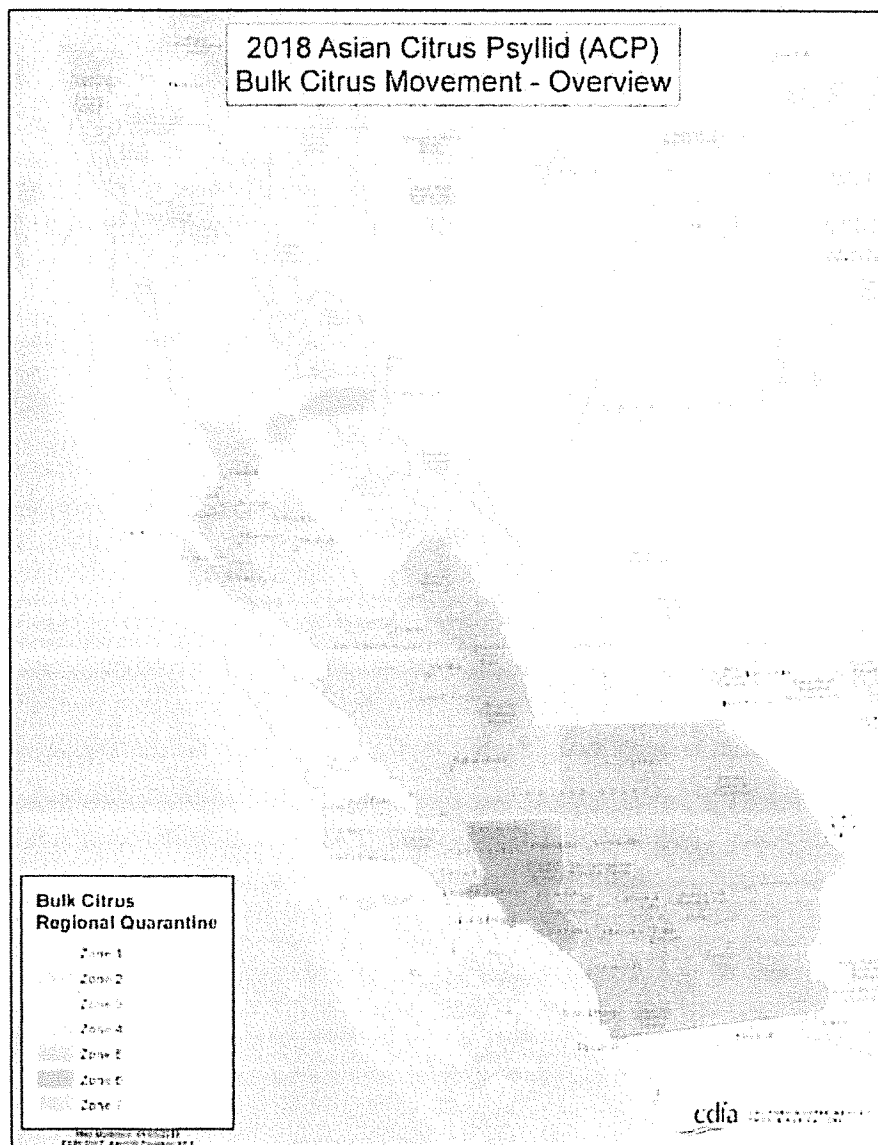
3) Asian Citrus Psyllid (ACP) and Huanglongbing (HLB) Quarantine Report

The Department created and defined the ACP regional quarantine zones (RQZs) using several risk-based factors, including but not limited to: ACP population levels, the presence of confirmed HLB detections, geographical barriers to the natural movement of ACP, and sufficient citrus commodity cleaning and packing capacity. As a result, 3 RQZs were created to regulate the movement of ACP host nursery stock and 7 RQZs were created to regulate the movement of bulk citrus (shown below). The emergency regulation to implement the ACP regional quarantine became effective January 1, 2018.

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Regional Quarantine Zone 1 for both nursery stock and bulk citrus is considered the non-infested zone and is therefore not regulated. Establishments in Zone 1 are not required to have a compliance agreement. Due to the new RQZs, the ACP Program sent letters to all licensed production nurseries and citrus handling growers, packers, and transporters not in Zone 1 to notify each establishment of the regulation change. The nursery letter included a new compliance agreement and exhibits to be taken to a local ACP Program office for issuance. The citrus letter included revised regional quarantine exhibits to be signed and submitted. In addition, all retail nurseries were sent a separate letter that served to announce the regional quarantine, cancel any current compliance agreement with the ACP Program, and to provide information regarding the expanding HLB disease quarantine areas.

Bulk Citrus



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The regional quarantine regulations permit bulk citrus fruit to move within the same bulk citrus regional quarantine zone if fully safeguarded while in transit from the growing location to the packing house. For growers to move fruit to a packing house located in a different regional quarantine zone, the fruit must first be treated with a pre-harvest application, or be cleaned of all stems and leaves prior to shipment. Growers utilizing one of these options must also submit an ACP-Free Declaration Form to the local CAC reporting this movement.

Bulk Citrus Movement Enforcement

The CACs entered into regulatory agreements with the ACP Program to enforce the regulations governing the intrastate movement of bulk citrus. From October 2017 through January 2018, the counties issued 888 of the bulk citrus compliance agreements, conducted 240 inspections of growers, 1,505 inspections of transporters, and 419 inspections of packinghouses. In addition to the inspections, CAC's staff also issued 335 Notice of Violations and 22 Notice of Proposed Actions.

Mandarin with Leaves & Stems

Growers, transporters and packers of mandarins with leaves and stems operate under an ACP compliance agreement. Currently, 137 growers and 30 packinghouses are under compliance for this activity.

Under QC Permit 1386, a total of 263,357 boxes of mandarins with stems and leaves were processed and shipped from 30 different packing facilities. Approx. 65 percent of processed mandarins with leaves and stems were shipped out of state, and 35 percent were within the state of California.

Table 25. Compliance Agreements for Mandarins with Leaves and Stems

Compliance agreement with growers	137
Compliance agreements with packers	30
TOTAL COMPLAINTS	167
Processed boxes shipped Interstate	171,183
Processed boxes shipped Intrastate	92,174
TOTAL PROCESSED BOXES SHIPPED	263,357
<i>1 Processed Box=23-30 lbs.</i>	

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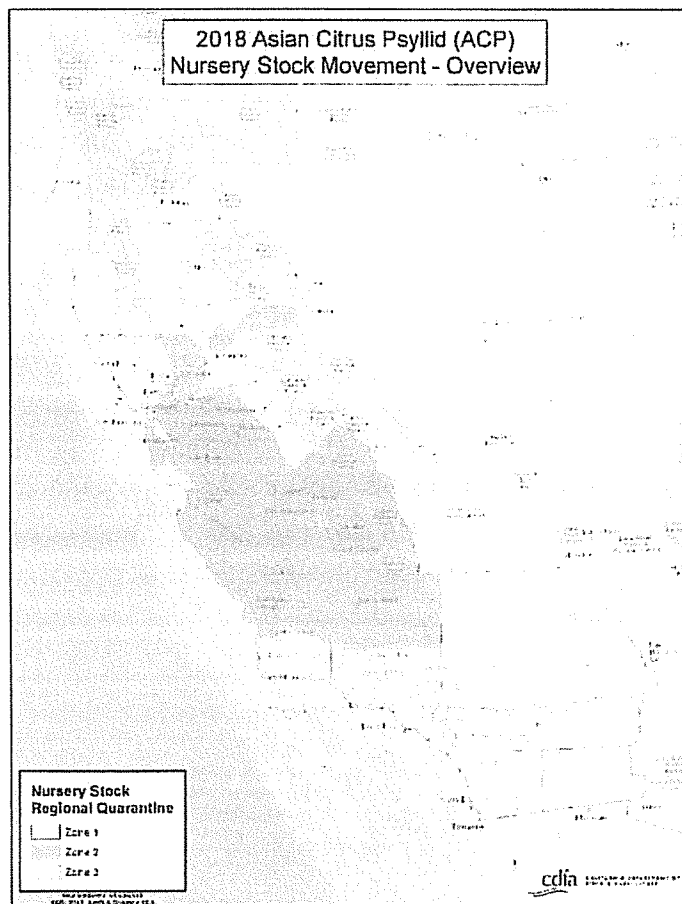
Movement of Citrus Nursery Stock and Budwood

To regulate the movement of ACP host nursery stock, the state has been divided into three different zones:

ZONE 1: Comprises of uninfested counties, geographical barriers exist between Zone 1 and Zone 3, and it is not proximate to the border with Mexico. Zone 1 counties: Alpine, Amador, Butte, Calaveras, Colusa, Del Norte, El Dorado, Glenn, Humboldt, Inyo, Lake, Lassen, Marin, Mariposa, Mendocino, Modoc, Mono, Napa, Nevada, Plumas, Sacramento, San Francisco, Santa Cruz, Shasta, Sierra, Siskiyou, Sonoma, Sutter, Tehama, Trinity, Tuolumne and Yuba.

ZONE 2: Comprises of counties that are partially infested with ACP, geographical barriers exist between Zone 2 and Zone 3, HLB has not been detected, and the zone is not proximate to the border with Mexico. Zone 2 counties: Alameda, Contra Costa, Fresno, Kern, Kings, Madera, Merced, Monterey, Placer, San Benito, San Joaquin, San Luis Obispo, San Mateo, Santa Clara, Solano, Stanislaus, Tulare, and Yolo.

ZONE 3: Comprises of counties that are generally infested with ACP, HLB has been detected in some areas, and the zone is proximate to the border with Mexico. Zone 3 Counties: Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego, Santa Barbara, Ventura.



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To prevent the movement of ACP via movement of outdoor grown citrus nursery stock (CNS) from generally infested ACP counties in Zone 3, to partially infested counties in Zone 2, or to non-infested counties in Zone 1 is not permitted. Only CNS grown and continuously maintained in USDA/APHIS approved insect resistant structures may move CNS from Zone 3 to Zone 2 or 1 under a Quarantine Commodity Permit (QC Permit).

Interstate movement of outdoor grown ACP host nursery stock in an ACP regional quarantine zone must meet the USDA's Federal Order requirements for movement to non-citrus producing states or states that are currently under quarantine for ACP. Nursery stock grown inside a USDA/APHIS approved screen house can move freely outside the regional quarantine zones both intra and interstate after meeting the mandated treatment protocol. During this reporting period, 47,033 plants in 463 shipments met the requirements for interstate movement and were shipped under limited permits.

A total of 3,346,371 host plants are still on hold due to non-treatment of host plants at nurseries in Zones 3 and 2. Some of these nurseries treat the plants only when they receive a sales order. A total of 2,561 host plants of various sizes were voluntarily destroyed by nurseries due to many reasons, but mainly due to poor growth of plants.

Leaves for consumption (Kaffir lime and Curry leaves) continue to be approved for movement out of the quarantine zones with methyl bromide fumigation treatment or processing by washing, pureeing, drying and freezing of the leaves. A total of 3,581 boxes comprised of 36,540 lbs. of washed leaves were shipped in 231 shipments. Another 258 boxes comprised of 2,525 lbs. of frozen leaves were shipped in 33 shipments. Leaves were also dried at 145 degrees for 24 hrs. and a total of 17 boxes comprised of 64 lbs. of dried leaves were shipped in 17 shipments. USDA staff also monitored the methyl bromide fumigation of fresh leaves and certified 695 boxes comprising 12 shipments.

Table 26: Other Regulatory Data

Compliance agreement with production nurseries	359
Plants treated at production nurseries	2,564,094
Treatments at production nurseries	549
Plants voluntarily destroyed at production nurseries	2,561
USDA Limited permits issued for interstate movement of CNS	463
Citrus plants moved to other states under 463 USDA limited permits	47,033

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Huanglongbing Regulatory Activities

The expansion of the HLB quarantine continued in both Los Angeles and Orange Counties. There were seven quarantine area expansions between October 1, 2017 and March 31, 2018 in Orange and Los Angeles Counties. No expansion occurred in the Riverside/San Bernardino portion of the HLB quarantine during this time frame.

As of March 31, 2018, total of 674 sq. miles is under quarantine for HLB in portions of Los Angeles, Orange, Riverside and San Bernardino Counties as shown below:

Table 27: HLB Quarantine Area in California

County	Area (Sq. Miles)
Los Angeles*	318
Orange*	262
Riverside*	67
San Bernardino*	27
TOTAL	674

*Partial County Quarantine

Outdoor grown CNS in an HLB quarantine area have the option to move ACP host nursery stock into a CDFA approved screen house where plants will remain for a period of two years, during which regular 30-day visual inspection of plants for ACP continue; in addition to yellow trap service every 30 days. Upon completion of the two-year period, plants will be tested for presence of HLB. If negative for HLB, the nursery can sell those plants within the HLB quarantine area only. Currently, five CDFA approved screen houses are inside the HLB quarantine area. One of the five CDFA approved screen houses in Los Angeles County has already completed the two-year period in September 2017, with negative results for HLB and has since started selling the plants. The nursery has already sold 28 plants out of the 122 plants that were approved for sale after a two-year holding period.

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Table 28: CDFA Approved Screenhouses

County	Name	Address	City	Zip	# Plants	Start of 2yr period	Completion Date
Los Angeles	Birds of Paradise	4112 Paramount Blvd.	Pico Rivera	90660	94	9/17/2015	9/17/2017
Los Angeles	Garden View Inc.	12901 Lower Azusa Rd.	Irwindale	91706	95	3/27/2018	3/27/2020
Orange	Upland Nursery Inc.	1518 N Tustn Street	Orange	92867	355	8/11/2017	8/11/2019
Orange	Mimosa Nursery	2700 W Crescent Ave.	Anaheim	92801	1,353	8/14/2017	8/14/2019
Orange	Magnolia Garden Nursery	10722 Magnolia Ave.	Stanton	92804	329	8/25/2017	8/25/2019
					2,226		

Compliance agreements were signed with all citrus growers inside the HLB quarantine area. Four growers in the Orange County HLB quarantine area were issued a compliance agreement. Two growers do not ship the fruit outside the quarantine area, and hand clean the fruit and remove the leaves and stem debris. The remaining two growers have groves in poor condition, and do not harvest the fruit.

In the Riverside/San Bernardino quarantine, there are a total of 22 citrus growers who have signed compliance agreements. Three packing houses, two inside and one outside the quarantine area are under compliance. Eleven growers opted to ship the fruit for final packing to the Corona College Heights (CCH) packing house located outside the HLB quarantine area. Fruit consisted of both lemons and oranges. A total of 995 bins in 25 shipments were moved to the CCH packing house, of which, 604 bins were lemons and the remaining 391 were oranges. All the growers opted to use two methods to clean their fruit before shipping it outside to a packing house: pre-harvest insecticide application using approved chemicals and field cleaning the fruit on site. The remaining growers shipped their fruit to two packing houses inside the quarantine area after field cleaning on site. The harvest has been completed for this season.

Table 29: Regulatory Activities

Activity	Los Angeles	Orange	Riverside/San Bernardino	Total
Regulatory visits	2,298	2,770	1,999	7,067
Hold notices issued to Residential find sites	58	134	0	192

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Regulatory Activities Cont'd

Plants voluntarily destroyed	182	1,155	4,330	5,667
Compliance Agreements signed with Fruit Sellers	74	144	10	228
Certified Farmers Markets Under Compliance	17	13	3	33
Swap Meets Under Compliance	6	5	1	12
Grower Under Compliance	0	4	22	26
Packing House Under Compliance	0	0	3*	3

*2 packing houses are inside and 1 outside the HLB quarantine area

4) Diagnostics

ACP Identification: Adult identification is performed at CDFA's Plant Pest Diagnostic Center (PPDC) – Entomology lab.

HLB Diagnostics: HLB diagnostics is performed at PPDC on ACP and suspect citrus and other host plant samples submitted to the lab as per the work instruction provided by the USDA – Center for Plant Health Science and Technology (CPHST) for DNA extraction and polymerase chain reaction (PCR) detection of citrus HLB pathogens.

All samples were assigned an accession number to prevent disclosure of the sample collection site. Results were submitted to PPDC and entered into the PDR database.

HLB diagnostics are summarized in Table 30.

Table 30. HLB Testing

Month	PLANT	ACP CDFA	ACP CRB	ACP CPDP	ACP U of AZ	Monthly Total
2017 Oct	7845	2667	2257	0	1293	14062
2017 Nov	7378	5286	0	0	612	13276
2017 Dec	7696	4391	2444	94	596	15221
2018 Jan	8188	1065	3172	188	301	12914
2018 Feb	8282	94	3400	908	1640	14324

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2018 Mar	6858	0	4748	1548	1101	14255
Total	46247	13503	16021	2738	5543	84052

5) Outreach

To comply with Food and Agricultural Code 5779, CDFA sponsored 37 informational public meetings in counties where ACP or HLB were detected prior to pesticide applications. All residents were informed of the symptoms of HLB and the devastation this disease will cause. The public meetings are a collaborative effort with multiple agencies participating in the meetings, summarized in Table 29.

Table 31. ACP/HLB Informational Public Meeting

County	Location	Date
Kern	Lamont	10/5/17
Kern	Arvin/Mettler	12/21/17
Kern	Bakersfield	1/18/18
Fresno	Fresno	12/7/17
Fresno	Reedley	10/10/17
Fresno	Reedley/Orange Cove	10/19/17
Los Angeles	Hacienda Heights	10/11/17
Los Angeles	Norwalk	12/27/17
Los Angeles	Pico Rivera	10/9/17
Los Angeles	Pico Rivera	10/30/17
Los Angeles	Pico Rivera	12/4/17
Los Angeles	Pico Rivera	1/16/18
Los Angeles	San Gabriel	10/4/17
Los Angeles	Whittier	10/25/17
Los Angeles	Whittier	1/29/18
Los Angeles	Rosemead	1/16/18
Orange	Anaheim	9/20/17
Orange	Anaheim	10/2/17
Orange	Anaheim	10/23/17
Orange	Anaheim	2/14/18
Orange	Santa Ana	1/25/18
Orange	Santa Ana	3/14/18
Orange	Fullerton	3/7/18
Orange	Westminster	12/20/17
Orange	Garden Grove	12/11/17
Orange	Garden Grove	2/20/18
Orange	Garden Grove/Westminster	2/28/18
Placer	Roseville	11/1/17

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Public Meeting Dates Cont'd

Riverside	Riverside	10/19/17
Riverside	Riverside	12/13/17
San Bernardino	Highland	11/29/17
San Bernardino	San Bernardino	2/8/18
Tulare	Dinuba	1/17/18
Santa Barbara	Santa Barbara West	11/13/17
Ventura	Camarillo/Santa Rosa	11/30/17
Ventura	Saticoy/Santa Paula West	11/20/17
Ventura	Somis	10/12/17

Table 32: 2017 Nuffer, Smith and Tucker Outreach Report
Outreach Activities: October 1, 2017-March 31, 2018

Tactic	Results	Impressions (if available)
Media relations – English, Spanish, Asian and trade media relations Proactive press releases, op-eds, media alerts and interviews Responsive to local/county needs and media inquiries	18 earned media stories	393,296
Advertising – Hyperlocal placements raised awareness in specific communities while regional placements reached a broader audience	54 ads	690,695
Public service announcement	139 broadcasts	342,300
Community events – Secured CPDPP presence at community events in key regions to speak with residents and distribute information	One community event, estimated 50 conversations	—
Informational materials – Updated and distributed collateral materials	13,705 pieces of informational materials distributed	—
CaliforniaCitrusThreat.org and CitrusInsider.org – Management, updating and sharing of CPDPP websites	—	30,627

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Outreach Activities Cont'd

CPDPP social media – Management, posting and sharing of CPDPP's Facebook and Twitter accounts	—	129,323
Industry events – CPDPP participation in meetings reaching key industry segments	1,200 attendees	—
Field crew trainings – Interactive workshops that train field crew about best practices to prevent the spread of the Asian citrus psyllid	10 trainings reached 200 attendees	—
Elected official/city government outreach – Desk-side meetings, phone and webinar briefings, city council presentations and conference attendance help CPDPP build relationships with elected officials who then help educate residents and industry	<ul style="list-style-type: none"> – Held deskside meetings with seven cities in or near the HLB quarantine area – Alerted all cities with HLB trees about the issue – Attended one elected officials/city government meeting – Awarded an elected official or city staffer with the "Citrus Hero Award" on a monthly basis 	—

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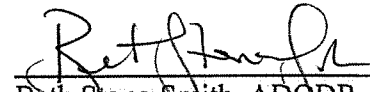
Approved and signed by



5-15-18

Nick Condos, ROAR
California Department of Food and Agriculture
Plant Health and Pest Prevention Services

Date



5.17.18

Beth Stone-Smith, ADODR
United States Department of Agriculture
APHIS, Plant Protection and Quarantine

Date