CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE

Action Plan for Asian Citrus Psyllid and Huanglongbing (Citrus Greening) in California

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This document states CDFA's statewide Action Plan for ACP and HLB in California and details the program implemented by CDFA to sustain and protect California's commercial citrus production.

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I. Action Statement

The California Department of Food and Agriculture (CDFA) will act to sustain and protect commercial production of citrus in the state of California through the implementation of this Action Plan for Asian citrus psyllid (ACP) and Huanglongbing (HLB).

Program elements will include:

- An ACP eradication program in areas where eradication is deemed feasible;
- An ACP suppression program using pesticide applications in areas where suppression is deemed feasible;
- An ACP population reduction program using biocontrol agents to slow ACP expansion from heavily infested areas;
- An HLB eradication program;
- A statewide early detection program for both ACP and HLB;
- An ACP and HLB regulatory program;
- An on-going dialog with scientists from the ACP/HLB Ad Hoc Science Advisory Panel, University of California (UC), state and federal agencies, members of the citrus industry, and regulatory officials to ensure program design and elements consider the best available science and promote and protect the citrus industry;
- A grower education, outreach, and coordination program;
- A public education and outreach program.

As recommended in the Area-Wide Control (AWC) of ACP Technical Working Group (TWG) Report (final report, February 9, 2009), implementing an effective ACP-suppression program will "sustain commercial production of citrus and allow time for research to provide more effective, long-term solutions." CDFA's goal is to sustain and protect commercial citrus production while efforts are underway to find long-term solutions for sustaining citrus production.

ACP, one of only two confirmed vectors of the deadly citrus disease, HLB or greening disease, was first detected in California in 2008. As a result, CDFA implemented delimitation and survey techniques to determine the extent of the infestation, and enacted state interior quarantine restrictions to contain the psyllid and protect areas where the psyllid was not yet known to occur.

Quarterly Review

CDFA will review this plan on a quarterly basis to ensure all actions are consistent with identified program goals and objectives, and will consider adjustments as necessary as a result of new and relevant information, technologies, pest pressures, or other developments. Current scientific findings and recommendations, as well as updated federal and state regulations, policies, and/or industry practices will be reviewed to ensure CDFA's actions are coordinated, scientifically-based, transparent, and consistent with the goal of protecting California's commercial citrus production.

II. Current Status of ACP and HLB

The psyllid is now confirmed to be widespread in the southern California counties of San Diego, Imperial, Riverside, San Bernardino, Orange, Los Angeles, Santa Barbara and Ventura. Smaller populations of the psyllid have been detected in, Tulare, Kings, Kern, Fresno, Madera, San Joaquin, Stanislaus, San Benito, San Mateo, Monterey, Merced, Santa Clara, Alameda, Yolo, Placer, Contra Costa, Solano and San Luis Obispo Counties. To date, over 55,000 square miles of the state are affected by the ACP state interior quarantine regulation.

HLB is caused by bacteria (*Candidatus* Liberibacter asiaticus) (*C*Las) which can be transferred to plants in the citrus family (Rutaceae) by an infected ACP (adult or nymph). HLB-infected trees bear small, asymmetrical fruit which are partially green, bitter, and unsalable. The disease destroys the appearance and economic value of the trees, and will eventually cause the death of the tree. HLB is considered to be one of the most serious plant diseases in the world and currently there is no cure.

HLB has only been known to occur in Los Angeles and Orange Counties. A single HLB infected tree was identified in an urban area of Los Angeles County (Hacienda Heights) in 2012 and a second tree was confirmed in 2016, 2 doors down from the original find site. In 2015, an HLB infected tree was confirmed from the city of San Gabriel and upon continued intensive survey of the surrounding area 52 additional trees have been confirmed from June 2015 through June 2017. In 2017, the program confirmed 2 positive trees from Cerritos, Los Angeles County, 1 positive trees from La Habra, Orange County, 1 positive trees from Fullerton, Orange County and 11 positive trees from Anaheim, Orange County. A All of the infected trees were removed, treatments to kill any infected psyllids were conducted, and strict quarantine restrictions are in place to prevent the movement of any host plants from the surrounding area. Additionally in 2016, a sample of ACP collected in La Puente (Los Angeles County) was confirmed positive for *C*Las and in 2017 a sample of ACP collected in Rosemead (Los Angeles County) was also confirmed positive for *C*Las. An extensive survey was conducted in both areas without any additional confirmed detections.

III. Pest Profiles

Asian Citrus Psyllid (ACP)

The ACP, *Diaphorina citri* is a small, plant-feeding insect. It is 3 to 4 mm in length, smaller than a grain of rice, and difficult to detect due to size and sedentary nature when undisturbed. ACP adults are mottled brown in color, and are typically found feeding on new flush and the underside of older leaves. When feeding, the adult's body is angled 30-45 degrees off the plant. Adults will jump or fly when disturbed, but disperse only relatively short distances from the host plant.

ACP nymphs and adults have piercing-sucking mouthparts which enable them to pierce the new growth of citrus and feed on the vascular system (phloem.) ACP attacks all varieties of citrus and very closely related ornamental plants in the family Rutaceae. Preferred host plants include citrus (all varieties), orange jasmine, and curry leaf. As they feed, ACP produce a toxin that causes the plant tips to die back and become contorted, preventing the leaves from expanding normally.

Eggs of ACP are almond-shaped, about 0.3 mm in length, and start out pale yellow and turn orange as they mature. Egg development lasts three to nine days depending on temperature. ACP nymphs are sessile and feed exclusively on new growth. Nymphs go through 5 instars and range in size from 0.3 mm long in the first instar to 1.6 mm long as fifth instars. Nymphs are yellow with red eyes and produce white, tubular, waxy secretions which can be visible from a distance and used as a visual detection aid. The presence of the waxy secretions can encourage the growth of sooty mold.

Huanglongbing (HLB) or Citrus Greening (CG)

Prior to 2004, HLB, also known as CG, was known to occur in Asia from Japan to southern China, in Southeast Asia, and the Indian subcontinent to Pakistan. It also exists in the Arabian Peninsula, and in Africa. It was first reported in the Western Hemisphere in Brazil in 2004, and then it was first confirmed in the United States in Florida in 2005. It now occurs throughout Florida, Georgia, Puerto Rico, and the U.S. Virgin Islands. It has been confirmed in portions of Louisiana, South Carolina, and Texas, and it has been found in residential trees in California (Hacienda Heights, San Gabriel and Cerritos, Los Angeles County and La Habra, Fullerton and Anaheim, Orange County).

HLB infects all commercial citrus species. A distinctive characteristic of infected trees is the development of one or more yellow shoots, while other parts of the tree remain asymptomatic. A diseased tree takes on a sectored appearance. Individual leaves often have an asymmetrical "blotchy mottle" appearance.

During feeding, ACP adults and nymphs can become infected with *C*Las (the bacteria that causes HLB). Once infected, ACP can efficiently transmit *C*Las through feeding to the host plant. Transmission can also occur through grafting of infected plant tissue. The bacterium enters the phloem of the plant and blocks transportation of nutrients within the tree.

Infected trees may have areas with mottled yellow leaves (generally asymmetrical patterns are seen) and will produce irregular shaped, hard, bitter-tasting fruit. Infected trees die within three to five years. There is no cure for this disease.

IV. Organization, Responsibilities, and Staffing

The Incident Command System (ICS)

Managing ACP and HLB in California is a coordinated, interagency effort between the United States Department of Agriculture (USDA)/Animal and Plant Health Inspection Services (APHIS), CDFA, and the County Agricultural Commissioners (CACs), and requires the participation of multiple non-governmental entities (industry members, university researchers, technical specialists, etc.)

The presence of ACP and HLB in California constitutes an "incident" as per the Federal Emergency Management Agency (FEMA), and represents a threat to the environment and property. Responding to these pests is required to ensure protection of valuable resources. Because federal funding has been requested to implement the response, the Incident Command System of management is used.

The ICS is an action planning process which ensures that all ACP and HLB-related activities are coordinated and communicated with all partners involved, and that all activities are in support of identified objectives. The ICS process ensures integration of all program elements, from planning, operations, communication, and outreach, to equipment needs and financial management. Using the ICS process allows for a standardized system of communication, collaborative decision-making and cost-effective resource utilization.

Representatives from CDFA, USDA, and affected CACs convene regularly (daily, weekly, or other frequency as determined necessary) to plan, communicate, and act on the ACP and HLB response in California.

United States Department of Agriculture (USDA)

The USDA, APHIS Plant Protection and Quarantine (PPQ) is responsible for administration of the Citrus Health Response Program (CHRP). The goal of CHRP is to sustain the United States' 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, including ACP and HLB. The CHRP provides guidelines for nursery stock production, fruit inspection, treatment, and certification.

The PPQ, Center for Plant Health Science and Technology (CPHST) provides scientific support for PPQ regulatory decisions and operations. CPHST is responsible for ensuring that PPQ has the information, tools and technology to make the most scientifically valid regulatory and policy decisions possible. In addition, CPHST ensures PPQ's operations have the most scientifically viable and practical tools for pest exclusion, detection, and management.

The USDA Agricultural Research Service (ARS) is the chief scientific in-house research agency for the USDA. ARS conducts research to develop and transfer solutions to agricultural problems of high national priority and provide information access and dissemination to ensure high-quality, safe food, and other agricultural products, assess the nutritional needs of Americans, sustain a

competitive agricultural economy, enhance the natural resource base and the environment, and provide economic opportunities for rural citizens, communities, and society as a whole.

The Department of Homeland Security, Customs and Border Protection (CBP) employs agriculture specialists at U.S. ports of entry and international mail facilities to target, detect, intercept, and thereby prevent the entry of invasive pest and disease threats before they have a chance to do any harm. The CBP agriculture specialists work with specialized x-ray machines that detect organic materials. They utilize agricultural canines specifically trained to sniff out meat and plant materials in international ports of entry.

California Department of Food and Agriculture (CDFA)
The CDFA division of Plant Health and Pest Prevention Services develops, administers, manages, and implements the Citrus Pest and Disease Prevention Program. Program elements include:

- Administration of Federal Agreement
- Urban and Rural Residential Detection Trapping and Visual Survey
- Delimitation Trapping and Visual Survey
- Treatment Activities
- Regulatory Quarantine Restrictions
- Public Outreach and Messaging

Within CDFA, three Branches provide different services in support of the ACP and HLB Action Plan.

- Pest Detection and Emergency Projects (PDEP) Branch conducts all aspects of ACP and HLB survey, detection, and treatment activities.
- Pest Exclusion (PE) Branch conducts all aspects of implementation of State Interior Quarantine regulations for ACP and HLB.
- Plant Pest Diagnostics Branch (PPD) conducts diagnostics pertaining to HLB and ACP.

California Citrus Pest and Disease Prevention Committee (CCPDPC)
California Code of Regulations, Title 3, Section 5914 creates the California Citrus Pest and Disease Prevention Committee (CCPDPC). The CCPDPC, comprised of Secretary-appointed members of the California citrus industry and general public, is authorized to develop, subject to Secretary approval, a statewide citrus specific pest and disease work plan that includes, but is not limited to, the following:

1. Informational programs to educate and train residential owners of citrus fruit, local communities, groups, and individuals on the prevention of pests and diseases and their vectors, specific to citrus.
2. Programs for surveying, detecting, analyzing, and treating pests and diseases specific to citrus involving producers of citrus and residential owners of citrus fruit and host materials, except as provided in Section 5930.

In addition, the CCPDPC submits recommendations to the Secretary on, but not limited to, the following:

- Annual assessment rate.

- Annual budget.
- Expenditures necessary to implement the statewide work plan developed pursuant to this section.
- The amount of fees to be levied, as provided in Section 5919.
- The receipt of money from other sources to pay any obligation of the committee and to accomplish the purposes of the committee in the manner provided in this article.
- The adoption of regulations consistent with the powers and duties of the committee.

Statewide Grower Liaison Coordinator and Grower Liaisons
A Statewide Grower Liaison Coordinator and Grower Liaisons will be employed, to provide services to growers.

The Statewide Grower Liaison Coordinator shall be employed to act as the lead over the Grower Liaisons, providing assistance, coordinating meetings and outreach materials on area-wide and program treatment activities and to provide support as needed.

Grower Liaisons shall provide the function of disseminating outreach and education materials to the citrus growers in their assigned area to facilitate coordinated area-wide treatments. Grower Liaison will be assigned to work in the following counties: Fresno, Tulare, Kern, Imperial, Riverside, San Bernardino, Santa Barbara/San Luis Obispo, San Diego and Ventura.

Grower Liaison tasks include:

- Contact and provide ACP/HLB and other program related information to individual growers, pest control advisors, packing houses, and others that work with the citrus industry.
- Facilitate Treatment Coordination as needed.
- Develop a local response plan in collaboration with the CCPDPC.
- Coordinate seminars and speaking engagements.
- Assist with continuing to develop the citrus mapping layer in respective area.
- Document work and submit monthly report to Statewide Grower Liaison Coordinator.
- Attend monthly Outreach and Operations Subcommittee meetings and CCPDPC meetings in person or via webinar as feasible.
- Attend grower meetings. This includes, but is not limited to, industry-related events for organizations such as California Association of Pesticide Applicators and Pesticide Applicators Professional Association, and the University of California, Cooperative Extension.

Statewide Grower Liaison Coordinator tasks include:

- Regular communication with Grower Liaisons to ensure specific tasks identified are adequately carried out.

- Regular communication with the Manager of the Citrus Pest & Disease Prevention Program or her/his designee and the CCPDPC.
- Stay current with the latest ACP research and pesticide treatment information.
- Facilitate communication between citrus growers and project staff.
- Evaluate effectiveness of the grower outreach and education program.
- Participate in citrus industry-related and various grower education programs.
- Attend monthly Outreach and Operations Subcommittee meetings and CCPDPC meetings in person or via webinar as feasible.

All activities of the Statewide Grower Liaison Coordinator and Grower Liaisons are conducted in coordination with the CDFA Citrus Pest and Disease Program Manager. CDFA provides general and technical oversight for all tasks assigned to the Statewide Grower Liaison Coordinator and to Grower Liaisons.

California County Agricultural Commissioner (CAC)
The CACs implement federal, state and local regulatory programs designed to promote agriculture and protect people, the environment and marketplace equity. The CACs provide regulatory services that are coordinated with the USDA/APHIS, CDFA, and the California Department of Pesticide Regulation (CDPR). Each County Agricultural Commissioner and County Sealer of Weights and Measures is licensed by CDFA and appointed by the respective county's Board of Supervisors.

The CACs conduct the following services related to the Action Plan for ACP and HLB:

- **Pesticide Use Enforcement**
  Activities include the enforcement of State regulations pertaining to the safe use of pesticides; issuance of restricted material permits; on-sight inspection of applications; administration of pesticide use reporting; surveillance of dealers, pest control advisors and pest control operators; investigation pesticide incidents. CACs enforce regulations to protect ground and surface water from pesticide contamination.

- **Pest Detection and Abandoned Grove Abatement**
  In cooperation with CDFA and USDA/APHIS, the CACs conduct ACP trapping and survey programs. Program activities include placing and monitoring traps, screening traps for ACP and submitting traps to approved regional screening locations, submitting traps with suspect ACP to the CDFA Plant Pest Diagnostic Laboratory, conducting visual surveys for HLB, and collecting and submitting tissue samples with suspect HLB symptoms.

  Abandoned groves serve may serve as a harborage for ACP and a source of HLB inoculum, as they are not actively managed for the pest or disease. The CAC's have the authority to abate abandoned groves in their counties. The CAC's have general abatement authority under the Food and Agriculture Code (FAC) Section 5401-5405, these sections state that any premises, plants, conveyances

or things which are infected or infested with any pest, or premises where any pest is found, are a public nuisance. It further states that the Commissioner can abate the property as a public nuisance at the expense of the property owner.

- **Pest Eradication**
  In cooperation with CDFA and USDA/APHIS, the CACs facilitate CDFA and grower applied treatments for ACP by informing the County Boards of Supervisors, developing press releases, facilitating public meetings, and providing treatment and regulatory information for growers on their websites.

  CACs work with CDFA Pest Detection and Emergency Projects Branch staff to conduct pre-treatment inspections and post-treatment monitoring for residual pesticides in surface waters at sites treated by CDFA.

- **Pest Exclusion/Quarantine/Phytosanitary Certification**
  In conjunction with CDFA and USDA/APHIS, the CACs enforce State Interior Quarantine for ACP and HLB [California Code of Regulations Sections (CCR) 3434 and 3439], including, as applicable, the inspection of shipments from areas affected by the quarantine to ensure compliance, and enforce the terms of the various Master Permits issued by CDFA to enable movement of products from the affected areas otherwise prohibited by the quarantine.

  CACs provide information and technical resources to citrus producers on pesticide use restrictions, and facilitate communication with and information from UC Cooperative Extension on ACP management strategies, including an area-wide control program. CACs are responsible for oversight of licensed Pest Control Operators, including ensuring the safe and per label use of pesticides and proper reporting of pesticide use.

  CACs provide training and technical resources to citrus production nurseries statewide regarding the implementation of the federally-approved insect resistant screen house program, and issue compliance agreements and conduct on-going inspections, sampling, and monitoring of approved, insect-resistant growing structures.

  CACs provide phytosanitary certification services, including inspection, sampling, and issuance of compliance agreements and/or certificates to facilitate movement of regulated commodities from the affected ACP quarantine area. Phytosanitary certification is provided to meet state, federal, and international plant quarantine regulations pertaining to ACP.

V. Technical Advisors and Support

Technical Working Group (TWG)
TWGs are established as needed to provide scientific input on management of invasive species. A TWG was convened in December 2008 to address components of an area-wide control (AWC) program for the ACP in the United States. Outcomes, recommendations and research gaps were identified and published in February of 2009 in a report entitled "Area Wide Control of Asian Citrus Psyllid *(Diaphorina citri)* Technical Working Group Report".

In September 2010, a second TWG was organized to assess the status of existing area-wide control efforts of ACP that resulted from the December 2008 meeting. The TWG addressed questions broadly covering insecticide applications, production practices, survey practices, and management areas. In general, the TWG summarized that area-wide ACP control is achieved with effective communication and coordination of treatments among local citrus growers and grove managers. ACP can be successfully controlled with coordinated treatments because the insect population will have fewer individuals left from which to reestablish.

Specific recommendations included:

- Treat as much citrus acreage as possible during each spray cycle to maximize coverage and prevent the establishment of pest refuge areas.
- Coordinated area-wide treatment applications should be completed within a two to three week time frame.
- Mode of Action (MOA) use should be coordinated and rotated within management areas to prevent development of insect resistance.
- Dormant season applications are most critical overall in maintaining ACP population reductions.
- Application methods (aerial, ground) should be tailored to fit each management area by considering geographical or environmental influences as well as unique location characteristics such as residential, organic production, or critical habitat interfaces.
- Management areas should be as large as possible, taking advantage of any natural geographic separations and existing cooperative efforts among producers.
- Management practices which promote flushing should ideally be coordinated within a management unit.
- Scouting emphasis for ACP detection should be placed on grove block perimeters. Scouting method(s) (sticky trap, visual, stem tap) should be tailored to the specific area and circumstance.
- Organic growers within a management area should utilize the most efficacious product available during the coordinated treatment window.
- Extension, outreach and communication groups should be engaged to assist with education, communication, and public awareness in citrus growing states.

Center for Plant Health Science and Technology (CPHST)
Scientists with the USDA/CPHST are consulted on all program elements, including detection techniques, diagnostic tools, and exclusion policies. Scientists with CPHST are typically included in

the TWG. CPHST worked with state and local cooperators to develop an area-wide management approach to controlling ACP which has been adopted by citrus growers in Texas. CPHST also develops and validates new molecular diagnostic tools and provides diagnostician training.

Agricultural Research Services (ARS)
Scientists with the USDA/ARS conduct research to develop and transfer solutions to agricultural problems of high national priority and provide information access and dissemination to the CDFA. Scientists with ARS are typically included in the TWG. ARS Scientists are actively engaged in the development of survey programs being implemented in California. They are also engaged in research on early detecting technologies.

University of California, Division of Agriculture and Natural Resources (UC ANR), Cooperative Extension
The UC ANR provides scientific resources, including local UC ANR advisors, specialists, and research to the agricultural community. Specialists with UC ANR have provided science-based recommendations to growers for management of ACP in both generally infested areas and areas of new or expanding infestations. Specialists with UC ANR have developed a year-round ACP integrated pest management program, which addresses growers concerns related to pesticide use, insect resistance, application timing, and ACP monitoring.

Specialists with UC ANR participate in ACP TWG meetings and are regularly consulted on issues relating to ACP quarantine enforcement policies and eradication and control strategies deployed by CDFA.

The UC ANR also conducts research on HLB at the Biosafety level 3 facility at UC Davis and will expand their efforts at the planned Biosafety level 3 facility at UC Riverside one it has been built. Biosafety level 3 facilities are required for research and diagnostic work involving dangerous plant and animal pathogens.

Citrus Clonal Protection Program (CCPP)
The CCPP is a cooperative program with the UC, Riverside -Department of Plant Pathology and Microbiology, CDFA, USDA-APHIS, the citrus industry of the state of California and the Citrus Research Board (CRB). Since 2009, the CCPP has been a part of the National Clean Plant Network for specialty crops. The CCPP provides a safe mechanism for the introduction into California of citrus varieties from any citrus-growing area of the world for research, variety improvement, or for use by the commercial industry of the state. This mechanism includes, disease diagnosis and pathogen elimination followed by maintenance and distribution of true-to-type, primary citrus propagative material of the important fruit and rootstock varieties. The CCPP provides support to the citrus industry and CDFA by ensuring, through quarantine and disease testing, that citrus material entering California regardless of its point of origin, foreign or domestic is free from bud-transmissible diseases.

ACP/HLB Ad Hoc Science Advisory Panel (SAP)
This SAP is made up of scientists from the UC and within the citrus industry and is advised by scientists from the USDA. These scientists are tasked with answering scientific questions so that policy makers may consider the best available science when developing eradication and control procedures and regulatory policies. This SAP has provided recommendations on the criteria that should be used to determine if an ACP population exists in an area, and when an area can be declared free of ACP. Full reports of the panel's recommendations are available online at: http://www.cdfa.ca.gov/citruscommittee/docs/reports/SAP-Report-and-Meeting-031814.pdf.

CDFA Primary Scientists (State Primary Entomologist, State Primary Plant Pathologist)
CDFA Primary Scientists provide scientific input to CDFA Executive staff and Branch managers to ensure science-based policy development and decision-making. Primary scientists develop and review protocols for all aspects of invasive pest programs, including detection, treatment, and quarantines.

Office of Environmental Health Hazard Assessment (OEHHA)
OEHHA protects and enhances public health and the environment through scientific evaluation of risks posed by hazardous substances. OEHHA and CDFA work collaboratively to develop and provide health information to the public on pesticide applications aimed at combating invasive species. A representative of OEHHA is present at CDFA public meetings which are scheduled prior to CDFA pesticide applications and will answer health related questions.

State Water Resources Control Board (SWRCB)
SWRCB issues National Pollutant Discharge Elimination System (NPDES) permits. CDFA has full coverage under a NPDES General Permit issued by the State Water Resources Control Board titled "Statewide General National Pollution Discharge Elimination System (NPDES) Permit for Biological and Residual Pesticide Discharges to the Waters of the United States from Spray Applications. The U.S. Environmental Protection Agency (EPA) and the SWRCB have classified this discharge as a minor discharge. The NPDES permit ensures CDFA is in compliance with the federal Clean Water Act (CWA) (33 U.S.C. §1251 et seq. (1972). The CWA is the body of law that establishes a framework for regulating pollutants discharged into navigable waterways of the United States. The CWA prohibits the discharge of any pollutant, including residual pesticides, into surface waters, except under the terms of a NPDES permit.

California Department of Pesticide Regulation (DPR)
DPR has primary responsibility to enforce pesticide laws and regulations in California. The Enforcement Branch oversees compliance with pesticide use requirements, has overall responsibility for pesticide incident investigations, administers a monitoring program for analyzing domestic and imported produce for pesticide residues, and ensures compliance with pesticide product registration and labeling requirements. DPR works closely with CACs who are the primary local enforcement agents for pesticide laws and regulations. DPR staff attends the public meetings and engage with interested homeowners.

United States Fish and Wildlife Service (USFWS)
The USFWS mission is, working with others, to conserve, protect and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people. The USFWS helps protect a healthy environment for people, fish and wildlife, and helps Americans conserve and enjoy the outdoors and our living treasures. The Service's major responsibilities are for migratory birds, endangered species, certain marine mammals, and freshwater and anadromous fish. The USFWS provides technical assistance to CDFA on issues pertaining to the impact of program activities on federally listed threatened and endangered species and critical habitat.

National Marine Fisheries Service (NMFS)
The NMFS is the federal agency, a division of the Department of Commerce, responsible for the stewardship of the nation's living marine resources and their habitat and is responsible for the management, conservation and protection of living marine resources within the United States' Exclusive Economic Zone (water three to 200 mile offshore). NMFS assesses and predicts the status of fish stocks, ensures compliance with fisheries regulations and works to reduce wasteful fishing practices. NMFS works to promote sustainable fisheries and to prevent lost economic potential associated with overfishing, declining species and degraded habitats. The NMFS provides technical assistance to CDFA on issues pertaining to the impact of program activities on threatened and endangered marine species and critical habitat.

California Department of Fish and Wildlife (CDFW)
The CDFW maintains native fish, wildlife, plant species and natural communities for their intrinsic and ecological value and their benefits to people. This includes habitat protection and maintenance in a sufficient amount and quality to ensure the survival of all species and natural communities. The CDFW provides technical assistance to CDFA on issues pertaining to the impact of program activities on State listed threatened and endangered species and critical habitat.

Industry Representatives
Industry representative are knowledgeable about existing production practices, including chemical and cultural insect control practices, harvesting and handling practices. Industry representatives provide information used in the development of regulatory and eradication policies and procedures and are queried for their input on the practicality and feasibility of proposed policies and procedures.

Citrus Research Board (CRB)
The CRB is a grower-funded and grower-directed program established under the California Marketing Act as the mechanism enabling the state's citrus producers to sponsor and support needed research. The priorities for the Citrus Research Program have been realigned to meet the challenges facing citrus growers in California. The objective of the program is to be reactive to immediate threats and planning for future threats to the economic production of citrus. The CRB partners with the CDFA on several projects, including biocontrol activities and research projects on early detection technologies. In addition, they provide support under a cooperative agreement for mapping the statewide citrus layer and providing HLB diagnostic analysis of ACP samples.

California Citrus Quality Council (CCQC)

CCQC's primary objective is to ensure that California citrus production meets domestic and international regulatory standards. CCQC works with government agencies, international standards setting organizations, the UC, the California citrus industry and trading partners to help the California industry meet domestic and international phytosanitary, food safety, food additive and pesticide residue regulations. The CCQC provides CDFA with input and updates on trade impacts associated with ACP and HLB.

Trade Associations

Citrus Mutual (CCM) and Sunkist are both trade associations that work with citrus growers to market fruit nationally and internationally. CCM represents its members on matters that affect their economic livelihood and provide them with necessary information to enhance their ability to profit from their work. CCM closely monitors and becomes involved, as needed, in the regulatory and legislative processes of government which may result in an economic impact to growers. Sunkist is a grower cooperative that works together to develop a worldwide market, promote a brand name, access a global transportation system, develop comprehensive research capabilities, and gain governmental access to overseas markets. Like other citrus trade associations, CCM and Sunkist partner with CDFA to ensure that grower's needs are being met by the program.

Nursery Industry Groups

The nursery industry has several industry groups that engage in activities to support the citrus nursery industry in California, including California Association of Nurseries and Garden Centers (CANGC), California Citrus Nursery Society (CCNS), The California Citrus Nursery Board (CCNB), and the California Nursery Advisory Board (NAB). CANGC is a trade organization, focusing on retail nurseries and garden centers, which works to promote and protect the California nursery industry. CCNS is a non-profit industry association helping the citrus nursery industry of California become more successful. CCNS provides an exchange for information useful to the citrus nursery industry. It holds an Annual Conference and several single-purpose meetings each year to disseminate information and/or to serve as forums for industry representatives to develop positions on matters of interest to the industry. CCNB, also known as the California Citrus Nursery Research and Education Program, is an industry-funded and industry-directed program established under the California Marketing Act as the mechanism enabling the State's citrus nurseries to sponsor and support needed research. NAB is a group appointed by the Secretary to advise CDFA on matters affecting and pertaining to nurseries in California. The NAB contains representatives from a wide spectrum of the nursery industry. The mission of the NAB is to grow and maintain a strong relationship between CDFA and the nursery industry in order to secure the industry's future. All of these entities work collaboratively with the CDFA to ensure that the citrus nursery industry needs are represented and are being met by the program.

VI. Administrative Activities

Statewide Emergency Regulatory Action

On July 24, 2008, the Office of Administrative Law approved a statewide ACP Emergency Regulatory Action for ACP and HLB. The regulation (CCR 3591.21) declares the entire state to be an eradication area for ACP. As per Government Code Section 11346.1, CDFA submitted a "Finding of Emergency" with the proposed emergency action. The Finding of Emergency declares that the presence of ACP and HLB poses immediate and serious harm to the "public peace, health, safety, or general welfare" of the State of California, and calls for immediate action to avoid such harm.

As per Public Resources (PR) Code Section 210001.1, all projects undertaken by public agencies are subject to the same level of review under the California Environmental Quality Act (CEQA) as projects undertaken by private parties. However, as per PR Code Section 21080(b) (4), specific actions necessary to prevent or mitigate an emergency are exempt from the requirements of CEQA.

Just as CCR 3591.21 provides CDFA with statewide eradication authority for ACP, CCR 3639, which was filed with the Office of Administrative law on April 3, 2012 after the detection of HLB in Hacienda Heights in Los Angeles County, declares the entire state to be an eradication area for HLB, since the disease can occur anywhere in the state where ACP host material is present.

Therefore, the Statewide Emergency Regulatory Action, and corresponding Finding of Emergency, enables CDFA to take immediate, eradicative action in any area of the state where either ACP or HLB is known to occur.

Summary Abatement Action for Public Nuisances

Eradicating HLB involves tree removal. Typically, any action which involves the taking or destroying of property requires CDFA to follow standard, due process procedures including sending written notification, scheduling hearings, and providing the opportunity for the owner of the property to appeal the proposed action. Existing law, Food and Agriculture Code (FAC) Section 5762, establishes that any pest for which an eradication area has been proclaimed, and any stages of the pest, its hosts and carriers, and any premise, plants and things infested or infected or exposed to infestation or infection with such pest of its hosts or carriers, within such area, are public nuisances, which are subject to all laws and remedies which relate to the prevention and abatement of public nuisances. FAC Section 5763 establishes that the Department can take summary abatement actions against "public nuisances" when it is part of an eradication regulation.

FAC Sections 5762-5763 and CCR 3639 enable the Department to take immediate, eradicative action against HLB in any area of the state where it may be found.

Public Notification
The public is notified prior to the CDFA engaging in program activities in their area. This can be done by a Proclamation of an Emergency Project (PEP) which informs readers that residents are in an emergency response area, or by issuing a Notice of Treatment (NOT) in new treatment areas. Some areas may have both a PEP and a NOT issued for separate activities.

Proclamation of Emergency
A PEP is a communication tool used to inform the public and stakeholders of CDFA's intended actions. Issuing a PEP is not a requirement; however, CDFA's policy is to issue a PEP for all chemical treatment programs conducted by PD/EP.

The PEP explains to interested parties that ACP or HLB has been detected and the Department's intent to conduct delimitation and treatment in a designated area. The PEP explains that the presence of ACP or HLB poses an emergency and can cause harm to the state's environment, public health, and economy. The PEP details the detections which caused the Department to determine that an infestation exists, the potential integrated pest management options available to deal with the infestation, the option(s) selected to deal with the infestation, environmental consultation conducted, and the legal authority that allows the Secretary to conduct the project. Included with the PEP is a map of the affected area, including any sensitive areas where mitigations are used and the work plan which describes the actions to be taken.

The PEP is distributed to all state and local elected officials who represent the affected area, including mayors, County Boards of Supervisors, State Assemblypersons, and State Senators. It is also distributed to California state and federal agencies that are concerned with treatment projects including but not limited to:

Office of Environmental Health Hazard Assessment
Department of Pesticide Regulation
Department of Fish and Wildlife
California Environmental Protection Agency
United States Fish and Wildlife Service
United States Department of Food and Agriculture
Environmental Protection Agency
County Agricultural Commissioner

The PEP is also published in newspapers of general circulation that serve the affected area.

Notice of Treatment (NOT)
A NOT will be issued for all new treatment areas, and distributed to the appropriate authorities and posted on the CDFA website. Residents of affected properties may be invited to a public meeting where officials from CDFA, the CDPR, the OEHHA, and the CAC's office will be available to address residents' questions and concerns. Residents are notified in writing at least 48 hours in advance of any treatment in accordance with the FAC, Section 5779 and 5401-5404. Following the treatment, completion notices are left with the residents detailing precautions to take and post-harvest intervals applicable to the citrus fruit on the property. Treatment information is

posted at www.cdfa.ca.gov/plant/acp/treatment_maps.html. Press releases, if issued, are prepared by the CDFA information officer and the county agricultural commissioner, in close coordination with the program leader responsible for treatment. Either the county agricultural commissioner or the public information officer serves as the primary contact to the media.

Public Information

Prior to undertaking any treatment activity, CDFA will either contact the affected residents directly, or schedule a public meeting, or a series of public meetings, to inform residents, growers, and other interested parties of CDFA's intent to take action and technical information about products used, dates of treatment(s), etc. Representatives from the local CAC's office, DPR, and the OEHHA are present at the meetings to answer questions pertaining to pesticide use, and environmental and/or human health concerns related to the planned treatment.

In addition to the public meeting, residents are notified in writing at least 48 hours in advance of any treatment in accordance with Food and Agricultural Code 5779 and following treatments, a post treatment notification is left for the resident, thanking them for their participation and detailing the materials used during the treatment process.

Press releases are prepared by the CDFA Public Information Officer and/or the CAC. Either the county agricultural commissioner or the public information officer serves as the primary contact to the media. CDFA in cooperation with the CAC may participate in briefing and/or presentations with local elected officials.

State Interior Quarantine Regulations

ACP

California Code of Regulations Section 3435 was promulgated in 2008 after the first detection of ACP in San Diego County. At that time, the detection of a single psyllid triggered promulgation of the quarantine. The area under quarantine was determined by drawing a circle on a map with a 20-mile radius from the detection site.

Since that time, as a result of extensive statewide ACP detection efforts resulting in negative survey data, CDFA has established a policy of expanding existing quarantine boundaries, or establishing quarantines in a new area, by using a shorter radius (e.g. five miles) surrounding each detection site. Official quarantine boundaries are then established by identifying the roads, including highways, county or private roads and grove roads, and other landmarks that are closest to the circumference created when using the appropriate radius surrounding each detection site.

CDFA has consulted with members of the ACP/HLB Ad Hoc Science Advisory Panel to determine factors to consider when determining whether or not to promulgate or expand existing quarantine areas. Factors to consider include the number of ACP detected in an area, whether or not a reproducing population has been confirmed in an area, the length of time between detections, and any human-assisted movement of ACP which may be occurring in the area. Using these and other factors, the CDFA Primary State Entomologist will recommend the expansion of

or establishment of new ACP quarantine areas as determined necessary to protect California's commercial citrus.

CCR 3435 identifies regulated articles and prohibits movement of regulated articles from the affected area and/or restricts movement of regulated articles within the affected area. Enforcement of these restrictions and prohibitions is conducted through education, outreach, and communication with establishments (i.e.: nurseries, fruit packers and processors, harvesters, grove managers, etc.) inside the quarantine areas. The development and issuance of compliance agreements, exhibits and, when warranted, special permits, is the means by which CDFA uses to communicate specific provisions pertaining to restricted or prohibited movement of regulated articles. Enforcement activities are further detailed in Section IX of this document.

HLB

California Code of Regulations Section 3439 was promulgated in 2012 after the detection of HLB in Hacienda Heights in Los Angeles County. The provisions of this regulation pertain to all HLB and ACP hosts and prohibit the movement from, and restrict the movement into and within, the affected area. Enforcement of this regulation, as with the ACP quarantine regulation, is conducted through education, outreach, and communication with establishments (primarily retail and production nurseries) in the affected area.

The detection of a single HLB-infected tree will trigger the expansion of the HLB State Interior Quarantine (CCR 3439).

A new or expanded ACP or HLB State Interior Quarantine regulation will be filed as appropriate if ACP or HLB are detected outside of existing quarantines.

VII. Detection and Survey Activities for ACP

Urban and Rural Residential Detection Trapping and Visual Survey

This is a cooperative State/county trapping program for ACP to provide early detection of any infestation in a county. Traps are serviced by agricultural inspectors. The trap used for ACP detection is the yellow panel trap, which is a two-sided board coated with stickum. ACP becomes entangled on the sticky capture surface. Yellow panel traps have proven successful at detecting infestations of ACP. At all locations where traps are placed, the host plant is visually inspected for ACP. If there is evidence that ACP exists, the host will be visually surveyed for ACP samples.

- Trap Density: Five to 16 traps/square mile.
- Trap Servicing Interval: Every two to four weeks.
- Trap Relocation and Replacement: Traps should be replaced and relocated every four to eight weeks to another host at least 500 feet away if other hosts are available.
- Visual surveys and tap sampling are conducted once at each trapping site when the trap is placed or relocated at that site.

Transect Survey

If high or scattered ACP populations are found in the initial inspections, a transect survey may be implemented to rapidly determine the extent of the infestation. This involves inspecting a minimum of 20 properties per square mile and/or placing 20 traps per square mile along eight radii in the cardinal directions (e.g., north, northeast, etc.). Transect surveys extend between five and 20 miles beyond a detection site, depending on the situation.

Commercial Grove Trapping

In counties with substantial commercial citrus production, traps are placed within the groves at the density of one trap per 40 acres. Traps are replaced every month and submitted for screening. In generally infested areas (currently Orange, western Riverside, San Bernardino, Ventura and San Diego counties), the traps are removed and replaced with HLB survey and ACP collection for HLB testing.

Delimitation Trapping and Visual Survey Outside of the Generally Infested Area

The protocols below are the actions in response to the detection(s) of one or more Asian citrus psyllids (ACP) in the area outside of the generally infested area. The detection of a single ACP remains a quarantine trigger.

a. **Response to one or more ACP finds in all counties north of Ventura County and the Tehachapi Mountains, excluding Kern, Tulare, Kings, Fresno and Madera**

   Trapping

   Density will be 25 traps per square mile in a 1.5 mile radius, to form a nine square mile delimitation area. Traps will be serviced every 2 weeks for the first month. After that, the traps will be serviced monthly for two years past the identification date. Additional

detections may increase the size of the delimitation survey area and will restart the two-year clock on the trap servicing requirement, but only in the new grids.

Visual Survey

All properties with host trees within a 50 meter radius will be visually surveyed for ACP and HLB. Additional sites may be surveyed as part of the risk-based survey.

b. **Response to one ACP detected in the counties of Kern, Tulare, Kings, Fresno or Madera**

Trapping

Density will be 100 traps per square mile in a 1.5 mile radius, to form a nine square mile delimitation area. Traps will be serviced weekly for two months. After that, the traps will be serviced monthly for two years past the identification date. Additional detections may increase the size of the delimitation survey area and will restart the two-year clock on the trap servicing requirement, but only in the new grids.

Visual Survey

All properties with host trees within a 50 meter radius will be visually surveyed for ACP and HLB. Additional sites may be surveyed as part of the risk-based survey.

c. Response to two or more ACP detected in one trap or one or more ACP detected on separate traps within 400 meters of each other within a six month period in the counties of Kern, Tulare, Kings, Fresno or Madera

Trapping

Density will be 100 traps per square mile in a 1.5 mile radius, to form a nine square mile delimitation area. Traps will be serviced weekly for two months. After that, the traps will be serviced monthly for two years past the identification date. Additional detections may increase the size of the delimitation survey area and will restart the two-year clock on the trap servicing requirement.

Visual Survey

All properties with host trees within a 50 meter radius will be visually surveyed for ACP and HLB. Additional sites may be surveyed as part of the risk-based survey.

VIII. Detection and Survey Activities for HLB

1. Determination of HLB Survey Sites

Using risk modeling provided by Dr. Tim Gottwald, USDA, Agricultural Research Service (ARS), the following factors are considered when determining risk associated with HLB:

- Residential citrus population and distribution
- Weather effects
- Citrus transportation routes
- Potential to spread the Asian citrus psyllid (ACP) from commercial nurseries, big box stores and citrus green waste
- Areas infested with ACP
- Proximity to commercial citrus groves

Using these risk factors, total risk is determined for each square mile grid, resulting in a recommended sampling density as shown in table below. Each square mile map is identified by the section, township, range (STR) ID (the unique index). Each STR ID is assigned a Sample Density from Table 1, which is used to determine the number of sites to survey per square mile.

Table 1. Recommended Sampling Density and Number of Survey Sites for HLB in California.

Recommended Sampling Density	Actual # of Sites to Survey	# of Square Miles with the Recommended Density	Total # of Sites to Survey
0-5	5	1,926	9,630
6-20	10	1,392	13,920
21-40	25	1,168	29,200
41-80	50	1,111	55,550
81-160	100	324	32,400
161+	200	105	21,000
Total Number of Sites			**161,700**

CDFA will use this method to determine the number of sites to sample for each survey cycle. Data obtained from the survey is submitted to the USDA to verify that the Global Position System (GPS) points are within the assigned STR, and then forwarded to Dr. Gottwald. Following Dr. Gottwald's

analysis, in subsequent survey cycles, additional sites or STR's will be surveyed so that the recommended sampling density will be achieved.

Inspection of Hosts at Survey Site

- All members of the plant family Rutaceae at the site, primarily *Citrus* and *Murraya* species and any other hosts of ACP should be identified.
- Each host tree is visually sectioned into quadrants. Each quadrant is inspected for all ACP life stages (adults, nymphs, and eggs). All detected life stages are collected.
- All hosts at the site are inspected for HLB symptoms. The most common symptom is the blotchy mottle on the leaves (which occurs on all host varieties). The symptoms are better observed in the interior part of the canopy where sun is less likely to obscure the symptoms.
- Plant material should be collected from all hosts displaying symptoms of HLB.
- If HLB symptoms are not observed, but there is a high population of ACP on the host(s), plant material should be collected from the tree(s) that have a high population of ACP.
- All collected plant material and ACP samples will be processed and shipped to CDFA's Plant Pest Diagnostics Center (PPDC) for analysis.

Submission of ACP Samples

- Pour 95% non-denatured ethanol in the aspirator container. Collect adult ACP with an aspirator. Using a pipette transfer the ACP into a vial containing 95% non-denatured ethanol.
- The adult ACP from different hosts on the same property may be pooled into one vial (one vial per site.)
- New growth should be inspected for the nymphs. Nymphs should be collected with a small paint brush or forceps and placed in a vial with 95% non-denatured ethanol. Nymphs from different hosts should not be mixed in the same vial.
- Adult ACP and nymphs should be placed in separate vials. However, only one Pest and Damage Record (PDR) (Entomology) per site should be used.
- Vials should be numbered, beginning with number 1. In the "Remarks" section, indicate the contents of each numbered vial and the host from which the contents were collected. Examples:
  - Sample #1 = 10 nymphs from tree #2 =lemon;
  - Sample #2 = 2 adult ACP from tree #2=lemon.
- Host information should be entered in the host section on the PDR
- A PDR sticker should be affixed to each vial.
- All vials with PDR stickers and the PDR should be placed in a plastic bag.
- Samples should be placed in a cooler with ice packs. The cooler should be sent to the Meadowview warehouse to double check the chain of custody with the contents of the cooler. The cooler will then be taken to the PPD laboratory.

Submission of plant parts

- Twenty (20) symptomatic leaves per tree should be collected.
- Clippers, if used, should be disinfected with alcohol after every sample collection.

- Thorns should be cut off leaves. Leaves should be cleaned with a paint brush to remove any debris, including any ACP life stages present and any other insects.
- Leaves should be placed on a paper towel and thoroughly checked using a magnifying glass to be sure all insects (including ACP) and their life stages are removed. All plant samples submitted to the PPDC must be free of all insects
- Plant samples should be wrapped in a paper towel. Towel(s) with samples should be placed in a Ziploc bag. The Ziploc bag should be placed inside of another Ziploc bag (double Ziploc bagged).
- Using a Sharpie, label the bag with the date, address, city, cross street, county, the host, and the sample number. Place a PDR sticker on the bag or write the PDR number on the bag. Each bag with a sample must have a PDR number.
- Store the Ziploc bag with plant samples in a cooler with ice packs. Place a paper towel between the ice packs and the samples to insure that the samples stay dry but cool
- One PDR (Plant Pathology) should be completed for each site. Samples from each site should be numbered. If the detection site has multiple trees, there will be one PDR with multiple samples.
- In the "Remarks" section, include the host from which the sample was taken. Examples:
    - Sample #1= lemon;
    - Sample #2 = grapefruit;
    - Sample #3 = Mexican lime.
- Host information should be entered in the host section.
- Samples should be placed in a cooler with ice packs. The cooler should be sent to the Meadowview warehouse to double check the chain of custody with the contents of the cooler. The cooler will then be taken to the PPD laboratory.

IX. Treatment Activities

Treatment

CDFA's treatment activities for ACP vary throughout the state and depend on multiple factors. Factors CDFA considers prior to treatment include the proximity of the infestation to commercial citrus, and whether or not coordinated treatment activities are conducted by growers. Prior to initiating treatment in a new area, CDFA will review the situation and to determine if eradication or suppression of ACP is feasible in the area and consistent with the overall goal of protecting the state's commercial citrus production.

Currently, CDFA has identified four scenarios throughout the state in which treatment will occur.

1. In areas with commercial citrus production that are generally infested with ACP and where all growers are treating on a coordinated schedule, CDFA may conduct residential buffer treatments to suppress ACP populations.

2. In any area where ACP and HLB have been detected (e.g. Los Angeles County and Orange Counties), CDFA will conduct residential treatments to suppress ACP populations.

3. In any area where ACP has not been previously detected or where ACP has been detected at low densities, CDFA will conduct residential treatments to prevent establishment or suppress populations.

CDFA's current policy is to not conduct treatments in areas that are generally infested if there is no commercial citrus production in the area, or if all growers in the area are not treating.

Treatment Protocols

A Program Environmental Impact Report (PEIR) has been certified which analyzes the ACP treatment program in accordance with Public Resources Code, Sections 21000 et seq. The PEIR is available at http://www.cdfa.ca.gov/plant/peir. The treatment activities described below will be consistent with the PEIR.

In accordance with the integrated pest management principles, the CDFA has evaluated possible treatment methods and determined that there are no physical, cultural, or biological control available to eliminate ACP from an area.

In general, when treatment has been deemed appropriate, CDFA applies pesticides to host trees (residential, urban, or non-agricultural commercial) that are within 100 to 800 meters around each detection site. Only ACP host plants are treated.

Treatment Activities within the Generally Infested Area with Commercial Citrus Production, including Imperial, San Diego, Riverside, San Bernardino and Ventura Counties.

Areawide Buffer Treatment

CDFA will treat the residential area within a 400-meter buffer surrounding commercial citrus groves if the growers are conducting coordinated treatments in 90 percent of the designated Psyllid Management Area. A Notice of Treatment (NOT) will be issued. A public meeting will be held at least once per year.

International Boarder Treatments

CDFA will treat the residential area within an 800-meter buffer surrounding ACP detections that are within two miles of the California-Mexico border. A Notice of Treatment (NOT) will be issued. A public meeting will be held at least once a year**.**

Treatment Response to one or more ACP finds in all counties north of Ventura County and the Tehachapi Mountains, excluding Kern, Tulare, Kings, Fresno and Madera

All properties with host trees within a 50 meter radius will be treated and a Notice of Treatment (NOT) will be issued. Public meetings will be held in any county where ACP has not previously been detected.

Treatment Response to one ACP detected in the counties of Kern, Tulare, Kings, Fresno or Madera

In an urban environment, all properties with host trees within a 50 meter radius will be treated. In a commercial citrus environment where few residences are located, treatment may expand to include all residences with host trees out to the 800-meter radius that the commercial growers are treating (if the growers are treating). A NOT will be issued. Public meetings will be held in any county where ACP has not previously been detected or at CDFA discretion.

Treatment Response to two or more ACP detected in one trap or one or more ACP detected on separate traps within 400 meters of each other within a six month period in the counties of Kern, Tulare, Kings, Fresno or Madera

In an urban environment, all properties with host trees within a 400 meter radius will be treated. In a commercial citrus environment where few residences are located, treatment may expand to include all residences with host trees out to the 800-meter radius that the commercial growers are treating (if the growers are treating). A NOT will be issued. Public meetings will be held in any county where ACP has not previously been detected or at CDFA discretion.

In response to HLB detections all properties within 800 meters will be treated and a NOT will be issued.

The treatment protocol consists of both a foliar and a systemic insecticide. Foliar insecticides are useful for immediate reduction of the adult population in order to eliminate dispersal, while systemic insecticides are necessary to kill the sedentary nymphs and provide long term protection against reinfestation. Treatment frequency is dependent on the insecticide applied and severity of the infestation. Treatments will end no later than two years after the last psyllid detection in the treatment area. The Program uses registered pesticides, follows the label directions, including mitigations and restrictions and in some circumstances may adjust the treatment protocol and use only the foliar or systemic pesticide.

Foliar Treatment
Tempo® SC Ultra (cyfluthrin) is a pyrethroid contact insecticide. Treatment will initially occur once, and subsequent applications may occur for up to six times annually if additional psyllids are detected. This material will be applied to the foliage of all host plants using hydraulic spray or hand spray equipment.

Soil Treatment
A systemic soil application will be made using either Merit® 2F or CoreTect™.

- Merit® 2F (imidacloprid), is a neonicotinoid systemic insecticide. Treatment will initially occur once, and a subsequent application may occur once on an annual basis if additional psyllids are detected. This material will be applied to the soil within the root zone of host plants.

- CoreTect™ (imidacloprid) is a neonicotinoid systemic insecticide. It is used in place of Merit® 2F in situations where there are environmental concerns about soil surface runoff of the liquid Merit® 2F formulation, such as host plants growing next to ponds and other environmentally sensitive areas. Treatment will initially occur once, with a subsequent application once on an annual basis if additional psyllids are detected. This material is a pelletized tablet and is inserted into the soil and watered in within the root zone of host plants.

Termination of Treatment
Decisions on termination of treatment in an area will be based on the following factors:

- Adult ACP have been detected scattered over 10 or more sites in at least 6 of the delimitation trapping grids within 6 months;
- Established populations (nymphs and/or eggs) have been found at three or more sites in at least three of the delimitation trapping grids within 6 months;
- At least one find site property, with nymph(s) and or egg(s) refuses treatment;
- The cost of treatment exceeds available funds;
- Treatment ceases in Fresno, Kern, Kings, Tulare or Madera Counties.

Actions to Replace Treatment

The following actions will be implemented in areas where trapping has been terminated.

- Trapping at the rate of 25 traps per square mile in all delimitation areas will continue, until such time that ACP can be easily collected without a trap find to locate a population.
- Visual survey will be conducted to collect ACP specimens at properties with large numbers of ACP trapped on yellow panel traps (10 or more at one inspection **or** adults collected monthly for three inspections. These ACP will be tested for HLB.
- ACP parasites will be released as appropriate or available.
- The detection of HLB will trigger the HLB protocol.

Environmental Consultation

The treatment area will be reviewed through consultation with the CDFW's Natural Diversity Database for threatened or endangered species. The CDFA also consults with the CDFW, USFWS and NMFS when rare and endangered species are located within the treatment area. Mitigation measures will be implemented as needed. The CDFA will not apply pesticides to bodies of water or undeveloped areas of native vegetation. All treatment will be applied to residential properties, common areas within residential development, non-agricultural commercial properties and rights-of-ways.

Environmental Monitoring

To ensure protection of human health and the environment, the CDFA has contracted with CDPR to oversee environmental monitoring of treatment projects. Sampling media include air, leaf, soil, tank, and water. To address human health issues, CDFA has contracted with the OEHHA.

Pollinator Protection

The CDFA takes a number of beneficial actions to promote pollinator health at our program sites and throughout the state. CDFA works with the local CAC's office to identify all registered bee colonies and notifies the registered beekeeper prior to applying any pesticide. The CDPR is also consulted to ensure that label directions are interpreted properly and that the applications are made safely. CDFA staff conduct a visual survey of each property prior to making an application, take appropriate precautions to mitigate hazards to pollinators. During treatment activities, CDFA staff follow all label directions; appropriate best management practices and makes every effort to assure proper timing of applications. Staff remain on site until all of the water is absorbed into the soil to prevent pollinators from visiting any standing water.

X. HLB Response Activities

Because HLB is the most devastating disease of citrus worldwide, California cannot afford to allow the spread of HLB through our state. The presence of this disease in areas such as Asia, Brazil, Texas and Florida has afforded us the opportunity to learn from their experiences, including the best available options to prevent the spread and establishment of this pathogen.

Experts worldwide agree on three critical steps in HLB control:

1. Abatement procedures to remove infected trees.
    a. Removal methods may include but are not limited to cutting and burning on site, defoliation and burn standing, cut and buck up for double bagging and disposal at landfill, by burial, stump removal or stump treatment with Glyphosate (trade name Round Up) or other yet unidentified method of destruction that is approved by the regulatory officials.
2. ACP control.
3. Replant with disease-free trees, necessitating that all citrus nursery stock be produced under protective structures.

Host plant tests positive for HLB-associated Liberibacter
Each instance will be evaluated on a case by case basis and response activities may include the following:

1. Upon confirmation of an HLB infected plant, apply foliar insecticides to the infected plant and apply both foliar and systemic insecticides to all host plants within 800 m. See Appendix for approved insecticides.
2. After treatment, remove and destroy the diseased citrus tree or host plant following the abatement procedures. Completely remove any stumps if size permits or treat stump with approved stump treatment to prevent re-sprouting. See Appendix for approved herbicides.
3. Collect all trace back information on the source of the diseased plant. All genetically related material must be placed on hold, and tested for HLB – associated bacteria.
4. Initiate standard ACP delimitation survey and use the spoke model to a distance of 10 miles, if appropriate as well as visual inspection or P-vac or stem tap sampling for psyllids at trap properties.
5. Test 100 percent ACPs collected for the pathogen. All citrus trees and host plants within 800 m must be tested for HLB – associated bacteria.
6. If nursery stock tests positive for the pathogen, trace back and trace forward activities will identify related plant materials to be held and tested. Following the abatement procedure, infected trees must be destroyed and all host plants within 800 m must be tested for HLB-associated bacteria.

7. If HLB is detected in a commercial grove, apply foliar insecticides to the infected tree and apply both foliar and systemic insecticides to all host material within 800 m. Following the abatement procedure, remove and destroy the diseased tree. Completely remove stump if size permits or treat stump with approved stump treatment to prevent re-sprouting.
8. Survey and test host trees following the hierarchical sampling method. Collect 20 leaf samples from each of 25 percent of the trees in an orchard. Select trees to be sampled in groups of four, with 80 leaves being collected from the four trees. The four trees, a quadrat, are surveyed as one unit, either by sampling two trees in each of two rows to form a square or sampling four trees in a linear fashion in one row. In both scenarios, the quadrats will be separated by unsampled trees. To determine the total number of samples to be collected in an orchard being surveyed, the following formula was used: Number of trees per acre x number of acres of trees in the orchard/4. All trees with symptomatic leaves should be sampled regardless of the survey protocol. Perimeters and edges of open spaces should receive an added focus as HLB is often found in higher concentrations in these areas.
9. Examine all host plants for evidence or presence of ACP and collect and analyze all specimens found for HLB-associated bacteria.
10. Take appropriate steps to clean fruit of any ACP (all life stages) and remove leaves and stems before fruit moves away from the orchard.
11. Initiate a treatment program to suppress ACP densities and continue testing leaf tissue for HLB-associated bacteria until it is determined that no additional infections exist.

ACP tests positive for HLB-associated Liberibacter

1. Initiate ACP delimitation survey.
    a. In residential situations, test all host plants on the property and adjacent properties for the HLB – associated bacteria. Initiate standard radius ACP delimitation survey and use the spoke model to a distance of 10 miles, if appropriate as well as visual inspection or P-vac or stem tap sampling for psyllids at trap properties.
    b. In commercial groves, survey and test host trees following the hierarchical sampling method. Collect 20 leaf samples from each of 25 percent of the trees in an orchard. Select trees to be sampled in groups of four, with 80 leaves being collected from the four trees. The four trees, a quadrat, are surveyed as one unit, either by sampling two trees in each of two rows to form a square or sampling four trees in a linear fashion in one row. In both scenarios, the quadrats will be separated by unsampled trees. To determine the total number of samples to be collected in an orchard being surveyed, the following formula was used: Number of trees per acre x number of acres of trees in the orchard/4. All trees with symptomatic leaves should be sampled regardless of the survey protocol.

Perimeters and edges of open spaces should receive an added focus as HLB is often found in higher concentrations in these areas.

2. All ACP found will be tested for HLB-associated bacteria.
3. If the inoculative psyllid is found in a trap, test citrus tree or other host plant in which the trap was placed and host plants within an 800 meter radius. In residential situations, sample and test all trees on the property and all host plants within an 800 meter radius.
4. If the inoculative ACP is found in the nymphal stage or as an adult feeding on a host plant, test that tree and all immediately adjacent host plants for HLB-associated bacteria, regardless of the presence or absence of symptoms. The plant on which the insect was found feeding should be considered "highly" suspect for HLB and routinely monitored. Test all host plants within an 800 meter radius for HLB-associated bacteria.
5. Complete an intensive visual survey for symptomatic trees. Test all symptomatic trees for HLB -associated bacteria.
6. Initiate a treatment program to suppress ACP densities and continue testing leaf tissue for HLB-associated bacteria until it is determined that no additional infections exist.

XI. Biological Control Activities

Complementing CDFA's ACP treatment actions, and the ACP containment actions carried out through enforcement of the State Interior Quarantine, is a classical biological control program aimed at reducing the population of ACP in highly infested areas. The goal of this program is to significantly reduce the abundance of ACP in heavily infested areas to slow the outward spread of this pest into new areas.

The ACP biological control efforts in California are multifaceted, and developed and implemented through cooperation between CDFA, USDA, Citrus Research Board (CRB), California State University (CSU), and University of California (UC).

Two potential ACP biocontrol agents (parasitic wasps *Tamarixia radiata* and *Diphorencyrtus aligarhensis*) have been identified and collected from climatically matched areas of Pakistan by the UC Riverside. One wasp, *T. radiata*, has already been approved for release in California. Releases by UC Riverside and CDFA started in December, 2011. Quarantine studies for non-target risk analysis for the second wasp, *D. aligarhensis*, have been completed and a petition requesting a permit for field release has been approved by the USDA Animal Plant Health Inspection Service. The initial release of *D. aligarhensis* took place in December 2014. The UC is currently engaged in experimental releases to determine distribution and establishment of *D. aligarhensis*.

The CDFA ACP biocontrol program is composed of three major areas of focused activities and continued development:

- Mass production of ACP and the parasitic wasp, *T. radiata* in conventional insectaries located at CDFA's Mt. Rubidoux facility (Riverside County) and the CSU Pomona campus (Los Angeles County). Operations at each facility are carried out under the terms of a CDFA-issued permit, as required by Food and Agricultural Code Section 6305.Rearing of ACP and the parasite occurs on potted trees inside secured cages in controlled rearing rooms. Standard protocols for the large-scale production of *T. radiata* have been developed in Florida and Texas and are being adapted for use in California.
- Production of small, potted citrus trees (especially curry leaf, *Bergera koenigii*) which are used as ACP host material in the Mt. Rubidoux and Pomona insectaries. Production of trees is at CDFA's Arvin facility (Kern County)
- Production of *T. radiata* on caged, field trees at CSU, Pomona and at selected commercial groves near Riverside. This project is funded by USDA. The caged trees at CSU Pomona are located in a 20-acre field next to the insectaries described above. The caged trees in commercial groves are located near the campus of the UC Riverside. At all locations, the cages trees are intentionally and naturally inoculated with ACP. Once high populations of ACP are achieved, adult *T. radiata* are introduced into the cages and allowed to increase in number on the resident psyllids. Production of *T. radiata* in the field cages has significantly increased the number of parasites available for release but is limited to the spring and summer months of the year.

Initial releases of *T. radiata* were focused within the Los Angeles basin. Post-release monitoring has confirmed the establishment of *T. radiata* at over 80 locations. Until 2014, release sites were selected by scouting and information obtained from interested parties. The steady increase in parasite production as a result of the field cages and continued expansion of production at Mt. Rubidoux and CSU Pomona has resulted in the instigation of an area-wide release strategy covering all urban regions in southern California and into the southern Central Valley within the ACP quarantine areas.

XII. Regulatory Activities

General

Intrastate and interstate movement of hosts of ACP and HLB are regulated by Title 3, California Code of Regulations (CCR) Section 3435, State Interior Quarantine and Code of Federal Regulations (CFR) Section 301.76, CG and ACP, respectively. These regulations specify the quarantine areas, the hosts and possible carriers, and the prohibitions or conditions which enable movement of hosts within or from the quarantine area.

In conjunction with USDA and the CACs, CDFA enforces all provisions of these regulations, and provides guidance to affected industry representatives of the conditions and actions which would make regulated products eligible to move within and beyond the quarantine boundaries.

In general, regulatory enforcement activities are intended to prevent the spread of ACP and HLB by restricting the movement of hosts from the affected area. Regulatory activities conducted by CDFA include the development and issuance of hold notices and compliance agreements and exhibits; the development and distribution of Pest Exclusion and Phytosanitary Advisories, which provide detailed information on applicable regulations and enforcement policies, development and sharing of education material provided to affected entities and CAC regulatory staffs on applicable regulations and enforcement policies; and on-going communication with and monitoring of regulated establishments within the affected area to ensure compliance with the requirements of the applicable quarantine regulations.

The CDFA, under the terms of a compliance agreement, can pre-approve an exclusionary facility that meets the USDA Citrus Nursery Stock Protocol's requirements prior to a quarantine being enacted. This will allow uninterrupted intrastate and interstate nursery stock shipments. The local CAC is responsible for approving the exclusionary facilities design and construction. After approval, the facilities will be inspected at least once every 30-days to confirm compliance with the Protocol's requirements.

In addition to the requirements regarding ACP and HLB, all citrus nursery stock produced and/or sold in California must meet the requirements found in Title 3, California Code of Regulations Sections 3701 through 3701.8, Citrus Nursery Stock Pest Cleanliness Program. All source trees for citrus nursery stock propagative materials must be registered with the Citrus Nursery Stock Pest Cleanliness Program, and must meet testing and maintenance requirements.

Summary of ACP Quarantine Restrictions

Intrastate Movement

Nursery stock, green waste and plant parts are prohibited from moving out of the quarantine area. Nursery stock may move within a quarantine area if treated and tagged in an approved manner. Treatment and tagging requirements are outlined in Exhibit A and include the use of both an approved foliar insecticide and systemic pesticide at specified times prior to shipment, and a statement on the tag that the stock may not move out of the ACP quarantine area.

Bulk citrus fruit in bulk containers or any citrus fruit with stems and leaves attached are prohibited from moving out of the quarantine area. Bulk citrus fruit and fruit with stems and leaves may move freely within an ACP quarantine area

Appliances and equipment used to harvest, plant, prune, move, or process any regulated host are prohibited from moving out of the ACP quarantine area unless treated and/or cleaned in such a manner to remove all live life stages of ACP.

Issuance of Hold Notices

Hold notices are issued under authority provided in FAC Section 5701 in order to prevent the movement of hosts from a premise where a pest has been detected. As per this authority, hold notices may be issued for all ACP or HLB hosts on any premise up to five miles from a site where either of these pests have been detected.

Issuance of Compliance Agreements and Exhibits

Compliance agreements and exhibits are issued under authority provided in FAC 5705. Compliance agreements and exhibits are used to convey the terms of a State Interior Quarantine to affected businesses in the area, and to receive agreement from the business's responsible party that the quarantine restrictions will be met. Compliance agreements allow the movement of host material under prescribed conditions under general regulatory oversight. Shipments made under the terms of a compliance agreement (and accompanying Exhibit) do not require regulatory supervision.

Exhibit A - This exhibit provides stipulations pertaining to ACP host nursery stock movement within ACP regulated areas. To be eligible to move within a quarantine area, ACP host nursery stock must be treated in an approved manner (with an approved foliar and approved systemic product within 90 days prior to shipment) and bear a tag indicating that it may not move out of the regulated area.

Exhibit B - This exhibit provides stipulations pertaining to ACP host nursery stock movement interstate to non-citrus producing states. To be eligible to move interstate to non-citrus producing states, ACP host nursery stock must be grown and handled as per federal protocol.

Exhibit B1 - This exhibit provides stipulations pertaining to ACP host nursery stock movement intrastate from ACP regulated or restricted areas. To be eligible to move intrastate, ACP host nursery stock must be grown and handled as per federal protocol.

Exhibit C – This exhibit informs packers, processors and receivers within the ACP quarantine area of the provisions for movement of citrus and other host fruit from quarantine areas. All fruit must be free of stems and leaves prior to leaving the quarantine area and all equipment must be free of stems and leaves and live life stages of ACP prior to leaving the quarantine area.

Exhibit D - This exhibit is used to inform growers and grove managers that all fruit must be free of stems and leaves prior to leaving the quarantine area, and that all equipment must be free of stems and leaves and live life stages of ACP prior to leaving the quarantine area. This exhibit also

informs growers and grove managers that fruit and green waste moved out of the quarantine area must move under the terms of the applicable Master Permit.

Exhibit E - This exhibit specifies that all equipment used in harvesting, processing and hauling of host plants and plant parts and any green waste residues including but not limited to tractors, trailers, trucks, planting, picking and pruning equipment and processing machinery must be cleaned of all plant parts of listed host species prior to leaving quarantine area.

Exhibit F - This exhibit specifies that all bulk fruit leaving the ACP quarantine area must be delivered to an approved receiver and drivers must use a direct route without interruptions during the transport of such fruit, and must inform regulatory officials in the event of a spill during transport.

Exhibit J - This exhibit specifies that all regulated host nursery stock offered for sale at a swap meet must be obtained already treated from a production nursery and must bear a label stating that it may not be moved outside the quarantine area. This exhibit also specifies that vehicle or trailer used to transport ACP host material is free from all life stages of ACP and ACP host material (including leaves, stems and debris) prior to leaving swap meet location and returning to origin.

Exhibit M - This exhibit specifies that all regulated host nursery stock offered for sale at a farmers market must be obtained already treated from a production nursery and must bear a label stating that it may not be moved outside the quarantine area. This exhibit also specifies that regulated articles may not be moved out of the area quarantined for ACP, regardless of origin, and informs establishment that if origin is outside of the area quarantined for ACP, all unsold ACP host material, not sold by the close of the farmer's market, will be destroyed or disposed of in a manner approved by the Project. This exhibit also specifies that vehicle or trailer used to transport ACP host material is free from all life stages of ACP and ACP host material (including leaves, stems and debris) prior to leaving the quarantine area.

Exhibit P - This exhibit specifies that cut flowers and greenery from regulated host plants are prohibited from moving out of the ACP quarantine area, and may only be moved within the ACP quarantine area if treated with methyl bromide fumigation in accordance with 7 CFR part 305 (APHIS schedule T101-n-2) or irradiated in a facility located outside an area quarantine for CG disease.

Exhibit R - This exhibit is used to inform retail establishments that ACP regulated host plants are prohibited from moving outside the ACP quarantine area, and that regulated host nursery stock sold at retail establishments must be obtained already treated from a production nursery or treated on-site in an approved manner and must bear a label stating that it may not be moved outside the quarantine area.

Exhibit Z – This exhibit is a comprehensive list of regulated ACP host articles and commodities. The list includes all nursery stock, and plant parts, including green waste and propagative plant parts except for seed extracted from fruit. **Issuance of Special Permits**

The interior quarantine regulations for both ACP and HLB authorize CDFA to issue special permits pertaining to the movement of the regulated articles and host commodities covered which would otherwise be prohibited. This may occur when there is a specific demonstrated need and the terms and conditions of the permit adequately mitigate the biological risk. These special permits are called quarantine commodity permits and may be issued to individuals, businesses, researchers or to the program project staff. The permit may be self-executing, having all the terms and conditions in the body of the permit or it may require the permit participants to enter into compliance agreements with attached exhibits. The exhibits contain their specific responsibilities and the mitigating actions they must implement in order to move the prohibited article or commodity.

Permits issued to the project staff are generally referred to as "Master Permits" as it enables them to utilize compliance agreements and exhibits for numerous participants and create a regulatory network for those involved. As an example, for the movement of bulk citrus, the compliance agreements and exhibits can link the grower to harvester, harvester to hauler/transporter, hauler/transporter to the packing facility or processor. All new permit requests/concepts are first vetted through the ACP/HLB Incident Commanders. Additionally, most master permits for intrastate movement have requirements which are substantially the same as the federal requirements for interstate movement. Special permits have been issued for the movement of: nursery stock and propagative material, bulk citrus, mandarins with stems and leaves attached, freeze damaged fruit, removal of HLB suspect trees for research and collection of leaves for destructive nutrient analysis.

Additionally, federal and State plant pest permits have been issued as appropriate to support research activities related to ACP and HLB. The federal permits are applicable when the research involves the interstate movement of regulated/prohibited organisms into California and State permits are required for the intrastate movement and use of such organisms. A federal permit was issued to internationally move the biocontrol organism *Tamarixia radiata* with its ACP host into Florida to establish a colony and a portion of that colony was subsequently moved interstate under another federal permit into California to the UC Riverside's Contained Research Facility. Once it was determined that the ACP/*Tamarixia radiata* colony was not contaminated by other organisms, the federal permit was modified to allow experimental release into California. Eventually the federal permit requirements were dropped and this activity now takes place under the terms of a State permit, since you have to move live ACP with the parasite in it. State plant pest permits have also been issued to researchers to maintain ACP infested nursery stock to screen for efficacious conventional and organic pesticides under California conditions.

Title 3, Section 3154 of the California Code of Regulations authorizes CDFA to issue special permits which provide options for movement of articles otherwise prohibited movement by the quarantine regulations. CDFA has issued the following permits for intrastate movement of articles prohibited movement by CCR 3435:

Master Permit QC 1255 and 1377

Bulk fruit and any fruit with stems and leaves attached are prohibited from moving outside an ACP quarantine area. Master Permits QC 1255 and 1377 provides the following options for movement:

- Removal of stems and leaves prior to movement; accompanied by a "Field Cleaning Verification Form", and delivered to an approved receiver;
- Harvested within fourteen days of the application in the grove of a pesticide effective at controlling ACP, accompanied by a "ACP-Free Declaration Form", and delivered to an approved receiver;
- Other performance based option (to be proposed by interested party and subject to review and approval by CDFA)

Master Permit 1306
Plant parts of ACP hosts are prohibited from moving out of the quarantine area. Master Permit 1306 authorizes movement of processed host material. This permit requires the use of a "Process Verification Statement" with each shipment. Approved processing methods include heating, drying, picking, shredding, freezing, pureeing, freeze drying, turning into a powder, etc.

Master Permit QC 1353
Nursery stock is prohibited from moving out of the quarantine area, but may move to any destination under the terms of this permit. This permit provides stipulations pertaining to the production of ACP host nursery stock in an approved insect-resistant structure and following the federal protocol entitled "Interstate Movement of Citrus and Other Rutaceous Plants for Planting from Areas Quarantined for Citrus Canker, Citrus Greening, or Asian Citrus Psyllid." Citrus nursery stock produced under the terms of this permit is eligible to be shipped intrastate to all of California and also qualify for federal certification for interstate movement.

Master Permit 1289
Green waste is prohibited movement out of the quarantine area but may move to approved destinations under the terms of this special permit. Stipulations included under this permit include destination of green waste to an approved facility, use of an approved green waste processing and handling method(s), and on-going ACP trapping and monitoring of the approved receiver by the local county agricultural commissioner's office.

Master Permit 1295
All plant parts of regulated hosts are prohibited movement out of the quarantine area, but articles intended for consumption, apparel, personal assessor, or other decorative use may move intrastate under the terms of this special permit. Stipulations under this permit include treatment of such articles with Methyl bromide fumigation in accordance with 7 CFR part 305 (APHIS schedule T101-n-2) or irradiation in a facility located outside an area quarantined for CG disease.

Voluntary Pre-shipment Nursery Treatment Program
All nursery stock offered for sale in the ACP quarantine areas must be treated prior to movement within the area. However, many retail sales locations are unable to treat plants on-site due to

pesticide use restrictions, or other factors such as cost or space limitations. Therefore, CDFA has developed a voluntary, pre-shipment treatment program that can be implemented, with oversight from the local CAC, in nurseries outside the State Interior Quarantine area, to facilitate movement of nursery stock within ACP quarantine areas.

Interstate Movement

The USDA/APHIS regulates interstate movement of ACP regulated host material and movement of such ACP host nursery stock between non-contiguous quarantine areas in citrus producing states (i.e., California).

In order to be eligible to move interstate ***to a citrus producing state*** or between non-contiguous quarantine areas in California, the ACP host nursery stock must have been produced in an approved, insect resistant structure under the terms of a compliance agreement and as per the federal protocol entitled "Interstate Movement of Citrus and Other Rutaceous Plants for Planting from Areas Quarantined for Citrus Canker, Citrus Greening, or Asian Citrus Psyllid." The terms of the compliance agreement and accompanying exhibit specify the structure construction standards, plant sourcing and testing requirements, and on-going inspection, safeguarding, monitoring, and record keeping requirements. The facility and all its entryways must be designed and constructed to exclude quarantine pests and diseases. This may include, but is not limited to: screening with openings approximately 0.3 square millimeters or less in size, forced air curtains, positive air pressure, and double door entryways. These requirements ensure that the nursery stock develops in a pest-free environment and will not spread any citrus pests or diseases from the quarantine area.

Additionally, Master Permit QC 1260 specifies approved transiting corridors that must be followed by when moving nursery stock intrastate between non-contiguous quarantine areas.

In order to be eligible to move interstate ***to a non-citrus producing state***, the ACP host nursery stock must be inspected every 30 days, treated with an APHIS-approved systemic insecticide (soil drench) at least 30 days but not more than 90 days prior to shipment, and then treated with an APHIS-approved foliar spray no more than 10 days before shipment. Shippers must be operating under the terms of a compliance agreement with APHIS and shipments much be accompanied by a Limited Permit. Each plant being moved interstate must be labeled with adequate identifying information to permit trace-back to each premises.

Summary of HLB Quarantine Restrictions

Intrastate

ACP and HLB host nursery stock, plant parts, and fruit and (except seed extracted from fruit) are prohibited from moving out of the HLB quarantine area unless they meet the requirements outlined in Title 7, CFR, Part 301.

Also, ACP and HLB host nursery stock is prohibited from moving within the area under quarantine unless produced and continuously maintained in a departmentally approved insect-resistant

structure under the terms of a compliance agreement. ACP and HLB host nursery stock must bear a label stating that it cannot be moved outside the quarantine area.

Compartmentalization of growing areas within an approved insect-resistant structure will be considered in the case of either HLB or ACP being detected within the structure. If ACP or HLB is detected in an approved insect resistant structure and compartmentalization exists, the Department will complete a risk assessment to determine regulatory response. No further shipments will be allowed from the facility until authorized by the Department.

If ACP is detected and no compartmentalization exists, ACP and HLB-host host nursery stock must either be held for two years and tested for HLB every six months with negative results, or destroyed.

If HLB is detected in an approved insect-resistant structure and no compartmentalization exists, no further shipments will be allowed and the nursery stock will need to be removed from the facility and the facility treated in an approved manner.

ACP-only (not HLB) host nursery stock may move within the HLB quarantine area if treated in an approved manner, or if it was produced outside the HLB quarantine area and is transported into the HLB quarantine area to an approved, insect-resistant facility for treatment and/or sale. All ACP-only nursery stock offered for sale in the HLB quarantine area must bear a label stating it cannot be moved outside the HLB quarantine area.

ACP and HLB-host fruit placed directly into bulk containers or bins *without cleaning* is prohibited from leaving the HLB regulated area. Fruit in bulk that has been cleaned using normal packing house procedures may move out of the HLB quarantine area.

All equipment used to harvest, prune, process, or transport any hosts of ACP and HLB must be cleaned and/or treated in a manner to eliminate all live life stages of ACP prior to movement out of the HLB quarantine area.

Interstate

The USDA/APHIS regulates interstate movement of ACP and HLB-regulated articles from HLB quarantine areas.

ACP and HLB regulated host nursery stock may move interstate from an area quarantined for HLB to any state if produced under the terms of a compliance agreement and as per the federal protocol entitled “Interstate Movement of Citrus and Other Rutaceous Plants for Planting from Areas Quarantined for Citrus Canker, Citrus Greening, or Asian Citrus Psyllid.” The terms of the compliance agreement and accompanying exhibit specify the structure construction standards, plant sourcing and testing requirements, and on-going inspection, safeguarding, monitoring, and record keeping requirements.

In addition, in order to be eligible for interstate movement, ACP and HLB regulated host nursery stock must be tested at least twice for HLB at six month intervals with negative results.

XIII. Outreach and Education Program

The CCPDPP requires the services of a professional outreach contractor to oversee an outreach and education program. The program is designed to inform residents the threat the citrus disease, HLB, and its vector, the ACP pose to their dooryard citrus. Additionally, growers are kept abreast on the current status of HLB and ACP, as well as other pests and diseases of citrus. The outreach and education program will include the following items:

- A work plan including all deliverables and completion dates for all components.
- Messaging that creates an environment of cooperation and support for controlling ACP and HLB among residents, growers, legislators and stakeholders.
- Cohesive, distinctive artwork and graphics to be used on all printed and electronic materials associated with the CCPDPP and the CCPDPC outreach and education program.
- Quarterly newsletters and articles with arrangements to distribute them in existing publications, i.e. Citrograph, regional associations, trade press, on the CDFA and CCPDPP websites and in the mail.
- A media update guide, including press releases for distribution to local papers, trade press, print media, television, and radio in citrus growing regions.
- Handouts and complementary materials that can be easily updated and produced in short runs for use in trade shows and also repurposed for electronic distribution via email, on websites, etc., to provide relevant updates on the CCPDPP.
- A program that provides regular updates to regional citrus growers, County Agricultural Commissioners, Farm Bureau chapters, elected officials and local governmental groups, and that provides materials and information for use in local grower meetings, field day activities and trade shows.
- A program to identify, educate and deploy candidates among California's citrus growers, to serve as local experts. These growers will be available for media interviews and public meetings in areas where citrus trees are newly infested with ACP or infected with HLB.
- Speaker kits, including talking points, handouts and visuals, for use in making presentations on ACP and HLB.
- A media outreach strategy that can reach reporters with breaking news in a timely fashion.
- Incorporation of other outreach vehicles/mechanisms (Twitter, Facebook, etc.) upon approval of the CDFA.
- Provide program's outreach materials in multiple languages for distribution via multiple media channels to reach the largest audience.

1. Residential Messaging

Messaging is directed toward residents and will continue in areas of the state where residential treatments for ACP are deemed necessary due to the proximity of commercial citrus. In areas of the state that are either generally infested or do not have substantial citrus acreage, the messaging will focus on finding and eradicating HLB-infested trees. In all areas, the public messaging will emphasize resident cooperation with CDFA survey and treatment crews.

2. Grower Messaging

In some citrus growing areas, commercial groves are separated by substantial distances, making open communication and coordination between growers difficult. Individual growers may have implemented pest management strategies for ACP and HLB, but experience has shown that a successful control program must be coordinated among all growers in an area to maximize the effect of treatments. It is imperative in managing this pest, that outreach messaging directed toward growers emphasizes grower participation in an area-wide pest management strategy to protect commercial citrus as well as individual growers.

In order to accomplish the timely application of treatments over large geographical areas in a coordinated manner, the outreach materials will be distributed in various ways, including by the contractor, CDFA, Grower Liaisons and the Statewide Coordinator. Recognizing that the cost of treatments is borne by the citrus growers, it is imperative to have a robust grower outreach program that reaches as many of the growers as possible to ensure effective treatments are conducted in a timely manner.