

Glassy-winged Sharpshooter Nursery Shipping Protocol

May 20, 2021

These protocols are provided to clarify the responsibilities and procedures to be followed by County Agricultural Commissioners in order to certify glassy-winged sharpshooter-free nursery stock destined to non-infested areas of California. These procedures are derived from the Pierce's Disease Control Program Regulations (formerly known as the Emergency Regulations and the Master Permit QC 922), including the associated compliance agreements and their exhibits.

1. Nursery Evaluation by CAC:

County Agricultural Commissioners (CAC) monitor and conduct the visual survey and trapping activities of nurseries for the presence of glassy-winged sharpshooters (GWSS) to determine if a nursery in the infested area is eligible to ship nursery stock to non-infested areas of California under:

- A. The Pierce's Disease Control Program Regulations (non-infested premise nursery) or,
- B. The Master Permit (infested premise nursery) or,
- C. The GWSS Nursery Stock Approved Treatment Program (ATP) or,
- D. The Broker Compliance Agreement or,
- E. The Distribution Center Compliance Agreement.
- F. Qualifying nurseries shall sign a compliance agreement under the Program Regulation, Master Permit (or both i.e., multiple yards or locations), the Approved Treatment Program, Broker or Distribution Center. Information can be found at:
<https://www.cdfa.ca.gov/pdcp/guidelines.html>
- G. Or, based on monitoring, CAC determines that a nursery is unable to qualify to ship nursery stock under A, B, C, D or E to non-infested areas because of continuous pest pressure.

2. Shipping Under the Pierce's Disease Control Program Regulations (non-infested premise nursery):

For those nurseries qualified to ship nursery stock using the Pierce's Disease Control Program Regulations, which are the most stringent standards, the shipments shall be accompanied by a stamp or certificate, which affirms that the plants in each shipment are originating from a non-infested (GWSS-free) premise. This non-infested (GWSS-free) premise shall be determined by visual survey and trapping. The nursery premise shall be trapped at a minimum of 1 trap per one-half acre, and not less than 2 traps per one-half acre in the staging areas.

Definition: A non-infested (GWSS-free) premise is defined as a non-infested nursery. A GWSS-free premise must be free of GWSS (viable) egg masses, live nymphs, and with no more than three adults found in the same one-half acre in a two-week period. In addition, loading dock traps must also not exceed three GWSS adults in the same one-half acre in a two-week period.

If the loading dock traps exceed three GWSS adults in the same one-half acre in a two-week period, the nursery shall immediately suspend all shipments to non-infested areas. A 100' radius treatment in/around the staging area shall be conducted with a product from the included list other than Fenprothrin (Tame®) or Carbaryl (Sevin®) (see #7 Pesticides for Use). The nursery may resume shipping after one successful trap cycle below the threshold under one of the following options: upon removal of the suspension by the CAC, the nursery must switch over to a Master Permit compliance agreement, or, the nursery shall treat all shipments destined to non-infested areas for a minimum of 30 days. These outgoing treatments must be conducted using

Fenpropathrin (Tame®) or Carbaryl (Sevin®), label permitted. Although an outgoing inspection by the CAC is not required during this 30 day mandatory treatment period, the treatment must be witnessed by the CAC. A Certificate of Quarantine Compliance (CQC)* is required and should contain additional language stating that the shipper is under a mandatory 30 day treatment program. The county staff shall indicate the time, date, rate and material used on the CQC. The CQC shall expire at the end of the fifth day after being issued. **Phytosanitary Certificates may be used for all applicable GWSS shipments in lieu of CQCs.*

The CAC are expected to monitor all of the above nursery activities. The stamp or certificate must include the nursery's compliance agreement number. For those destination counties enforcing restrictions, the nursery must provide a Shipping Permit (Blue Tag) for each shipment destined to non-infested areas. They must also pre-notify destination county offices (via fax or other agreed upon method) 24 hours in advance of the arrival of the shipment. These requirements also apply to "will-call" orders.

3. Shipping Under the Master Permit (infested premise nursery):

For those nurseries qualified to ship under the Master Permit, all of the following conditions must be met:

- A. The staging area (shipment loading area) is trapped and monitored by the CAC to ensure the area is GWSS-free. Traps must be placed at a minimum of 2 traps per one-half acre in the staging areas. Loading dock traps must not exceed three GWSS adults in the same one-half acre in a two-week period. If the nursery is using Fenpropathrin (Tame®) or Carbaryl (Sevin®) as a foliar application on all outgoing loads containing host material, the staging area traps must not exceed six GWSS adults in the same one-half acre in a two-week period.
If the loading dock traps exceed three GWSS adults in the same one-half acre in a two-week period (or six GWSS adults in nurseries exclusively using Fenpropathrin (Tame®) or Carbaryl (Sevin®) on outgoing shipments), the nursery shall immediately suspend all shipments to non-infested areas. A 100' radius treatment in/around the staging area shall be conducted with a product from the included list other than Fenpropathrin (Tame®) or Carbaryl (Sevin®) (see #7 Pesticides for Use). The nursery may resume shipping after one successful trap cycle below the threshold.
- B. The nursery shall submit GWSS-free plants for inspection.
- C. The CAC conducts a 100% inspection of all host plants at the GWSS-free staging area.
- D. If the CAC finds an apparently viable GWSS life stage on any plant material, the infested plant(s) shall be returned to the growing grounds. It is the origin county's discretion whether this is the entire species, variety, block origin, or pot size. The CAC shall submit a sample of the GWSS for confirmation to the CAC Entomologist or the Plant Pest Diagnostics Center (PPDC). If GWSS is confirmed, action shall be taken by the nursery to mitigate the pest risk. The CAC shall make every effort to identify the growing locations of the different species of plants, which should be rejected on the basis of a find. This allows the CAC at origin the flexibility to make decisions based on pest risk assessment regarding the nursery stock and its location within the nursery grounds.
- E. Once the plants are inspected by the CAC and found free of all GWSS life stages, the nursery shall apply a treatment to safeguard plants from infestation prior to shipment. The treatment shall be effective against adult and nymphal stages of GWSS (see #7 Pesticides for Use).
- F. The CAC issues a CQC for each shipment destined to a non-infested area. The treatment shall be witnessed by the CAC. The county staff shall indicate the time, date, rate and material used on the CQC. The CQC shall expire at the end of the fifth day after being issued. If the shipment contains both host and non-host plants, the entire load shall be treated as a safeguarding measure. Similarly, if a shipment destined to a non-enforcing county (*Alpine, Del Norte, Inyo, Lassen, Mono, Modoc, Plumas, Sierra and Siskiyou Counties*), or out of state, is

co-mingled with material destined for an enforcing county, the entire load shall be treated as a safeguarding measure.

- G. The nursery inspects the shipping vehicle for the presence of GWSS prior to the loading of plants. The vehicle's doors shall remain closed or some other method used approved by the CAC, except when plants are being loaded, to prevent the entry of GWSS adults after inspection.
- H. The nursery provides a Shipping Permit (Blue Tag) for each shipment destined to non-infested areas. They must also pre-notify destination county offices (via fax or other agreed upon method) 24 hours in advance of the arrival of the shipment. These requirements also apply to "will-call" orders.

4. Compliance Agreement Requirements (Master Permit and Program Regulation)

- A. Each nursery possessing a GWSS compliance agreement shall have all growing grounds within each respective county listed under said compliance agreement.
- B. All host plant material shipped to non-infested areas of the state must originate from a nursery (and/or yard) under a GWSS compliance agreement. If a nursery acquires plant material that *does not* originate from a nursery (and/or yard) under a GWSS compliance agreement, the following requirements apply:

(1) Program Regulation Nurseries:

If acquiring plant material from Master Permit nurseries, nurseries lacking a GWSS compliance agreement, or any other source outside of a nursery setting (e.g. harvested product from homeowners or private property) then the following must occur:

- a) Shipper must take possession of plant material and transport to a yard under their existing compliance agreement.
- b) The plant material must be held in a quarantine area within the nursery for a period of 30 days. The nursery shall notify the CAC when this occurs. The plants will be monitored using yellow sticky traps at a density of 1 trap per ½ acre for a period of no less than 4 weeks. The quarantine area will be a designated area approved by the County Agricultural Commissioner. Program Regulation protocols will apply to any trap finds. This area shall be trapped and monitored for GWSS. Chemical applications with a material effective against adult and nymphal stages of GWSS shall be applied, if necessary to eliminate all GWSS life stages (see #7 Pesticides for Use).

(2) Master Permit Nurseries:

If acquiring plant material from nurseries lacking a GWSS compliance agreement or any other source outside of a nursery setting (e.g. harvested product from homeowners or private property) then the following must occur:

- a) Shipper must take possession of plant material and transport to a yard under their existing compliance agreement.
- b) The plant material must be held in a quarantine area within the nursery for a period of 30 days. The nursery shall notify the CAC when this occurs. This area shall be trapped and monitored for GWSS. The plants will be monitored using yellow sticky traps at a density of 1 trap per ½ acre for a period of no less than 4 weeks. The quarantine area will be a designated area approved by the County Agricultural Commissioner. Chemical applications with a material effective against adult and nymphal stages of GWSS shall be applied, if necessary, to eliminate all GWSS life stages (see #7 Pesticides for Use).

- C. Irregular Sized (e.g. Oversized) Plant Material from Other Sources:
(The following information regarding the shipment of irregular sized plant material shall be used as a guideline for certifying qualifying plant material and is at the discretion of the CAC). All host material that originates from nurseries lacking a GWSS compliance agreement or any other source outside of a nursery setting (e.g. harvested product from homeowners or private property) that is presented to the CAC for certification must be of a size and condition that makes a 100% visual inspection feasible. If it is determined by the CAC that a 100% visual inspection cannot be conducted, the following may occur:
- (1) Shipper must take possession of plant material and transport to a yard under their existing compliance agreement.
 - (2) The plant material must be held in a quarantine area within the nursery for a period of 30 days. The nursery shall notify the CAC when this occurs. This area shall be trapped and monitored for GWSS. Two chemical applications shall be applied, approximately two weeks apart, with either Fenprothrin (Tame®) or Carbaryl (Sevin®) during this quarantine period. These two chemical treatments shall be monitored by the origin CAC. Upon completion of the treatments, the plant material may be shipped from the nursery or added to the nursery's existing stock. For shipments destined to non-infested counties, the origin CAC shall contact the destination CAC to confirm the plant material was certified per protocol.
- D. With the exception of plant material mentioned in 4.C(2), use of the insecticides Fenprothrin (Tame®) or Carbaryl (Sevin®) should be limited to safeguarding treatments of outgoing material to prevent the possibility of GWSS insecticide resistance. Refer to #7 Pesticides for Use for alternative insecticides to maintain nursery stock pest cleanliness standards within production areas.
- E. Nurseries possessing GWSS compliance agreements shall be responsible for all contractors/subcontractors hired to represent and act on the behalf of said nursery including pesticide applicator companies and representatives, merchandisers, trucking companies and their drivers. This includes training of all contractors/subcontractors on the GWSS shipping protocols and regulations. All training records shall be maintained for a minimum of two years and made available to the CAC upon request.

5. Destination Inspection of Nursery Stock:

Note: Inspection of arriving nursery stock shipments at destination is at the discretion of and conducted by the destination CAC.

- A. When a nursery stock shipment arrives at a nursery, verification of the paperwork is essential.
- (1) Determine if the shipping nursery is under a Master Permit or Program Regulation compliance agreement.
 - a) If it is coming from a Master Permit nursery, verify that the CQC and Blue Tag is with the shipment.
 - b) If coming from a Program Regulation nursery, verify that it has a stamp or certificate (including the compliance agreement number) and a Blue Tag.
 - c) If shipment is from a Program Regulation nursery under a mandatory 30 day safeguarding treatment program, verify that the CQC and Blue Tag is present.
 - (2) If no certification is present and the shipment is from a partially infested county, check to see if the shipping nursery is located outside of the infested area. If it is, then the CQC, stamp (or certificate), or Blue Tag is not required. If the shipment is from an infested area, the county at destination should call the PD/GWSS Nursery Program representative or origin CAC to inquire about the shipment paperwork. *If the shipping*

nursery cannot immediately produce the certification paperwork; the destination county may choose to reject the entire shipment (return to origin).

- (3) If the shipment consists of all non-host material, then the nursery is allowed to ship with their nursery stock certificate. No Blue Tag, stamp, or CQC is required. (Since no Blue Tag is required, no prior notification is required).
- B. If live GWSS adults or nymphs are found in the truck, the truck should be closed, and the entire shipment should be rejected and returned to origin.
 - (1) If the shipment was a multiple county drop, notify the other CAC's.
 - (2) If live adults fly into the nursery from the shipment, then see below.
- C. If live adults or nymphs are found while inspecting an off-loaded nursery stock shipment, the following should be done:
 - (1) Collect as many of the adults or nymphs as possible from the shipment and submit the sample to CDFA's PPDC for confirmation.
 - (2) Isolate the shipment and immediately apply a chemical treatment (see #7 Pesticides for Use) to all the plant material in the shipment. The treatment must be effective against adult and nymphal stages of GWSS.
 - (3) The receiving CAC may opt to destroy the entire shipment or return the shipment to origin. A rejection should be issued for the entire shipment.
- D. If during the inspection of an incoming nursery stock shipment an apparently viable egg mass of GWSS is found, the following should be done:
 - (1) Finish inspecting the entire shipment.
 - (2) Secure suspect GWSS sample(s) from the shipment and submit to the CDFA's PPDC for confirmation.
 - (3) Put the particular plant material (may be entire species, variety, block origin, or pot size) on hold (off-sale to the public) and safeguard until the sample is confirmed. The destination CAC may choose to consult with the origin CAC and/or CDFA to help determine what the affected plant material in the load is.
 - (4) If the PPDC determines the sample is a non-viable egg mass, then release the held plant material.

Note: Only shipments with PPDC confirmed viable GWSS life stages should be rejected (treated/reconditioned, returned, or destroyed.) It has been determined that fresh parasitized egg masses may be considered as "viable" due to the fact that not all eggs may be parasitized.

- (5) If the sample is a viable egg mass, then the following options are available:
 - a) The affected host material is rejected. Affected host material may be entire species, variety, block origin, or pot size depending on the perceived risk and is at the discretion of the destination CAC. Information provided by the origin CAC and/or CDFA may assist the receiving counties with risk evaluation.
 - i) The affected host material is returned to origin.
 - ii) The affected host material is destroyed at destination.
 - iii) The affected host material is held and treated (if CAC feels the pest risk can be mitigated). This can either be a chemical treatment to eliminate GWSS (see #7 Pesticides for Use) or removal of all leaves (defoliate) to remove egg masses and disposal in a manner that renders all life stages non-viable.

- E. If one or more adult GWSS or nymph are found in a nursery and the find can be directly linked to a recent shipment, then:
 - (1) Notify GWSS program
 - (2) Notify origin CAC

6. Follow-Up by Origin CAC when a confirmed life stage of GWSS is found at destination:

- A. If the nursery is operating under the non-infested (GWSS-free) premise of the Pierce's Disease Control Program regulations, the following requirements apply:
 - (1) The nursery shall immediately discontinue shipments that include the affected plant material (*may be entire species, variety, block origin, or pot size, as determined by origin CAC*). The nursery shall not ship affected material until cleared by the origin CAC.
 - (2) The origin CAC shall survey the nursery grounds to assess pest risk.
 - (3) The origin CAC shall check nursery traps and review treatment records.
 - (4) The nursery shall conduct treatment(s) in a 100' radius around affected host material with a product from the included list (see #7 Pesticides for Use).
 - (5) The origin CAC shall re-survey affected plant material after treatment(s).
 - (6) The nursery must switch over to a Master Permit compliance agreement, or, the nursery is required to treat all shipments destined to non-infested areas for a minimum of 30 days. These outgoing treatments must be conducted using Fenpropathrin (Tame®) or Carbaryl (Sevin®), label permitted. Although an outgoing inspection by the CAC is not required during this 30 day mandatory treatment period, the treatment must be witnessed by the CAC. A CQC is required and should contain additional language stating that the shipper is under a mandatory 30 day treatment program. The county staff shall indicate the time, date, rate and material used on the CQC. The CQC shall expire at the end of the fifth day after being issued. If the shipment contains both host and non-host plants, the entire load shall be treated as a safeguarding measure. Similarly, if a shipment destined to a non-enforcing county (*Alpine, Del Norte, Inyo, Lassen, Mono, Modoc, Plumas, Sierra and Siskiyou Counties*), or out of state, is co-mingled with material destined for an enforcing county, the entire load shall be treated as a safeguarding measure. *It is at the discretion of the origin CAC whether the nursery may revert back to their original Program Regulation status after 30 days.*
 - (7) All information regarding suspensions of shipping privileges or specific plant species shall be put on the non-public (password protected) portion of the GWSS web site at: <https://www.cdfa.ca.gov/pdcp>; General Info; County Users; GWSS Bulletin Board by the origin CAC. Destination CAC shall also use this site to report any finds made during destination inspection. Information regarding the lifting of suspensions shall also be indicated on the bulletin board at the time they occur.
- B. If the nursery is operating under the Master Permit (infested premise nursery), the following requirements apply:
 - (1) The nursery shall immediately discontinue shipments that include the affected plant material (*may be entire species, variety, block origin, or pot size, as determined by origin CAC*). The nursery shall not ship affected material until cleared by the origin CAC.
 - (2) The origin CAC shall survey the nursery grounds to assess pest risk and compliance with nursery stock pest cleanliness standards.

- (3) The origin CAC shall check staging area traps and review treatment records.
- (4) The nursery shall conduct, at minimum, one chemical treatment of all affected host material with a product from the included list (see #7 Pesticides for Use).
- (5) All information regarding suspensions of shipping privileges or specific plant species shall be put on the GWSS web site bulletin board by the origin CAC. Destination CAC may also use this site to report any finds made during destination inspection. Information regarding the lifting of suspensions may also be indicated on the bulletin board at the time they occur.

7. Pesticides for Use Against Glassy-winged Sharpshooter:

- A. The nursery will ensure all management practices and mitigation measures are consistent with the California Department of Food and Agriculture’s (CDFA) Statewide Pest Prevention Program Final Programmatic Environmental Impact Report. Fenpropathrin (Tame®) or Carbaryl (Sevin®) (as a foliar application) is recommended for use on nursery stock moving out of the infested area based on laboratory and field trial efficacy studies. The following pesticides can be used for control of the glassy-winged sharpshooter in nurseries:

| Active Ingredient | Product |
|--------------------------|--|
| acephate | Acephate 97UP |
| imidacloprid | Admire Pro® * |
| imidacloprid | Alias 4F® * |
| flupyradifurone | Altus® |
| acetamiprid | Assail 30 SG® |
| acetamiprid | Assail 70 WP® |
| permethrin | Astro® |
| cyfluthrin | Baythroid XL® |
| imidacloprid | CoreTect® * |
| cyfluthrin | Decathlon® 20 WP |
| cyfluthrin/imidacloprid | Discus® |
| imidacloprid | Marathon II Greenhouse and Nursery Insecticide |
| tau-fluvalinate | Mavrik Aquaflow® |
| acephate | Orthene® 97 |
| permethrin | Perm-UP 3.2 EC |
| imidacloprid | Quali-Pro Imidacloprid 2F® |
| dinotefuran | Safari 20 SG |
| carbaryl | Sevin SL® |
| bifenthrin | Talstar S Select® |
| fenpropathrin | Tame 2.4 EC Spray® |
| neem oil | Triact 70® ** |
| acetamiprid | Tristar® 30 SG |
| acetamiprid | Tristar® 8.5 SL |

* These items can be used in nurseries to control GWSS, however may not be used as a safeguarding (certification) treatment.

** Triact 70® can only be used as a safeguarding treatment for loads that contain organic or edible plant material that cannot be treated with one of the other products listed above. It cannot be used as a hold or quarantine response treatment within the loading dock or growing grounds with the exception of plant material that cannot be treated with one of the other products listed above.

As provided by Section 3651 of the Pierce's Disease Control Program (page 454.1 of the Plant Quarantine Manual), CDFA has allowed Napa and Sonoma Counties to establish variations from the standards set forth in the PDCP regulations. Included in these variations is the requirement of Fenpropathrin (Tame®) or Carbaryl (Sevin®) as a foliar application of host plant material coming from infested premise nurseries destined to Napa or Sonoma Counties.

- B. The criteria for pesticide selection by an individual grower or nursery will be dependent on their specific circumstances of harvest, worker re-entry, and/or shipment. Pesticides should be used according to EPA registration and label directions.