GWSS

Glassy-Winged Sharpshooter

Environmental Protection Task Force Recommendations

December 1, 2000

Submitted to Secretary William (Bill) J. Lyons, Jr.
California Department of Food and Agriculture

Glassy-Winged Sharpshooter

Environmental Protection Task Force

Report on Recommendations

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The Glassy-Winged Sharpshooter Environmental Protection Task Force, composed of state agency representatives, environmental and public health and non-governmental organizations and advocacy groups, grower organizations, a university researcher and a county agricultural commissioner, convened in the Fall of 2000 to suggest measures to the California Department of Food and Agriculture (CDFA) that would reduce possible harm to public health and the environment in its implementation of a statewide program to eradicate and prevent glassy-winged sharpshooter and Pierce's disease. The glassy-winged sharpshooter is an exotic insect to California, which came into the public eye in 1997 when it was determined to be a vector for Pierce's disease. Because the glassy-winged sharpshooter and Pierce's disease were determined to have the potential to adversely impact California's multi-billion dollar grape and wine industries, urgency legislation was passed and a federal emergency was declared.

With a deadline to produce a report in six weeks, the task force met on four different occasions and received extensive amounts of information on the statewide program, CDFA's strategic alliances, public outreach and education, eradication and prevention methods, biology of the glassy-winged sharpshooter and the program's compliance with the California Environmental Quality Act.

Task force members engaged in candid discussion regarding concerns with the program elements and potential impacts to public health and the environment. Task force members conducted intensive research and unearthed a wealth of information regarding public health and environmental issues. Concerns included the basis for an emergency, compliance with California Environmental Quality Act, adequate public disclosure, pesticide selection and application, the consideration of alternatives to pesticides, and the environmental and public health and safety impact that could result from pesticide use. The meetings culminated with the development of one finding, three consensus recommendations and two minority recommendations delivered to CDFA by the task force. The varying opinions and interests of the task force members led to the incorporation of individual/organization recommendations. Overall, task force members appreciated the opportunity to participate on the task force and convey perspectives on the important environmental and public health issues facing CDFA in its implementation of the statewide program.

This report has been organized in eight sections:

Section 1 – **Introduction** – provides a brief background on the program and the creation of the Glassy-Winged Sharpshooter Environmental Protection Task Force.

Section 2 -- **Task Force Panel** – lists the membership of the task force, their respective organizations and agencies, and a brief description of the mission of each organization/agency.

Section 3 – **Task Force Meetings** – summarizes the program as presented by CDFA staff as well as individual task force member presentations during the four meetings of the task force.

Section 4 – **Task Force Discussions** – outlines the discussions that task force members engaged in as well the general issues and concerns noted by the task force members.

Section 5 -- **Final Recommendations** – lists the five recommendations issued by the task force.

Section 6 – **Individual Member Findings and Recommendations** – incorporates the individual opinions, findings and recommendations made by some of the task force members.

Section 7 – **Report Preparation and Public Comments** – explains the preparation of the report and receipt of task force and public comment.

Section 8 – **Conclusion** – summarizes the few concluding remarks of task force members.

The Glassy-winged Sharpshooter Environmental Protection Task Force, composed of state agency representatives, environmental and public health non-governmental organizations, grower organizations, a university researcher, and a county agricultural commissioner, convened on four occasions in the Fall of 2000 to discuss the potential adverse environmental and public health impacts that could result from the implementation of the California Department of Food and Agriculture's (CDFA) statewide program. This program outlines elements for the eradication and prevention of the occurrence of the glassy-winged sharpshooter and Pierce's disease. The facilitation team of Dale Flowers and Tanya Matson provided meeting facilitation and preparation of this report.

Background/History

CDFA is currently implementing a statewide program that includes prevention, local eradication, and statewide control efforts to combat the glassy-winged sharpshooter and Pierce's disease. The glassy-winged sharpshooter (GWSS) is an exotic insect to California whose presence was discovered in the 1990's. Its presence was not considered significant until 1997, when it was discovered that GWSS was a vector for Pierce's disease. Pierce's disease has been in California for approximately 120 years. Major outbreaks of the disease have occurred in California in the 1880's, 1900's and 1920's. Pierce's disease is caused by bacteria called *Xylella fastidiosa*. In 1999, approximately 300 acres of grapes in Temecula, Riverside County were destroyed by Pierce's disease. As a result, it was determined that GWSS had the potential to adversely impact California's multi-billion dollar grape and wine industries.

In the Fall of 1999, the Legislature became involved in the GWSS issue. At that time, an ad hoc committee was appointed to review existing research programs and identify research needs. AB 1232 established a grants program to fund the research recommended by the ad hoc committee. AB 1232 also authorized the appointment of a Pierce's disease task force to formally recommend funding of specific research projects. In the fall of 1999, CDFA began formulating a comprehensive program, and in early 2000, the elements of that program were implemented.

In May 2000, SB 671, which appropriated $6.9 million for the first year of eradication and prevention of Pierce's disease and GWSS, was passed by the Senate and sent to the Governor for signature. Due to the urgent nature of the problem, this legislation provided for the establishment of emergency regulations to implement eradication and control measures. At the time of its' passing, the legislation did not specify requirements to ensure that the program consider public health and environmental concerns prior to expenditure of the funds. As a result, budget language was adopted which required the Department to "…consult with a task force comprised at a minimum of the Department of Pesticide Regulation, State Water Resources Control Board, Department of Fish and Game, a university-affiliated researcher, a grower, a County Agricultural Commissioner and an environmental or public health non-governmental organization." The language set forth two primary charges for the task force: (1) to "…provide input on potential adverse effects on public health and environment of the application of pesticides, including but not limited to their effects on species and pollinators such as honeybees"; and (2) to "…suggest measures that, in their opinion, would reduce possible harm to public health and the environment while effectively and expeditiously managing this pest threat."

In September 2000, CDFA staff began making contacts with California state agencies to request the participation of representatives with expertise in the environmental and public health matters to be considered. The California Department of Fish and Game, State Water Resources Control Board, and Department of Pesticide Regulation were contacted, in addition to the Department of Conservation and the Department of Health Services. Grower and farm association representatives, public health and environmental advocacy groups, a university researcher and a county agricultural commissioner were also contacted and requested to participate.

These task force members were able to provide their expertise as well as represent the mission and perspectives of their individual agencies and organizations.

State Agency Representatives

Name	***Affiliation***	***Mission/Department***
Brian Finlayson	California Department of Fish and Game 1701 Nimbus Road, Suite F Rancho Cordova, CA 95670 *bfinlayson@dfg.ca.gov*	To manage California's diverse fish, wildlife, and plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public.
Ron Oshima	Department of Pesticide Regulation 1001 "I" Street Sacramento, CA 95814 *roshima@cdpr.ca.gov*	The Department of Pesticide Regulation regulates all aspects of pesticide sales and use to protect public health and the environment.
Mike Reid	State Water Resources Control Board P.O. Box 944312 Sacramento, CA 95814-2130 *reidm@dwq.swrcb.ca.gov*	To preserve and enhance the quality of California's water resources and ensure their proper allocation and efficient use for the benefit of present and future generations.
Erik Vink	California Department of Conservation 801 K Street, MS 13-71 Sacramento, CA 95814 *evink@consrv.ca.gov*	With the economy and environment in mind, the Department of Conservation encourages the responsible use and preservation of California's resources through its programs.
Dr. Rick Kreutzer, M.D.	California Department of Health Services, Environmental Health Investigations Branch 1515 Clay Street, Suite 1700 Oakland, CA 94612 *rkreutze@dhs.ca.gov*	The mission of the California Department of Health Services is to protect and improve the health of all Californians.

Environmental and Public Health Non-Governmental Organizations

Name	*Affiliation*	*Mission/Department*
John McCaull	Audubon Society 555 Audubon Place Sacramento, CA 95825 *jmccaull@audubon.org*	Work in California to conserve and restore natural ecosystems focusing on birds, other wildlife, and their habitats for the benefit of humanity and the earth's biological diversity.
Linda J. McElver	Canaries Foundation, Inc. PO Box 3253 San Luis Obispo, CA 93403 *lmcelver@hotmail.com*	Advocate for the needs of the chemically sensitive populations.
Ann Maurice	Ad Hoc Committee for Clean Water P.O. Box 484 Occidental, CA 95465 (707) 874-3855	An independent non-profit organization dedicated to open government, fair and rational public policy, protection of public health and welfare including other species, natural resources and wild lands.
Jessica Hamburger	PCL-Pesticide Action Network 49 Powell Street, Suite 500 San Francisco, CA 94102 *jah@panna.org*	Pesticide Action Network advances alternatives to the use of pesticides worldwide to promote healthier, more effective pest management through research, policy development, education, media, demonstrations of alternatives and international advocacy campaigns.

Grower Representatives

Name	*Affiliation*	*Mission/Department*
Hank Giclas	Western Growers Association 1005 12th Street, Suite A Sacramento, CA 95814 *hgiclas@wga.com*	To provide growers of fresh produce in California and Arizona with support programs that could not be generated by any single grower alone.
Ron Macedo / Tess Dunham	California Farm Bureau 1127 11th Street, Suite 627 Sacramento, CA 95814 *tdunham@CFBF.com*	A voluntary, non-governmental, nonpartisan organization of farm and ranch families seeking solutions to the problems that affect their lives, both socially and economically.

University Representative

Name	*Affiliation*	*Mission/Department*
Dr. Les Ehler	University of California, Davis Department of Entomology Davis, CA 95616 *lehler@ucdavis.edu*	Department of Entomology

State and Local Government Representatives

Name	*Affiliation*	*Mission/Department*
Richard Greek	San Luis Obispo County Department of Agriculture 2156 Sierra Way, Suite A San Luis Obispo, CA 93401 *rgreek@co.slo.ca.us*	The Department of Agriculture/Measurement Standards is committed to serving the public's interest with a cooperative spirit. We are responsible for insuring equity in the market place for San Louis Obispo County's citizens. This dedicated staff uses their individualized knowledge, abilities and efforts to meet our collective responsibility as defined in our enforcement and service programs.
Gerry Miller	California Department of Food and Agriculture 1220 N Street, Room A-357 Sacramento, CA 95814 *gmiller@cdfa.ca.gov*	We serve the citizens of California by working to prevent the harm that exotic and important pests can cause. This helps to assure the economic viability and competitiveness of California agriculture; availability of high quality food, fiber, nursery stock, and seed for consumers, and protection of agricultural, natural and urban environments.

The California Department of Food and Agriculture engaged the services of a professional facilitator to guide the group through an unbiased process for the development of recommendations. The budget control language requires the submittal of a report on the overall GWSS program and the task force recommendations by January 1, 2001. Therefore, the task force had a relatively short period of time to assimilate program information and make appropriate recommendations. The GWSS Environmental Protection Task Force met on four separate occasions from October 24, 2000 to November 14, 2000. The following section outlines the presentations made to the task force by CDFA staff and task force members. Task Force Discussion regarding the information presented in meetings is presented in Section 4, Task Force Discussions.

Meeting 1 – October 24, 2000

To provide the task force with details regarding the program and its development, CDFA staff members involved in the implementation of the program made presentations describing the elements of the program. The staff presented information regarding the background and history of the development of the program, the relationship of the GWSS Environmental Protection Task Force with other established task forces, human health concerns, biology of the GWSS, the cause of Pierce's disease, and the elements of the statewide program.

Strategic Alliances

Alliances were established with the other state departments, the viticulture industry, the United States Department of Agriculture (USDA), University of California, Pierce's Disease Advisory Task Force, County Agricultural Departments, and the Science Advisory Panel (SAP) to assist CDFA with successful administration of the program. CDFA serves as the coordination agency for program activities, ranging from training and guidance for local cooperators to the compilation and organization of statewide survey results and public outreach activities. The Pierce's Disease Advisory Task Force is composed of scientific experts to specifically address disease-related issues and research topics. The SAP is composed of scientific experts in the field of entomology, and assists CDFA in addressing issues such as control, protection and eradication. The SAP also reviewed available eradication and control methods, and made recommendations to CDFA. Additionally, advisory task force subcommittees have been established to address specific issues, such as the movement of bulk grapes.

Program Elements

Elements of the program include public outreach, detection, containment and research. A statewide public outreach program has been developed and includes coordination of press releases, news articles and ads. Local agencies have also been charged with public outreach responsibilities to inform the public of the program and its control and eradication efforts. Prior to any spraying of pesticides to control GWSS, a public meeting is held to inform residents in the treatment area about treatment procedures and to address their questions or concerns.

The presence of GWSS is confirmed through detection measures such as visual surveys and trapping. Recently passed emergency regulations have enabled the implementation of containment actions such as restricting movement of infested nursery and/or bulk grape shipments. These regulations have also enabled CDFA to request the County Boards of

Supervisors to name local control entities to develop and implement Rapid Response Plans, most often determined to be the County Agricultural Commissioner. Each identification of GWSS is assessed on a site-specific basis, with containment methods chosen that are appropriate to the conditions. For example, if pesticides are to be used in an urban area, products registered by the United States Environmental Protection Agency (USEPA) and the California Department of Pesticide Regulation (DPR) for home use, and that are familiar to the public, are most often chosen.

Research priorities have been coordinated by the Pierce's Disease Advisory Task Force. Approximately 26 research projects have been funded. Research topics include biological control of GWSS and Pierce's disease, GWSS life cycle and feeding preferences, and plant nutrition and pruning for disease control tactics.

Pierce's Disease, Native Vectors, GWSS and Biological Control

Pierce's disease has been in California for approximately 120 years and is caused by bacteria called *Xylella fastidiosa*. It is found across the State of California except the foothills, which are believed to be too cold for the bacteria to thrive. Currently, there are no known cures for Pierce's disease. There are a number of native insect species that may serve as vectors for the disease. Most are xylem-feeding bugs such as leafhoppers and spittlebugs that typically live in grassland or riparian settings. The bacteria are acquired while the bug is feeding on an infected plant. The disease is mechanically transferred to plants they feed on. Native vectors typically feed on the new growth at the tip of grapevines that may allow an infected portion of that vine to be removed with regular pruning. However, GWSS, an exotic vector, is much larger than its native counterparts and tends to feed on older, larger branches of grapevines further down the vine where pruning does not occur. In addition, native vectors tend to forage around the edges of vineyards and return to their native habitat, while GWSS can live and breed throughout a vineyard. Combined, all of these biological factors could significantly alter the known epidemiology of Pierce's disease in California.

Research into potential biological control methods is currently underway. After research field trips to Louisiana and Mexico, an egg wasp parasite was identified, lab studies were conducted, and releases occurred in Temecula (Riverside County), Bakersfield (Kern County) and Fillmore (Ventura County) during August 2000. Biological control methods are in the early stages of development and the degree of success expected is not yet certain.

Meeting 2 -- October 31, 2000

The second meeting of the task force was comprised of additional, more detailed information regarding the program in response to questions and concerns posed by the task force at Meeting 1. Additional information was presented regarding compliance with the California Environmental Quality Act (CEQA), the measures taken to protect non-target pollinators and threatened and endangered species, and the decision-making process for the selection of a pesticide when spraying is the chosen containment method.

California Environmental Quality Act

CDFA Staff Counsel explained to the task force, through the filing of a Notice of Exemption (NOE), that CDFA was in full compliance with CEQA. These exemptions are available when emergency situations arise and compliance with a full environmental impact report (EIR) process would be time-consuming and cumbersome, inhibiting a quick response to address the emergency situation. The Legislature determined that GWSS, in conjunction with Pierce's disease, represented a significant and immediate threat to the grape and wine industry, and determined the situation an emergency. The NOE filed was not a substantive review of the action to be taken, but primarily served as a notice to the public that the action would be carried out under the emergency exemption. At some point, the emergency status will no longer be applicable and full environmental review will be required. CDFA has initiated discussion with a consultant for EIR preparation.

Pollinators and Threatened and Endangered Species

If pesticide application is chosen as the most suitable containment method, the program has incorporated methods to address concerns regarding pollinators and threatened and endangered species. Pesticide application can result in the kill of non-target beneficial species. For example, commercial honeybees could be impacted by spraying, if preventive measures are not taken. There is an established mechanism to ensure that beekeepers are notified of any CDFA-sponsored actions that may impact honeybees. Notification occurs through individual county agricultural commissioners, which require beekeepers to register beekeeping operations. To reduce impacts to wild pollinators, mitigation measures are outlined on the pesticide label. Mitigation measures include avoidance of spraying blooming plants and avoidance of spraying during windy conditions. Private pest control operators, under contract to the agricultural commissioners, comply with all the requirements set forth on the pesticide label.

Threatened and endangered species are addressed through a consultation process agreed on between CDFA, the California Department of Fish and Game (CDFG), and the U.S. Fish and Wildlife Service (USFWS); and outlined in a Memorandum of Understanding (MOU). As part of the MOU, CDFA submits information regarding its emergency programs to these agencies for review and comment. If issues or concerns arise, CDFA staff will meet with agency staff to resolve the issues. This MOU, which has been in effect for nine years, has successfully been implemented to the satisfaction of all agencies involved. Over that time, there have been no problems with respect to impacts on threatened or endangered species.

Decision-Making Process for Selection of a Pesticide and/or Alternative

CDFA staff explained the decision-making process for choosing a pesticide for application. To start, the SAP reviewed applicable efficacy and other data and recommended several different pesticide materials to CDFA for program use. Those recommendations were narrowed to three pesticides: carbaryl, imidacloprid, and baythroid. In choosing from these recommendations, CDFA considered factors such as registration status, label restrictions, any information on prior experience with the material, its availability and familiarity to the public, and potential health concerns. Carbaryl was selected because efficacy data was available, it was registered for residential use, it could be applied on a variety of host plants, and its public health impacts had been reviewed in prior programs. Carbaryl is not the only pesticide material that CDFA could use. Recent efficacy data had been released regarding imidacloprid and baythroid that could result in the use of those materials. CDFA would continue to evaluate other materials for potential use in the program.

Meeting 3 – November 7, 2000

Meeting 3 consisted of presentations from environmental and public health advocacy group representatives, as well as some additional discussion from CDFA staff regarding the selection process for pesticide alternatives.

Environmental and Public Health Advocacy Groups

Linda McElver of the Central Coast Canaries, represents the chemically-sensitive population and presented the task force with the issues faced by this and other "acceptable risk populations." According to Linda, for these populations, there are life-threatening and other serious health effects associated with the use of pesticides that can result in dire consequences. Linda indicated that the safety of pesticides can not be guaranteed, even though registration requirements set forth by the USEPA and the California Department of Pesticide Regulation are met. Several studies for a variety of cancers (breast, ovarian, lung, liver, testicular, brain, and pancreatic) are linked to pesticide exposure. Risk assessments review the effects of active ingredients, but do not require the same rigorous testing for inert ingredients, many of which are classified under a category labeled "unknown toxicity." Nor is the synergistic effect of active and inert ingredients assessed. The USEPA states that chemically-sensitive population can be affected by pesticides at levels less than one part per billion. Linda stated that approximately 6.3 percent of Californians have the disability of chemical intolerances, and it is estimated that as many as 37 percent of the population have chemical sensitivity and 30 to 40 percent of the population will get cancer. Linda asserted that the program currently implemented by CDFA would force pesticide application on private properties against the will of the poor, sick and dying without concern for the financial impacts associated with seeking an appeal, another safe location to live, or the medical bills incurred. Currently, the program does not have an established protocol to address the needs of the chemically-sensitive population, nor does it consider pre-existing medical conditions prior to implementing its spray program, or include any follow-up monitoring on health or environmental effects.

Jessica Hamburger, Pesticide Action Network, presented the task force with information regarding alternatives to pesticide use. Recommendations on the overall program that would facilitate the consideration of alternative methods were presented. Recommendations presented included the expansion of the SAP and Pierce's Disease Advisory Task Force to include environmental and public health representatives, the creation of a program for developing, deploying and monitoring alternatives to synthetic pesticide use, and aiming research at developing Pierce's disease and GWSS control measures that pose the least possible harm to human health and the environment. Sean Feder of California Certified Organic Farmers provided an organic grower's perspective and offered some alternatives to pesticide use. If a CDFA spray program requires the application of pesticides on an organic crop, that crop is no longer qualified for sale as organic. This could result in significant economic losses for an organic farmer. Sean offered alternative methods that would be acceptable to organic farmers as well as less harmful to the environment and public health. Those alternatives included oils and soaps, kaolinite clay, barriers, bug vacuuming, and biological control methods. A botanical pesticide called Premium Pyganic 175, which has received approval from the Organic Materials Review Institute, would be available for use in the CDFA program if its registration through DPR could be fast-tracked. Carbaryl may be an efficacious material for the short-term, but would not be in the long-term, due to potential non-target kill of beneficial insects and the disruption of the insect community, which is relied upon heavily by organic farmers.

Ann Maurice with Ad Hoc Committee for Clean Water presented the results of the research she had conducted. She questioned the rationale behind the declaration of the emergency and the subsequent development of the Regulations 3560-3660, the statewide program and the Rapid Response Plans. In testimony before the Legislature, wine industry officials indicated that approximately 300 acres were lost in Temecula, and factoring in similar losses in the future, estimated an approximate $6.5 million loss in 2000 would occur. Ann's research with agricultural and other governmental officials indicated that wine production in Kern County, which had been deemed to have an established population of GWSS, had increased from the previous year. In fact, the research indicated that Kern County had the highest production of grape and citrus in the state. In addition, swarms of GWSS are known to occur in citrus groves and recently taken photographs in Temecula depicted newly-planted young grapevines adjacent to citrus groves; yet, it did not appear that these grapevines were diseased or dying. In fact, she noted that Pierce's disease occurs in "hot spots" scattered through vineyards. She asserted that other possible variables for devastation could be vines that were infected prior to planting; immune system suppression or impairment; nutritional deficiency; other disease; and poor soils, or defective vines. Other factors uncovered in her research included no mandatory program to certify vines are free of *Xylella fastidiosa*, planting and replanting occurring in Pierce's disease prone areas (including highly susceptible varietals and rootstocks), no buffer zones had been established, and planting occurring without contour terracing on erodable soils. Ann felt that in light of these facts, GWSS could not be the sole determining factor behind the viticulture devastation due to Pierce's disease. Ann concluded that the measures chosen to control GWSS include pesticides, exotic insects, and the release of bio-engineered bacteria, and the public should consider the risks and/or unintended consequences associated with these measures. Pesticide exposure is a health risk, bio-engineered bacteria can also affect humans, and exotic insects can disrupt natural species populations.

Selection of Alternatives to Pesticides

Alternatives to pesticides were reviewed by CDFA. The criteria for selection of a non-pesticide alternative included its efficacy data in replicated tests with appropriate controls, its registration for use in California, whether or not it met the goals of the program (either directly or indirectly), and whether it was approved for use by the SAP. Several pesticide alternatives were considered including biological control, mass trapping, "soft insecticides," trap crops, physical barriers, GWSS pathogens, predators and repellents. Research and study for use of the identified GWSS egg parasite as a non-pesticide alternative is underway and efficacy data are being collected. Methods such as trap crops, physical barriers, and repellents, while potentially effective for individual growers, would not result in controlling the spread of GWSS, and could result in increasing the size of the control zone. Use of soft insecticides such as soaps, botanicals, and insect or growth regulators was considered by CDFA; however, efficacy data were lacking and testing was ongoing. Predators are potential options, although unlikely, because predation has not been successful to date in controlling leafhopper populations.

Meeting 4 – November 14, 2000

Meeting 4 consisted primarily of open discussion that led into the development of recommendations. To guide the task force in developing recommendations, an outline of the issues and concerns noted during Meetings 1 through 3 was provided to each member. Prior to entering into discussion on recommendations, the task force attempted to come to an agreement on its findings. Due to the short time frame, consensus was not found with respect to findings. The task force ultimately arrived at five recommendations; three consensus and two minority. The recommendations are discussed in further detail in the Final Recommendations section below.

During each meeting, the task force members asked questions and provided feedback regarding the program and its approach to public health and environmental issues. At regular intervals, task force members outlined issues or concerns that arose in light of the information presented. The issues ranged from questioning the justification of the emergency declaration to the pesticide selection process, consideration of alternatives, public information, impacts on non-target species, and public health and safety concerns. Eight (8) primary categories of concern were identified:

1. Emergency Conditions/Legal/Problem Identification
2. Pesticide Selection and Application
3. Consideration of Alternatives
4. Public Information Disclosure/Involvement/Notice
5. Public Health and Safety
6. Effects on Species (pollinators, threatened and endangered)
7. Environmental Considerations
8. Research Needs

To begin, the task force focused on clarification of its scope.

Scope

One of the first issues the task force discussed was its scope. Specifically, what was the intent of the budget control language? It was noted that the budget control language requested the task force members to provide input "…concerning the potential adverse effects on public health and the environment of the application of pesticides…" This language did not specify particular treatments, but was believed to imply the review of solely urban treatments. Furthermore, some task force members felt that it would not be appropriate to discuss general pesticide usage across the state that may be lawfully implemented by individual growers. However, it was noted that the implications of the research that CDFA is conducting span from urban treatment to pesticide use in agricultural lands throughout the state. In fact, research includes a seven-year program on the efficacy of pesticides and other control mechanisms that could have far-reaching impacts. Interpretation of the scope ranged from addressing only those actions that would be conducted with the $6.9 million in funds allocated in association with the budget control language, to a full discussion of the CDFA program, research topics, and the Rapid Response Plans being implemented at the county level with CDFA coordination. Agreement on the breadth of the scope was not clearly met. Nonetheless, to encourage focus and provide a framework for discussion, the task force agreed at a minimum to narrow its focus to those actions implemented by CDFA.

Emergency Conditions/Legal Issues/Problem Identification

The task force discussed the legitimacy of the emergency declaration. Research and review conducted by a few task force members generated questions with respect to the magnitude of the problem. The Legislature was presented with testimony from the agricultural community regarding projected losses based upon the approximate 300-acre devastation experienced in Temecula. Based upon the industry continuing to suffer similar losses in the following years, estimates were placed at approximately $6.5 million. In spite of this fact, task force members presented current photos of vineyards in Temecula that depicted recent plantings adjacent to

citrus groves. Since GWSS have been known to rise in swarms in and around citrus groves, the young grapevines depicted in the photos appeared to present a contradictory picture to the contention that GWSS poses a significant threat. Grower representatives noted that there are a number of different factors to be considered when analyzing the situation and the limited sample, as presented, could skew the overall data. However, it was acknowledged that these facts generated questions as to the true magnitude of the problem, and whether or not the notion of an emergency situation was well founded. Other confounding factors cast doubt on the magnitude of the problem. Pierce's disease is known to occur in approximately 5,000 acres of the Napa Valley, where GWSS are not known to occur. Other native vectors occur in that area, but native vectors do not move through vineyards as quickly as GWSS. Kern County, where the greatest devastation has occurred, also reports the highest production of grape and citrus in the state. If GWSS and Pierce's disease presented a significant threat, some task force members felt the program should also incorporate testing of rootstock transported from an infested area to an uninfested area to ensure the absence of Pierce's disease. These combined factors bred uncertainty with respect to the magnitude of the problem and the legitimacy of the emergency declaration.

Some task force members asserted that the answers to many questions could have been provided to the public through the preparation of a full environmental impact report under the provisions of the California Environmental Quality Act. These members contended that the emergency declaration and subsequent Notice of Exemption effectively short-circuited the review of potential environmental impacts of the overall program. Conversely, other members noted that it was not the role of the task force to question the legitimacy of the emergency declaration and the decisions that well-qualified, fully informed CDFA staff had made. Rather, the role of the task force was to provide recommendations that would reduce the potential harmful effects of pesticide use on public heath and the environment.

Pesticide Selection and Application

Primary concerns noted were the choice to apply pesticides as part of the program and the selection of particular pesticides such as carbaryl, imidacloprid and baythroid. Some members of the task force noted a lack of transparency in the decision-making process that led to the choice of these pesticides, as well as the apparent elimination of non-pesticide alternatives that could have been as effective as pesticides. Some felt that the peripheral, temporal effects of pesticides, such as non-target kill of beneficial insects and pollinators, as well as potential harmful human health impacts, were not sufficiently considered during the selection process. In addition, the program does not include protocol for addressing organic farms, which would suffer significant economic losses should pesticides be applied on organic farms. Some felt that organic farmers should not have to suffer economic losses for the sake of another agricultural interest. Concern was also expressed about whether or not an aggressive pesticide application campaign was justified when the SAP had noted that eradication measures in Kern County would not likely be successful because GWSS had been deemed an established population. In light of these facts, concern was expressed with pesticide application as a short-term answer that may not ultimately be effective. The representative from the California Department of Fish and Game (CDFG) voiced concern over the possible use of the pyrethroid insecticide cyfluthrin, because it is much more toxic to fish and wildlife than carbaryl. In addition, based upon 25 years of CDFG incident records and a review of its fish and wildlife toxicology, carbaryl has not been a problem to fish and wildlife in California.

Conversely, other task force members felt that the task force should not be second-guessing decisions made by CDFA and the advice of SAP regarding the choice to use pesticides. Rather, the task force should make prudent recommendations regarding program refinements that could minimize adverse public health effects, environmental effects, and enhance public knowledge.

Consideration of Alternatives

The task force expressed concerns regarding the consideration of alternative methods in the decision-making process. The SAP was responsible for making recommendations to CDFA for effective control and eradication methods. Whether or not the SAP considered alternative methods was uncertain to task force members. Methods such as soaps, botanical insecticides, repellents, and bug vacuuming, while not efficacious for the purpose of eradication, could slow the progress of GWSS.

It was also uncertain to the task force whether or not the SAP evaluated long-term alternative methods for control and eradication of GWSS and Pierce's disease, such as trimming, planting of varieties that demonstrate higher resistance to diseases and improving cultivation practices.

Public Information – Disclosure/Involvement and Notice

In order to properly assess the potential environmental and public health effects of CDFA's statewide program, the task force expressed a desire to have a better understanding of the entirety of the program, including the county-based Rapid Response Plans and future research topics. The task force was concerned with the fact that it was afforded very little time to assimilate information, respond with questions and comments, and subsequently provide useful feedback. Some members were concerned with the lack of public input into the program.

The CDFA program contains a public information forum prior to pesticide application in urban areas. That forum is intended to allow the public to ask questions and receive feedback. However, some on the task force felt that the public meetings do not discuss the potential ecological and health impacts of the pesticides.

Public Health and Safety

The chosen pesticides have been registered by the U.S. Environmental Protection Agency and the California Department of Pesticide Regulation for use in home and garden settings. However, task force members who represented human health advocacy groups pointed out that CDFA cannot provide 100 percent assurance that no adverse health effects will occur, particularly for the percentage of the population that is chemically-sensitive. Moreover, the program does not contain a provision for financial compensation for chemically-sensitive persons who may be displaced as a result of urban spraying. In addition, human health advocates noted that imidacloprid had received a "Section 18" registration, which effectively exempted that product from the normal pesticide registration testing process. The DPR representative clarified that imidacloprid had received "Section 18" exemption for use on citrus, and that exemption would soon expire. He also noted that imidacloprid had been tested in accordance with required procedures, and was registered by the USEPA and DPR for home and garden use.

Other task force members expressed concern for the chemically-sensitive population and asked public health advocacy groups to suggest practical measures to CDFA that would reduce the

risks to these persons while balancing all interests, beliefs and positions. These members felt that a coordinated effort through CDFA and county agricultural commissioners, who are properly informed and aware of the statewide situation, would prevent individuals from taking a vigilante approach as a result of misinformation received through the media. Without coordinated effort, the public could use pesticides without concern for general public health, without reading label requirements, and without warning to nearby neighbors that could result in greater impacts to sensitive populations.

Effects on Species

Wild Pollinators

Some task force members noted that pesticide application could result in unintentional non-target kill of beneficial insects, disrupting the balance of the pollinator community. A few members expressed concern that there was no formal program to address pollinators, other than following label instructions to avoid application when plants are blooming or when wind conditions were high. These members noted that pesticide application in urban settings could also negatively impact backyard organic gardens or disrupt privately-operated biological control activities. Some members expressed concern that there was no program element that analyzed or monitored the potential cumulative impacts on the food chain that could result from pesticide application. In addition, a quote from a USDA report indicated an overall reduction in the number of pollinators in the State of California. A reduction could be correlated with the fact that many honeybees are procured from out-of-state and transported to California.

Other members rebutted some of those concerns. Pollinator populations have decreased, but that decrease, in part, could be due to mites that have destroyed honeybee colonies. An increase in importation of pollinators from out-of-state could also be related to the overall increase in the number of acres of crops in the state. In addition, many melon farmers, who rely heavily on pollinators for crop development, use imidacloprid, one of the pesticides applied by CDFA as part of the program. When applied according to the label requirements, non-target kill can be controlled and should not represent a significant threat.

Endangered and Threatened Species

Endangered and threatened species were of great concern to some of the task force members. These members indicated a perception that the implementation of the program could have adverse impacts on endangered and threatened species, and expressed concern for what was considered to be a lack of input from the appropriate resource agencies such as the CDFG, U.S. Fish and Wildlife Services, and National Marine Fisheries Service. Pesticides could enter waterways and have unknown impacts on aquatic organisms at the base of the food chain causing cumulative impacts. These members also noted concern with pesticide application near urban creeks, which oftentimes contain spawning grounds for endangered fish species, such as salmon and steelhead. It was the opinion of some task force members that CDFA did not choose a pesticide with the least harmful effects (i.e., low toxicity and persistence) that would adequately protect endangered and threatened species.

The CDFG official noted that CDFA has initiated the proper consultation procedures under the Memorandum of Understanding and, to date, no impacts to threatened or endangered species had occurred. As part of the provisions of the MOU, CDFA provides CDFG with maps delineating the spray area with sufficient lead-time to allow local biologists to survey the spray area and ensure no endangered species or other species of concern, such as raptors, are present. Still others noted that CDFA should be commended for establishing an appropriate consultation process for interagency coordination that minimizes or eliminates impacts to endangered or threatened species.

Environmental Considerations

Environmental considerations are addressed under each topic; however, task force members expressed general concern with effects that pesticide application may have on water quality, air quality and soil quality.

Research Needs

Some task force members noted that the public should have been involved in the establishment of research priorities. In addition, some believed that there were some gaps in the research topics chosen. Some felt that fundamental research topics such as reviewing vineyard management practices (watering, pesticide application, fertilizing), and soil conditions should be considered.

Discussion on the final recommendations primarily focused on the emergency status of GWSS and the CEQA review. Suggested recommendations varied from the discontinuance of the emergency condition as well as cessation of all eradication efforts and release of any research monies until a full CEQA review was completed, to the continuance of the program with the most efficacious and least toxic chemical available for use. Others noted that there was not enough information disclosed to the public to support the determination of an emergency, yet an emergency could still exist and CDFA actions should not cease. However, it was acknowledged that increased public disclosure and review would have given the emergency status a greater degree of validity in the eyes of the public. Still others noted that the emergency status had short-circuited the CEQA process that would have opened up avenues for discussion of alternatives with the public. Ultimately, the task force arrived at a consensus on three recommendations. In addition to the three recommendations, two minority recommendations were proposed. All of the recommendations are set forth below in addition to a notation indicating consensus or favor. It should be noted that not all task force members were present for the entirety of these discussions.[1]

Consensus Recommendations

- ➔ CDFA establish and adequately document, within 45 days of receipt of report, the basis for the emergency declaration and conduct and document regular review of the status of GWSS and Pierce's disease in the State of California to determine if an emergency exists and if local control programs are necessary while effectively and expeditiously managing the occurrence and preventing the spread of Pierce's disease using the guiding principle of least possible harm to public health and the environment. – (*Unanimous of those task force members present)*

- ➔ CDFA conduct a full review, evaluation, and disclosure of the program, alternatives, and mitigation of potential adverse impacts pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code. – (*Unanimous of those task force members present)*

- ➔ CDFA should set the stage for statewide dialogue on the issue of transference of agricultural risk to backyards and private property, beginning with a review of the Food and Agricultural Code, Chapter 6, Abatement Generally, Section 5401, which gives the right to the Secretary of Agriculture and County Agricultural Commissioners to spray private property against the will of the property owner. – (*Unanimous of those task force members present)*

Minority Recommendations

- ➔ CDFA declare an end to the emergency status and develop a new program using the guiding principle of least possible harm to public health and the environment while effectively and expeditiously managing the occurrence and preventing the spread of Pierce's disease. - *(Two (2) in favor of those task force members present)*

- ➔ No spraying of public or private properties by CDFA. - *(Three (3) in favor of those task force members present)*

[1] Ron Oshima/DPR and Hank Giclas/Western Growers Association were unable to attend the fourth meeting on recommendations. Tess Dunham/California Farm Bureau and John McCaull/Audubon-California attended the meeting, but were unable to be present when consensus recommendations were reached.

Individual task force members, in collaboration with their respective agencies and memberships, and based upon individual research, developed individual/organization findings and recommendations. Although these recommendations do not represent the opinion of the task force in its entirety, it was determined that these findings and recommendations could further assist CDFA.

Individual Member Findings and Recommendations

- ***Ron Oshima, California Department of Pesticide Regulation (DPR)***
  November 14, 2000

  Emergency Conditions

  Finding: CDFA is pursuing the CEQA process for GWSS to provide opportunity for public comment and preview.

  Recommendations:

  1. CDFA should advance the CEQA process in parallel with the rapid response to the emergency declaration in order to provide opportunity for public comment.

  2. CDFA should publish a schedule for the CEQA process and update it as milestones are completed. This would be most effective as an element on the GWSS web page.

  Pesticide Selection and Application

  Finding: CDFA and county programs have selected currently registered pesticides for the GWSS spray programs and have complied with required application practices.

  Recommendation:

  CDFA should identify the chemical and non-chemical alternatives that were evaluated and eliminated, and the selection criteria as a matter of public information.

  Public Information – Disclosure/Involvement

  Finding: Most GWSS information available is descriptive of the state and county eradication programs and geographical areas. There is little current information available in the areas of public concern: public health and safety; alternatives; necessity of the program; environmental contamination unless inquiries are direct to a presentation; a public meeting or a web page. These references are isolated with no continuity as to their relevance to the GWSS program.

Recommendation:

CDFA should add a comprehensive program description to their web page with program objectives, decision criteria and program decisions along with alternatives that were not selected links to associated information (environmental monitoring results at DPR's Website, ExToxnet, etc.) with some text description to put in a context, a schedule with milestones to update the status going through the CEQA process.

Public Health and Safety and Environmental Considerations

Finding: Most information is not easily accessible at a single location.

Recommendation:

CDFA should develop a comprehensive program web site to link to appropriate information sources (see also Public Information recommendation).

Research Impacts to Species and Information Gaps

Finding: There appears to be no systematic process to update research funded, research results, monitoring of the spray program for efficacy, and distributing missing information regarding:

1. History of Pierce's disease (PD) in California with economically significant outbreaks on vineyards by date and locations.
2. History of GWSS in California from identified specimens by date and location.
3. Identification of counties that have been surveyed for the presence of GWSS (missing information on the statewide map of GWSS and PD distribution).
4. Annual grape production in California by county and year.

Recommendation: Same as Public Information recommendation above.

- ***Brian Finlayson, California Department of Fish and Game***
  November, 2000

Recommendations:

1. To protect fish and wildlife (including threatened or endangered species) from pesticide effects associated with the control/eradication of the glassy-winged sharpshooter, the Department of Food and Agriculture should consult with the Department of Fish and Game for location and mitigation of sensitive areas and species. The Department of Fish and Game will provide recommendations on areas to be avoided and/or measures to be taken to mitigate for expected impacts.

2. The Department of Food and Agriculture should use materials in a manner that are the least toxic to fish and wildlife while accomplishing their program goal.

- ***Dr. Rick Kreutzer, California Department of Health Services (DHS)***
  November 27, 2000

  Recommendation:

  1. CDFA should review two documents that were produced during the Medfly activities in Los Angeles. These documents make recommendations that are relevant to the same issues associated with the glassy-winged sharpshooter. They are:

     (a) "Charges and Recommendations" of the Malathion Public Health Effects Advisory Committee-March, 1992; OEHHA;

     (b) "Urban Pesticide Spraying: Charting a Course for Public Health Protection", April, 1993; OEHHA.

  These activities began in DHS and were moved to the California Environmental Protection Agency at the time of its creation in 1991.

- ***Mike Reid, State Water Resources Control Board***
  November 8, 2000

Recommendations:

1. CDFA should terminate its carbaryl spraying program until adequate documentation is made available to the public. Such documentation should include:

   (a) published peer-reviewed epidemiologic investigations of the relationship between GWSS (or other sharpshooters) and PD; and

   (b) thorough summaries of the safety and efficacy of all treatments considered for the control of GWSS on conventionally grown and organic crops, residential areas, and wild lands.

   Citations to all material used in the compilation of these summaries should also be made available.

2. A better understanding of the role of GWSS in transmitting the disease should be a priority. Some research is certainly necessary but improved communication of examples where GWSS is present but the disease may not be (and vice versa) would be helpful.

3. The goal of the treatment program should be clarified (i.e., slowing the spread of GWSS versus eradication).
4. It has been communicated that malathion (and, in fact many other treatments) were considered as other treatment options, and that careful weighing of their safety and efficacy compared to those of carbaryl was made. These facts should be conveyed to the public in a succinct, written analysis.

- ***Jessica Hamburger, Pesticide Action Network North America***
  November 14, 2000

  Recommendations:

  1. Protect Public Health, the Environment and Organic Farms

     - Protection of public health and the environment should be a primary factor in selecting options for controlling and preventing Pierce's disease.
     - All CDFA program components must comply with applicable public health and environmental laws, including the California Environmental Quality Act, the National Environmental Policy Act, the Clean Water Act, the Clean Air Act, the Endangered Species Act, the Federal Insecticide, Fungicide and Rodenticide Act and any other applicable laws as a precondition for the disbursement of funds.
     - No Pierce's Disease Control program funds should finance the use of synthetic pesticides, including EPA Category I and II acute poisons, nerve toxins (including Lorsban and Sevin), known or probable carcinogens, reproductive or developmental toxicants, or any known to have contaminated California groundwater.
     - Broadcast (including aerial) applications of pesticides to combat Pierce's disease must never be used.
     - Organic farms, urban mini-farms, gardens and landscapes must not be contaminated by forced pesticide spraying. Maintaining these organic islands will ensure the availability of release sites for natural enemies of the GWSS, and will prevent financial losses to growers and damage to backyard conservation efforts.

  2. Ensure Adequate Public Notification and Input

     - CDFA must inform residents of their right to refuse to allow spraying of pesticides and their right to take alternative measures on property that they own or rent. Pierce's Disease Control Program funds should be made available to hire experts to provide non-chemical control of GWSS around homes, schools, hospitals, nursing homes and other sensitive areas.
     - If pesticides are used, the public must be notified in advance of any applications. Neighbors within a one-mile radius of the proposed spraying must receive notice at least two weeks in advance, with a second 24-hour notice of the details of the program. Residents must be provided with information about the health and ecological impacts of the chemicals to be used.
     - All decisions about Pierce's disease control should be transparent and include adequate public input. This includes decisions at the federal, state, county and local levels. Specifically, the process should include the following provisions:

       a) State regulations and plans and county workplans must be subject to health and environmental review with public involvement as required by CEQA.
       b) CDFA's Pierce's Disease Advisory Task Force and Glassy-Winged Sharpshooter Science Advisory Panel must include diverse representation. Both groups should have at least one representative from each of the following stakeholder constituencies: public health organization;

environmental organization; organic farmer; and a community representative from an area that is impacted by Pierce's disease policy. Meetings should be sufficiently posted in advance and should be open to the public.

3. Promote Organic and Sustainable Approaches

- Growers must take preventive measures to control Pierce's disease. Preventive steps should include the following:

  a) Avoid planting grapes in areas that are known to be Pierce's disease hotspots;
  b) Avoid planting grapes next to crops known to harbor large populations of GWSS, such as citrus;
  c) Avoid planting grape varieties known to be susceptible to Pierce's disease; and
  d) Immediately remove plants exhibiting symptoms of Pierce's disease.

- Pierce's Disease Control Program funds should be used to assist growers in adopting organic and sustainable practices through on-farm research, technical support and cost sharing. The program should emphasize planting resistant varieties and using buffer zones, mechanical controls, and non-toxic confusion and diversion strategies to keep GWSS from feeding in vineyards and orchards. The program should support agricultural practices that reduce the incidence of disease by providing for a diversity of predatory insects, diverse cropping patterns and habitat diversity.
- Genetically modified organisms (e.g., bacteria, insects and plants) should not be used to combat Pierce's disease and no public funding should be allocated to such approaches.
- The introduction of non-native beneficial insects to control the GWSS should be avoided unless research shows that native beneficials cannot provide adequate control. Non-native species may be introduced only if research shows that they would not cause collateral damage to local ecosystems.
- If analysis of the threat posed by GWSS justifies it, CDFA should implement quarantine on the shipment on all nursery stock, vines, and grapes from counties where GWSS infestations have been discovered. Using pesticides on nursery stock and grape shipments that are suspected of containing GWSS adults, nymphs or egg masses will be ineffective and will cause unnecessary health and ecological impacts.
- CDFA must ensure that grape plants offered for sale are free of *Xylella fastidiosa*, the bacterium that causes Pierce's disease. The effectiveness of CDFA's current nursery certification program designed for this purpose should be evaluated and improved as necessary.
- Selection of control measures must take into account impacts on beneficial insects that pollinate plants and keep other pests in check.

4. Prepare Alternatives Assessments

- Pesticide Action Network recommends that CDFA prepare an alternatives assessment that describes the efficacy and safety of each alternative, and discloses information gaps. CDFA can then commission studies to fill those

research gaps. We recommend that CDFA develop a comprehensive program based on the alternatives assessment for preventing Pierce's disease as well as slowing the spread of the GWSS.

- We recommend that CDFA conduct an annual review of its program, adopting new measures shown by scientific studies to be more effective or as effective and less harmful than previously selected alternatives. The review process should include independent scientific review and meaningful public involvement. We recommend that CDFA work with the Organic Farming Research Foundation to conduct field tests of organic-compatible approaches to controlling Pierce's disease and GWSS.
- Alternatives assessments are needed in the following areas:

  a) Assess non-toxic options for control of GWSS in residential areas and public spaces.

     Many options pose less threat to human health and the environment than applying the nerve toxin carbaryl in residential areas. Alternatives to be assessed include bug vacuuming, yellow sticky traps and other traps, and localized releases of parasitic wasps.

  b) Assess alternative approaches to controlling Pierce's disease.

     Organic agriculture generally poses less threat to human health and the environment than does conventional agriculture. Organic viticulturalists are confident that they can manage the GWSS and Pierce's disease without resorting to the use of synthetic pesticides, just as they manage many other pests and diseases in their vineyards. Organic farmers use methods such as improving the health of the soil and the plant, planting resistant varieties, and providing for a diversity of predatory insects, diverse cropping patterns and habitat diversity.

     High priority should be given to determining the efficacy and safety of the following measures to prevent Pierce's disease on the farm:

     (1) Increasing the health of the plant by 1) analyzing the soil and balancing the components; 2) using contour planting in hillside vineyards to reduce soil erosion and improve water infiltration; and 3) keeping the vineyard free of weeds while maintaining cover crops such as grasses and legumes.

     (2) Avoiding high-risk practices, such as 1) planting grapes in areas that are known to be Pierce's disease hotspots; 2) planting grapes next to crops known to harbor large populations of GWSS, such as citrus; and 3) planting grape varieties known to be highly susceptible to Pierce's disease.

     (3) Improving habitat for beneficial insects.

     (4) Creating buffer zones between vineyards and residential and other incompatible areas.

     (5) Introducing new beneficial insects only after conducting experiments to ensure that they will not cause collateral ecological or economic damage.

(6) Coating plants with kaolinite clay (Surround) to confuse the GWSS by changing the plant's surface chemistry. In preliminary trials, Surround works almost as well as Provado, the leading sharpshooter insecticide.

(7) Using micronutrient treatments, organic-approved plant antibiotics and biological control agents within the plant tissue to suppress *Xylella fastidiosa*, the bacteria that causes Pierce's disease.

(8) Pruning grapevines to eliminate Pierce's disease infections that have not spread to the main stem of the plant.

(9) Using biodynamic remedies, including barrier planting and foliar sprays.

c) Assess alternative measures to control GWSS in agricultural areas.

Broad-spectrum insecticides are unlikely to effectively control GWSS. Economic thresholds are extremely low for GWSS because it damages crops by spreading disease rather than consuming the plant. Broad-spectrum insecticides such as carbaryl kill all the beneficial insects, including parasitic wasps and spiders. This creates an ecological vacuum that will create more pest problems, including mite outbreaks. Non-chemical and least toxic methods are likely to be the most effective ones for maintaining low populations of GWSS in the long run.

High priority should be given to determining the efficacy and safety of least toxic and organic-allowed controls, including:

(1) Biological controls, such as localized releases of parasitic wasps and other beneficial insects.
(2) Physical controls, such as barriers and bug vacuuming.
(3) Sticky traps (unless they are shown to act as attractants).
(4) Botanical insecticides, such as Neem and sabadilla. (Pyrethrins are broad-spectrum insecticides and are not a preferred solution).
(5) Oils and soaps, which are known to be effective on the nymph stage of leafhoppers. (GWSS is a leafhopper).
(6) Creative solutions, like the sterile male release program for the Mediterranean fruit fly.

d) Assess alternatives for control of the spread of GWSS in nursery and crop shipments.

CDFA should assess the efficacy of quarantine on the shipment on all nursery stock and potentially infested crops from counties where GWSS infestations have been discovered if wine industry funds are available to offset the cost of the program. Other non-chemical and least toxic options for nursery and crop shipments include bug vacuuming and application of soaps, oils and botanical insecticides.

- ***Ann Maurice, Ad Hoc Committee for Clean Water***
  November 26, 2000

Findings:

1. The feared "devastation" has not materialized. Grape production is UP! The declaration of "emergency" and "war" on the glassy-winged sharpshooter was based on belief in "impending doom" to the State's wine industry because of fears of "devastation" to the growers in Temecula. However, the feared "devastation" has not materialized. Grape production is UP in Temecula and UP all over the State.

2. GWSS is not the determining factor for disease. Vineyards near high populations of the glassy-winged sharpshooter do *not* necessarily have Pierce's disease. Vineyards in "infested areas" are alive and well, while, on the other hand, there are Pierce's disease losses in areas with *no* glassy-winged sharpshooters.

   Growers in Temecula, supposedly ground zero for GWSS, have been planting within a few feet of their own citrus groves with known high populations of sharpshooters, yet, those vines are not necessarily impacted. Instead, there are areas called "hot spots" of disease scattered throughout Temecula vineyards. Therefore, *the glassy-winged sharpshooter cannot logically be the determining factor* for outbreak of Pierce's disease. If the GWSS were the *determining factor,* there would be the highest incidence of Pierce's disease closest to the citrus with their "clouds" of leafhoppers, and progressively less and less, the further you get from the insects. That is *not* the case. *Therefore, other variables must be determining manifestation of the disease. What are those other variables?* Possibilities are: purchase and planting of already-contaminated vines, poor nutrition, soil erosion, weak or susceptible rootstock or varietals, presence of other diseases, abrupt shut-off of irrigation July 1st, bacteria-contaminated water or soils and other unknowns. Pierce's disease can be easily confused with other problems. The Department has *not* produced evidence of the extent (in acreage or vines) of the so-called "devastation" in Temecula and other counties with GWSS infestation, compared with the extent of losses to Pierce's disease in "uninfested" counties. We have been shown no evidence as to how variables other than the glassy-winged sharpshooter were ruled out.

3. No evidence for "recent" spread of insect or bacteria. There is *no evidence* that the glassy-winged sharpshooter is "new", or just "beginning to spread". What is *new* and *just beginning* is the Department's *recent* decision *to look for* it. There is a logical correlation between looking for something and finding what might have been there all along. There is documentation that the GWSS has been known to be present in high numbers in citrus groves for at least 10 years. The bacteria, *Xylella fastidiosa,* that can cause Pierce's disease is definitely not new. The bacteria was known to have precipitated an outbreak of Pierce's disease a hundred years ago.

   The GWSS may have been present, for a long time, in small numbers throughout the state, but may have been unable to get established in high or significant numbers outside citrus-growing regions due to climatic, habitat, altitude, ultra-violet light or other variables unknown and unidentifiable to human researchers.

4. Faulty definition of "infestation." The Department's definition of "infestation" is the detection of "five adults" within a "five day period" within a 300-yard radius, or "the detection of multiple life stages".

   The Department's definition of "infested area" is an area "within one mile" of an infestation, or "an area" which has not been surveyed in a manner approved by the Department to detect "vectors". Therefore, *the maps showing extent of "infestation" are misleading and may exaggerate the extent of GWSS population* by including vast shaded areas with very few sharpshooters or none at all because they are not surveyed per the Department's definitions as outlined above.

5. "Treatment area" includes properties with no GWSS. *CDFA pesticide application includes spraying private properties even though they have no GWSS found on them.* Treatment with carbaryl and imidacloprid have been made on properties *in the vicinity* of GWSS finds. Such "broad-spectrum" pesticides may actually, in the long run, be ineffective (do not kill eggs) or might even make matters worse by killing natural predators or by stimulating the leafhoppers, and property owners may have no opportunity to "abate" the insect their own way because there are not necessarily any insects on their property!

6. No consistent widespread "panic" in the wine industry. There is no evidence of widespread *"panic" in* the wine industry. If there were "panic", the industry itself would already be adopting, or demanding adoption of certain common sense procedures or practices, which we recommend, such as:

   (a) Buffer zones to areas of known insect or bacteria infestation;
   (b) Mandatory certification program guaranteeing that all grapevines sold are free of the *Xylella* bacteria;
   (c) Inspection of grapevines for *Xylella* bacteria prior to sale and transport;
   (d) No planting or re-planting of susceptible vines in known Pierce's disease prone areas; and
   (e) Use of physical methods to impede GWSS feeding on vines, such as traps around vines or traps for GWSS every half-acre *in vineyards.*

7. No Rapid Response Pesticide Eradication Program in "infested areas", no resulting collapse of the grape industry. The Department is *not* attempting to eradicate the GWSS in "infested areas". In other words, GWSS has already built-up high concentrations in certain counties, yet, *"infested" Kern County, for example, is leaving it up to individual property owners, businesses and farmers to deal with the insects as they see fit, and has no mandatory pesticide spray program.*

   Kern County believes, and the CDFA apparently concurs, that it would be impossible to eradicate the sharpshooter.

   However, in spite of their being *no* short-term, pesticide-based, mandatory spray Rapid Response Plan in Kern County, we see *no evidence of "panic"* on the part of grapegrowers in Kern County or in neighboring counties due to this CDFA policy. *No evidence of imminent collapse of the Kern County grape/wine industry.*

No evidence of adoption or discussion of the above common sense and practical precautions.

8. Pesticides proposed and being used for "Rapid Response" may endanger public health and the safety of endangered species and pollinators. In general, pesticides are not thoroughly tested in the registration process and the quality of the testing was challenged by the Legislative Committee. Some of the pesticides proposed or used for Pierce's disease control were registered for use in the State of California years ago, prior to the re-organization of the Department of Food and Agriculture that occurred as a result of the Senate Office of Research review. Were those pesticides (carbaryl or malathion) re-analyzed, re-studied or re-registered?

   Furthermore, the full product is not necessarily analyzed for significant adverse impacts. "Inerts" and "secret ingredients", while possibly 85% of the product, are unidentified and adverse impacts of those "inerts" on humans and other species are largely unknown.

   Some of those secret ingredients may even be responsible for "hormoligosis" (pesticide stimulation of insect reproduction), may be highly toxic carcinogens, or cause unidentified disturbances to human and other species' reproductive systems, cause neurological impairment, learning disorders, aggression, violence or death. Humans and other species have variable reactions to toxins. The adverse impacts to individuals may be deadly, especially to known chemically sensitive persons. Other persons may be rendered chemically sensitive after this application, or develop increased sensitivity. There is abundant information regarding these toxins that increased sensitivity is created with repeated exposure.

   Specifically with regard to salmonids, research shows that pesticides may adversely impact anadromous fishes' ability to transition from fresh to salt water habitat. The active ingredients in the pesticides used and proposed for use are known to be highly toxic to aquatic life and pollinators. Carbaryl and Lorsban have been sprayed and are not ruled out either by aerial or ground application. Imidacloprid, I believe, was sprayed in Brentwood. (My investigation continues). Section 18 exemptions were obtained for Admire, an imidacloprid product, exempting the product from existing labeling instructions and allowing an 'experimental', or non-registered use. This allows for unanticipated adverse impacts not flagged in the registration process, and experimenting on the public. Pesticide spray drift is known to travel for miles, temperature inversion and winds allow for transport of volatiles. Runoff can take pesticide residues into swales, creeks and streams. Furthermore, the USDA advises that "broad-spectrum" pesticides like carbaryl and Lorsban may "exacerbate a leafhopper problem."

   I conclude that human and other species are at an unacceptable risk due to pesticide application of public and private properties in this Pierce's disease program considering the above findings and findings 1 – 7.

9. Genetic engineering projects pose grave risks to the environment and the public. This program includes controversial genetic engineering aspects that have not been disclosed or evaluated per CEQA and NEPA due to the "emergency exemption". Research has been funded and is underway to bio-engineer the *Xylella* bacteria, insects and plant material. The new bio-engineering industry is little regulated and there is a potential for unintended catastrophic consequences to human health, agriculture and the environment.

Recommendations:

1. Terminate the “emergency” status. Growers are planting highly susceptible varietals in known high vector concentration areas, with no buffer zones. This activity casts a shroud of doubt over the credibility of the emergency. Surely, if this were truly an emergency, one would think that grape growers would be avoiding Pierce’s disease prone areas, without any prompting. Presumably their concern for their own financial well-being and their leaders would require it.

2. Suspend or amend Section 3650-3660 of the California Food and Agricultural Code pending full review and disclosure of potential adverse impacts of the regulations and vineyard practices per CEQA, NEPA, nuisance laws, the state “Right to Farm” laws, unfair business practices, civil rights laws, public disclosure laws, Americans with Disabilities Act, the Endangered Species Act, and other applicable laws. The definition of “infestation” and “infested area” are too broad, allowing for genetic engineering or pesticide abatement on properties that actually harbor no “pests”, just a potential “pest” population, shifting the burden of risk of exposure to the public, away from the wine industry.

3. End any CDFA GWSS/PD programs of aerial spray, “backyard home invasion” ground spray, or soil-soaking pesticide application of public, private properties, parks or wild lands since those applications put our citizens, especially the chemically sensitive, livestock, pets and property, the environment, including wild and domestic pollinators, endangered species including salmon and steelhead, aquatic invertebrates and amphibians, birds, bats and insects, at an unreasonable and unacceptable risk.

4. No new funds to the program, [about $35 million in state and federal funds already allocated].

5. No release of bio-engineered bacteria, insects or plant materials, or release of exotic bacteria or insects for purposes of Pierce’s disease control under any circumstances due to potentially disastrous unintended consequences.

6. No further release of funds or implementation of programs for Pierce’s disease or glassy-winged sharpshooter control prior to full disclosure, review and evaluation of the program, alternatives, and mitigation of potential adverse impacts per the California Environmental Quality Act (CEQA) and other applicable laws, including but no limited to the National Environmental Policy Act (NEPA), the Clean Water Act, Endangered Species Act, Food Quality Protection Act (FQPA), Federal Insecticide, Fungicide, Rodenticide Act (FIFRA), and the American Disability Act.

7. If the fund is not terminated, continue the Environmental/Public Health Task Force and add Public Health and Environmental representatives/advocates to the Pierce's disease Advisory Task Force and Scientific Advisory Panel.

8. Mandate the following common sense practices for the wine industry:

   (a) Buffer zones to areas of known insect or bacteria infestation;
   (b) Certification program guaranteeing that all grapevines sold are free of the *Xylella bacteria;*
   (c) Inspection of grapevines for *Xylella* bacteria prior to sale and transport;
   (d) No planting or re-planting of susceptible vines in known Pierce's disease prone areas; and
   (e) Use of physical methods to impede GWSS feeding on vines, such as wraps around vines or traps for GWSS every half-acre in vineyards.

- ***Linda McElver, Central Coast Canaries***
  November, 2000

Recommendations:

1. In order to prevent State of California liability, discrimination of medically disabled persons, displacement of medically disabled persons, endangerment, injury, and possible murder of the unidentifiable "acceptable risk" populations, I recommend all CDFA spraying of any pesticides shall cease immediately in regards to the GWSS program to protect all the people.

2. I also recommend that the Legislature shall enact laws that order immediate, full product testing on all pesticides to protect all the healthy people of California.

3. I recommend that the Legislature order the development of new testing models to protect at-risk populations of sick, asthma, cancer, chemically sensitive, AIDS, porphyria, multiple sclerosis, chronic fatigue, fibromyalgia, Gulf War Syndrome and other vulnerable subpopulations.

4. The 2,500 residents and their neighbors for the surrounding half-mile shall be surveyed for adverse health effects from previous CDFA GWSS spraying. Three identical checklists shall be provided to all potential CDFA pesticide exposures. They will evaluate their symptoms, immediately before, up to three days after, and two weeks after CDFA exposure. The California Department of Environmental Health Services shall tally the surveys. Persons shall identify any pre-existing medical conditions. Identities shall be protected. For example, the Interagency Work Group Draft on Multiple Chemical Sensitivities (MCS) concludes that Chronic Fatigue Syndrome, Fibromyalgia, MCS and others are probably the same condition. Since most report chemical sensitivity of varying degrees, having chronic fatigue, being sprayed and having worse symptoms, would give valuable input if a major portion of those persons adjacent or near the CDFA GWSS spraying had worse symptoms. EPA states that some pesticides can cause chemical intolerances or MCS. Asthmatic children could be evaluated before and after spraying their yards. This survey is necessary, since it is well-established in the literature and by the EPA, that doctors, and therefore, the public are not fully trained to recognize pesticide poisoning, nor do most doctors

recognize pesticides as a potential trigger and cause of asthma, chemical sensitivity, and other health problems. The "acceptable risk" people including asthmatic children may suffer with immediate adverse effects or die for the sake of the profits of the wine grower. EPA scientists have stated that sensitive populations can react to less than one part per billion of a pesticide. They believe it is the inerts triggering and adverse response.

5. The Legislature shall allocate funds raised from additional taxes on pesticide products to build homeless centers in each county and major cities on non-toxic state land that is forever pesticide free, to house the already displaced and homeless chemically hyper-sensitive Californians. The homeless centers shall have a one-mile buffer zone to other residences and be as far away as possible from industry. These homeless centers shall be fully accessible for the chemically injured, built according to recommendations of medical specialists in the field of environmental medicine and familiar with the needs of Multiple Chemically Sensitive patients. Land shall be made available at reduced rates for the chemically sensitive to live in the same area as the protected, chemically sensitive homeless centers. Grants and loans shall be made available to build affordable housing for the disabled, chemically sensitive. The purpose of these chemically sensitive homeless centers will be as a place to reside while ill, avoiding neighborhood exposures of any chemical, and nearby farm exposures, until safer housing is available in the regular communities. This residence would qualify for federal Section 8 HUD funds. The residence will have a qualified environmental doctor experienced in alternative treatments reported to be successful by the MCS community. Free medical care shall be provided, when insurance is not available. Justification -- 50% of the MCS victims report pesticides as the trigger for their disability. Dursban is known to cause MCS. Due to incomplete testing, these people's lives and health have been destroyed. This is the least we can do as a state for the benefit of allowing all these untested pesticides widespread use in California.

6. Regarding the suggestion of 1,000-foot buffer zones between agricultural and residential land. While I agree that this will be a step in the right direction, I also recommend that the Legislature shall enact legislation that will investigate the issue of drift in the parts per billion level and how it affects asthmatics, chemically sensitive and other vulnerable sub-populations. This new toxicity data then shall be required for the enforcement of California Food and Agricultural Code 6614 to insure that certain disabled segments of the population are not being endangered, forced from their homes, and discriminated against.

7. I made a request for the investigation by a state attorney who is an expert in disability issues earlier. No response from CDFA has come so far; it was suggested that I get an attorney. Due to the fact that lives may be at stake, I recommend that the Legislature shall order a legal investigation by the Attorney General's office concerning the GWSS eradication program and its impact and liability regarding the medically-disabled, especially the chemically intolerant's right to life, liberty and the pursuit of happiness, access to their properties and their communities. Chemically-intolerant and other medically disabled sick and dying poor persons should not have to donate funds to hire an attorney to fight for their rights to live.

8. I recommend as a final solution to the GWSS emergency that all further funds be stopped. There are too many unknown risks to the public health from pesticide spraying and genetic engineering that was not even discussed at the GWSS task force. The agricultural industries that believe they will be affected or at risk from GWSS shall build fences with screen the height needed (15 feet) to keep the dreaded GWSS out. Vine trunks also should be wrapped to serve as an added barrier.

9. Full Pierce's disease testing shall be completed on all vineyards at their own expense to determine if a vine is Pierce's disease free. All diseased vines will be removed or rescued with the Agrisciences method or other sustainable method. Beneficial insects can be introduced in the enclosed area to combat any other pests. That this program is far safer and probably cheaper than the plan to potentially spray the entire state with toxic chemicals. The fencing will relieve the nursery industry and the remainder of the state the responsibility of protecting the lucrative wine industry. Considering the evidence that Temecula plants grapevines right next to GWSS-infested citrus and there is no death or destruction in sight, and Kern County has been written off as too infested, with no spray program. Obviously, GWSS is not that big of a problem and no person or other industry (nursery, organic, etc.) should suffer because of it. We also believe it is a huge waste of our tax dollars to continue funding because of the false projections of devastation and exaggerated losses for the wine industry. What is really happening is that they didn't make as much profit as they could have and they want taxpayers to insure their success.

- ***Hank Giclas, Western Growers Association***
  November 28, 2000

  Recommendations:

  1. The emergence of the glassy-winged sharpshooter as a principal pest in California has become a critical concern for the Western Growers Association (WGA). This pest has severe and deleterious effects on a diverse array of crops ranging from citrus to nursery products. The effects range from plant destruction through transmission of disease to international and domestic trade restrictions. The containment and subsequent control of the GWSS is of paramount importance to California and should remain a top priority of state government.

  2. The "emergency response" of individual counties, CDFA and USDA in areas of GWSS infestation has been appropriate to date. The containment and control of this pest and the disease it vectors will take a concerted effort on the part of government, industry and the public. To meet this end, WGA would strongly recommend that the treatments, protocols and policies associated with these efforts be communicated more effectively to the partners involved (including the general public).

3. WGA likewise encourages the continued review and evaluation of the threat of GWSS and Pierce's disease on both local and statewide levels and expeditious and appropriate actions to control these threats where necessary. This continued review should be done in a transparent fashion that promotes public understanding of the rationale and decisions made in conjunction with containment and control programs.

- ***Dr. Les Ehler, University of California, Davis***
  November 8, 2000

  Findings:

  1. The insecticide carbaryl is moderately to highly toxic to a wide range of non-target species, including beneficial insects, such as honeybees and predaceous and parasitic insects and can be expected to cause short-term ecological disruption of treated habitats.

  2. The Task Force is divided over whether or not least-toxic alternatives to carbaryl can effectively and expeditiously management the pest threat.

  Recommendations:

  1. The Department should provide written notification of possible adverse effects on carbaryl to citizens whose property is targeted for treatment.

  2. The Department should commission a scientific study of the environmental and public health effects of carbaryl in treated areas.

  3. The Department should commission a scientific study to assess the efficacy or suggested alternatives, including release of egg parasites.

- ***Richard Greek, CACASA – San Luis Obispo County Agricultural Commissioner***
  November 9, 2000

  Emergency Conditions

  Recommendation:

  Conduct and document regular reviews of the basis for maintaining the emergency and factors used to determine when local control programs will or will not occur while expeditiously moving through a full CEQA review.

Public Information – Disclosure/Involvement

Recommendation:

Establish a goal of ensuring the project decision-making process provides for broad public input and transparency with full disclosure on the scientific and regulatory status of chemicals (including inert ingredients), drift management for pesticides and other measures along with associated risk and mitigations.

Public Health and Safety

Recommendation:

Give highest priority to the research and project components (e.g., biological control; “safer” chemicals; program experience and monitoring data; and other strategies) that move control efforts to approaches that increase public health and environmental protection as rapidly as possible creating additional flexibility for protecting at-risk populations and sensitive environments.

7. Report Preparation and Public Comments

This report was prepared based upon meeting summaries drafted for each meeting as well as information and comments submitted by task force members. The task force reviewed and provided comments on the draft of the report prior to its final preparation. The summaries of each meeting are within Appendix A of this report and available for review at the California Department of Food and Agriculture.

There were also additional written comments, reports, studies and other information received from task force members, citizens, non-profit organizations and other groups. A matrix of the comments received is included in Appendix B and those comments are also available for review at the California Department of Food and Agriculture.

In conclusion, task force members articulated an appreciation for the opportunity to participate on the task force and convey perspectives on the important environmental and public health issues surrounding the implementation of the program. Some expressed disappointment that the time frame was so limited and that the task force was unable to come to consensus on concrete pesticide alternative recommendations. Overall, the task force agreed that a wealth of information had been discovered that should shed some light on the environmental and public health concerns associated with the implementation of CDFA's statewide program.