Napa County
Winegrape Pest and Disease Control Assessment District

ENGINEER'S REPORT
Expanded Programs
Fiscal Year 2024/2025

May 3, 2024

Prepared for:
County of Napa
Board of Supervisors

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CERTIFICATES

The undersigned respectfully submits the enclosed report as directed by the Board of Supervisors.

Dated: May 3, 2024

TERRANCE E. LOWELL, P.E.,
For Kristin Lowell Inc.,
Engineer of Work

By 

I HEREBY CERTIFY that the enclosed Engineer's Report was filed with me on the _____ day of _____, 2024.

Neha Hoskins, Clerk of the Board, Napa County, California

By _____

I HEREBY CERTIFY that the enclosed Amended Engineer's Report was approved and confirmed by the Board of Supervisors, County of Napa, California, on the _____ day of _____, 2024.

Neha Hoskins, Clerk of the Board, Napa County, California

By _____

ENGINEER'S STATEMENT

This Report is prepared, as directed by the Board of Supervisors, pursuant to Article XIIID of the State Constitution (Proposition 218).

The Napa County Winegrape Pest and Disease Control District (the "District") was formed under the provisions of Food and Agriculture Code §6292. The purpose of the District is to assist in the funding, through the levy of assessments on qualifying vineyard properties, of inspection, detection, prevention Pierces disease by the glassy-winged sharpshooter, and to address other pests and diseases that attack winegrape plants.

An estimated budget to fund the activities of the District is set forth in Exhibit B. The annual budget may increase or decrease depending on the amount of funding contributed by state and county sources to carry out the County of Napa's Workplans for the Glassy-Winged Sharpshooter, Vine Mealybug, the Vine Mealybug Parasitoid Release Project, Sentinel Trapping Program, and the Spotted Lantern Program. Funding for the improvements is financed through a property-based assessment levied against each parcel consisting of one or more planted vineyard acres in the District area. A detailed description of the methodology for determining the special benefit assessment for each parcel is set forth in Exhibit C.

This report includes the following attached exhibits:

EXHIBIT A: A description of the proposed project.

EXHIBIT B: The estimate of the cost of the program to be funded.

EXHIBIT C: A statement of the method by which the undersigned determined the amount proposed to be assessed against each parcel, based on benefits to be derived by each parcel, respectively, from the program to be funded.

EXHIBIT D: A map showing all the parcels of real property within the District.

EXHIBIT E: An assessment roll, showing the amount proposed to be specially assessed against each parcel of real property within this assessment district.

Respectfully submitted,

Terrance E Lowell

TERRANCE E. LOWELL, P.E.
Engineer of Work

EXHIBIT A: PROJECT DESCRIPTION

INTRODUCTION

In January 2022, the Board of Supervisors reauthorized the existence of the District through March 2027. On a yearly basis, the Board levies assessments on behalf of the District against real property with one or more planted vineyard acres to address the threat of the glassy-winged sharpshooter (GWSS), the vine mealybug and other potential pests of winegrapes. The assessments will finance the programs identified below.

GLASSY-WINGED SHARPSHOOTER PROGRAM

In March 2000, the Napa County Board of Supervisors approved a Workplan for addressing the GWSS in Napa County. The Workplan identified the major components required for developing and implementing an effective Napa County GWSS management program.

Since the approval of the Workplan, the County has expanded the GWSS program. The current program provides for inspection of all plant material arriving in the county; the placement and inspection of increased numbers of traps to determine if the pest is present; and disseminating information to stakeholders. In addition, the Agricultural Commissioner has worked with the local wine industry and the California Department of Food and Agriculture (CDFA) to secure funding for the additional activities within the Napa County Workplan.

The County's mission is to continue to create programs to protect the local winegrape industry and economy. These programs are largely funded with State resources; however, funding of other program aspects, such as inspection of nursery stock from locations not known to be infested with GWSS, should continue to be funded with assessment revenues. To date, there have been no infestations of GWSS in Napa County.

Detection Trapping

Activities within this program area consist primarily in the placement and biweekly inspection of yellow-sticky panel traps. The County currently performs a base level of GWSS trapping utilizing existing staff, some of which is year-around at high-risk nursery/landscape facilities. The Agricultural Commissioner is dedicated to placing and inspecting GWSS traps, particularly in areas located in high-risk locations. In FY23/24, Agricultural Commissioner staff placed and monitored 1,130 GWSS traps in vineyard, urban, nursery, and other high-risk areas, as part of a program paid for by CDFA and county funds. District funds will now cover the vineyard trapping program in FY 24/25.

Trapping will occur from June to October, except for extended season trapping at high-risk nursery/landscape facilities. Other prioritized areas for trapping will be landscaped urban/residential settings and recently landscaped wineries and estates, with a concentration on recent plantings.

In December 2021, an expanded high-risk winter trapping program was implemented in Napa County in direct response to the residential GWSS infestation detected in neighboring Solano County. This program consists of 100 traps placed throughout Napa County, serviced monthly, from December 1 through March 31.

Exclusion Activities

Activities within this program area consist of year-round visual inspection of incoming commercial plant shipments, primarily at nurseries, home garden centers, landscape projects, and wineries/estates. Approximately 500 blue-tagged shipments from infested areas will be inspected. In addition, Napa County anticipates inspecting approximately 2,500 non-blue tagged shipments throughout the year as allowed under the Napa County GWSS Workplan and paid by Pest District assessments.

Education/Awareness Activities

Education and Awareness activities consist of developing GWSS related educational materials for distribution and presentation to various community groups, individuals, schools, etc. The Deputy Agricultural Commissioner is responsible for overseeing the development of the materials for presentation and distribution. The Deputy Agricultural Commissioner also utilizes the services of a professional communications consultant to supervise a contract for creative design and outreach services such as new campaign development for print and website ads, and radio / tv spot creation and airing, etc.

VINE MEALYBUG PROGRAM

In the Vine Mealybug Program, containing existing infestations is a priority. The following describes the scope of work to be performed under this program. All activities described will be conducted at levels deemed adequate to effectively delimit and contain infestations of VMB. Growers are expected to control their infestations and minimize their spread by employing all applicable integrated pest management (IPM) strategies recommended by the UC Cooperative Extension Viticulture Farm Advisor and licensed and registered Pest Control Advisors. As suspected infestations have continued to be identified, the program has moved away from a regulatory program of compliance agreements to a strategy of pest management by the use of the most up to date IPM strategies.

Detection Trapping

Activities within this program area consist primarily of the placement and inspection of approximately 950 VMB pheromone delta traps. In 2024, trapping will be conducted in high-risk areas throughout the County, except in areas determined to be chronically infested by University of California, Riverside researchers utilizing historical VMB trap data from Napa County. Trapping densities will continue to be at 25 traps per square mile and will be deployed in August and removed in October, when the most VMB are usually trapped. The VMB detection trapping program is funded, in part, using District funds.

Other detection activities will include microscopic inspection of county-placed and monitored traps as well as traps purchased, placed, and maintained by vineyard owners and operators, when brought to the Agricultural Commissioner's Office for inspection.

Pest Management Activities

Containing existing and new infestations is a priority. Male VMB trap data is tracked using GIS technologies. An interactive map on the Ag Commissioner website allows growers to navigate to different areas of the County and see relative levels of VMB trap counts. Detailed site-specific maps with trap data are available to individual growers on request to aid them in detecting

infestations at their vineyards. Growers will be instructed to train their vineyard workers to detect signs of VMB infestations and will be provided with information on VMB biology and life cycles. Growers will be informed of IPM treatment strategies to manage VMB based on the severity of the infestation including an emphasis on rotating insecticides to minimize the chance of developing insect resistance to the products. Sanitation of equipment used for vineyard management and harvest prior to movement off of an infested property is also stressed as well as strategies to minimize movement of VMB by workers conducting field activities in infested vineyards.

Education/Awareness Activities

Agricultural Inspectors and the Deputy Agricultural Commissioner are responsible for developing the materials for presentation and distribution. Training and outreach events will be scheduled by the Ag Commissioner's Office at Pest District-sponsored seminars, at meetings sponsored by UC Cooperative Extension, and with regional groups of growers that are managing VMB via webinar, at outdoor field days, and/or in-person. Printed materials and other educational resources will be disseminated to growers. Agricultural Inspectors will also do one-on-one outreach with growers on VMB IPM control strategies.

UCCE Research Proposals

Pest District funds will provide financial support for various UCCE research proposals, including *"Improving growers' capacity to respond proactively to Pierce's disease: Effects of vector populations, disease incidence and environmental factors on outbreaks"* and a UCCE proposal to continue grower education and outreach *"Outreach & Extension: Improving the visibility of Pest District activities through educational resources, regional working groups & a stakeholder survey".* All projects are brought to the District by Dr. Monica Cooper, Viticulture Farm Advisor at Napa County UCCE.

VINE MEALYBUG PARASITE RELEASE PROGRAM

In 2025, the VMB parasite release program will be implemented for a twelfth year. *Anagyrus* wasps will be released at approximately 98 sites throughout the County, at a rate of three releases per site. Release sites are selected utilizing past trapping data, the UCCE chronically-infested data, and grower-identified infestations. Following the releases for the past six years, Ag Commissioner staff has returned to vineyards and found evidence of parasitism of VMB by the wasps. The objective of the releases is to attempt to build a population of parasitic wasps in vineyards infested with VMB. The releases are not expected to provide significant levels of VMB control. Growers are encouraged to release additional wasps on their properties as a part of an overall integrated pest management strategy.

Release of the wasps will be conducted by Agricultural Commissioner staff and will occur in May and June of 2025. Growers will help to identify locations of infestations within vineyards to help pinpoint the release sites. The release sites will be mapped and included on the interactive VMB map on the Ag Commissioner website.

SENTINEL TRAPPING PROGRAM

The sentinel trapping program aims to detect serious pests of winegrapes not established in California. 2024 will mark the program's eleventh year. By strategically placing traps throughout Napa County, the program identifies new pest infestations early, preventing widespread damage. Prior to 2009, the European Grapevine Moth was not known to be established in North America. With its discovery in Napa County in 2009, and 10 additional California counties in subsequent years, a multi-million-dollar federal quarantine program was established. In August 2016 after a seven–year battle, EGVM was deemed eradicated. After a seven-year eradication effort, EGVM was eliminated in August 2016. Napa County growers spent around $50 million on treatment and quarantine, with an additional $50 million from federal, state, and county agriculture departments. Early detection of such pests can potentially save millions in resources.

Target Pests

The pests selected for the sentinel trapping program were identified by reviewing information from the USDA Grape Commodity-based Survey Guidelines, the Cooperative Agricultural Pest Survey (CAPS) for grapes, USDA's Tortricids of Agricultural Importance, and by consulting with CDFA, USDA, and international authorities on grape pests. The four pests were reevaluated in 2017 by CDFA entomologists and deemed to be valid potential pests of winegrapes and worthy of being part of an early warning detection program.

The four pests in the sentinel trapping program are:
Honeydew Moth (*Cryptoblabes gnidiella*): Found in Asia, Africa, Europe, South America, and Hawaii. Larvae damage stems and ripe berries, causing juice leakage and rot.
European Grape Berry Moth (*Eupoecilia ambiguella*): Distributed in Asia and Europe, it destroys flower buds, open flowers, and developing grapes. Associated rots are also a concern.
Grape Berry Moth (*Paralobesia viteana*): Found in eastern North America and recently detected in western Colorado. It lays eggs on grapes, blossoms, and stems, with larvae webbing clusters and tunneling into berries.
Grape Tortrix Moth (*Argyrotaenia ljungiana*): Considered a pest in southern Europe and the former USSR, it damages various plants, with significant losses in apples, grapes, and tea. Larvae skeletonize leaves and may also feed on buds and fruits.

Detection Activities

Approximately 250 traps will be deployed at the rate of one trap per square mile per insect, monitored bi-weekly. The trapping period for 2024 will span mid-May to mid-September, aligning with the EGVM trapping season. Traps will be strategically placed in vineyards during peak moth activity based on pest life cycles. California Department of Food and Agriculture will fund initial deployment and servicings. District funds will cover trap servicings and removal from July through September 2024.

SPOTTED LANTERNFLY PROGRAM

The Spotted Lanternfly (*Lycorma delicatula*) is native to China and detected first in Pennsylvania in September 2014. Spotted lanternfly feeds on a wide range of fruit, ornamental and woody trees, with tree-of-heaven being one of the preferred hosts. Spotted lanternflies are invasive and can spread long distances by people who move infested material or items containing egg masses. If allowed to spread in the United States, this pest could seriously impact the country's grape, orchard, and logging industries. Currently, grapes appear to be the hardest-hit horticultural or agronomic crop in the quarantine zone of Southeastern PA. Spotted lanternflies are swarm feeders and up to 400 SLF adults per vine have been reported.

Detection Activities

The Spotted Lanternfly trapping program in Napa County involves placing and regularly checking sticky traps in high-risk areas. Traps are constructed using a combination of sticky flypaper, staples, and chicken wire around host tree trunks to prevent unintended bird catches. The wire barrier doesn't affect the traps' effectiveness in catching Spotted Lanternfly adults as they seek to feed, mate, and lay eggs on tree trunks.

Starting in May, traps will be set up at priority host locations, considering both host preference and high-risk areas like airports, railways, and transit hubs. Traps will be checked bi-weekly until September, with removal scheduled by September 30. California Department of Food and Agriculture will fund initial deployment and servicings. District funds will cover trap servicings and removal from July through September 2024.

EXHIBIT B: ESTIMATE OF COST

The budget below details the anticipated expenditures for Fiscal Year 2024/2025 to provide the services described above.

NAPA COUNTY WINEGRAPE PEST AND DISEASE CONTROL DISTICT BUDGET	
Workplan Expenditures	**Budget**
District Share of GWSS Program Costs	$125,477
District Share of Winter Trapping	$8,834
District Share of Vine Mealybug Costs	$32,932
Parasitic Wasp Release Project	$52,499
SLF Trapping Program	$32,428
District Share Sentinel Trapping	$92,115
VPP Trapping Program	$142,156
UCCE Outreach/Education	$42,000
Outreach/Education	$20,000
Research - Dr. Monica Cooper	$36,775
Engineer's Report	$5,800
County Admin Costs	$29,771
Total Expenditures	***$620,787***
Revenues	**Budget**
Fund Balance	$51,975
Donation	$0
Total Revenues	***$51,975***
AMOUNT TO ASSESSMENT	**$568,812**

EXHIBIT C: METHOD OF APPORTIONMENT

GENERAL

Proposition 218 requires that the County levy assessments according to the special benefit each parcel receives from the improvements (or activities to be funded by the District). Proposition 218 added to the state constitution Article XIIID Section 4(a) which states in part:

> *"The proportionate special benefit derived by each identified parcel shall be determined in relationship to the entirety of the capital cost of a public improvement...No assessment shall be imposed on any parcel which exceeds the reasonable cost of the proportional special benefit conferred on that parcel... Parcels within a district that are owned or used by any agency, the State of California or the United States shall not be exempt from assessment unless the agency can demonstrate by clear and convincing evidence that those publicly owned parcels in fact receive no special benefit."*

Determining the proportionate share of special benefit among the parcels of real property within the proposed assessment district which benefit from the proposed activities is the result of a four step process: 1) defining the proposed activities; 2) identifying how each parcel specially benefits from the proposed activities; 3) determining the amount of the special benefit each parcel receives from the proposed activities; and 4) apportioning the cost of the proposed activities to each parcel based on the special benefit that each parcel receives from the proposed activities.

The Glassy-Winged Sharpshooter, Vine Mealybug, the Vine Mealybug Parasitoid Release Project, Sentinel Trapping Program, and the Spotted Lantern Program are designed to only benefit those parcels with planted vineyard acres in an effort to reduce the amount of crop damage and revenue loss. Therefore, these programs provide only a special benefit to those parcels. The special benefit to parcels from these proposed services and programs exceeds the total amount of the proposed assessment.

SPECIAL BENEFIT

The special legislation, Food and Agricultural Code §6292 et seq., was enacted to provide assessment financing for the detection and prevention of the Glassy-winged Sharpshooter, the vine mealybug, and other potential pests of winegrapes in Napa County. These destructive pests and diseases pose a significant threat to the grape and wine industry. Napa County has a great economic interest in protecting its agricultural products from the pests and diseases. The winegrape pest and disease control measures provide the necessary detection and prevention activities to all planted acres to keep the Napa County wine industry vital. Without these measures, each vineyard could lose its crop due to bug infestation, and thus loss of revenue. Each vineyard parcel receives special benefit from these activities in that each vineyard operates without the threat of losing its crop. Since all planted vineyard acres will benefit equally from these activities each vineyard acre is assessed in like manner. That is to say, every planted vineyard acre receives the same benefit and thus, the same assessment amount per planted acre.

ASSESSMENT CALCULATION

This legislation expressly defines that no assessment shall be greater than $20 per planted vineyard acre. As previously discussed, each planted vineyard acre specially benefits from the identified programs. For Fiscal Year 2024/2025 there are 47,401 assessable planted vineyard acres. The amount of the assessment for the special benefit each vineyard acre receives is $12.00 ($568,812 divided by 47,401) per assessable vineyard acre.

EXHIBIT D: MAP OF DISTRICT

A map of the District is on file in the office of the Clerk of the Board of the County of Napa. The lines and dimensions of each lot or parcel within the Assessment District are those lines and dimensions shown on the maps of the Assessor of the County of Napa, for the year when this Report was prepared, and are incorporated by reference herein and made part of this Report. The Assessor's maps shall govern for all details concerning the lines and dimensions of such lots or parcels.

EXHIBIT E: ASSESSMENT ROLL

The attached table lists every parcel in the District by their respective assessor's parcel number, owner name, and assessment amount.