Napa County

1195 THIRD STREET
SUITE 310
NAPA, CA 94559

Agenda

SPECIAL JOINT MEETING
GROUNDWATER TECHNICAL ADVISORY GROUP
AND BOARD OF SUPERVISORS

Tuesday, July 9, 2024

9:00 AM

Board of Supervisors Chambers
1195 Third Street, Third Floor

Groundwater Technical Advisory Group

Albert Filipelli (Chair)
Monica Cooper (Vice-Chair)
Julie Chambon
Miguel Garcia
Mathias Kondolf

Brian D. Bordona, Secretary- Director
Chris Apallas, County Counsel
Jamison Crosby, Natural Resources, Planning Manager
Brendan McGovern, Natural Resources, Planner III
Alexandria Quackenbush, Meeting Clerk
Angie Ramirez-Vega, Meeting Clerk

How to Watch or Listen to this Special Joint Meeting of the Napa County Groundwater Technical Advisory Group and Board of Supervisors

The Groundwater Technical Advisory Group realizes that not all County residents have the same ways to stay engaged, so several alternatives are offered. Remote Zoom participation for members of the public is provided for convenience only. In the event that the Zoom connection malfunctions for any reason, the Groundwater Technical Advisory Group reserves the right to conduct the meeting without remote access.

Please watch or listen to the Special Joint Meeting of the Napa County Groundwater Technical Advisory Group and Board of Supervisors in one of the following ways:

1. Attend in-person at the Board of Supervisors Chambers, 1195 Third Street, Napa, Third Floor.
2. Watch on Zoom using the attendee link: https://countyofnapa.zoom.us/j/842343169. Make sure the browser is up-to-date.
3. Listen on Zoom by calling 1-669-900-6833 (Meeting ID: 842-343-169).

If you are unable to attend the meeting in person and wish to submit a general public comment or a comment on a specific agenda item, please do the following:

1. Call the Board of Supervisors Public Comment Line at 707-299-1776 during the item on which you want to speak. Comments will limited to three minutes, subject to the discretion of the Chair. If you cannot make the meeting, you may leave a comment by voice mail by calling the Public Comment Line before or after the meeting.
2. Email your comment to publiccomment@countyofnapa.org 24 hours in advance of the meeting to ensure that your comment will be shared with all members of the Board of Supervisors.

For more information, please contact the Clerk of the Board's office at (707) 253-4580 or send an email to clerkoftheboard@countyofnapa.org.

ANY MEMBER OF THE AUDIENCE DESIRING TO ADDRESS THE COMMITTEE:

ON A MATTER ON THE AGENDA
Please proceed to the podium when the matter is called and, after receiving recognition from the Chair, give your name and your comments or questions. In order that all interested parties have an opportunity to speak, please be brief and limit your comments to the specific subject under discussion. Time limitations shall be at the discretion of the Chair or Committee, but is generally limited to three minutes.

ON A MATTER NOT ON THE AGENDA
Public comment is an opportunity for members of the public to speak on items that are not on the agenda but are within the subject matter jurisdiction of the Committee. Public comment is limited to three minutes per speaker, subject to the discretion of the Chair. Comments should be brief and focused, and speakers should be respectful of one another who may have different opinions. Please remember this meeting is being recorded and broadcasted live via ZOOM. The County will not tolerate profanity, hate speech, abusive language, or threats. Also, while public input is appreciated, the Brown Act prohibits the Committee from taking any action on matters raised during public comment that are not on the agenda.

1. CALL TO ORDER; ROLL CALL

2. ADMINISTRATIVE ITEMS

JOINT MEETING OF THE GROUNDWATER SUSTAINABILITY AGENCY AND TECHNICAL ADVISORY GROUP UPDATE **24-1215**

Receive an update on the Napa Valley Subbasin Groundwater Sustainability Plan (GSP) implementation including: the need for adaptive management due to climate change; benefits from recharge opportunities; coordination with growers' participating in pilot sites; and implementation of the GSP and the three Workplans.

Attachments: Technical Memo

3. ADJOURNMENT

I HEREBY CERTIFY THAT THE AGENDA FOR THE ABOVE STATED MEETING WAS POSTED AT A LOCATION FREELY ACCESSIBLE TO MEMBERS OF THE PUBLIC AT THE NAPA COUNTY ADMINISTRATIVE BUILDING, 1195 THIRD STREET, NAPA, CALIFORNIA ON 7/3/2024 BY 3:00PM. A HARDCOPY SIGNED VERSION OF THE CERTIFICATE IS ON FILE WITH THE COMMITTEE CLERK AND AVAILABLE FOR PUBLIC INSPECTION.

ANGIE RAMIREZ VEGA (By e-signature)
Angie Ramirez Vega, Committee Clerk

1195 THIRD STREET
SUITE 310
NAPA, CA 94559
www.countyofnapa.org

Main: (707) 253-4580

Groundwater Technical Advisory Group **Agenda Date:** 7/9/2024 **File ID #:** 24-1215

TO: Technical Advisory Group for the Napa County Groundwater Sustainability Agency

FROM: Brian D. Bordona, Director of Planning, Building and Environmental Services

REPORT BY: Jamison Crosby, Natural Resources Conservation Manager

SUBJECT: Napa Valley Subbasin Groundwater Sustainability Plan (GSP): Implementation of Three Workplans

RECOMMENDATION

JOINT MEETING OF THE GROUNDWATER SUSTAINABILITY AGENCY AND TECHNICAL ADVISORY GROUP UPDATE

Receive an update on the Napa Valley Subbasin Groundwater Sustainability Plan (GSP) implementation including: the need for adaptive management due to climate change; benefits from recharge opportunities; coordination with growers' participating in pilot sites; and implementation of the GSP and the three Workplans.

BACKGROUND

Groundwater Sustainability Plan (GSP)

In 2022, the Napa County Groundwater Sustainability Agency (NCGSA) formed a five-member Technical Advisory Group (TAG) to advise the NCGSA, respond to changing groundwater conditions, and aid in the implementation of the Napa Valley Subbasin GSP, which was approved by the Department of Water Resources on January 26, 2023.

The goal of the GSP is to achieve sustainability by ensuring that there are no Undesirable Results in the Napa Valley Subbasin by 2042. As part of early GSP implementation steps to achieve the sustainability goal, the GSP recommended implementation of the following Workplans:

- Interconnected Surface Water and Groundwater Dependent Ecosystems Workplan (recommended in GSP Section 6)
- Napa County Water Conservation Workplan (GSP Management Action #1)
- Groundwater Pumping Reduction Workplan (GSP Management Action #2)

At the NCGSA meeting on March 26, 2024, these Workplans were adopted.

The purpose of today's meeting is to provide an opportunity for the NCGSA to receive, discuss, and question the TAG about the implementation of the Workplans and provide direction on topics and questions they would like the TAG to consider during the next 6-months to 1-year period related to ongoing GSP implementation and achieving groundwater sustainability.

Adaptive Management Response Actions, Climate Adaptation and Building Resiliency

The Fifth National Climate Assessment (<https://nca2023.globalchange.gov/>), published in Fall 2023, presents current conditions as well as multiple climate scenarios for the United States. Four climate scenarios were assessed, which are based on 1.5°C (2.7°F), 2°C (3.6°F), 3°C (5.4°F), and 4°C (7.2°F) increases in global temperature. All four climate scenarios predict Napa County is likely to experience higher hot temperatures, higher low temperatures, more precipitation, and more extreme precipitation events.

While the degree of change resulting from future climate change is uncertain; national, state, and local data indicate shifting climate patterns and trends. Long-term adaptive management strategies and measures implemented to optimize recharge opportunities and conserve water can help minimize the local impact. Increases in extreme precipitation events provide potential opportunities to increase recharge through best management practices and on-farm strategies to retain precipitation, enhance infiltration, and augment groundwater supplies.

Possible management scenarios were evaluated with the Napa Valley Integrated Hydrologic Model (NVIHM). Each management scenario was evaluated by comparing the simulated flow at the Napa River at Napa (Oak Knoll) station. The first set of three scenarios limited groundwater extraction to the estimated Sustainable Yield in the DWR-approved 2022 GSP (SY; ~15,000 acre-feet per year), to 90 percent of the SY (~13,500 acre-feet per year), and to 75 percent of SY (~11,250 acre-feet per year). Each of the three scenarios that limited groundwater pumping increased the streamflow throughout the critical low-flow period with larger reductions associated with greater streamflow.

The second set of three scenarios evaluates the impact of retaining precipitation and enhancing infiltration on vineyard properties. The NVIHM evaluates the amount of precipitation that will infiltrate or runoff to the stream system based on the land use and estimated runoff fraction. The runoff fraction was modified to simulate more precipitation going to soil infiltration and groundwater recharge compared to the baseline runoff fraction of 0.78 (or about 80 percent) and less precipitation becoming surface runoff. Three scenarios were modeled, increasing infiltration from approximately 20 percent (baseline condition) to 30, 40, and 60 percent infiltration. For example, the 30 percent infiltration corresponds to approximately 70 percent runoff, which represents an increase of about 10 percent more infiltration and groundwater recharge compared to the baseline condition with a runoff fraction of 80 percent and 20 percent infiltration. The increased infiltration resulted in greater streamflow throughout the low-flow summer period. The three scenarios to retain rainwater and increase infiltration on vineyard properties potentially result in a much greater benefit to streamflow during the critical period compared to the 10 percent pumping reduction. Simulations indicate that a 10% increase in infiltration has potentially more positive benefit to streamflow than a 10% reduction in pumping.

Climate variability, including shifts in the timing and duration of precipitation events, can impact groundwater discharge to streams. The relationship between hydrologic variability, streamflow, and potential impacts to groundwater dependent ecosystems are key questions being investigated during implementation of the ISW and GDEs Workplan. Ongoing responses to climate change will require being prepared for potentially hotter years where precipitation events no longer occur in the same pattern as historical events. It is important to continue to embrace "Conservation as a Napa Way of Life" to help build resiliency.

To continue evaluating potential impacts within vineyards, a Pilot Sites Program was established in early 2024. This program has two overarching objectives:

- To refine estimates of vineyard and winery water use in the Napa Valley.
- To share, collaborate, and contribute information about best management practices (including water conservation and surplus rainwater retention), lessons learned, and building climate resiliency.

Outreach to Napa Subbasin stakeholders, industry groups, and vineyard management companies is ongoing.

Interconnected Surface Water (ISW) and Groundwater Dependent Ecosystems (GDE) Workplan Implementation

The ISW and GDEs Workplan implementation includes hydrologic and biological monitoring at 6 sites in the Napa Valley Subbasin. On May 1 and 14, 2024, two reconnaissance field trips were used to assess monitoring approaches, define survey boundaries, and define project roles. Dr. Matt Kondolf, member of the Technical Advisory Group, attended the May 14 field visit. Both field visits included 4 of the 6 sites where access permissions have been secured (Sulphur Creek, Napa River at Calistoga, Napa River at St. Helena, and Napa River at Napa). The access permissions are currently progressing for the other two sites (Bale Slough and Napa River at Oak Knoll).

The ISW and GDEs Workplan implementation includes steps to implement the California Environmental Flows Framework (CEFF). CEFF is a systematic approach to assessing environmental flow needs that is currently being applied throughout California.

Explicit ecological management goals that will be refined with Workplan implementation include:

1. Protect and enhance habitat for groundwater-dependent aquatic and terrestrial special-status species in the Subbasin;
2. Protect and enhance GDEs and natural communities;
3. Protect and enhance habitat connectivity with aquatic habitat upstream of the Subbasin; and
4. Develop discharge-habitat relationships for special-status species, where possible.

The ISW and GDEs Workplan will use physical and biological data coupled with hydrologic modeling to better understand the conditions required to protect and enhance healthy terrestrial and aquatic GDEs. For aquatic portions of the GDEs and the CEFF analysis, a more specific goal is to ensure the long-term viability of a self-sustaining steelhead population in the Napa River Watershed. This goal will consider changes in streamflow that occur due to: 1) climate effects (which the NCGSA cannot control), and/or 2) groundwater pumping (which the NCGSA can manage to achieve sustainable groundwater resources including avoiding undesirable results on interconnected surface water). This ecological goal is also consistent with the goals outlined in the Napa County General Plan Update (Napa County 2008), which include “conserving and improving fisheries and wildlife habitat”, “maintaining and improving fisheries habitat”, and “protecting and enhancing the County’s biodiversity”.

Luhdorff & Scalmanini, Consulting Engineers will lead the shallow groundwater monitoring and installation of stage recorders at 3 of the 6 sites (the other 3 already have stage recorders). The fish habitat and population surveys, deployment and collection of water quality data (dissolved oxygen and temperature), and stream connectivity surveys will be led by the Napa County Resource Conservation District (RCD). Stillwater

Sciences will lead the remaining biological surveys and CEFF analysis. Most of these surveys commenced in June and continue in Summer 2024; a few studies (birds and special status plants) will occur in Spring 2025.

Special status amphibian surveys were conducted at the 4 accessible study sites. Foothill yellow-legged frog egg masses, tadpoles, and a sub-adult were observed at the Napa River at St. Helena and Sulphur Creek sites. In addition, northwestern pond turtles were observed at Napa River at Yountville and Napa River at St. Helena. Napa County RCD biologists observed a steelhead redd (nests dug in gravel by steelhead) at the Napa River at Calistoga site.

Monitoring will continue over Summer 2024 to track changes in biological habitat as seasonal declines in groundwater levels and surface flows continue.

Napa County Water Conservation (NCGSA) and Groundwater Pumping Reduction (GPR) Workplans Implementation

The NCGSA has developed and is implementing the WC and GPR Workplans. The GPR Workplan includes an implementation plan and anticipated timeline for the program to achieve measurable reductions in groundwater pumping in the NCGSA. The WC and GPR Workplans identify a suite of water conservation practices. The GPR Workplan anticipates a voluntary program that incentivizes growers and other water users/industries in the Subbasin to adopt and expand water conservation practices.

One opportunity identified in the GPR Workplan for encouraging voluntary adoption of water conservation practices is certification programs. Certification programs require producers to meet specified standards to become certified. In exchange, certified businesses can meet regulatory standards, buyer specifications, label their product in a certain way, and have access to new markets. This can create additional value (higher price or cost savings) for some commodities. The GPR Workplan includes the identification and potential expansion of one or more certification programs for water conservation practices that will help the NCGSA achieve groundwater sustainability.

NCGSA staff are working toward development of a certification program guideline document that will define potential minimum standards/practices for certification and other desired program components such as auditing process, verification process, reporting, and data management. Certification program participation will be voluntary and will include appropriate incentives to encourage participation.

At the July joint NCGSA/TAG meeting a certification program summary matrix will be presented (see attached Technical Memo). This summarizes four existing example programs: Napa Green (NG), California Sustainable Winegrowing Alliance (CSWA), SIP Certified (SIP), and Fish Friendly Farming (FFF). The matrix compares and contrasts winery and vineyard certification requirements, program costs, water conservation practices, verification process, and presence in Napa County. The purpose is to illustrate the range of offerings within the existing programs and briefly summarize water conservation practices included in each program.

The presentation will provide an overview of different types of incentives for certification program participation. These include but are not limited to financial incentives (e.g., covering certification costs, capital costs, fees), behavioral nudges (e.g., benchmarking, notifications), brand awareness (e.g., pilot sites, industry leaders, water stewardship), and other education and assistance (e.g., planning assistance, permitting). An overview of funding opportunities and incentives will be presented.

The NCGSA is invited to provide direction to the TAG on topics and questions the NCGSA would like the TAG

to consider during the course of the next 6-month to 1-year period related to ongoing GSP implementation.

PROCEDURAL REQUIREMENTS

1. Staff reports
2. Discussion
3. Public Comments
4. No action required

FISCAL & STRATEGIC PLAN IMPACT

Is there a Fiscal Impact?	Yes
Is it currently budgeted?	Yes
Where is it budgeted?	272000
Is it Mandatory or Discretionary?	Mandatory
Is the general fund affected?	No
Future fiscal impact:	Analysis of future impact is pending

ENVIRONMENTAL IMPACT

ENVIRONMENTAL DETERMINATION: The proposed action is not a project as defined by 14 California Code of Regulations 15378 (State CEQA Guidelines) and therefore CEQA is not applicable.

ERA Economics
1111 Kennedy Place, Suite #4
Davis, CA 95616

Draft Technical Memorandum

Subject: Napa GPR Implementation: Preliminary Napa Certification Program Summary and Implementation Updates

By: ERA Economics LLC

To: Jamison Crosby and Brenden McGovern, Napa County
Vicki Kretsinger and Cab Esposito, LSCE

Date: June 13, 2024; rev June 25, 2024

Purpose and Background

The County of Napa GSA (NCGSA) has developed and is implementing the Water Conservation (WC) and Groundwater Pumping Reduction (GPR) Workplans. The GPR includes an implementation plan and anticipated timeline for the program to achieve measurable reductions in groundwater pumping in the NCGSA. The WC and GPR Workplans identify a suite of water conservation practices. GPR implementation anticipates a voluntary program that incentivizes growers and other water users/industries in the Subbasin to adopt and expand water conservation practices.

One opportunity identified in the GPR implementation plan for encouraging voluntary adoption of water conservation practices is certification programs. Certification programs require producers to meet specified standards to become certified. In exchange, certified businesses can meet regulatory standards, buyer specifications, label their product in a certain way, and have access to new markets. This can create additional value (higher price or cost savings) for some commodities. The GPR implementation plan will develop a certification program for water conservation practices that will help the NCGSA achieve sustainable groundwater conditions.

The NCGSA Technical Advisory Group (TAG) has received information and presentations regarding potential certification programs from NCGSA staff and consultants at multiple TAG meetings in 2022 and 2023. Representatives from the local certification programs presented at the April 2024 TAG meeting. This technical memorandum (TM) summarizes GPR implementation for the certification program component and summarizes existing programs.

GPR Implementation: Napa Certification Program(s) for Water Conservation

GPR implementation schedule calls for certification program development in Q2 and Q3 of 2024. The NCGSA staff and its consultants are currently developing a certification program outline that defines potential minimum standards/practices for certification and other desired program components such as auditing process, verification process, reporting, and data

management. The outcome of this phase of GPR implementation will be a concise water conservation certification program document that the NCGSA can consider and may use to guide certification program implementation.

Certification program participation will be voluntary. Implementation will include appropriate incentives to encourage voluntary certification. Incentives are being developed as part of a broader GPR implementation process. Certification program implementation is part of a broader outreach and education process for GPR implementation. It is not intended to be an additional regulatory burden and cost for participants. Certification program implementation will include education and outreach and may be phased in to develop support and encourage participation.

The outcome of the program development, incentives, and education and outreach process will be a certification program for water conservation measures that achieve measurable groundwater benefits in the Napa Valley Subbasin. The GPR implementation schedule specifies certification program implementation through Q2 of 2025. Certification program implementation *may include, but is not limited to*, one or more of the following:

1. A certification program specified by NCGSA to meet minimum requirements for water conservation practices. This would impose a substantial administrative burden on the NCGSA and would duplicate some of the efforts of other certification programs that already operate in the county.
2. An existing certification program endorsed by NCGSA that meets minimum requirements for water conservation practices. This would reduce the administrative burden on the NCGSA and would leverage an existing certification program that meets minimum requirements defined by NCGSA. It may also require an existing certification program to modify standards to meet NCGSA requirements.
3. Multiple existing certification program endorsed by NCGSA that meet minimum requirements for water conservation practices. This would reduce the administrative burden on the NCGSA and would leverage multiple existing certification programs that meets minimum requirements defined by NCGSA. It could also require existing certification programs to modify standards to meet NCGSA requirements.
4. NCGSA could partner with one or more local organizations to develop, expand, or refine existing education, training, outreach, and certification programs. For example, the Napa County RCD manages the LandSmart program that assists growers with resource management. This or similar programs could be expanded to meet NCGSA requirements for water conservation.

In summary, the GPR implementation plan specifies that NCGSA staff and its consultants will work with existing certification programs, or potentially a new program, to develop specific water conservation practices, standards, and a method for reporting and sharing data. Incentives will be developed to encourage voluntary participation. The goal is to develop or expand one or more certification programs to achieve and verify additional water conservation in the NCGSA.

Certification Programs for Wineries and Vineyards in Napa County

There are multiple certification programs currently in Napa County. These programs have different water conservation practices, standards, verification methods, data/reporting, and program costs. Due to the complexity of the programs, it is difficult to provide a clear and direct comparison across the programs. This TM provides a high-level comparison of the key elements of each certification program as they apply to the GPR implementation in Napa County. Selected program elements were combined into a summary matrix for comparison purposes.

Certification Program Summary Matrix

A separate program summary matrix was developed for vineyard certification and winery certification. The purpose of the matrix is to summarize: (i) water conservation practices, (ii) all certification and auditing costs, (iii) other practices that are certified in addition to water conservation, and (iv) other program elements/notes that are relevant for GPR implementation.

The following categories and elements were included in the certification program summary matrices that are specific to winery and vineyard certification:

- **Vineyard or Winery Certification**
  - **Offered**. Does the program offer vineyard or winery certification?
- **Program Costs**
  - **Up-front costs**. These are the up-front costs to become certified by the program.
  - **Annual costs**. These are annual costs for renewal or other ongoing costs.
  - **Additional costs**. Any additional program costs for certification and verification.
  - **Third-party audit costs**. Costs paid to a third-party or for direct auditing, which may be annual or periodic.
- **Water Conservation Practices**
  - **GPR/WC specified water conservation practices**. A summary of specific water conservation practices and whether each certification program includes these practices as part of its existing standards.
- **Verification Process**
  - **Third-party verification**. Does the program rely on a third-party to verify compliance?
  - **Report metered water use**. Does the program require water measurement (meters) and does it require certified entities to report water use?
  - **Verification frequency**. How often does the program require audits/verification?
  - **Other notes**. Additional notes and context that help the reader understand the differences between the different programs.

- **Napa County Presence**
    - **Acres certified**. Number of acres certified in Napa County.
    - **Vineyards certified**. Number of vineyards certified in Napa County.
- **Other Program Certifications**
    - **Other practices**. This section lists other practices that are certified by the program. Most programs include other practices (e.g., climate or air quality) that they certify for in addition to water conservation practices. This section provides an overview of the broader scope of each program.
- **Other Program Considerations**
    - **Educational tools/events**. Does the program provide education and outreach as part of the certification process?
    - **Process for program updates**. How and when does the program update its certification practices and standards?

A draft of the certification matrix was developed and sent to representatives from each of the certification programs to review and provide feedback on how the program is represented. NCGSA staff and consultants continue to work with the certification programs to build partnerships and support GPR implementation.

Napa County Certification Program Summary

Four certification programs were included in the summary matrix. There are other programs, such as Napa County RCD LandSmart, that offer certification services in Napa County. However, the four programs included in the summary matrix represent the most prominent programs in Napa County currently used by vineyards and wineries. The four programs include:

- **Napa Green (NG)**. A local program with 90 Napa Green Certified wineries and 70 growers certified or in the process of becoming certified, representing over 7,200 vineyard acres in Napa County.
- **California Sustainable Winegrowing Alliance (CSWA)**. A program that operates statewide and has approximately 44 wineries and 260 vineyards on 15,500 acres certified in Napa County. Some CSWA certified wineries are also certified by other programs.
- **SIP Certified (SIP)**. A program focused on vineyards and wineries on the Central Coast of California but with some small additional certifications in other parts of California, Oregon, and Michigan.
- **Fish Friendly Farming (FFF)**. A vineyard/agricultural program that serves over 39,600 acres of vineyards in 10 California counties, supporting regulatory compliance with water quality regulations and other environmental improvements including water conservation and efficiency.

The Vineyard Certification Matrix and Winery Certification Matrix are attached as figures 1 and 2 to this report.

The comparison matrix shows that programs are similar in the water conservation practices that they cover. However, programs differ in what practices are required. For example, Napa Green requires entities to select from its menu of water conservation practices, so a specific vineyard may not implement every water conservation practice listed. Similarly, CSWA uses a tiering system (i.e., categories 1-4) to rate practices along a scale, with requirements for continual improvement. A CSWA certified vineyard may not currently include a water conservation practice but is working towards including that practice in the future.

Costs vary by program. Most programs, with the exception of CSWA, have an initial cost for the application and certification process. Fees are typically per acre (vineyard) or per gallon of wine produced (winery). All programs have an annual cost for continued certification that varies by winery or vineyard size. These are generally between $500 and $3,000. A third-party audit is required at different intervals, between 1 and 3 years, with reported costs between $500 and $2,000 depending on the size of the operation.

Every program certifies other practices in addition to water conservation. This includes practices such as pest management, fertilizer, soil health, social equity, ecosystem, fire, air quality, and climate. In short, certification programs offer their members a wide scope of certified practices in addition to water conservation. These additional practices are developed, in part, to meet consumer expectations and buyer specifications. Since the programs differ in the practices certified the costs for certification are not directly comparable.

All programs have a presence in Napa County. Fish Friendly Farming has the most certified area of vineyards because it provides regulatory compliance for the regional water board irrigated lands regulatory program. Napa Green and CSWA have around 7,200 and 15,500 acres certified, respectively. SIP certified has a smaller presence in Napa County but has certified over 46,000 acres in California, Oregon, and Michigan. Similarly, CWSA and Fish Friendly Farming have a broader certification program in California with over 200,000 acres certified each.

The winery and vineyard certification matrices were developed to provide a quick summary comparison of selected existing programs in Napa County. The NCGSA staff and its consultants will be working to develop and implement the certification program and similar elements of the GPR workplan.

Summary and Next Steps for GPR Implementation

For a certification program to be successful and support GPR implementation it must result in the adoption of new water conservation practices (and expansion of existing practices that are widely adopted), verification of water conservation, and demonstrate progress towards reducing groundwater pumping.

The existing certification programs have different standards, practices, water conservation, and verification/audit methods. As described in this TM, NCGSA staff and its consultants will be developing a certification program document that outlines the minimum requirements to support GPR implementation. This will include a concurrent evaluation of incentives to encourage participation as well as outreach and engagement for certification programs and GPR program implementation.

The NCGSA staff and its consultants will be working on the following elements:

1. Certification program document (through Q3 2024)
2. Certification program incentives (as part of broader GPR and GSP implementation incentives through Q2 2025)
3. Certification program education, outreach, and partnership/rollout (through Q2 2025)

The Napa County TAG and GSA Board will continue to be provided with periodic updates on program development to provide feedback and direction on program development. NCGSA staff and its consultants will continue to engage substantial stakeholder and public input and direct outreach to support program development. Any program, incentives, or other implementation elements would be subject to TAG and ultimately Board approval through the defined public process.

[*Matrices are included in fig. 1 and fig. 2 on subsequent pages*]

Figure 1. Vineyard Certification Matrix

	California Sustainable Winegrowing Alliance	Fish Friendly Farming	Napa Green	SIP Certified
Vineyard Certification?	Yes	Yes	Yes	Yes
Costs				
Certification Cost (Up Front)	0	95% of vineyards in Napa have already paid	$800-$1,200	$500/$1,000
Certification Cost (Annual)	$250-$2,500	0	$450-$3,100	$5-$20/acre
Additional Costs	$250 for vineyard management companies	$2.00 per vineyard acre for direct access to the FFF data base for managers to see their required actions and timelines	0	0
Third-Party Audit	$650-$2,000+, depending on size	$500 every 5 years	$500-$2,000+ every 3 years, depending on size	$100 - $2,000+ annually, depending on size and Cycle type
Water Conservation Practices				
Distribution Uniformity Testing	Yes	Yes	Yes	Yes
Metering	Yes (category 3)	Yes	Yes	Yes
Soil Moisture Monitoring	Yes	Yes	Yes	Yes
Plant Moisture Monitoring	Yes	Yes	Yes	Yes
Erosion Control	Yes	Yes	Yes	Yes
Water Source Documenting	No (auditors check data collection methods, and site specific efforts are made to minimize negative impacts on watershed issues)	Yes	Yes	Yes (wells are mentioned several times; when a well isn't used, source water is identified so backflow prevention can be implemented)
Low-Volume Irrigation (e.g., drip)	Yes	Yes	Yes (baseline)	Yes
Water Conservation for Replanting	No	Yes	Yes	No
Cover Cropping	Yes	Yes	Yes	Yes
Verification Process				
Third Party Verification?	Yes	Yes	Yes	Yes
Report Metered Water Use?	Yes	Surface water diversions are reported to the State Water Board	Yes	Yes
Verification Frequency	Annual	5 years	Annual	Annual
Other Notes	Must rank category 2 for 85% of 148 practices; 60 required practices; main costs from annual audit	Certified by National Marine Fisheries Service and County Agricultural Commissioner; annual online audits	Interim annual desk audits; third-party audit every 3 years	Third-party desk audit annually; Third-party onsite visit every 3 years
Napa County Presence				
Acres Certified	15,500	40,000 (100k including roads, creeks, etc.)	6,000 (14,000 acres including properties)	
Vineyards Certified	260	1,100	62	
California Presence				
Acres Certified	204,000	224,000	6,000	46,000+ (CA, OR, MI)
Vineyards Certified	2,247	2,000	62	400+
Other Program Certifications				
Pest Management	Yes	Yes	Yes	Yes
Applied Nitrogen	Yes	Yes	Yes	Yes
Social Equity	Yes	Yes	Yes	Yes
Forest/Fire Management	No (not required, but provide resources for fire preparedness and practices to help with fire prevention)	No (in process of developing separate Fire Risk Reducion certificaiton in cooperation with CAL FIRE)	Yes	No
Ecosystem Management	Yes	Yes	Yes	Yes
Air Quality and Climate Protection	Yes	No (separate Climate Adaptation certification)	Yes	Yes
Other Program Considerations				
Educational Tools/Events	Yes	Yes	Yes	Yes
Process for Program Updates	Annually reviewed	Scientific review	Bi-annual update; Updates more frequently as needed	Annual Review; 5-year Peer Review

Figure 2. Winery Certification Matrix

	California Sustainable Winegrowing Alliance	Fish Friendly Farming	Napa Green	SIP Certified
Winery Certification?	Yes	No	Yes	Yes
Costs				
Certification Cost (Up Front)	0	NA	0	$500/$1,000
Certification Cost (Annual)	$300-$5,000	NA	$550-$3,850	$0.002-$0.03/gallon; 25% discount if combined with Vineyard certification
Additional Costs	$100 discount for certifying both winery and vineyard	NA	Integrated resource audit year 1, 6, 12,... $1,350-$2,250; abbreviated resource audit year 3, 9, 15,... $750-$1,500	0
Third-Party Audit	$650-$2,000+ per year, depending on size		$500-$2,000+ every 3 years, depending on size	$100 - $2,000+ annually, depending on size and Cycle type
Water Conservation Practices				
Waste Water Management	Yes	NA	Yes	Yes
Metering	Yes (category 3)	NA	Yes	Yes
Sanitation	Yes	NA	Yes	Yes
Landscaping	Yes	NA	Yes	Yes
Process Water Reuse	Yes	NA	Yes	Yes
Water Timing (off-peak hours)	Yes	NA	Yes	Yes
Verification Process				
Third Party Verification?	Yes	NA	Yes	Yes
Report Metered Water Use?	Yes	NA	Yes	Yes
Verification Frequency	Annual	NA	Annual	Annual
Other Notes	Annual self-assessment; 4 categories; must rank category 2 for 85% of 108 requirements; 41 required practices; main costs from annual audit	NA	Annual desk audit; third-party audit every 3 years; Winery Irrigation Resource Assessment is an "Upfront Cost" because it is required to be certified.	Third-party desk audit annually; Third-party onsite visit every 3 years
Napa County Presence				
Wineries Certified	44	NA	90	
California Presence				
Wineries Certified	171	NA	90	5 (CA & MI)
Other Program Certifications				
Energy or Greenhouse Gas Reporting	Yes	NA	Yes	Yes
Social Equity	Yes	NA	Yes	Yes
Labor/Employee Practices	Yes	NA	Yes	Yes
Sustainable Purchasing	Yes	NA	Yes	Yes
Air Quality and Climate Protection	Yes	NA	Yes	Yes
Other Program Considerations				
Educational Tools/Events	Yes	NA	Yes	Yes
Process for Program Updates	Annually reviewed; regulatory compliance	NA	Annually reviewed	Annual Review; 5-year Peer Review