



Institute for Conservation Advocacy, Research and Education

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August 28, 2016

ICARE Comments On: General Waste Discharge Permit and DEIR

Deadline: September 14, 2016

To:
San Francisco Regional Water Quality Control Board, WB
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Italic: WB

ICARE: Underline/bold

*General Waste Discharge Permit for Vineyard Properties in the Napa River and Sonoma Creek
Watersheds*

Existing and potential discharges of waste from vineyard properties including storm runoff from vineyards and unpaved roads that contain elevated levels of sediment, pesticides or nutrients or excess runoff that may cause a condition of pollution or nuisance due to erosion or flooding. This Order also regulates vineyard properties with on-channel reservoirs that receive treated wastewater. Only a few such reservoirs are known to occur within the Sonoma Creek and/or Napa River watersheds. Discharges from these reservoirs also are defined as “waste discharges.”

According to Order No-R2-2016XX

16. Vineyard Properties constitute about 162,000 acres, or 40 percent of the total land area in the Napa River and Sonoma Creek watersheds. Vineyard Properties include: planted grapevines, which cover approximately 59,000 acres; farm buildings; adjacent open-spaces under natural vegetation cover; and property-wide road networks - most of which are unpaved. The 59,000 acres of planted grapevines correspond to about 16 percent of the total land area in these two watersheds.

- 1. How many acres of hillside vineyards >5% slopes are there in Napa County?**
- 2. This Permit should cover cave tailing that are held in large deposits for years and/or are spread out on the vine rows, often times not fostering germination of cover crop.**
- 3. The Division of Mines and Geology doesn't govern the proper disposal of cave material. ICARE has seen for years no BMPs for mine tailings. Often the public reports that there are no BMPs on mine tailing to Napa County Planning and Development.**
- 4. Add herbicide waste runoff to this permit, as evidence by glyphosate (Roundup) showing up in detectable levels in wine, tap water and groundwater in Napa County. See Label GMO's press release attached I herein.**

5. Anti-Degradation

30. State Water Board Resolution 68-16 (“Statement of Policy with Respect to Maintaining High Quality of Waters in California”) requires whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality must be maintained. Resolution 68-16 only allows change in the existing high quality if it has been demonstrated to the Water Board that the change is consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial uses of such water, and will not result in water quality less than that prescribed in the

policies. Resolution 68-16 further requires that discharges meet WDRs which will result in the best practicable treatment or control of the discharge necessary to assure that (a) pollution or nuisance will not occur and (b) the highest water quality consistent with the maximum benefit to the people of the State will be maintained. Resolution 68-16 incorporates the federal “anti-degradation” policy (Cal. Code Regs., tit. 40, § 131.12). This Order is consistent with these policies because its implementation will result in improved water quality and achievement of TMDL sediment load allocations.

43. The Water Board will review a third-party program’s performance to ensure that adequate Farm Plans are being consistently prepared by Dischargers subject to this Order and that all monitoring and reporting requirements are being met.

The Anti-Degradation Resolution 68-16 insures that good quality water be maintained. Such is the case of Milliken Creek, Napa River, where the water quality is the ‘best water’ available for drinking. Yet industrial vineyard development pending at the headwaters of Milliken creek, will destroy the water quality of Milliken Creek. See attachment II by Joy Eldridge, Napa City Water Manager, letter attached herein. It is unclear how this Permit will protect ‘good quality water’ with the least accurate monitoring protocol/photo-points. If the WB is interested in abiding by Resolution 65-16, then the WB would require reliable, best scientific methods available to determine sediment pollution to the waters of the State. If the discharges uses turbidity monitoring, it is a reliable best management tool informing the discharger that BMPs are or aren’t working. Turbidity monitoring is feasible. The DEIR and Permit should discuss this monitoring tool to achieve performance standard verification.

Safe Drinking Water Act

44. It is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring Dischargers to meet water quality objectives, as applicable, designed to protect human health and ensure that water is safe for domestic uses.

For the last two years Napa City, and Calistoga have not met the standards of the Safe Drinking Water Act and have had fines for exceeding contaminants of trihalomethane. Vineyards are a significant cause of this, as they discharge nutrient to water of the state and therefore are a significant environmental cause of algae blooms in the water supply forcing the use of chlorine. The bi-produce of chlorine is trihalomethane. The public wants reliable and best available scientific monitoring. Why won’t the WB require turbidity monitoring in the GWDR Draft Waste Discharge Requirements for Vineyard Properties Order No. R2-2016-XX ?

1. Soil erosion in the farm area: soil loss rate \leq tolerable soil loss rate. The tolerable soil loss rate is as defined by the USDA Soil Conservation Service (1994).

Omission: Sediment runoff from mounds of dirt/debris is storage and moved off vineyard properties (as a result of cave mining and landslides) on to Napa County road shoulders allowed by Napa County Public Works.

1. *Storm runoff from a new Hillslope Vineyard: a) peak storm runoff in 2-, 10-, 50-, and 100-year (24-hour duration) rainfall events following vineyard development shall not be greater than pre-development peak storm runoff; and b) shall not cause or contribute to downstream increases in bed and/or bank erosion (as specified in Attachment A).*

Erosion Control Plans escape CEQA when it comes to evaluating the environmental impacts of sediment basins necessary to capture and hold vineyard runoff whether it be during a 2, 10, 50 and 100, storm event. It will take many times the acres of the vineyard in order to prevent runoff (spills) into waters of the State. Because Farm Plans are secret and not available to the public, the developer along with the third party may or may not model this impact and there are no performance standards for this feature. The amount of land necessary to capture and hold runoff/sediment from a 100 acre hillside vineyard development will cause environmental harm not mitigated for in the DEIR and the GWDR creates a safe haven for the polluters to work privately with third parties away from the public scrutiny defeating the purpose of CEQA.

1. *Monitoring and Reporting*

- a. *Discharger shall conduct monitoring and site inspections of the entire Vineyard Property to document that discharge control actions implemented consistent with the Farm*

4

Plan are in-place and functioning properly such that the performance standards in B.1 through B.7 are being met.

1. *Farm Water Quality Protection Plan*

- a. *The Farm Water Quality Protection Plan (Farm Plan) must include a comprehensive inventory of vineyards, roads, reservoirs, and waterways located throughout the Vineyard Property to document the BMPs already in-place and/or to prescribe additional BMPs that shall be implemented and maintained to comply with all conditions of this order, including but not limited to, attainment of all applicable performance standards for discharge, and also to document the actions implemented to protect and/or enhance stream-riparian habitat complexity and connectivity. The Farm Plan also must include a specific time schedule and corresponding milestones to measure progress toward attainment of*

the performance standards, and a monitoring plan to document BMP implementation and assess effectiveness.

Add: The FP inventory shall include; sediment/tailings locations resulting from cave development; stream identification for protection on class I, II, III and IV; including hydrology arrows showing the flow directions.

2. Annual Report

- a. *The Discharger shall submit an Annual Compliance Form to the Water Board. The Annual Compliance Form shall certify that the facility meets the conditions of this Order and that the Farm Plan is being implemented according to the schedule established in the Farm Plan. A sample Annual Compliance Reporting Form is included in Attachment E (Table E-1).*

This relies on self-reporting by the discharger, therefore, the Annual Report shall be a transparent document available to the public demonstrating that the discharger is within allowable limits to pollute i.e., Water right permits are made available through GIS technology by the State Water Resource Control Board, SWRCB. However, the Annual Compliance Form should show the turbidity monitoring results to truly prove that the BMPs are effective.

ATTACHMENT A

California Regional Water Quality Control Board San Francisco Bay Region

General Waste Discharge Requirements

Order No. R2-2016-00XX Farm Plan Requirements

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1

This Order requires Dischargers to prepare and implement a Farm Plan that controls sediment discharges and storm runoff increases from vineyards and roads, and also controls pesticide and nutrient discharges from vineyards, as needed to attain the performance standards described in

2

this attachment. Once the Farm Plan has been Certified by an approved Third-Party Program,

3

an approved Qualified Professional, and/or by Water Board staff, a copy of the Farm Plan shall

be kept at the Vineyard Property and be available for review by Water Board staff upon request. The process for approval of a Third-Party Program and/or a Qualified Professional is as specified in Attachment C to this Order. Except in cases of an unauthorized discharge or emergency circumstances, Water Board staff will typically provide Dischargers a minimum of 72 hours advance notice prior to inspection. Only Water Board staff, or other individuals authorized by the Discharger will inspect the Vineyard Property.

Add: Herbicide discharges

2. Base Map

The base map for the Farm Plan shall include the entire Vineyard Property and may be an aerial photograph, topographic map, LiDAR derived shaded relief map, Google Earth image, or

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The “Farm Plan” documents natural features, developed areas, and best management practices (BMPs) implemented to achieve applicable performance standards for discharge. Its scope and contents are as defined herein.

2

“Certified” is defined as the Farm Plan being complete, and upon its full implementation that the Vineyard Property would achieve all applicable performance standards for discharge.

3

A “Qualified Professional” is defined to include a California registered professional in a discipline associated with erosion and sediment control (e.g., professional engineer, licensed geologist, or certified professional in erosion and sediment control).

4

A “Vineyard Property” is defined by a parcel or contiguous parcels under the same ownership, where grapevines are planted on part of the property.

Draft Waste Discharge Requirements for Vineyard Properties Order No. R2-2016-XX

equivalent that depicts features at 1:6000 or larger scale (a 1:2400 scale base map is recommended so that smaller features including stream channels, riparian corridors, vineyard drainage structures, reservoirs, roads, etc. can be discerned and delineated accurately). Topography shall be delineated to distinguish the land areas where the average ground surface slope is < 5 percent, 5-to-30 percent, and those areas > 30 percent, and also shall include 5-to-40 foot (consistent with US Geological Survey 7.5 minute quadrangle conventions), or higher resolution contour intervals.

The Vineyard Property base map(s) shall delineate the following:

- *Property boundaries;*
- *Parcel boundaries and identifiers (APN numbers);*
- *Geomorphic terrane units (see Water Board, 2009, pp. 19-21) and/or soil series (with*
- *Boundaries of vineyard blocks (showing row direction, slope, and block ID);*
- *Engineered drainage structures (e.g., subsurface drainage systems, underground outlets, diversion ditches, lined waterways or outlets, etc.);*
- *Vineyard avenues;*
- *Non-vineyard land uses (grazing areas; winery area, etc.);*
- *Farm buildings, agrichemical handling and mixing sites, agrichemical storage facilities, and equipment yards and/or staging areas;*
- *All channels including Class I, II, and III, and also human-made waterways/ditches;*
- *Water wells and streamflow diversion structures;*
- *Springs and seeps;*

Add: Hydrologic arrows showing the flow directions to Base Map for surface water and groundwater

- *Reservoirs, ponds, and lakes;*
- *All roads and road crossings, with road surface type (paved or unpaved) and crossing type (culvert, bridge, ford, etc.) also delineated; and*

5

- *Known active or potentially active landslides , soils with high erosion hazards, and known active or potentially active gullies.*

Add: caves and cave tailings storage or deposition:

g) Nutrient management: Best management practices to guide nutrient applications (e.g., fertigation, cover crops, soil amendments, plant and/or soil testing) shall be implemented as needed to protect water quality.

The Napa River is listed for nutrient pollution since 1988. What is the nutrient monitoring that will be done to make sure this GWDR/FP is tracking dischargers limits to pollute?

- ***Bed and Bank Erosion:** the performance standard for bed and bank erosion downslope of a Hillslope Vineyard is evaluated and achieved as follows:*
- *1. Review available information including: property land-use and natural disturbance history; vineyard design and management practices; natural and engineered drainage features; and soil, geology, landslide, and topographic maps*

Draft Waste Discharge Requirements for Vineyard Properties Order No. R2-2016-XX

12

2. Conduct a field survey to evaluate and document channel condition, beginning at the point(s) of discharge from the Hillslope Vineyard along overland flow pathways and/or into the receiving channel(s), downstream to the first response reach (e.g., gravel-bedded channel reach with a slope ≤ 0.02), and/or to the property boundary (whichever is encountered first).

As technically and economically feasible, at sites where a Hillslope Vineyard discharges into an
13

Unstable Area, as a precaution the Discharger shall implement additional BMPs to attenuate Vineyard Property storm runoff. For example, these BMPs may include establishment of no-till cover crops, application of composted mulch, soil amendments to increase organic matter content (e.g., crop residues, manure, and/or compost), installation of level-spreaders, disconnecting existing drainage pipe systems, and/or construction of detention basins. Also, as technically and economically feasible, the Discharger shall implement soil bioengineering projects to control erosion in actively eroding gullies and landslides, and also in channel reaches that are down-cutting and/or head-cutting. Example soil bioengineering projects are described in in Marin Resource Conservation District (2007).

Add: year around cover crop

The sediment basin necessary to capture and hold a 50 acre vineyard during a 2, 10, 50 and 100, storm event will take many times the acres of the vineyard in order to prevent spilling/discharging into waters of the State. What kind of BMPs need to be developed for this?

4. Required Elements of the Farm Plan

The Farm Plan shall include all of the following elements:

- . *a) Base map(s) (as specified above);*
- . *b) Conservation practices to control discharges of agri-chemicals;*
- . *c) Conservation practices to control Farm Area sediment discharge and to attenuate peak runoff;*
- . *d) Conservation practices to reduce sediment discharge and attenuate peak runoff associated with property access roads;*
- . *e) Conservation practices to protect and/or enhance stream-riparian habitat complexity and connectivity;*

- f) *Water quality controls for reservoirs that receive recycled wastewater, and which may discharge to surface waters of the State (as applicable); and*
- g) *Photo point monitoring.*

Add: FPs will be made available to the public by uploading to the WB's website the GWDR GIS base map, i.e. SWRCB's water right base map.

Rationale: The public has a right to know that dischargers are complying with the Clean Water Act (CWA) and the Porter Cologne Act (PCA). It has taken 28 years to get regulations on non-point pollution. This wait has cost the public valuable public trust losses such as swimming, fishing and recreation in the Napa River and Sonoma Creek. Water quality and quantity are plummeting to the point that the Napa River is no longer navigable in the fresh water reaches of the River. This is a loss to generations now and in the future. If the WB persists in allowing dischargers of pollution to self monitor with NO public transparency of FPs and their BMPs are secret, compliance of the GWDR may be arbitrary and capricious.

Where the deadline for the achievement a performance standard is later than the date of completion of the Farm Plan (Table 1), the Farm Plan shall include a time schedule for achievement of the performance standard, and milestones to gauge incremental progress.

Agri-chemical controls

The Farm Plan shall describe the BMPs that are in-place and those that will be implemented to control discharges of agri-chemicals including all nutrients and pesticides. This element of the Farm Plan shall describe practices for safe storage, mixing, and loading of agri-chemicals, and/or to protect against discharges to surface and groundwater that could contribute to a violation of water quality standards. Specifically this element of the Farm Plan shall be developed and implemented to attain the performance standards for pesticide management and nutrient management as specified above. Performance standards for nutrient management and pesticide management must be achieved by the date of completion of the Farm Plan, which for an existing Vineyard Property is within three years of adoption of this Order, and for a new Vineyard Property, is within three years of adoption of this order or by the completion of vineyard construction

(whichever date is later) .

Add: Herbicides/Round-up/glyphosate

16

Fully Protected Stream-Riparian Corridors

What is the evidence based practice to substantiate where the WBs claim that ‘Fully Protected Stream Riparian Corridors’ will be established according to this:

17

Where a Vineyard Property has: a) Established and maintained stream setbacks , as measured from the top of bank, along all unconfined alluvial channels that are on average ≥ 1.5 times then bankfull width (see Table 2 for calculation of setback width as a function of watershed area); and/or

For determining stream setbacks why not use stream classifications consistent with all resource agencies such that setbacks are described and defined based on biological needs pertaining to Class I, II, III and IV streams? Additionally, confined streams need restoration. Rutherford Dust and Oakville to Oak Knoll are restoration projects underway on confined reaches of the Napa River. FP should have setback provisions for confined stream channels also. One of the causes of incision/confined channel is removal of vegetation from the riparian area.

b) Has implemented active and/or passive restoration measures through participation in a reach- based habitat enhancement project, including the Rutherford Napa River Restoration, the Oakville to Oak Knoll Napa River Restoration, the Carneros Creek Adaptive Management Plan, and/or any other reach or tributary scale stewardship plan, that has been reviewed and approved by the Water Board, the setbacks established under these plans are considered sufficient for the Vineyard Property to be considered to have Fully Protected Stream- Riparian Corridors.

Delete: ‘Fully Protected-the WB has NO evidence that their ‘approved’ FPs are protecting listed species and water quality.

Water quality controls for reservoirs that receive recycled wastewater, and which may discharge to surface waters of the State (only as applicable)

The Farm Plan shall describe the BMPs that are in-place and/or that will be implemented to protect water quality in downstream water bodies as related to operation and maintenance of reservoirs that receive recycled water, and which may discharge to surface waters of the State. This element shall detail operation and maintenance activities of these reservoirs, design overflow conditions, and the drainage location(s) during overflow and/or maintenance. The Discharger shall consider the timing, magnitude, and duration of water released from these reservoir(s) to downstream waterbodies including minimizing the discharge of recycled water. The Discharger shall implement erosion and sediment control BMPs to prevent potential erosion impacts to creeks at the point of discharge and downstream of the discharge. The discharger shall take measures to minimize impacts on downstream riparian areas including as applicable eradicating non-native species in downstream riparian areas within the Vineyard Property, augmenting gravel and wood supply to downstream channel reaches, and/or riparian habitat enhancement. The Farm Plan also shall include appended Water Rights permits or licenses that apply to the reservoir and describe management measures and reporting measures to ensure

16

Dischargers that achieve this performance standard (as applicable) are eligible to enroll under Tier 1. Vineyard Properties that do not include unconfined alluvial channels, also can qualify for enrollment under Tier 1 upon full implementation of a Certified Farm Plan.

17

No vineyard avenues, roads, pipelines, pumps, or vineyard rows can be maintained within the setback, which is measured perpendicular to the channel beginning at the top of the bank.

18

Benefits of enrollment in Tier 1 include exemption from the requirement to perform BMP effectiveness monitoring (as specified in Attachment E), reduced reporting requirements, and also being formally recognized by the Water Board as a Water Quality Steward.

19

These include reservoirs constructed on-channel, and/or off-channel reservoirs that include spillways where subsequent to overflow there would be a discharge to surface waters of the State.

Add: include screens on reservoir overflows to prevent non-native fish from entering streams causing mortality to native fish and disruption of the natural eco-system.

Add: State that compliance with Department of Fish and Wildlife, DFW, Code 5937 shall be demonstrated in the FP as keeping the fish in good condition and by-pass flows are being met. Additionally, monitoring fish by-pass flows and reporting this shall be in the FP.

Order No. R2-2016-00XX MONITORING AND REPORTING REQUIREMENTS

Guidance regarding establishment and protocols for photo- point monitoring are provided in OWEB (2007) and NRCS (2009).

Photo monitoring of Farm Plans, FP, for sediment discharge to waters of the State is not a reliable nor timely monitoring methodology to determine if sediment /turbidity is harming the public trust and/or special status species such as Chinook & steelhead. Photo monitoring does not provide the public with the best available science in determining whether the discharger is meeting water quality standards of the sediment, nutrient and pathogen TMDL. The WB should require turbidity monitoring.

. *Group Monitoring Program Option: To assess effectiveness of BMPs implemented to*

36

achieve the performance standards for storm runoff from Hillslope Vineyards , the Group Monitoring Program shall:

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The stream-riparian restoration measures are only applicable where the Vineyard Property includes unconfined alluvial channels (see Attachment A for details).

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Within the project area, in almost all cases, vineyard storm runoff estimates have been based solely upon modeling. Vineyard BMP monitoring is intended to evaluate whether the key assumptions of these models are valid, and also to confirm that results are accurate.

Where soil infiltration values in vineyards (as specified below) are similar or greater to values in paired sites under natural vegetation cover, the performance standards for storm runoff from Hillslope Vineyards shall be considered achieved.

Draft Waste Discharge Requirements for Vineyard Properties Order No. R2-2016-XX

Characterize Hillslope Vineyard soil infiltration capacity: *characterize Hillslope Vineyard soil*

37

infiltration capacity as a function of geomorphic terrane type, slope class, and BMP type. This characterization can be developed from a stratified sample of vineyard properties. At a minimum, five vineyard properties in each defined geomorphic terrane type (Water Board, 2009, pp. 19-21) must be characterized; the alluvial fan and valley terrane type may be further subdivided based on the texture, age, or alluvial depositional environment. The field sampling protocol should be guided by Nimmo et al. (2009) or Bagarello et al. (2004). Other field sampling protocols also may be proposed for review and approval. The investigation shall be conducted under the supervision of a professional geologist or a professional engineer licensed to practice in the State of California, who has professional experience in conducting infiltration and/or groundwater testing programs.

Sample location and density: at a minimum, field saturated hydraulic conductivity (FSHC) shall be measured at ten randomly selected sites located within the inter-rows of each vineyard block. If the coefficient of variation (CV) for measured values of FSHC is > 100%, then additional sites shall be sampled until the CV is ≤ 100%. At Hillslope Vineyard sites, FSHC also shall be measured at a minimum of ten undeveloped hillslope sampling sites under natural vegetation cover to characterize pre-vineyard development site conditions. If the coefficient of variation (CV) for measured values of FSHC is > 100%, then additional sites shall be sampled until the CV is ≤ 100%.

Also, at all properties that are sampled, a soil profile description must be prepared in each mapped soil series that is planted in vineyard. The soil profile description shall be developed based on sampling and description of one-or-more soil pits, the locations of which shall be referenced. At Hillslope Vineyards, in addition to the description of the soil profile in each vineyard block, a soil profile description also must be prepared to characterize all of the delineated soil series under natural vegetation cover where FSHC is measured. Soil profile descriptions should be prepared by an experienced professional soil scientist.

Within two years of adoption of this Order, a study plan shall be submitted to the Executive Officer for review and approval. Within five years of adoption of this Order, a final report shall be submitted to the Water Board that presents and evaluates the field-saturated hydraulic conductivity and soil profile data. The report also shall evaluate the effectiveness of BMPs with regard to soil infiltration capacity. Where geometric mean values of soil infiltration capacity in Hills-

lope Vineyards are statistically similar or significantly greater than values at paired sites under
37

natural vegetation cover; the “Infiltration is the movement of water into soil. There is a maximum rate at which the soil in a given condition can absorb water; this upper limit is called the infiltration capacity. Water that does not infiltrate, runs quickly over the ground surface, whereas water entering into the soil moves much more slowly underground. The soil, therefore, plays a major part in determining the volume of storm runoff, its timing, and its peak rate of flow.” (Dunne and Leopold, 1978, p. 163) Soil infiltration capacity is sensitive to management practices and vegetation cover changes, and as such provides a useful basis for evaluation of the effects of vineyard development and management practices on storm runoff from Hillslope Vineyards performance standards for Hillslope Vineyard storm runoff (as related to BMP implementation to attenuate runoff) shall be considered achieved. Where geometric mean values for soil infiltration capacity in vineyards are significantly lower than in the paired sites under natural cover, consultation with a Qualified Professional and/or approved Third-Party Program is required under this Order to direct implementation of refined and/or supplemental BMPs to further attenuate storm runoff peak, and six years thereafter soil infiltration capacity shall be re-evaluated as specified above.

Add: consultation shall be with a State certified hydrologist/geologist.

ATTACHMENT E

California Regional Water Quality Control Board San Francisco Bay Region

General Waste Discharge Requirements

Order No. R2-2016-00XX MONITORING AND REPORTING REQUIREMENTS

This Monitoring and Reporting Program (MRP) is issued pursuant to Order No. R2-2016- 00XX (Order) and California Water Code (CWC) section 13267. The Discharger shall not implement any changes to this MRP unless, and until, a revised MRP is approved by the Executive Officer. To allow the Water Board to evaluate compliance with the terms and conditions of the Order, this MRP requires that monitoring, sampling, and record-keeping be conducted by vineyard property owners and operators (hereinafter, Dischargers).

This MRP requires preparation of an Annual Report of compliance, to be submitted to the Water Board by November 15 of each year. The Annual Report shall document pre-rainy season preparations, individual monitoring data (if not participating in a group monitoring program), compliance schedule progress, an evaluation of the effectiveness of management practices, and records of any inspections where a water quality problem was identified, as well as the management practices taken to correct these problems.

This relies on self-reporting by the discharger, therefore, the Annual Report shall be a transparent document available to the public demonstrating that the discharger is

within allowable limits to pollute i.e., Water right permits are made available through GIS technology by the State Water Resource Control Board, SWRCB. However, the Annual Compliance Form should show the turbidity monitoring results to truly prove that the BMPs are effective.

DISCHARGER TIER REQUIREMENTS

The extent of water quality monitoring and reporting required of each Discharger is a function of the Discharger's designated tier (as defined in Order No. R2-2016-00XX). Tiers established under this Order relate to the anticipated effort by Water Board staff, per incremental improvement in water quality. The tier-specific requirements are as follows:

33

A. Tier 1 Dischargers (Stewardship Tier): 1. BMP Implementation Monitoring

Photo-points provide a qualitative indication of BMP performance and habitat and water quality conditions in receiving waters. Photo-points shall be established and monitored to document winter readiness, demonstrate annual maintenance practices and BMP implementation, and to document habitat and water quality conditions in receiving waters at and/or near points of discharge from the vineyard. Photo-points shall be numbered and depicted on maps contained in the Farm Plan (requirements and specifications for the Farm Plan are included in Attachment A). Photo-point records and field notes shall be

33

To qualify for the Stewardship Tier, a Vineyard Property must: 1) develop a Farm Plan that is Certified by an approved Third-Party Program or a Qualified Professional; 2) the Farm Plan must be fully implemented and have attained all applicable performance standards for discharge; and 3) (as applicable) effective management actions also must be implemented to protect and/or restore stream-riparian habitat complexity and connectivity (as described in detail in Attachment A, Fully Protected Stream-Riparian Corridors).

Add: if it is legal for the WB to delegate the FB development to a 'third party' a qualified professional and Third-Party Program shall include staff that are State Certified hydrologist/geologists.

Draft Waste Discharge Requirements for Vineyard Properties Order No. R2-2016-XX

appended to the Farm Plan. Guidance regarding establishment and protocols for photo-point monitoring are provided in OWEB (2007) and NRCS (2009).

2. Reporting

A letter certifying that: a) the Farm Plan has been fully implemented; b) the Vineyard Property has attained performance standards for discharge; and c) passive and/or active restoration mea-

34

asures have been implemented (as defined in Attachment A), must be submitted to the Water Board by an approved Third-Party Program or a Qualified Professional. Once every five years thereafter, a letter of recertification must be submitted.

B. Tier 2 Dischargers (Farm Plan certified by a Third-Party Program or a Qualified Professional):

Dischargers permitted under Tier 2 are required to perform BMP Implementation Monitoring, and as specified below also are required to perform BMP Effectiveness Monitoring.

- 1. BMP Implementation Monitoring: as specified under the requirements for Tier 1.*

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- 2. BMP Effectiveness Monitoring : Tier 2 Dischargers that include Hillslope Vineyards shall perform either:*
 - a) Property-specific monitoring of the effectiveness of vineyard BMPs implemented to achieve the performance standards for storm runoff (as specified below under the requirements for Tier 3); or*
 - b) Participate in a Group Monitoring Program as described immediately below. A Group Monitoring Program can be developed and administered by an approved Third-Party Program or a fee collection group. All dischargers who have completed a Farm Plan that has been Certified by an approved Third-Party Program or Qualified Professional are eligible to participate in a Group Monitoring Program subject to terms and conditions established by the organization conducting the Group Monitoring Program.*

- 3. Group Monitoring Program Option: To assess effectiveness of BMPs implemented to*

36

achieve the performance standards for storm runoff from Hillslope Vineyards , the

Group Monitoring Program shall:

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The stream-riparian restoration measures are only applicable where the Vineyard Property includes unconfined alluvial channels (see Attachment A for details).

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Within the project area, in almost all cases, vineyard storm runoff estimates have been based solely upon modeling. Vineyard BMP monitoring is intended to evaluate whether the key assumptions of these models are valid, and also to confirm that results are accurate.

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Where soil infiltration values in vineyards (as specified below) are similar or greater to values in paired sites under natural vegetation cover, the performance standards for storm runoff from Hillslope Vineyards shall be considered achieved.

24

Draft Waste Discharge Requirements for Vineyard Properties Order No. R2-2016-XX

Characterize Hillslope Vineyard soil infiltration capacity: *characterize Hillslope Vineyard soil*

37

infiltration capacity as a function of geomorphic terrane type, slope class, and BMP type. This characterization can be developed from a stratified sample of vineyard properties. At a minimum, five vineyard properties in each defined geomorphic terrane type (Water Board, 2009, pp. 19-21) must be characterized; the alluvial fan and valley terrane type may be further subdivided based on the texture, age, or alluvial depositional environment. The field sampling protocol should be guided by Nimmo et al. (2009) or Bagarello et al. (2004). Other field sampling protocols also may be proposed for review and approval. The investigation shall be conducted under the supervision of a professional geologist or a professional engineer licensed to practice in the State of California, who has professional experience in conducting infiltration and/or groundwater testing programs.

Sample location and density: at a minimum, field saturated hydraulic conductivity (FSHC) shall be measured at ten randomly selected sites located within the inter-rows of each vineyard block. If the coefficient of variation (CV) for measured values of FSHC is > 100%, then additional sites shall be sampled until the CV is ≤ 100%. At Hillslope Vineyard sites, FSHC also shall be measured at a minimum of ten undeveloped hillslope sampling sites under natural vegetation cover to characterize pre-vineyard development site conditions. If the coefficient of variation (CV) for

measured values of FSHC is $> 100\%$, then additional sites shall be sampled until the CV is $\leq 100\%$.

Also, at all properties that are sampled, a soil profile description must be prepared in each mapped soil series that is planted in vineyard. The soil profile description shall be developed based on sampling and description of one-or-more soil pits, the locations of which shall be referenced. At Hillslope Vineyards, in addition to the description of the soil profile in each vineyard block, a soil profile description also must be prepared to characterize all of the delineated soil series under natural vegetation cover where FSHC is measured. Soil profile descriptions should be prepared by an experienced professional soil scientist.

Within two years of adoption of this Order, a study plan shall be submitted to the Executive Officer for review and approval. Within five years of adoption of this Order, a final report shall be submitted to the Water Board that presents and evaluates the field- saturated hydraulic conductivity and soil profile data. The report also shall evaluate the effectiveness of BMPs with regard to soil infiltration capacity. Where geometric mean values of soil infiltration capacity in Hillslope Vineyards are statistically similar or significantly greater than values at paired sites under natural vegetation cover, the

37

“Infiltration is the movement of water into soil. There is a maximum rate at which the soil in a given condition can absorb water; this upper limit is called the infiltration capacity. Water that does not infiltrate, runs quickly over the ground surface, whereas water entering into the soil moves much more slowly underground. The soil, therefore, plays a major part in determining the volume of storm runoff, its timing, and its peak rate of flow.” (Dunne and Leopold, 1978, p. 163) Soil infiltration capacity is sensitive to management practices and vegetation cover changes, and as such provides a useful basis for evaluation of the effects of vineyard development and management practices on storm runoff from Hillslope Vineyards.

25

Draft Waste Discharge Requirements for Vineyard Properties Order No. R2-2016-XX

performance standards for Hillslope Vineyard storm runoff (as related to BMP implementation to attenuate runoff) shall be considered achieved. Where geometric mean values for soil infiltration capacity in vineyards are significantly lower than in the paired sites under natural cover, consultation with a Qualified Professional and/or approved Third-Party Program is required under this Order to direct implementation of refined and/or supplemental BMPs to further attenuate storm runoff peak, and six years thereafter soil infiltration capacity shall be re-evaluated as specified above.

3. Reporting

Following permit adoption, each year by November 15 all Dischargers must submit an annual compliance report that documents progress toward completion of the Farm Plan and progress toward attainment of the performance standards for discharge. The Annual Compliance Form is included as Table E-1 in this attachment.

C. Tier 3 Dischargers (Farm Plan developed independently):

1. BMP Implementation Monitoring: as specified under Tier 1.

2. BMP Effectiveness Monitoring:

Tier 3 Dischargers that include Hillslope Vineyards shall assess performance of vineyard erosion control and runoff attenuation BMPs, the discharger shall develop a property-specific characterization of the soil infiltration capacity (i.e., field-saturated hydraulic conductivity) in the vineyard. The field sampling protocol should be guided by Nimmo et al. (2009) or Bagarello et al. (2004). Other field sampling protocols also may be proposed for review and approval. The investigation shall be conducted under the supervision of a professional geologist or a professional engineer licensed to practice in the State of California, who has experience in infiltration and groundwater testing.

Sample location and density: at a minimum, field saturated hydraulic conductivity (FSHC) shall be measured at ten randomly selected sites located within the inter-rows of each vineyard block. If the coefficient of variation (CV) for measured values of FSHC is > 100%, then additional sites shall be sampled until the CV is \leq 100%.

At Hillslope Vineyard sites, FSHC also shall be measured at a minimum of 10 undeveloped hillslope sampling sites under natural vegetation cover to characterize pre-vineyard development site conditions. If the coefficient of variation (CV) for measured values of FSHC is > 100%, then additional sites shall be sampled until the CV is \leq 100%.

At all sites a soil profile description also must be prepared for each mapped soil series that is planted in vineyard. The soil profile description shall be developed based on sampling and description of one-or-more soil pits, the locations of which shall be referenced. At Hillslope Vineyards, in addition to the description of the soil profile in each vineyard block, a soil profile description also must be prepared to characterize the all of the delineated soil series under natural vegetation cover where FSHC is measured.

Within two years of adoption of this Order, a study plan shall be submitted to the Executive Officer for review and approval. Within five years of adoption of this Order, a final report shall be submitted to the Water Board that presents and evaluates the field-saturated hydraulic conductivity and soil profile data. The report also shall evaluate the effectiveness of BMPs with regard to soil infiltration capacity. Where geometric mean values of soil infiltration capacity in Hillslope Vineyards are statistically similar or significantly greater than values at paired sites under natural vegetation cover, the performance standards for Hillslope Vineyard storm runoff (as related to BMP implementation to attenuate runoff) shall be considered achieved. Where geometric mean values for soil infiltration capacity in vineyards are significantly lower than in the paired sites under natural

cover, consultation with a Qualified Professional and/or approved Third-Party Program is required under this Order to direct implementation of refined and/or supplemental BMPs to further attenuate storm runoff peak, and six years thereafter soil infiltration capacity shall be re-evaluated as specified above.

3. Reporting

Following permit adoption, each year by November 15 all Dischargers must submit an annual report that documents progress toward completion of the Farm Plan and progress toward attainment of the performance standards for discharge. The Annual Reporting Form and Schedule for Compliance are included as Table E-1 to this attachment.

Tier 3 Dischargers also must submit a completed Farm Plan (as specified in Attachment A) to the Water Board for review and approval in conformance with the schedule for compliance specified in Attachment A.

For Tier 1, 2 and 3 FPs:

In addition to photo-points add turbidity monitoring for reliable data reporting that the discharger is complying with the CWA and PCA. Turbidity is the best available science to protect waters of the state and insure that the anti-degradation regulations are being implemented in FPs.

All FPs must have public access for scrutiny of compliance with the CWA and the PCA, i.e. water right permits can be viewed on a base map (WRIMS) at the SWRCB. Secret FP documents held on the farm and the sole reporting by the discharger insures that water quality will continue to plummet and listed species will continue to be imperiled.

The Permit relies on annual self-reporting by the discharger, therefore, the Annual Report shall be a transparent document available to the public demonstrating that the discharger is within allowable limits to pollute i.e., Water right permits are made available through GIS technology by the State Water Resource Control Board, SWRCB.

ATTACHMENTS

Glyphosate in Napa Valley Groundwater: 3.3 Times Higher Than What is Allowed in European Drinking Water

Napa, CA., September 1, 2016

In a joint partnership, Label GMOs Napa County and the Napa County Green Party did what the U.S. government has not been doing-- tested local water supplies for glyphosate, the active ingredient in Roundup, the most commonly used herbicide in the world.

Although the Safe Drinking Water Act was originally passed by Congress in 1974 to protect public health by protecting drinking water and its sources, including rivers, lakes, reservoirs, springs, and groundwater wells, the federal government does not test for glyphosate.

"The Safe Drinking Water Act requires the testing for pesticides, and they do for about 200; however, none of them test for glyphosate," wrote Dr. Don Huber, Professor Emeritus of Purdue University, in an email on April 29th of this year.

Therefore, on July 6th, 2016, the groups took three water samples from three different water sources in the Napa Valley-- a sample from the Napa River, taken at the Oak Knoll bridge in Napa; a sample of municipal tap water from outside a home in Yountville, which gets its water from Rector Reservoir; and a sample of unfiltered well water from outside a home on Hedgeside Avenue in Napa. The groups shipped the samples via overnight mail to Microbe Inotech Laboratories in St. Louis, Missouri to be tested for glyphosate.

The results of these tests indicated that while the sample from the Napa River did not contain a detectable level of glyphosate (<0.05 parts per billion or ppb), and the sample of municipal water in Yountville contained only a small amount of glyphosate (0.091 ppb), the well water contained 0.729 ppb, which is lower than what is allowed in the United States at 700 parts per million but is higher than what has been shown to cause harm and three times higher than what is allowed in drinking water in the European Union at 0.1 ppb.

Scientists have shown that 0.1 ppb of glyphosate, also a patented antibiotic, kills beneficial gut bacteria, which make up 70% of the immune system in humans.(1) In addition, scientists have shown that only 0.1 parts per trillion of glyphosate stimulates the growth of breast cancer cells.(2)

Moreover, many other toxic compounds are used in these glyphosate-based herbicides. These other compounds have recently been shown by French scientist Gilles-Eric Seralini to be 1000 times more toxic than glyphosate alone, as well as endocrine and nervous system disruptors, making the current allowable levels of glyphosate too high to protect human health.(3)

Given the low levels of glyphosate that have consistently been found in municipal water supplies compared to the higher levels found in groundwater, Dr. Michael Antoniou, Geneticist at King's College in London, stated, "What we can detect in human urine has to be coming from food and man-made drinks, such as wine and beer, rather than tap water."

Glyphosate is sprayed in vineyards throughout Napa County in the winter when the vines are dormant. According to the California Department of Pesticide Registry, 50,417 pounds of glyphosate were applied on Napa County vineyards in 2013 alone, the last reported year.

In March 2016, Moms Across America reported that tests of ten wines from the California North Bay, including wines from Napa County, all contained varying levels of glyphosate. At the Acres USA Confer-

ence in 2011, Dr. Huber stated that the glyphosate is likely absorbed through the roots and bark of the grapevines and is then translocated into the leaves and grapes, making its way into the wine itself.

"These test results point to two environmental issues in Napa County-- herbicide use and over-extraction of groundwater, both primarily due to agriculture," said Amy Martenson, Co-coordinator for Label GMOs Napa County.

"It is not surprising that glyphosate would be in higher concentrations in groundwater versus surface water, because groundwater is stored in alluvial aquifers, similar to reservoirs, that do not get the flushing actions that surface flows get," stated Chris Malan, watershed advocate and Napa County Green Party Council Member. "As people extract more and more groundwater, the contaminants become more and more concentrated, which is devastating to future generations who will need to depend on clean aquifers."

Concerned about the amount of pesticide use in Napa County, the negative impacts to the environment and human health, and its likely connection to Napa County's high cancer rate, Label GMOs Napa County and the Napa County Green Party have called on local officials to reduce pesticide use by taking the following actions:

- 1 Ban the use of pesticides on all publicly-owned lands, except if needed to protect the health, safety, and welfare of its residents.
- 2 Direct the Agricultural Commissioner to use his authority under AB 947 to create school protection zones, banning pesticide use a quarter of a mile around all schools.
- 3 Make organic certification a criteria for all new Williamson Act contracts, which give tax breaks to landowners in the Agricultural Preserve and Agricultural Watershed to keep their land in agriculture; these contracts could be tied to organic farming practices but currently are not.

###

(1) Current Microbiology. The Effect of Glyphosate on Potential Pathogens and Beneficial Members of Poultry Microbiota In Vitro. (2013). Shehata, AA, Schrod, W, Aldin, AA, Hafez, HM, and M. Kruger.

(2) Food and Chemical Toxicology. Glyphosate Induces Human Breast Cancer Cells Growth via Estrogen Receptors. (2013). Thongprakaisang, S, Thiantanawat, A, Rangkadilok, N, Suriyo, T, and J. Satayavivad.

(3) International Journal of Environmental Research and Public Health. Co-Formulants in Glyphosate-Based Herbicides Disrupt Aromatase Activity in Human Cells below Toxic Levels. (2016). Defarge, Nicolas, Takacs, Eszter, Lozano, Veronica Laura, Mesnage, Robin, Spiroux de Vendomois, Joel, Seralini, Gilles-Eric, and Andras Szekacs.



MEMO

TO: David Morrison, County Planning Director
Brian Bordona, Principal Planner

FROM: Joy Eldredge, Water General Manager *Joy* *ref*

CC: Eric Robinson, KMTG
Mike Parness, City Manager
Michael Barrett, City Attorney
Jacques LaRoche, Public Works Director
Phil Brun, Deputy Public Works Director, Operations
Erin Kebbas, Water Quality Manager
Michael Hether, Senior Engineer

DATE: April 4, 2016

SUBJECT: Comments on Final EIR for Walt Ranch (#P11-00205-ECPA Project) and Need for Conditions to Protect Municipal Water Supplies within Milliken Reservoir Watershed

Introduction

The City of Napa (City) has reviewed the Final Environmental Impact Report (Final EIR) for the proposed Walt Ranch vineyard development project (Project), including responses to the City's comments on the Draft EIR. The City is concerned that the Final EIR does not adequately respond to the City's Draft EIR comments and fails to show that the Project's adverse water quality impacts will be less than significant with respect to the City's drinking water supply from Milliken Reservoir.

The City objects to the proposed Project's approval, unless the EIR is revised and recirculated to address the following items:

- Acknowledge that Water Code section 13260 obligates the Project to file a report of waste discharge with the San Francisco Bay Regional Water Quality Control Board, because nutrients and other wastes in its agricultural storm water runoff or irrigation drainage "could affect" — and indeed will affect — the high-quality municipal drinking water supply the City obtains from Milliken Creek, which runs through the Project site before entering the City's Milliken Reservoir less than a mile downstream.

- Acknowledge that the State Water Resources Control Board's (SWRCB) Antidegradation Policy, Resolution 68-16, prohibits the Project's agricultural storm water runoff or irrigation drainage from causing any degradation of receiving waters and requires best practicable treatment or control of nutrients and other wastes.
- Characterize water quality impacts as significant, or potentially significant, with respect to nutrients (e.g., nitrogen, phosphorous, sulfate compounds) and turbidity.
- Prescribe mitigation requiring water quality monitoring for nutrients and turbidity.
- Prescribe as mitigation best management practices (BMPs) that will be implemented to prevent nutrient and turbidity discharges.
- Prescribe a BMP modification requirement triggered by monitoring results showing that Project storm water runoff or irrigation drainage exceeds certain benchmarks for nutrients or turbidity.
- Prescribe as mitigation a condition of approval under which the Project's approval would be revoked for failure to implement the preceding mitigation measures requiring water quality monitoring and BMPs.
- Analyze an alternative project that omits vineyard development within the Milliken Creek watershed above the City's Milliken Reservoir.

Increasing Trend of Vineyard Development Impacts to Milliken Reservoir Drinking Water

Milliken Creek runs through the Project site before entering the City's Milliken Reservoir, which is less than a mile downstream from the Project. (Draft EIR Figure 4.6-3.) Milliken Reservoir is one of only two local water sources for 86,000 City residents and approximately 2,200 individual water service accounts in the unincorporated County. Milliken Reservoir provides the highest source water quality of all the City's water sources, followed by Hennessey Reservoir and then the State Water Project (SWP), which is imported from the Sacramento River, whose quality is significantly lower than that of Milliken and Hennessey reservoirs. The City faces increasingly stringent drinking water quality standards and customer expectations, and source water quality is among the factors guiding the City's use of its different water sources to provide public water service that is affordable, reliable and safe.

The Milliken Creek Watershed encompasses 6,141 acres above Milliken Reservoir, of which the City owns approximately 2,200 acres. The remaining acreage is under increasing vineyard development pressure because the Napa Valley floor is essentially fully developed, so vineyard developers are focusing their efforts on surrounding hillsides and watersheds. With the end of the Great Recession, new land development is progressing again. And the County has been approving vineyard development projects upstream from the City's municipal drinking water reservoirs in the mistaken assumption that erosion control plans prevent water quality impacts to the City's sources of drinking water supply.

For example, the County of Napa approved the 24-acre Kongsgaard vineyard project (#P14-00069-ECPA) on February 11, 2016, and approved the 344-acre Circle S vineyard project (#P06-01508-ECPA) on January 12, 2012. Those two vineyard development projects drain into Milliken Creek and thence into Milliken Reservoir and together encompass 368 acres, or 6 percent of the Milliken Reservoir watershed. The City participated in the California Environmental Quality Act (CEQA) review process for those projects, but the County

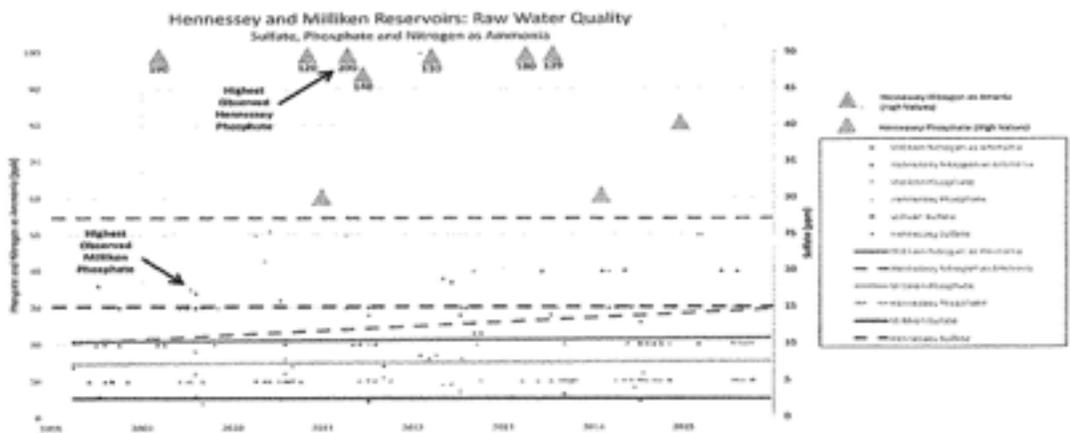
disregarded the City's concerns about water quality impacts and refused to prescribe City-proposed mitigation measures that included monitoring to confirm such impacts are avoided or reduced to a less-than-significant level.

The Final EIR for the Walt Ranch Project indicates that the County is poised to approve yet another vineyard development project — this one encompassing more than 177 acres in the Milliken Reservoir watershed — whose direct, indirect and cumulative effects on water quality will significantly degrade the City's highest-quality source of supply. The County's approval of the proposed Walt Ranch Project would increase the acreage of new vineyard project development to 545 acres upstream from Milliken Reservoir— approximately 9 percent of the watershed.

Meanwhile, federal and state drinking water quality standards continue to become more and more stringent. Caught between long-term trends of increasingly stringent drinking water quality standards, on one hand, and increasing County vineyard development approvals, on the other hand, the City and its water customers end up bearing the burden of degraded water quality from vineyard development and the need to carry out costly drinking water treatment upgrade projects. The County should prevent the shifting of vineyard development impacts onto the City and its public drinking water customers.

Substantial evidence shows such impacts are now degrading the City's Milliken Reservoir water source and already have been degrading the City's Hennessey Reservoir water source.

The watershed above Hennessey Reservoir encompasses 34,000 acres, of which the City owns 2,822 acres. The continuing trend of vineyard development in this much larger watershed (34,000 acres versus 6,141 acres) correlates with a trend of degrading water quality in Hennessey Reservoir — even with the County's erosion control planning program in place.



Milliken and Hennessey Reservoirs, P. 3, 2010001.dwg 07/10

Through the last decade the City's water division has observed and responded to an increase in algal growth within Lake Hennessey. Nutrient discharges from vineyard storm water runoff and irrigation drainage increases nutrient concentrations in Hennessey Reservoir, which increases algal blooms. Algae degrades drinking water quality by, among other things, causing unpleasant tastes and odors that cause customer complaints and erode customer confidence in safe drinking water quality. To fight reservoir algae, the City monitors growth and applies algacide treatments. Increased algal growth is attributed to the presence of nutrients such as phosphorous and nitrogen loadings from vineyard storm water runoff and irrigation drainage flow into Hennessey Reservoir, where they react with sunlight to cause algal growth.

The City has observed degradation of water quality in the Lake Hennessey watershed since the 1948 construction of this reservoir and is now in the process of designing upgrades to the existing drinking water treatment plant to address that degradation. (Callinan, 2013) The highest observed levels of phosphates in Lake Hennessey are over 5 times higher than the highest levels in Milliken Reservoir (200 ppb vs 35 ppb.) In addition the normal lowest observed levels of sulfates in Lake Hennessey are nearly 4 times higher than the normal observed levels in Milliken Reservoir (11 ppm vs 3 ppm.) The key observations of the graphed data is the consistency of the Milliken water quality showing, to date it has been untainted by nutrients and runoff from the surrounding hillsides, contrasting with the high levels of nutrients observed running into the Hennessey watershed.

Over the last 8 years, the City has seen a 400 percent increase in the level of effort required to treat Hennessey Reservoir water for algae problems, while annual customer complaints about resulting taste and odor problems continue to rise. The number of customer complaints when the City is serving Lake Hennessey water is nearly five times higher each year (from 13 to 65) than it was just 5 years ago. Water quality degradation from nutrients and algae is just the beginning. When algae dies, it consumes oxygen during the decomposition process and increases levels of total organic carbon (TOC). Reduced oxygen (called biological oxygen demand, or BOD) itself is water quality degradation. Increased concentrations of TOC, itself, is water quality degradation that, in turn, increases formation potential of disinfection byproducts during the City's drinking water treatment process, which also is water quality degradation. Since implementation of Stage II of the Disinfection Byproduct Rule (DBPR-II) the City has been required by the Safe Drinking Water Act to notify customers that levels of total trihalomethanes — a disinfection byproduct — in their drinking water exceed federal thresholds.

With respect to the proposed Walt Ranch Project and other vineyard development projects that the County has been approving in the Milliken Reservoir Watershed, the City and its water customers seek to prevent the kind of water quality degradation the City has been observing in the Hennessey Reservoir Watershed. The County's existing erosion control plan program has likely been helpful — but it has failed to stop a trend of increasing degradation to the City's public drinking water supplies from Milliken and Hennessey reservoirs.

As detailed below, the City's Water Division requests the County's assistance in protecting public drinking water supplies from degradation by vineyard development projects within the Milliken and Hennessey watersheds. The City respectfully asks that the County become its partner to prevent direct, indirect and cumulative water quality impacts that otherwise would

result from the County's discretionary decisions to allow changed land uses within the watersheds sustaining the City's two local sources of public drinking water supplies.

The Walt Ranch Final EIR Missapplies Significance Criteria And Disregards Water Quality Protection Principles In An Effort To Rationalize The Draft EIR's Erroneous Conclusion That Direct, Indirect and Cumulative Water Quality Impacts Will Be Insignificant

The Final EIR leaves unchanged the Draft EIR's misapplication of water quality standards to rationalize a conclusion that the proposed Project will not cause a significant adverse impact to water quality in Milliken Creek and Milliken Reservoir. According to the Draft EIR, the Project would not cause a significant impact to water quality unless it will:

- "Cause a violation of an adopted water quality standard, or result in a cumulatively considerable contribution to an existing violation of an adopted water quality standard."

(Draft EIR at 4.6-31.) The Draft EIR acknowledges that Milliken Creek is tributary to the Napa River and explains the Napa River is listed as "impaired" under section 303(d) of the federal Clean Water Act with respect to nutrients, pathogens and sedimentation/siltation. (Draft EIR at 4.6-20-21 [explaining that 303(d) listing means receiving waters already violate water quality standards protecting use for municipal water supplies and other purposes].)

Neither the Draft EIR nor the Final EIR describe the existing quality of water in Milliken Creek and Milliken Reservoir with respect to nutrients, pathogens or sedimentation/siltation. (Draft EIR at 4.6-8.) Failure to disclose and consider the existing water quality of Milliken Creek and Milliken Reservoir with respect to nutrients and other wastes is a fatal evidentiary and analytical gap that prevents the County and the public from reasonably assessing the significance of the proposed Project's impacts on that water quality, as required by CEQA.

In fact, despite a trend of declining water quality, Milliken Reservoir water quality typically is still higher, or better, than the "floor" established by water quality standards protecting municipal drinking water use with respect to nutrients (e.g., nitrogen compounds, phosphorous, sulfate), sediment/turbidity and other wastes. The County's significance criterion for water quality assumes that any Project-caused increase in loadings of nutrients or other wastes is insignificant, because such wastes "can be safely assimilated" — so long as water quality standards are not violated. (Draft EIR at 4.6-20.) The problem with the County's application of that criterion is its erroneous assumption that water quality degradation is insignificant — so long as water quality standards are not violated.

The County's assumption conflicts with case law prohibiting the use of adopted regulatory standards as the sole determinant of impact significance. Use of existing environmental regulatory standards in determining impact significance integrates CEQA review with other environmental regulatory programs — which conceptually is good. (*Protect the Historic Amador Waterways v. Amador Water Agencies* (2004) 116 Cal.App.4th 1099, 1107. But use of a regulatory standard may "not be applied in a way that would foreclose the consideration of other substantial evidence showing that there might be a significant environmental effect from a project." (*Id.* at 1108.) Here, the County has violated the preceding rule by assuming the

comparatively high quality of water in Milliken Creek and Milliken Reservoir can "safely assimilate" increased loadings of nutrients and other wastes from the proposed Project and from the recently approved Kongsgaard and Circle S vineyard development projects.

The County's assumption also conflicts with the state water quality law it purports to apply through the Draft EIR's significance criteria. Where a project would discharge nutrients or other wastes into receiving waters whose baseline quality exceeds water quality standards, the State Water Resource Control Board's (State Board) Antidegradation Policy specially protects such "high quality" waters from new waste discharges or a relaxing of standards limiting existing discharges. (State Board Resolution 68-16.) To prevent degradation of high quality waters, Antidegradation Policy requires application of "best practicable treatment or control" as mitigation and prohibits any remaining degradation — unless the discharger demonstrates extraordinary socio-economic needs require the degradation.

Consistent with the failure of the County's Draft and Final EIRs to describe the existing high quality of water in Milliken Creek and Milliken Reservoir with respect to nutrients and other wastes, the Draft and Final EIRs also fail to apply Antidegradation Policy to inform application of the EIR's significance criterion — under which the proposed Project would only have a significant water quality impact if it would "[c]ause a violation of an adopted water quality standard, or result in a cumulatively considerable contribution to an existing violation of an adopted water quality standard."

Thus, the County's approach to analyzing the proposed Project's water quality impacts (1) fails to disclose and describe the existing high quality of water in Milliken Creek and Milliken Reservoir with respect to nutrients and other wastes and (2) implies that whatever degradation might occur is insignificant, so long as water quality standards are still met, (3) even though Antidegradation Policy mandates best practicable treatment or control as mitigation and prohibits degradation — absent extraordinary socio-economic needs the EIR does not attempt to articulate.

The Final EIR's Responses to the City's Comments Are Inadequate

The Final EIR acknowledges receipt of the City's comments on the Draft EIR (designating them as "Comment A5") but fails to respond to all the issues raised by the City's comments. The failure to respond to issues raised by the City's comments makes the County's Final EIR inadequate. That failure also shows a lack of substantial evidence to support the conclusion that water quality impacts will be insignificant.

Responses to Comment A5-05

The Final EIR's response to the City's comments reveals a myopic focus on erosion control. Essentially, the Draft and Final EIRs go to some length to support the conclusion that the proposed Project will not increase erosion and sediment loading —but then assume without support that maintaining or reducing existing levels of erosion and sediment loading will ensure no adverse water quality changes with respect to pesticides, nutrients or other wastes generated by the Project. The Final EIR states:

When addressing comments on water quality, it is important to note that the purpose and goal of an Erosion Control Plan is to mitigate any soil loss and that sediment is the primary medium of transport for adsorbed pesticides. *Thus, if there is no soil loss (as predicted for the Proposed Project) then pesticides will not have a significant impact on water quality due to run-off.*

(Final EIR, Response to Comment A5-05, first full paragraph at 4-45 [emphasis added].) The County provided the City with a Walt Ranch Applicant attorney memo dated January 5, 2016, that make the same unsupported assumption ("if there is no soil loss then pesticides will not have a significant impact on water quality due to run-off"). (January 5, 2016, Memorandum from Dickenson Peatman & Fogarty to County Analytical Environmental Services at 1.)

Actually reducing erosion would assist in avoiding the Project's turbidity and sedimentation impacts to downstream receiving waters of Milliken Creek and Milliken Reservoir, but neither the Draft EIR nor the Final EIR attempt to actually show how that would affect Project discharges of dissolved nutrients or pesticides from storm water runoff or irrigation drainage. The Final EIR asserts "there are no significant impacts on water quality because pesticide use is highly regulated . . ." but such conclusory assertions fail to pass CEQA muster. Neither the Draft EIR nor the Final EIR even attempt to explain why there will be no significant water quality impacts with respect to nutrients — a clear failure to respond to an important issue raised in the City's comments on the Draft EIR. At bottom, the Draft EIR and Final EIR both assume — without providing substantial supporting evidence — that there will be no significant water quality impacts with respect to nutrients. The preceding analytical and disclosure failures violate CEQA.

The City has observed that the trend of increasing vineyard development in the Hennessey Reservoir watershed correlates with the trend of degrading water quality in Hennessey Reservoir since its construction in 1948 — and is now having to design upgrades to the City's drinking water treatment plant to address the degradation. Milliken Reservoir shows a flatline trend of maintaining water quality, however the degradation of water quality will increase as the County continues to approve vineyard development in the Milliken Reservoir watershed. For example, the highest observed levels of phosphates (a nutrient) in Lake Hennessey are 10 times higher than the highest levels in Milliken Reservoir (200 ppb versus 20 ppb.) In addition, the normal observed levels of sulfates in Lake Hennessey are nearly 4 times higher than the normal observed levels in Milliken Reservoir (11 ppm versus 3 ppm.)

The January 5, 2016, Applicant attorney memo references water quality monitoring performed for the Rodgers Ranch Project (Upper Range Draft EIR) as proving there are no significant impacts to municipal water quality from vineyard development. Rodgers Ranch Project is located within the Hennessey Reservoir watershed. But the Rodgers Ranch Project's water quality data shows the opposite of point it is cited to support; it shows that nutrient levels *increased* by 100-400 percent above background levels in Hennessey Reservoir.

Specifically, the Upper Range Draft EIR cites a single water quality sampling effort performed in the spring — near the end of the rainy season — at three project locations. The results reported for Sulfates were:

N1 - Sulfates 20 mg/L

N2 - Sulfates 22 mg/L

N3 - Sulfates 48 mg/L

Sampling in the spring — near the end of the rainy season — would understate that project's Sulfates discharge, because nutrients (or fertilizers) applied during the last growing season would have been washed away by storm water runoff during the beginning and middle of the rainy season. Water quality samples from the "first flush" of a storm at the start of the rainy season would almost certainly result in higher Sulfates levels (that is why the State Board requires industrial and municipal storm water dischargers to sample run-off during the first flush of a storm at the start of the rainy season).

Moreover, putting aside the selection of water quality samples from the spring, the Sulfates levels reported in the Upper Ranch Draft EIR are between two and four times higher than the normal background levels of Sulfate in Hennessey Reservoir, which are 11 ppm. The Upper Ranch Draft EIR asserted that project would have less than significant water quality impacts because the 11 ppm Sulfates level is below the water quality standard of 250 mg/L — improperly assuming that lowering receiving water quality to the floor set by water quality standards is insignificant — despite Antidegradation Policy. Such incremental reductions in water quality have significant, measurable effects on water quality. For example, the taste of City water customers' drinking water is degraded by the introduction of Sulfates into the water source. At bottom, the water quality sampling evidence from the Upper Ranch Draft EIR does not support — and, in fact, contradicts — the "no significant impact" conclusion in the Walt Ranch Draft EIR and Final EIR.

On page 4-45 of the proposed Project's Final EIR, the 3rd full paragraph states:

There are no significant impacts on water quality because pesticide use is highly regulated by the federal, State, and County governments and is sparingly used within the County as recognized by the Napa County Pesticide Report.

(Final EIR at 4-45.) The paragraph goes on to conclude that the only items of concern for municipal drinking water are those that are on the Contaminant Candidate List (CCL) and, since only four of those contaminants are used in Napa County according to the 2013 annual pesticide use report for Napa county, there is purportedly no cause for concern about significant impacts.

The County Planning Director's August 17, 2015, letter attached to the January 5, 2016, Applicant's attorney memo, asserts that municipal water supply sources are protected because only small amounts of vineyard chemicals are used under strict regulation by the County Agricultural Commissioner's office.

However, highlights of those "small amounts" applied in Napa County, if applied in watershed areas that would adversely affect municipal drinking water, are not limited to the 4 named items on the CCL. Water quality is affected by pesticides, herbicides and other man-made constituents, phosphates, nitrates, sulfates and other nutrients also affect drinking water quality including, but not limited to:

Sulfur and sulfates

- 832,200 lbs of sulfur, the largest used chemical applied for grape growing in Napa last year
- 18,750 lbs of lime-sulfur
- 9,000 lbs of ammonium sulfate

Sulfur and sulfates have effects on drinking water, most noticeably the measurable effects on taste and odor. Consequently there is a secondary MCL of 250 mg/L, which has been adopted as the water quality standard setting the floor on sulfate concentrations in receiving waters used for municipal drinking water supplies.

Phosphates are another major concern for raw water in drinking water supplies. Phosphates provide nutrients in water, which spurs the growth of blue-green algae. Algae dies, decomposes and imparts a foul taste and odor to drinking water. Treatment with ozone and granular activated carbon is required to eliminate those impacts. The City's drinking water treatment plant for Milliken Reservoir (as well as its separate plant for Hennessey Reservoir) does not employ ozone or granular activated carbon. Water quality degradation from the proposed Project is accelerating the need for such drinking water treatment plant upgrades.

There were over 50,000 pounds of glyphosate applied in Napa County with an unknown portion of those total pounds applied within the City of Napa's municipal supply watersheds.

The EIR does not acknowledge or address nutrient loading impacts on water quality.

As evidenced by the impacts to water quality in Lake Hennessey, the City has concerns that the current high quality water in the Milliken watershed will suffer significant impacts from the changed land uses from new vineyard development and ongoing vineyard practices upstream. The City seeks a commitment to gathering monitoring data during the beginning and end of the rainy season to ensure that vineyard operations within the Milliken Reservoir watershed do not adversely impact the quality of water the City serves as a municipal drinking water supply. If impacts are seen, the primary objective is to address the problem at the pollution source at the site where it originates and to prevent the water quality impacts. The County has responsibility to the public and its constituents to require new development to mitigate its impacts on the environment and the community.

The Milliken Treatment Plant has only direct filtration and does not have full conventional treatment. The plant is capable of treating the existing high quality raw water in the watershed to meet drinking water standards for its rate paying customers. Impacts to the water quality will drive the need for changes to the existing water treatment process.

The water rate customers that are served by the Milliken Treatment Plant are primarily County customers including the Silverado Country Club and Monticello Park areas. The Water Division feels strongly that these customers should not be burdened with the cost of addressing negative changes to water quality resulting from the County's approval of vineyard development in the Milliken Reservoir watershed.

The City respectfully requests that municipal water supply protection be ensured by the County if it approves the proposed Walt Ranch Project and any other future vineyard developments. Thank you for your cooperation in working together with us to protect these important resources for our citizens and customers in the County of Napa.

Request for Mitigation to Avoid or Reduce Water Quality Impacts

If the County decides to approve the proposed Walt Ranch Project despite the City's objections, the City respectfully requests that the County impose conditions of approval requiring Applicant to carry out the following water quality monitoring program.

Water Quality Monitoring. Applicant shall conduct a water quality monitoring program. The program shall include sampling of storm water runoff entering Milliken Creek from the Project site at a location 50 feet upstream and within 20 feet downstream of the location where cumulative Project area runoff enters the Creek within the watershed. Applicant shall collect and test samples three times per year:

- Within 72 hours after the first major storm event (1 or more inches of rainfall within 24 hours) of the wet season (October 1 to April 30);
- Within the period January 1-31; and
- Within the period May 1-30.

Samples shall be tested for presence and concentrations of the following constituents:

- Specific conductance
- Phosphate
- Nitrates (as Ammonia)
- Sulfate
- Turbidity

The City's Water Division sets the following parameters for our water supply reservoirs to prevent degradation of existing water quality:

<u>Milliken Reservoir</u>	<u>observed 2016</u>
Specific conductance	≤120 ppb
Phosphate	≤30 ppb
Nitrates (as Ammonia)	≤40 ppb
Sulfate	≤3.5 ppm
Turbidity	<12 NTU

If the upstream sample test results are above the levels indicated above for Milliken Reservoir, the monitored point shall not increase the concentration of the parameter by more than 10%.

If analytical data from the proposed Project shows no reduction in water quality under the preceding parameters, the sampling requirement may be concluded upon three years after full development of the project. However, even in that circumstance, if future monitoring performed by the City indicates runoff from the property is contributing to water quality degradation, the monitoring and reporting requirements will resume for an additional three-year period.

Sampling Requirements. All samples must include GPS latitude and longitude information.

Laboratory Requirements. Analytical data must be performed by an ELAP-certified laboratory in accordance with sampling and chain of custody requirements.¹

Reporting of Data. For each sample, a complete copy of laboratory test results shall be submitted to the County and the City's Water Division within 20 days of the receipt of the results from the laboratory.

Corrective Actions. If any parameter is exceeded, Applicant shall examine the best management practices (BMPs) it is implementing to control discharge of waste from the Project site, shall identify the actual or suspected cause of the parameter exceedance, and shall either modify relevant BMPs or add one or more new BMPs in order to eliminate the cause of the exceedance(s). Applicant shall complete the BMP review within 48 hours and resample the failed sites within 72 hours after the start of the next storm event. Applicant shall provide the County and the City Water Division with a Corrective Action Memorandum describing its BMP review and modification(s) within 30 days after receiving a sample test result exceeding one of the constituent parameters.

Penalties. Failure to take corrective actions sufficient to address the nutrient addition within a 30-day period shall result in administrative penalties and/or revocation of use permit or other penalty sufficient to compel the applicant to correct the problem.

¹In 2016, the cost of analyzing one sample is \$198, so the analytical cost in a year would be approximately \$800 - \$1,200. Such a cost is feasible for purposes of mitigation under CEQA.

