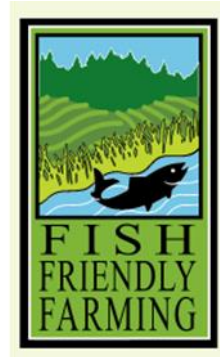


# North Coast Region 1 Vineyard Water Quality Order



Organizations in Mendocino County involved in commenting on  
Vineyard Permit

## History

### **1969- Porter-Cologne Water Quality Control Act**

- Created State Water Resources Control Board and 9 Regional Water Quality Control Boards
- Regulates discharges of waste to waters of the state (surface & ground waters)
- Applies to any person discharging or proposing to discharge waste that could affect the quality of water of the state

### **2000's- Irrigated Lands Regulatory Program**

- Initiated to prevent agricultural runoff from impairing surface waters
- Each Regional Water Quality Control Board must adopt an ILRP
- Expanded to include groundwater regulations in the early 2010s

**2008-** Region 1 Staff begin the process for developing an ILRP in Region 1 for Orchards and Vineyards, and later dropped orchards from the proposal

**2022-** Technical Advisory Group (TAG) convened to advise on conceptual options and preliminary draft regulatory language

**June 2023-** Region 1 staff published the Draft Order and Draft EIR and began a 60-day public comment period, at which time the Regional Board Directors sent the Draft back to staff for further review.

**October 2024-** New Draft Order published and hearing scheduled for December 4th

## Enrollment

All vineyards in the North Coast Regional Board area (Russian River to the Oregon border) that are over 5 acres and commercial

Can enroll as an individual or through a coalition:

Individual enrollees work directly with the Regional Board and all their submissions are considered public records. Fees to the state are high

Coalitions (likely to be Farm bureau and FFF). Coalitions carry out the monitoring, do annual reports and collect fees to pay the state which are very low

## **Sediment is the main pollutant**

Farmers must manage farm area and associated roads to limit soil erosion and delivery to ditches and all streams through a variety of practices.

### **Agricultural Drainage Outlet Monitoring: Farmers required to complete**

Grower measures turbidity of stormwater runoff from vineyard drainage systems (drop inlets and underground pipes), 20% of all outlets/year

Permit standard: 250 NTUs

### **Alternative to Ag Drainage Monitoring:**

Sediment and Erosion Control Plan (SECP, same as FFF plan) can be completed by a qualified professional, including:

Inventory of existing and planned management practices in the Farm Area

Schedule for implementation of planned management practices

Map showing all enrolled parcels and features, such as:

Streamflow diversion structures

Agricultural drainage structures

Farm buildings and equipment yards

Appurtenant agricultural roads

Photo-point monitoring locations

Must be certified by a qualified professional and recertified every 5 years

## **For sites carrying out Ag Structure Monitoring:**

- 50% ground cover for areas with a slope average under 10%.
- 75% ground cover for areas with a slope average of 10% or greater.

## **If grower can achieve**

- 90% ground cover, primarily composed of planted or rooted vegetation. Then can do photo monitoring
- All sites with SECP (FFF plan) can do photo monitoring

Coalitions must do streambed sediment monitoring.

The onerous requirement for instream turbidity monitoring was removed!

## Groundwater Monitoring

All growers must sample drinking water wells every 5 years for nitrates and sample one well for pesticides if the following pesticides have been sprayed on the parcel with the well in the past 5 years. Use USEPA-approved methods and an ELAP-certified laboratory

Annual monitoring is required if exceedances are found

- Atrazine
- Simazine
- Bromacil
- Diuron, except for products with less than 7% diuron that are applied to foliage
- Prometon
- Bentazon (Basagran®)
- Norflurazon

If water in any well that is used for drinking water exceeds 10 mg/L of nitrate+nitrite as N, provide notice to the drinking water well users within 10 days of learning of the exceedance

## Groundwater Trend Monitoring

Done by individuals and coalitions

<b>Trend Monitoring Parameters</b>	<b>Units</b>	<b>Analysis Type</b>	<b>Frequency</b>
pH	pH units	Field	Annually
Conductivity (at 25° C)	µmhos/cm	Field	Annually
Temperature	°C	Field	Annually
Nitrate as Nitrogen	mg/L	Laboratory	Annually
Total Dissolved Solids (TDS)	mg/L	Laboratory	Annually

Each grower must complete an Irrigation and Nitrogen Management plan. The Coalitions will hold workshops on these plans

## **Coalition Pesticide Monitoring**

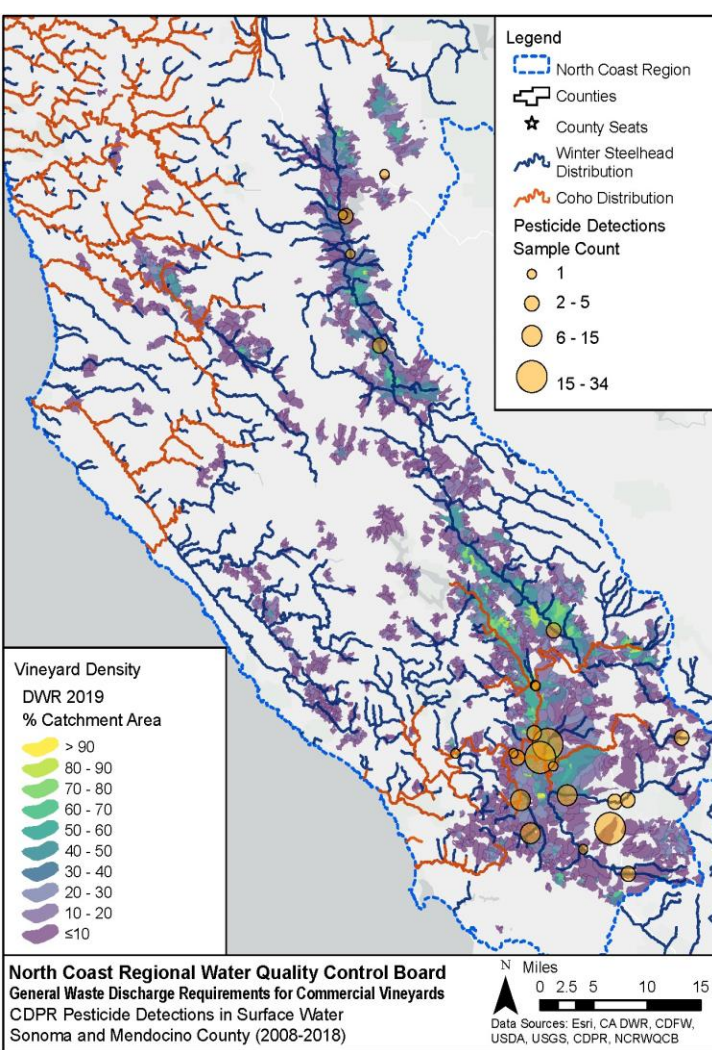
Every five years, the Coalition monitors representative surface water sites for the pesticides listed in next slide that have been applied to winegrapes in Sonoma and Mendocino Counties in the past five years according to the last available Pesticide Use Reports.

- The Coalition shall propose in the Workplan a representative network of surface water monitoring sites that meet the following requirements:
  - No less than one surface water monitoring site per HUC-12 watershed that are in the top quartile of vineyard density.
  - Site locations shall be chosen in places that are representative of commercial vineyard land use within the HUC-12 watershed, and to avoid signal from uses not regulated under this Order.
- Surface water quality sampling for pesticides shall be conducted three times in the required monitoring year. The first sampling event shall take place within 48 hours of the first Qualifying Storm Event (QSE) after November 1st. The second sampling event shall take place within 48 hours of the first QSE following January 1st and the third sampling event shall take place within 48 hours of the first QSE following March 1st. If a sampling event is missed for any reason, the Coalition shall sample following the next QSE and include rationale in the results for why the sampling event was missed.
- Samples shall be taken within the flow area of the water.



**Table B.5: Pesticide Monitoring Parameters and Trigger Limits**

Active Ingredient	Trigger Limit (µg / L)	Source <sup>23</sup>
glyphosate potassium salt	700	DDW Primary MCL; USEPA Primary MCL.
pendimethalin	0.7	USEPA Aquatic Life Benchmark
flupyram	135	USEPA Aquatic Life Benchmark
boscalid	116	USEPA Aquatic Life Benchmark
azoxystrobin	20	USEPA Aquatic Life Benchmark
trifloxystrobin	2.76	USEPA Aquatic Life Benchmark
imidacloprid	0.01	USEPA Aquatic Life Benchmark
myclobutanil	220	USEPA Aquatic Life Benchmark
tebuconazole	11	USEPA Aquatic Life Benchmark
oryzalin	13	USEPA Aquatic Life Benchmark
oxyfluorfen	0.33	USEPA Aquatic Life Benchmark
flumioxazin	0.022	USEPA Aquatic Life Benchmark
pyraclostrobin	1.18	USEPA Aquatic Life Benchmark
glufosinate-ammonium	3	USEPA IRIS Reference Dose (RfD) as a drinking water level.
cyprodinil	8.2	USEPA Aquatic Life Benchmark
quinoxifen	13	USEPA Aquatic Life Benchmark
difenoconazole	0.86	USEPA Aquatic Life Benchmark
spirotetramat	100	USEPA Aquatic Life Benchmark
bifenazate	150	USEPA Aquatic Life Benchmark
acetamiprid	2.1	USEPA Aquatic Life Benchmark
thiamethoxam	0.74	USEPA Aquatic Life Benchmark



Urban areas use the same chemicals as agriculture  
 Monitoring in streams receiving significant levels of urban runoff is not representative of agricultural runoff.

This concern was brought up during the review of the draft order but is not fully addressed

The Coalition will need to prepare a water quality monitoring work plan that addresses this issue

## Riparian Area Management

- The Order defines **Streamside Area** as being two contiguous components: a **Riparian Vegetation Area** and a **Vegetated Buffer** with different requirements. The Riparian Vegetation Area is defined as extending from the Ordinary High-Water Mark on the waterway to the Vegetated Buffer.
- The Vegetated Buffer is measured from the Riparian Vegetation Area to the Farm Area along Perennial and Ephemeral/Intermittent Streams, and from the Ordinary High-Water Mark in Hydrologically Connected Undesignated Channels (ditches), Unfarmed Wetlands, and Hydrologically Connected Lakes, Ponds, or On-Stream Reservoirs.
- The Ordinary High-Water Mark is defined in the nearly 400-page manual *“National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams”*. This definition is impractical and requires significant effort to determine on the creek. Sonoma County riparian ordinance uses top of bank, a better approach.

## Streamside Area Example on Perennial Stream

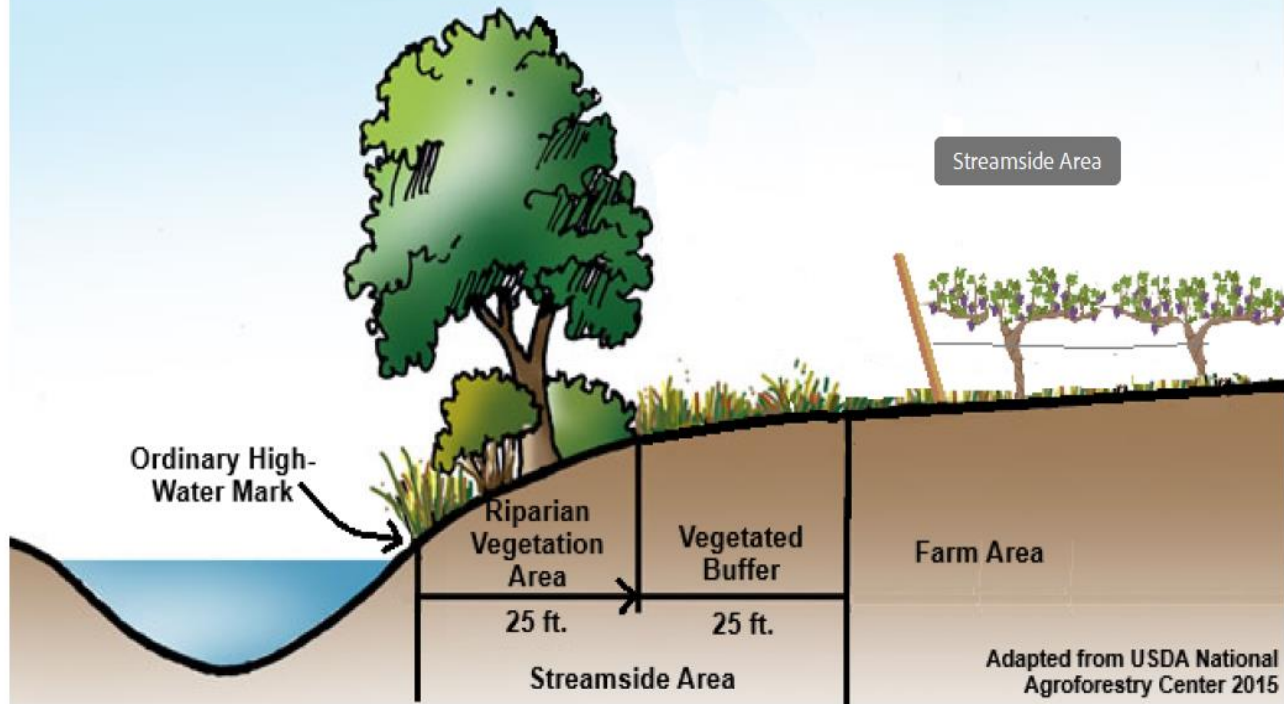


Figure 1: Streamside Area on a Perennial Stream

## Streamside Area Example on Ephemeral/Intermittent Stream

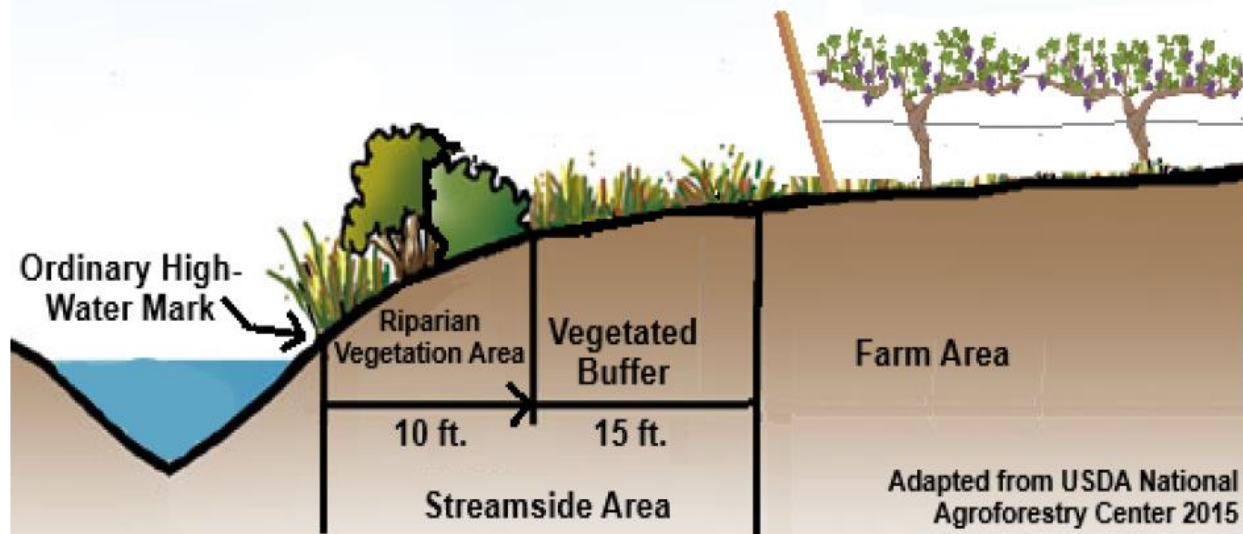


Figure 2: Streamside Area on Ephemeral/Intermittent Stream

### Streamside Area Example on Undesignated Channel

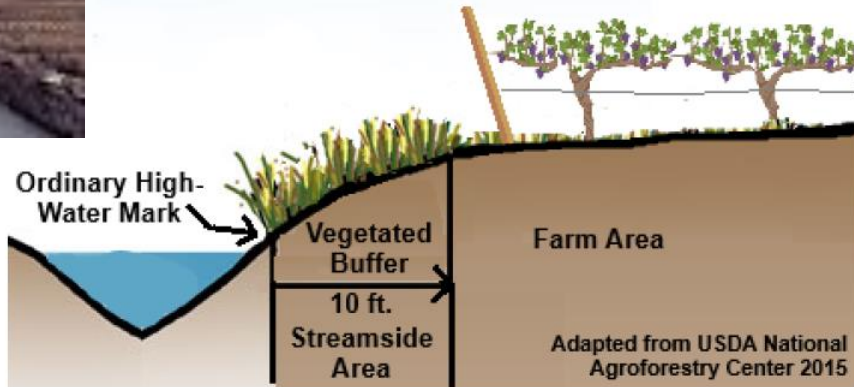


Figure 3: Streamside Area Example, Undesignated Channel

Figure 15. Tree slumping toward a stream on an unstable bank. The elevation at which roots are anchored into the ground, rather than the current elevation of the slumped tree, reveals the elevation of woody tree growth. The OHWM is shown as a *dashed line* and was determined from evidence on both the left and right banks.



**Table 6: Streamside Area Minimum Horizontal Width (feet) as Measured from Ordinary High-Water Mark\***

<b>Streamside Area component</b>	<b>Perennial Stream</b>	<b>Ephemeral/ Intermittent Stream</b>	<b>Hydrologically Connected Undesignated Channel<sup>27</sup></b>	<b>Unfarmed Wetland<sup>28</sup></b>	<b>Hydrologically-Connected<sup>29</sup> Lake, Pond, or On-Stream Reservoir</b>
Riparian Vegetation Area	25	10	N/A	N/A	N/A
Vegetated Buffer	25	15	10	50	50
Total Streamside Area width	50	25	10	50	50



## RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

OMB No. 0710-OHWM

The proponent agency is Headquarters USACE CEQW-CO-R.

Expires: XX-XX-XXXX

## AGENCY DISCLOSURE NOTICE

The public reporting burden for this collection of information, 0710-OHWM, is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Project Collection (0710-OHWM), Washington, DC 20503. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

Project ID #: \_\_\_\_\_ Site Name: \_\_\_\_\_ Date and Time: \_\_\_\_\_

Location (lat/long): \_\_\_\_\_ Investigator(s): \_\_\_\_\_

## Step 1 Site overview from remote and online resources

## Check boxes for online resources used to evaluate site:

- gage data     LIDAR     geologic maps  
 climatic data     satellite imagery     land use maps  
 aerial photos     topographic maps     Other: \_\_\_\_\_

Describe land use and flow conditions from online resources. Were there any recent extreme events (floods or drought)?

**Step 2** Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make notes of natural or anthropogenic disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls, etc.

## Step 3 Check the boxes next to the indicators used to identify the location of the OHWM

**OHWM** is at a **transition point**; therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below 'b', 'a', 'X', or just above 'a' the OHWM.

Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.

## Geomorphic indicators

- Break in slope:**  
 on the bank:  
 undercut bank:  
 valley bottom:  
 Other: \_\_\_\_\_
- Shelving:**  
 shelf at top of bank:  
 natural levee:  
 man-made berms or levees:  
 other berms: \_\_\_\_\_
- Channel bar:**  
 shelving (berms) on bar:  
 unvegetated:  
 vegetation transition (go to veg. indicators)  
 sediment transition (go to sed. indicators)  
 upper limit of deposition on bar:  
 instream bedforms and other bedload transport evidence:  
 deposition bedload indicators (e.g., imbricated clasts, gravel shoals, etc.)  
 bedforms (e.g., pools, riffles, steps, etc.): \_\_\_\_\_
- erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)
- Secondary channels:**
- Sediment indicators**
- Soil development:**
- Changes in character of soil:**
- Mudtracks:**
- Changes in particle-sized distribution:**  
 transition from \_\_\_\_\_ to \_\_\_\_\_  
 upper limit of sand-sized particles \_\_\_\_\_  
 silt deposits: \_\_\_\_\_

## Vegetation Indicators

- Change in vegetation type and/or density:**  
 Check the appropriate boxes and select the general vegetation change (e.g., graminoids to woody shrubs). Describe the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain.  
 vegetation absent to:  
 moss to:  
 forbs to:  
 graminoids to:  
 woody shrubs to:  
 deciduous trees to:  
 coniferous trees to:  
 **Vegetation matted down and/or bent:**
- Exposed roots below intact soil layer:**
- Ancillary indicators**
- Wracking/presence of organic litter:**
- Presence of large wood:**  
 Leaf litter disturbed or washed away:  
 **Water staining:**  
 **Weathered clasts or bedrock:**

Other observed indicators? Describe: \_\_\_\_\_

The Sonoma County Riparian Ordinance uses top of bank to define the creekside edge of riparian areas. This is a simple and easy method to determine a datum for the creekside edge of the Riparian Vegetation Area.

First page of data sheet needed for OHW datum determination

# Implementing Streamside Area Increases

## Existing vineyards must:

- Implement minimum widths when replanted
- Pay for mitigation credits if unable to meet minimum widths

## Farmed wetlands in existing vineyards:

- Not required to create buffers
- Growers must ensure “no long-term impacts to beneficial uses of the wetlands during replant activities”

## Riparian Vegetation Area compliance alternative:

- Growers may mitigate area differences in riparian vegetation between existing conditions at Order adoption and Order requirements
- Mitigation must be through restoration and protection of native riparian vegetation within the same sub-watershed (HUC-12)
- This alternative is only available for vineyards existing as of the Order adoption date.

## **Riparian Area Management Requirements**

**No removal of riparian vegetation unless for:**

- Restoration of native plants
- Fire fuel management
- Maintenance of crossings or utilities
- Expansion of the riparian corridor along the farm edge

**Management of the Riparian Corridor must support:**

- Sediment filtering
- Woody debris recruitment (e.g., trees falling into streams)
- Streambank stabilization
- Nutrient cycling
- Pollutant filtering
- Shading of water

**Prohibited activities within a Vegetated Buffer:**

- Construction or installation of new permanent structures related to commercial vineyard operations (e.g., agricultural roads, water storage, buildings)
- Storage of chemicals, oil, or petroleum products
- Placement of construction materials, trash, rubbish, refuse, plant waste, or other organic/earthen material or solid waste

## Existing Roads within Vegetated Buffer:

- All-Season Roads and Seasonal Roads existing at Order adoption may retain their original footprint during replanting if the following practices are implemented:
  - **Seasonal Roads:** Growers must install ground cover to achieve 90% coverage between December 15 - April 1 annually and maintain them to minimize/control/prevent sediment, nutrient, and pesticide discharges to surface waters.
  - **All-Season Roads:** Must be improved and maintained to minimize/prevent sediment discharge to surface waters through practices such as:
    - Water bars, rolling dips, road out sloping
    - Ditch and ditch relief culverts
    - Gravel or asphalt surfacing
    - Critical dips and trash rebar on stream crossing culverts

# Timeline

If document is adopted on Decemeber 4<sup>th</sup> meeting.

## **March 2025**

NCWQCB will release a Request for Proposals (RFPs) for Coalition applicants to apply within the deadlines proposed.

## **July 2026**

Approved coalitions shall be prepared to accept enrollments

## **July 2027 (continued annually)**

Coalitions should submit a list of all enrollee members and identify new or terminated enrollees since the last reporting period.

## **January 2029**

Submit a scope of work for a Water Quality Monitoring Workplan.

## **July 2029**

Coalition shall submit a Water Quality Monitoring Workplan in accordance with Attachment B: Section III. A.