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# Update on Vineyard and Orchard Permit Development

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North Coast Regional Water Quality Control Board

*Lynette Shipsey, Water Resource Control Engineer - Regional Water Board  
and*

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Item 6

February 20, 2019

Santa Rosa, CA

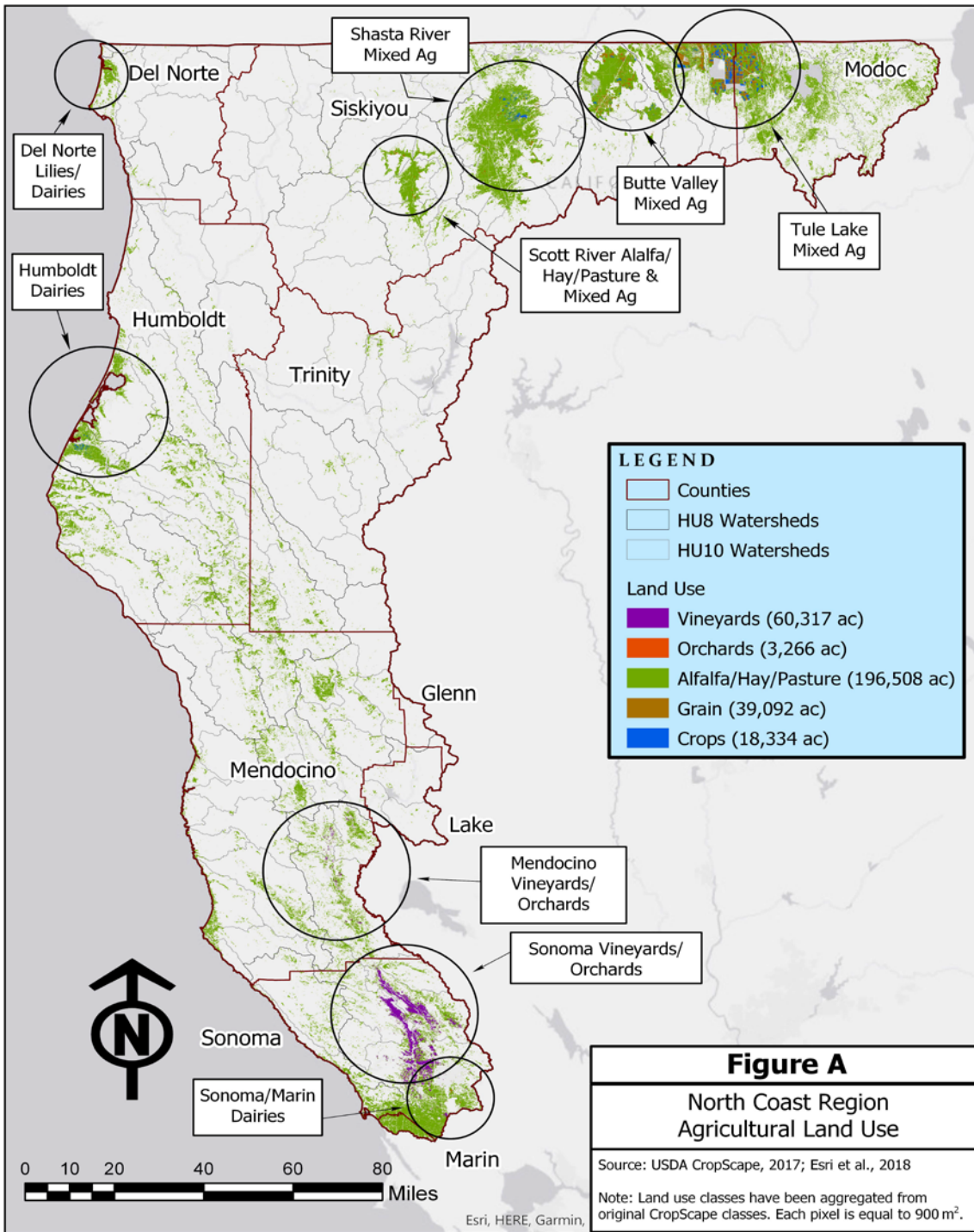


# Presentation Overview

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- Agricultural Lands Program - Vineyard & Orchard Overview
- Vineyard and Orchard Technical Assessment Discussion
  - ✓ Overview of technical assessment & scoping questions
  - ✓ Data and information evaluated
  - ✓ Outcome & permit scope recommendations
- Schedule for Permit Development



# Agriculture in the North Coast Region





# Agricultural Lands Program

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- State Required to regulate nonpoint source discharges of waste
  - ✓ Federal Clean Water Act
  - ✓ California Porter-Cologne Water Quality Control Act
- Existing Agricultural Permits
  - ✓ Scott and Shasta River TMDL conditional Waivers of WDRs
  - ✓ Cannabis and related activities Waiver of WDRs
  - ✓ Regionwide dairy permits
  - ✓ Federal Land Management Activities on National Forest Lands Waiver of WDRs



# Vineyard & Orchard Overview

March  
2017

April  
2018

May  
2018

August  
2018

February  
2019

- Regional Board endorses staff recommendation to focus on vineyards and orchards
- Regional Board directs staff to work on lily bulb operations in the Smith River
- New position: Irrigated Lands Program staff
- Begin permit scoping exercise
- Board update: Outcome of permit scoping exercise



# Vineyard and Orchard Permit

- Address waste discharges and provide water quality protection
  - ✓ Riparian management
  - ✓ Pesticide management
  - ✓ Nutrient management
  - ✓ Erosion control
- Potential Permit components
  - ✓ Farm water quality management plans
  - ✓ BMP-based approach
  - ✓ Monitoring and reporting
  - ✓ Third-party certification process
  - ✓ Enrollment into tiers based on risk



# Technical Assessment

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- Agricultural Permit:
  - ✓ Crop Type
  - ✓ Geographic Subregion
- *Vineyards and Orchards?*



# Technical Assessment

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- Collect *statistical and geospatial data* related to **discharges of waste from vineyards and orchards** within the North Coast Region
  - ✓ Characteristics of vineyard and orchard activities
  - ✓ Characteristics of watersheds and water bodies in proximity to vineyards and orchards





# Scoping Questions

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- Scoping Questions:
  - Question 1: Does an assessment of readily available data confirm that the development of a single permit to address discharges of waste from both vineyards and orchards is appropriate?
  - Question 2: Does an assessment of readily available data confirm that the development of a regionwide permit is appropriate?



# Data & Information Evaluated

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## Acreage Totals/Distributions

- Current & Historical Acreage Totals
- Geospatial Distributions

## Water Quality Risks

- Erosion Risk
- Precipitation Trends
- Existing Impairments

## Management Practices

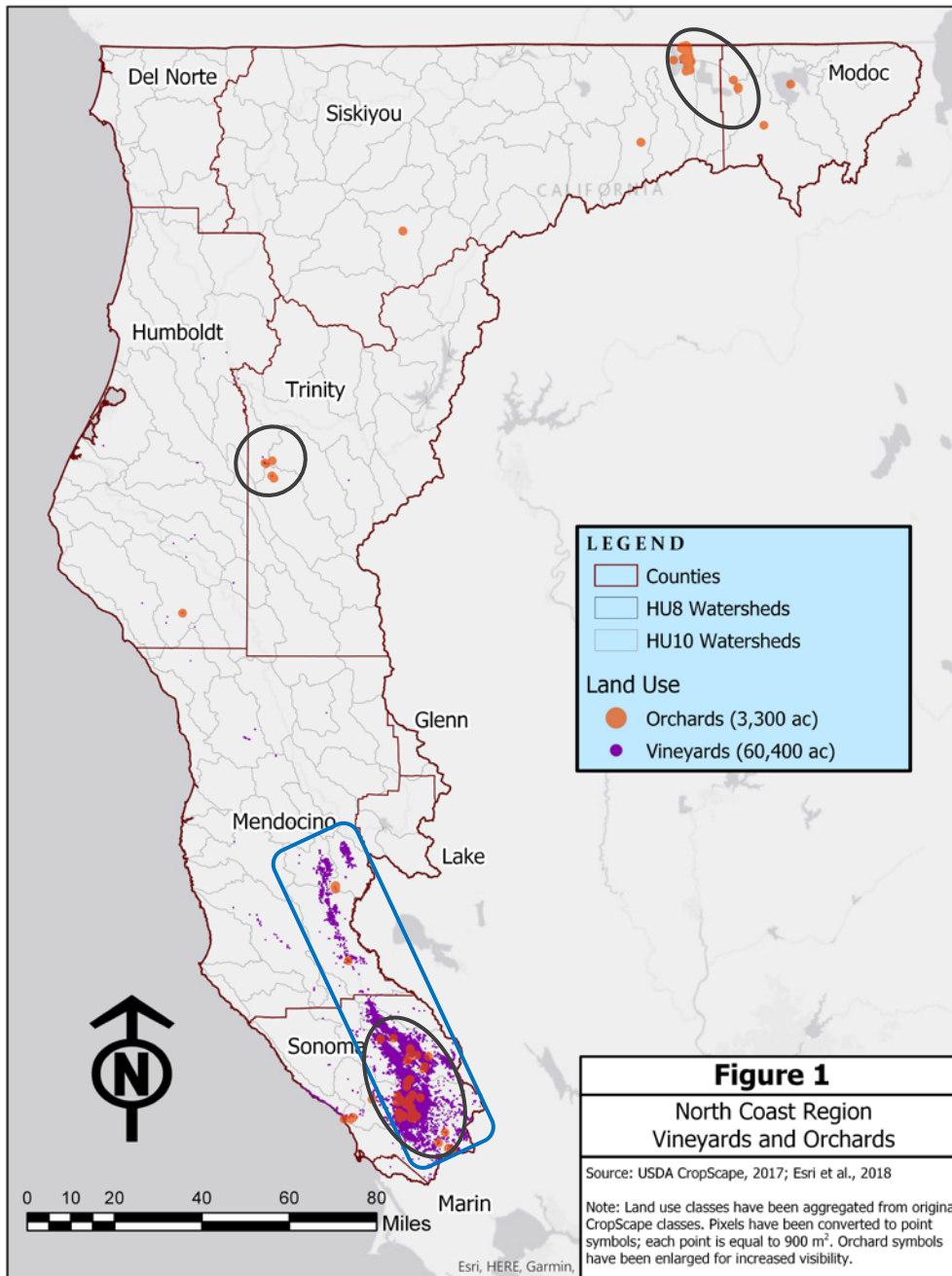
- Fertilizer Application Rates
- Pesticide Application Rates
- Water Use Rates
- Best Management Practices

## Existing Regulations

- County Ordinances
- State Regulations



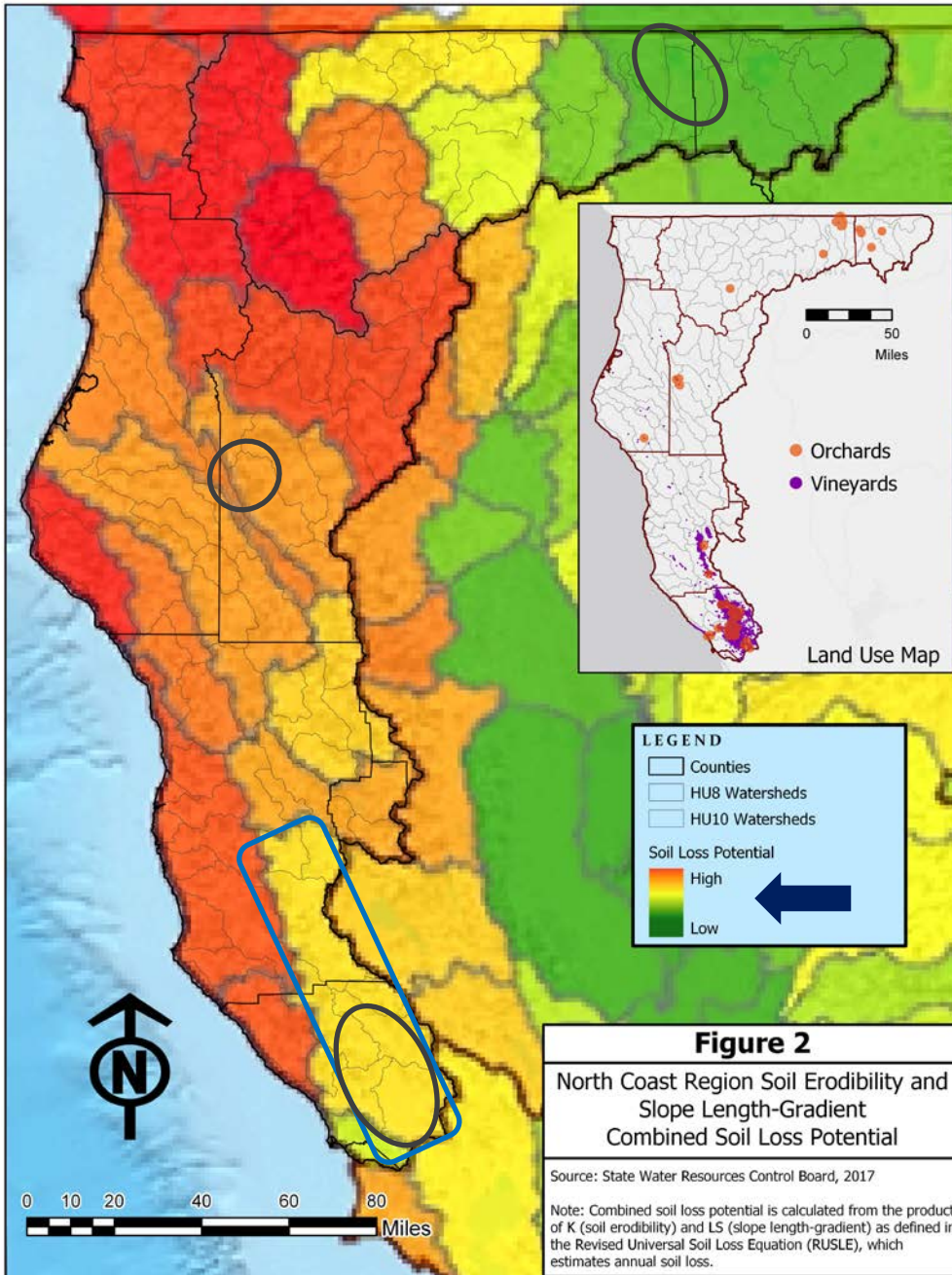
# Vineyard and Orchard Locations



- 2017:
  - ✓ 3,300 orchard acres
  - ✓ 60,400 vineyard acres
- 1985:
  - ✓ 14,600 orchard acres
  - ✓ 41,050 vineyard acres
- Vineyards primarily in Sonoma and Mendocino Counties
- Orchards dispersed throughout Region



# Soil Loss Potential



## ■ Vineyards:

- ✓ Moderately high soil loss potential
- ✓ Flat ground and steep slopes
- ✓ Periodically replanted

## ■ Orchards:

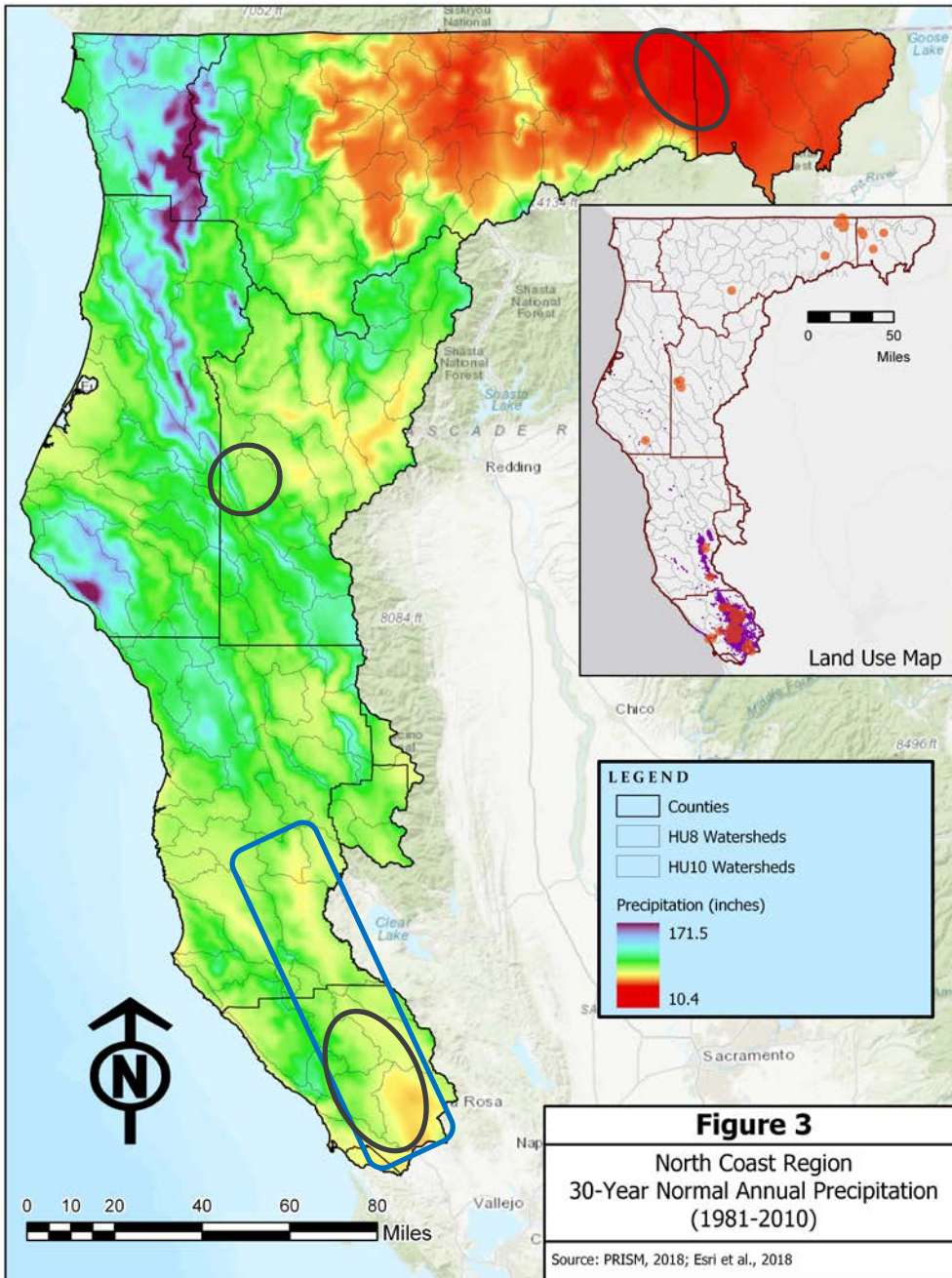
- ✓ Varying soil loss potential
- ✓ Generally located on flat ground
- ✓ Generally not replanted



# Annual Precipitation



- Vineyards:
  - ✓ Moderately high annual precipitation rates
- Orchards:
  - ✓ Varying annual precipitation rates

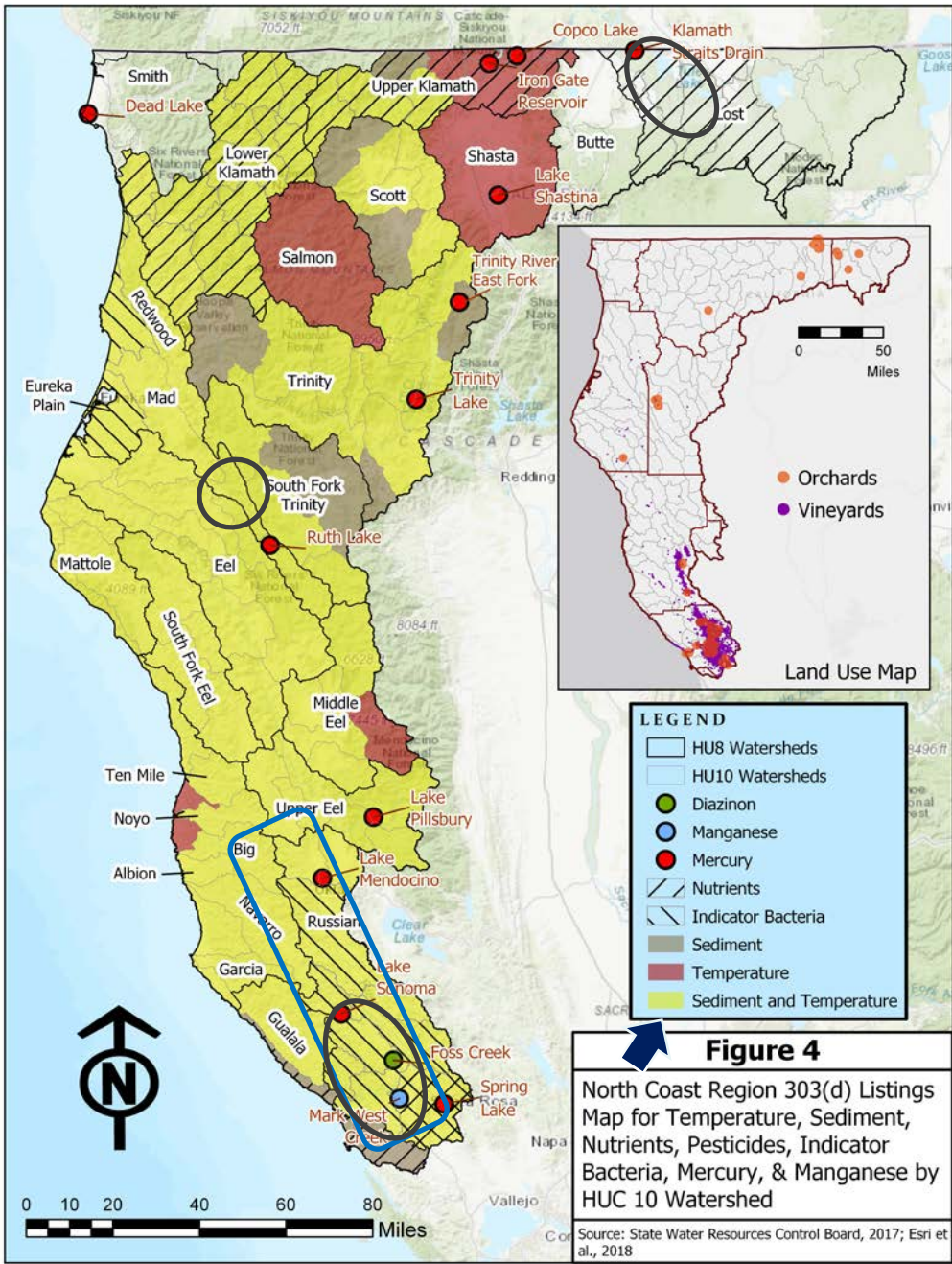




# Existing Water Quality Impairments



- Temperature
- Sediment
- Nutrients
- Pesticides
- Indicator Bacteria



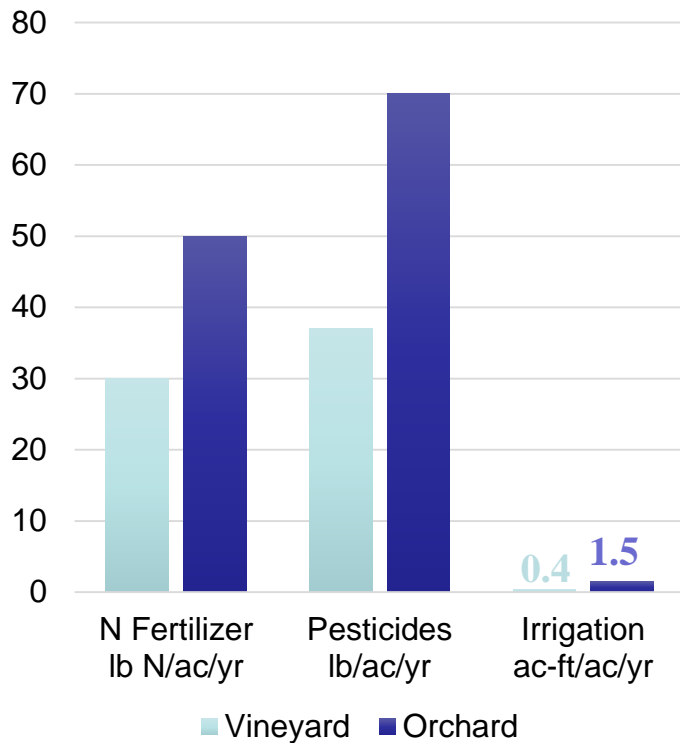
# TMDL Sediment Source Analyses



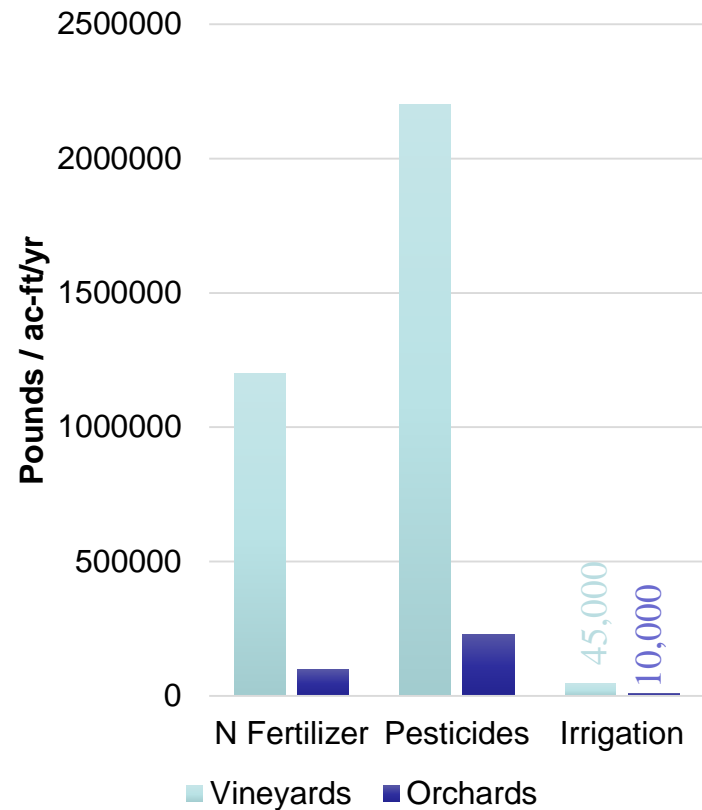
- Seven TMDLs identify agriculture as sediment source
- Two TMDLs identify vineyards as sediment source
- Roads are predominant source in all sediment TMDLs

# Fertilizer & Pesticide Application and Water Use Rates

## Typical Annual Vineyard/Orchard Usage Rates Per Acre



## Cumulative Vineyard/Orchard Mass Inputs





# Existing Regulations



- County:
  - Sonoma County Vineyard Site Development Program *Vineyard Erosion and Sediment Control Ordinance* (VESCO)
    - ✓ New development and replants > 1 acre
    - ✓ Includes orchards
    - ✓ 3 years post project completion
  - Agriculture Commissioner's offices
- State:
  - Department of Pesticide Regulation (DPR)



# Scoping Question 1 Summary & Recommendation

- Scoping Question 1: Does an assessment of readily available data confirm that the development of a single permit to address discharges of waste from both vineyards and orchards is appropriate?

## ➤ Staff Recommendation: Vineyard Only Permit

- ✓ Vineyards are a significant portion of the total agricultural acres while orchards are a smaller portion of the agricultural acres within the Region
- ✓ Vineyards are located in areas with moderately high annual precipitation rates and soil loss potential, while orchards are located in areas with variability in their climate and geology
- ✓ Water quality impairments are similar where vineyards are located but varied where orchards are located
- ✓ Cumulative mass inputs of fertilizer, pesticides, and water use from vineyards are much greater than those from orchards



# Scoping Question 1 Summary & Recommendation

- Scoping Question 1: Does an assessment of readily available data confirm that the development of a single permit to address discharges of waste from both vineyards and orchards is appropriate?
  - ✓ Orchard permit to be developed at later date
  - ✓ Discharges from orchards in the interim should be addressed on a case-by-case basis where appropriate and through enforcement where necessary



# Scoping Question 2 Summary & Recommendation

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- Scoping Question 2: Does an assessment of readily available data confirm that the development of a regionwide permit is appropriate?

## ➤ **Staff Recommendation: Develop Regionwide Vineyard Permit**

- ✓ Outside of Sonoma County there are no known local requirements applicable to new vineyard development, vineyard replanting, or vineyard land management practices
- ✓ Should climate conditions continue to change, vineyards may one day be in greater numbers outside of Sonoma and Mendocino Counties
- ✓ Though most vineyards are in Sonoma and Mendocino Counties, there are vineyards elsewhere which require regulatory coverage
- ✓ This permit will be utilized to address regionwide sediment and temperature impairments

# Schedule for Permit Development

Project Schedule	
Process/Milestone	Time Frame
Outreach to Advisory Group Members	Beginning Spring/Summer 2019
Tribal Consultations	Beginning Winter 2019
Administrative Draft of Permit	Winter 2019 – Summer 2020
CEQA Development	Winter 2019 – Summer 2020
Public Comment Period	Fall/Winter 2020
Public Workshops	Fall/Winter 2020
Adoption Hearing	Winter 2021

# Vineyard & Orchard Permit Development

- Questions & Comments?

