

# Update on Status of Implementing the North Coast Dairy Program



Item 4  
May 7, 2015

Cherie Blatt

North Coast  
Regional Water Quality  
Control Board



# Presentation Outline

## 1. Dairy Program Overview

- a. Enrollment and Reporting Submittals
- b. Water Quality Monitoring by County
- c. Enforcement Actions
- d. Program and Water Quality Summary

## 2. Next Steps

- a. Inspections, surface water sampling, groundwater sampling
- b. Potential Fees for the Waiver
- c. Expiration of Waiver & NPDES permit

# Enrollment

All Existing Cow Dairies are Enrolled:

**123** in Conditional Waiver of WDRs (Waiver)  
Order R1-2012-0003

**3** in General Waste Discharge Requirements  
(GWDR), Order No. R1-2012-0002

**0** in General NPDES Order No. R1-2012-0001

# Reporting Submittals

	<b>Waiver</b>	<b>GWDR</b>
<b>Water Quality Plan</b>	<b>2012</b>	
<b>Waste Management Plan</b>		<b>2013 (kept on dairy)</b>
<b>Nutrient Management Plan</b>		<b>2013 (kept on dairy)</b>
<b>Annual Report</b>	<b>November 30</b>	<b>November 30</b>
<b>Annual Fees</b>	<b>None so far</b>	<b>By herd size annually</b>

# Reporting Submittals

## Annual Report:

- Certifies dairy complies with the permit and is ready for winter

## Consists of:

- Annual Report form (7 pages)
- Water quality sample results (surface and ground)
- BMP photos (dairy is ready for winter rains)

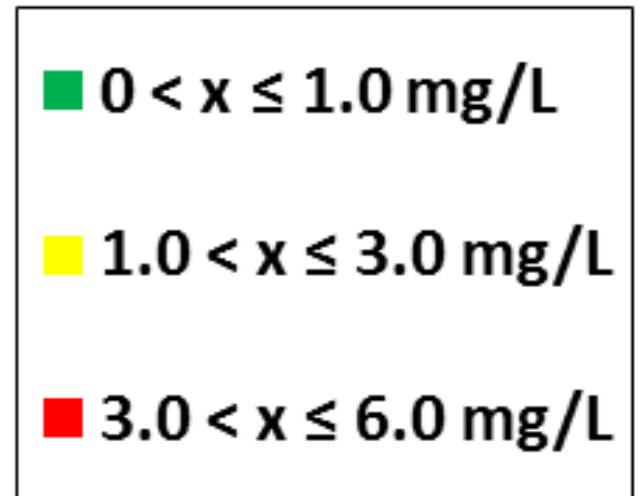
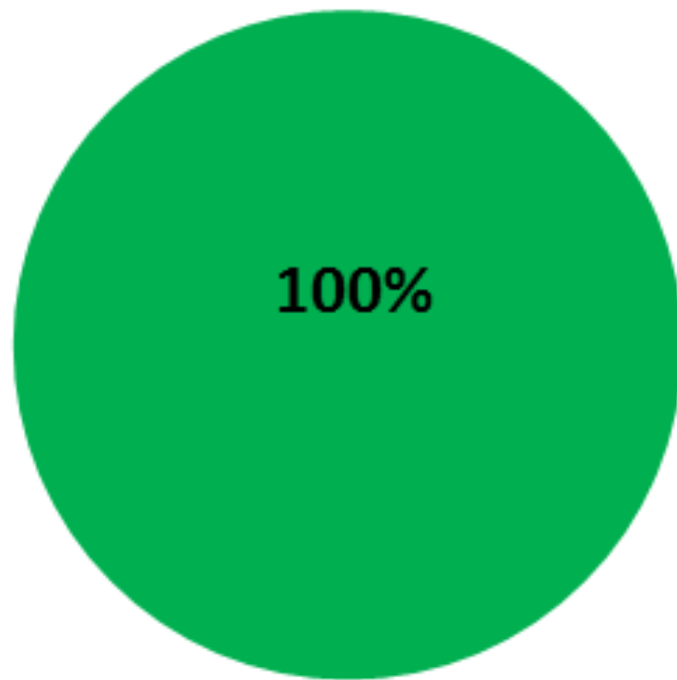
# Water Quality by County

- Number of Dairies, Staff Inspections
- Surface Water Sampling results
  - (Ammonia, Electrical Conductivity, pH, Temperature)
- Groundwater Sampling
  - (Nitrate, Fecal Coliform)
- Best Management Practices
- Concerns

# Del Norte Monitoring

- 8 Dairies – All Waiver
- 10 Staff Inspections
- Group Sampling (with NRCS staff)
  - Surface Water Sampling of three 1” Storms
    - 11 stream stations (up & downstream of dairies)
  - Groundwater Sampling
    - 8 dairy groundwater stations
    - 100% completed (Fall-Spring-Fall-Spring)

# Del Norte Surface Water: Ammonia

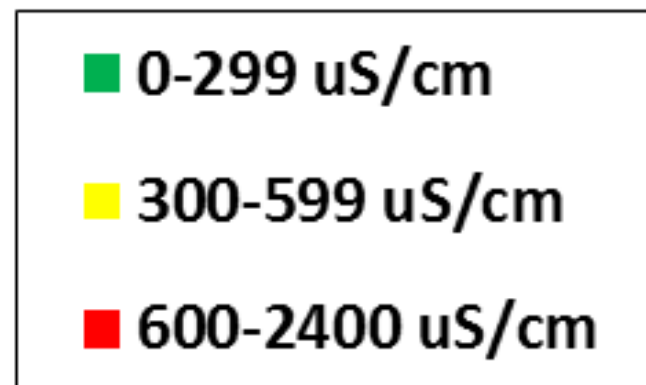
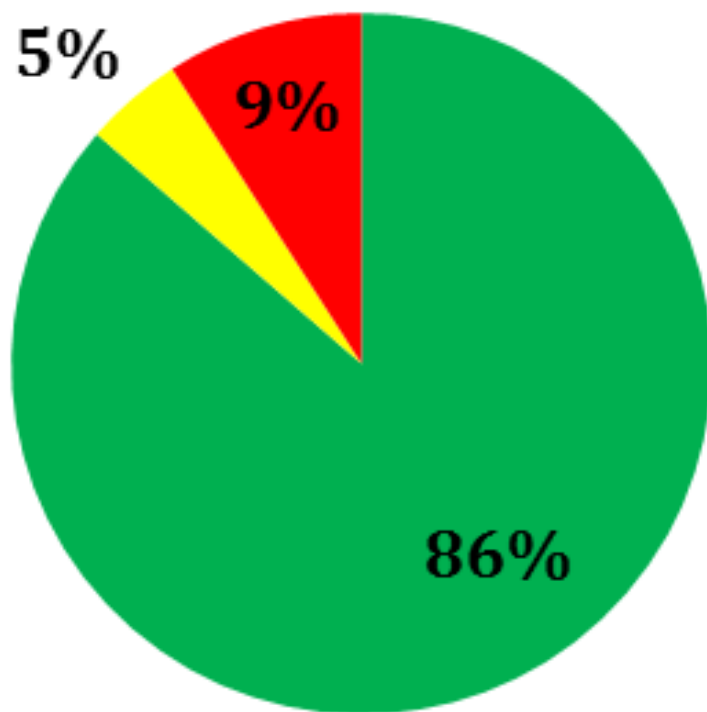


**n = 44**

**Reported as total ammonia**

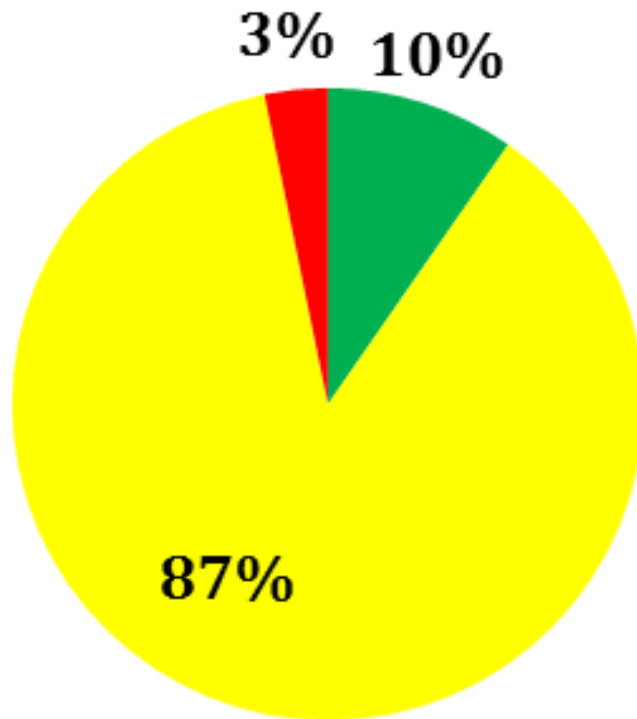


# Del Norte Surface Water: Electrical Conductivity



**n = 44**

# Del Norte Groundwater: Nitrate



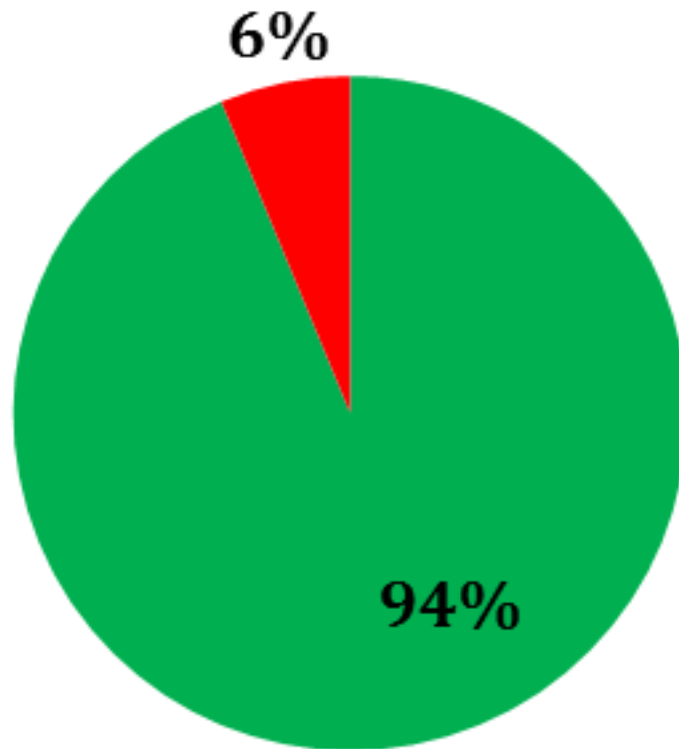
- Below Background ( $\leq 1$  mg/L)\*
- Above Background ( $1 < X \leq 10$  mg/L)
- Above MCL ( $10 < X \leq 15$  mg/L)

**n = 31**

**Reported as NO<sub>3</sub>-N**

**\* Hem, 1992**

# Del Norte Groundwater: Fecal Coliform



- None Detected (< 2.2 MPN)
- Detected (2.2 ≤ X ≤ 1600 MPN)

n = 31

\*MPN is most probable number per 100 mL

# Del Norte BMPs







# Future Del Norte Monitoring

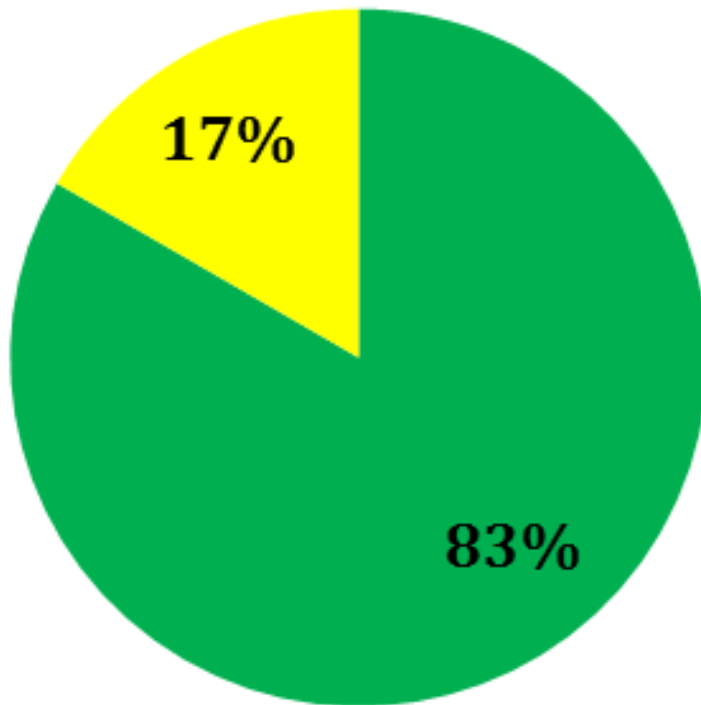
- Dairy group surface water sampling will continue
- Group groundwater sampling is complete for 5 year Waiver
- Regional Water Board staff sampling Smith River Plain groundwater in summer 2015

# Siskiyou Monitoring

- 3 Dairies – All Waiver
  - All Staff Inspected
- Surface Water Sampling of three 1” storms
  - Up and downstream of each dairy - ongoing
- Individual Groundwater Well Sampling
  - 60% completed



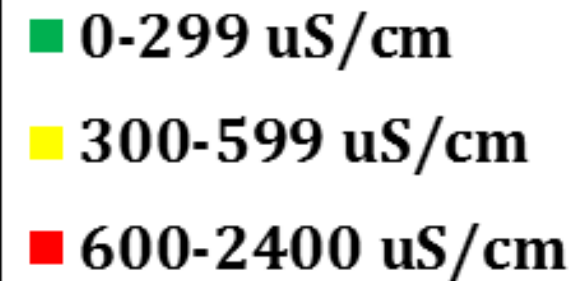
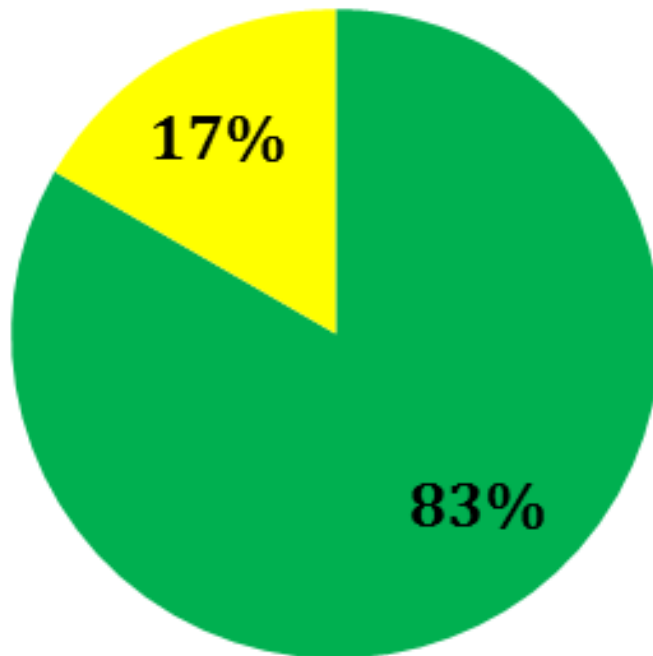
# Siskiyou Surface Water: Ammonia



- $0 < x \leq 1.0$  mg/L
- $1.1 < x \leq 2.9$  mg/L
- $3.0 < x \leq 6.0$  mg/L

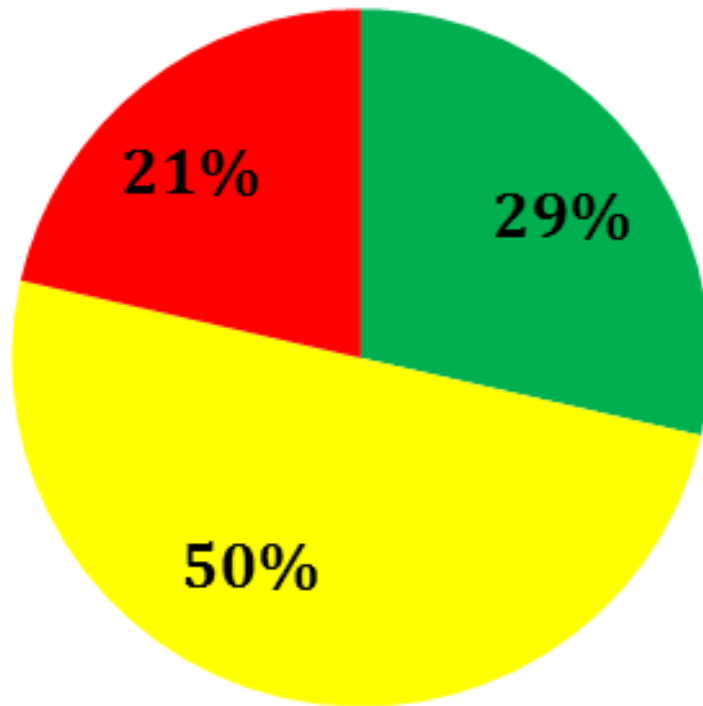
**n = 6**

# Siskiyou Surface Water: Electrical Conductivity



**n = 6**

# Siskiyou Groundwater: Nitrate



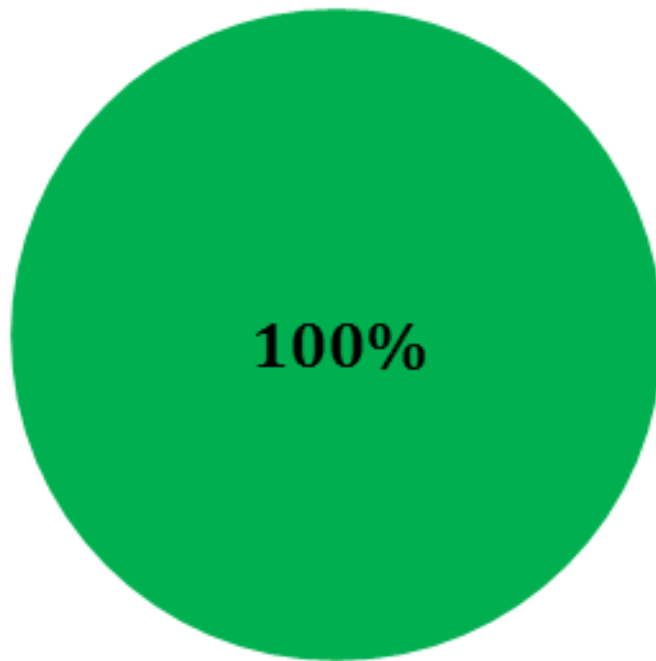
■ Below Background  
( $\leq 1$  mg/L)

■ Above Background  
( $1 < X \leq 10$  mg/L)

■ Above MCL  
( $10 < X \leq 45$  mg/L)

n = 10

# Siskiyou Groundwater: Fecal Coliform



■ None Detected  
( $< 2.2$  MPN)

■ Detected  
( $\geq 2.2$  MPN)

**n = 10**







# Future Siskiyou Monitoring

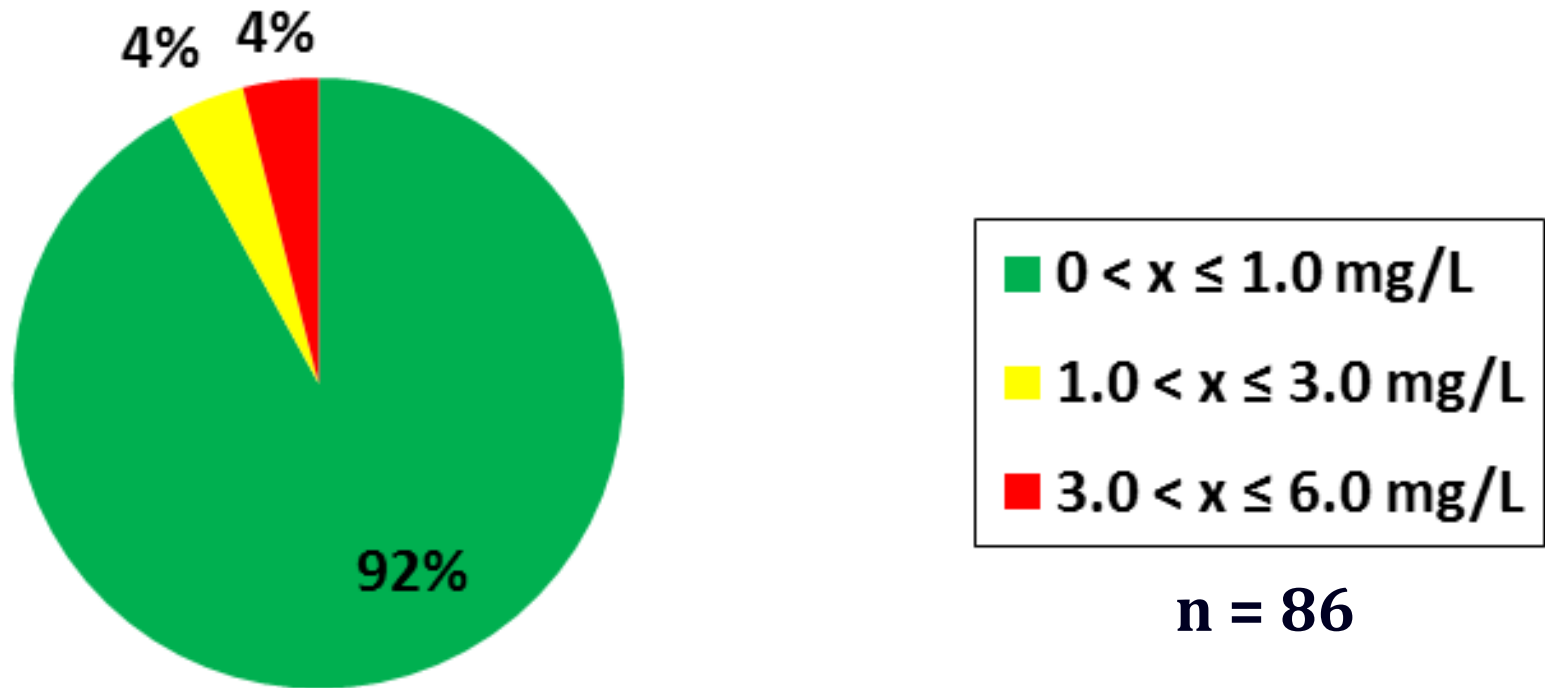
- Individual surface water sampling will continue
- Individual groundwater sampling
  - 40% remaining
- Concern about Nitrates in Groundwater



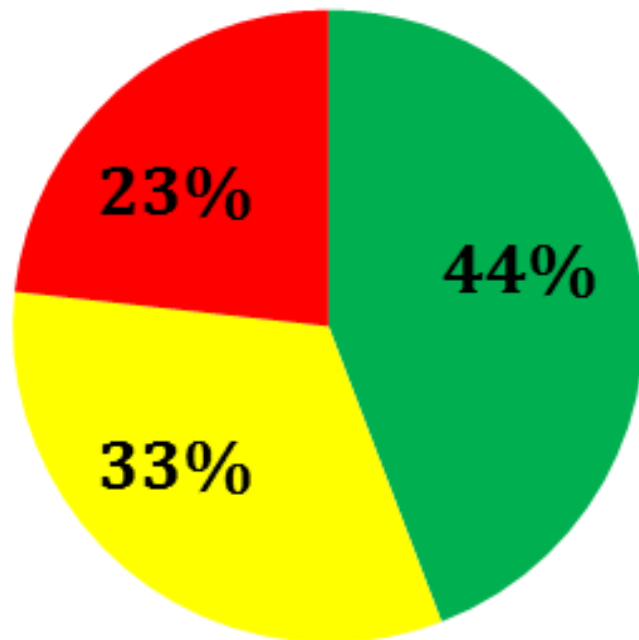
# Humboldt Monitoring

- 62 Dairies – 60 Waiver, 2 GWDR
- 52 staff inspections
- Group Surface Water Sampling (RCD)
  - 32 tributary stream stations (up & downstream)
  - 50% stations sampled each storm
- Individual Groundwater Sampling
  - 60% complete

# Humboldt Surface Water: Ammonia



# Humboldt Surface Water: Electrical Conductivity



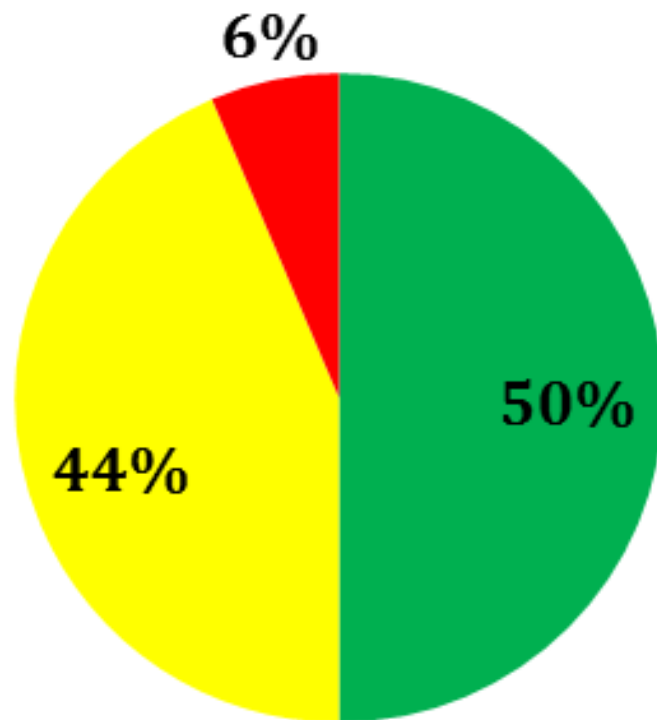
■ 0-299 uS/cm

■ 300-599 uS/cm

■ 600-1900 uS/cm

n = 86

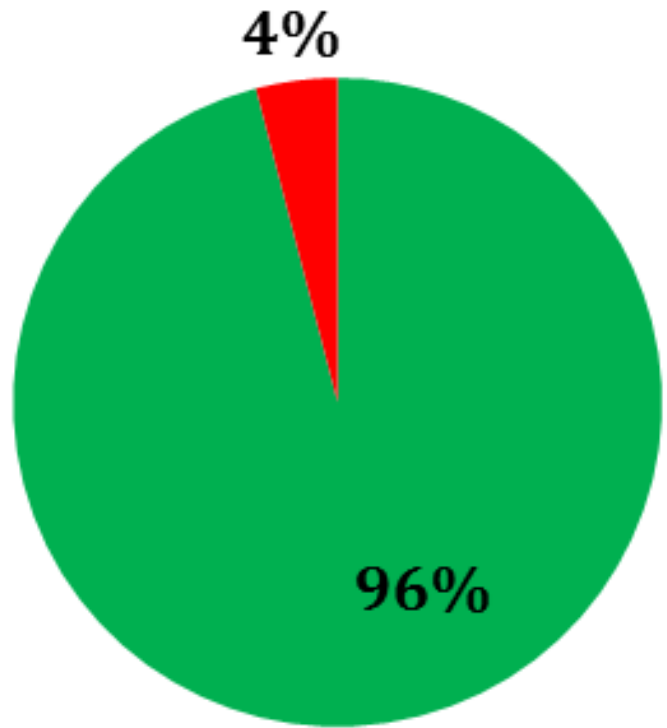
# Humboldt Groundwater: Nitrate



- Below Background ( $\leq 1$  mg/L)
- Above Background ( $1 < X \leq 10$  mg/L)
- Above MCL ( $10 < X \leq 17$  mg/L)

**n = 234**

# Humboldt Groundwater: Fecal Coliform



- None Detected (< 2.2 MPN)
- Detected (2.2 ≤ X ≤ 23 MPN)

n = 222



03.09.2015 11:24









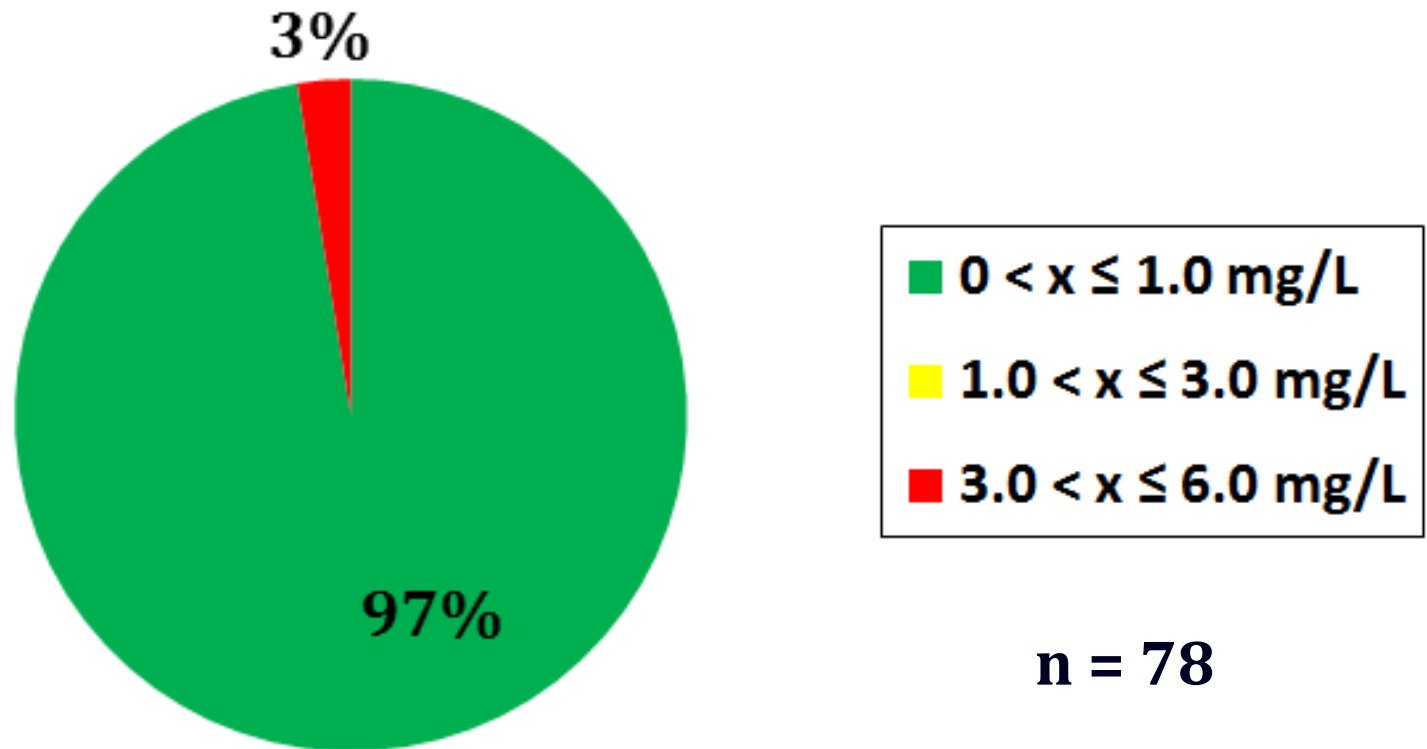
# Future Humboldt Monitoring

- Dairy Group surface water sampling will continue
- Individual groundwater sampling
  - 40% remaining
- Regional Water Board staff sampling Humboldt County surface waters for bovine bacteria 2015-2016

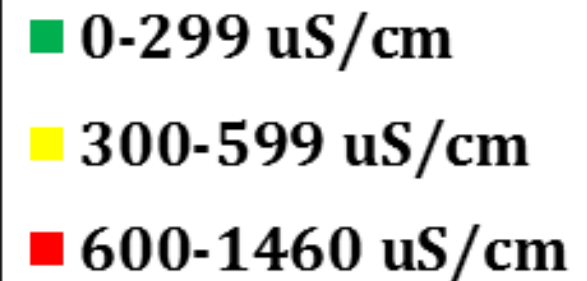
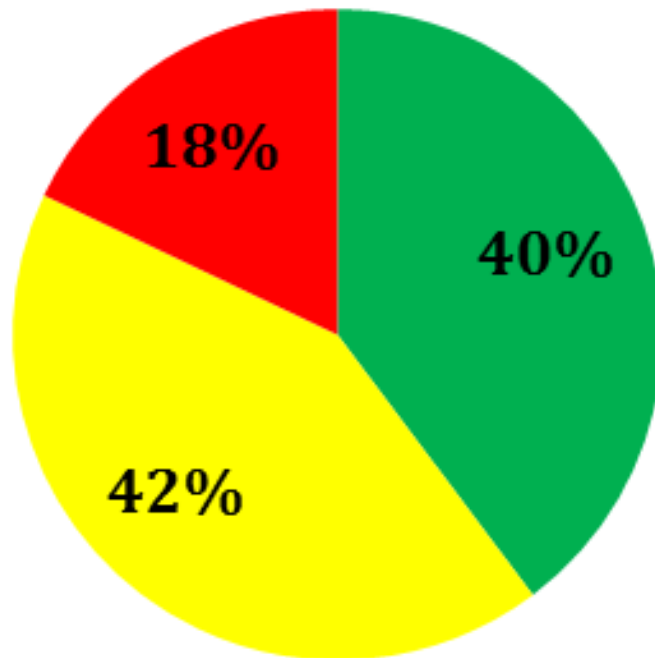
# Sonoma-Marin-Mendocino Monitoring

- 52 Dairies – 51 Waiver, 1 GWDR
- 53 staff inspections
- Group Surface Water Sampling (Farm Bureau)
  - 18 tributary stream stations (up & downstream)
  - 100% stations are to be sampled each storm
- Individual Groundwater Sampling
  - 40% complete

# Sonoma-Marin Surface Water: Ammonia

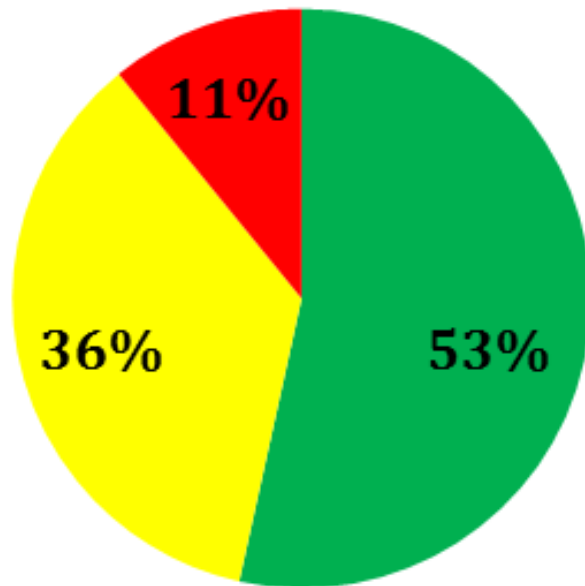


# Sonoma-Marin Surface Water: Electrical Conductivity



**n = 78**

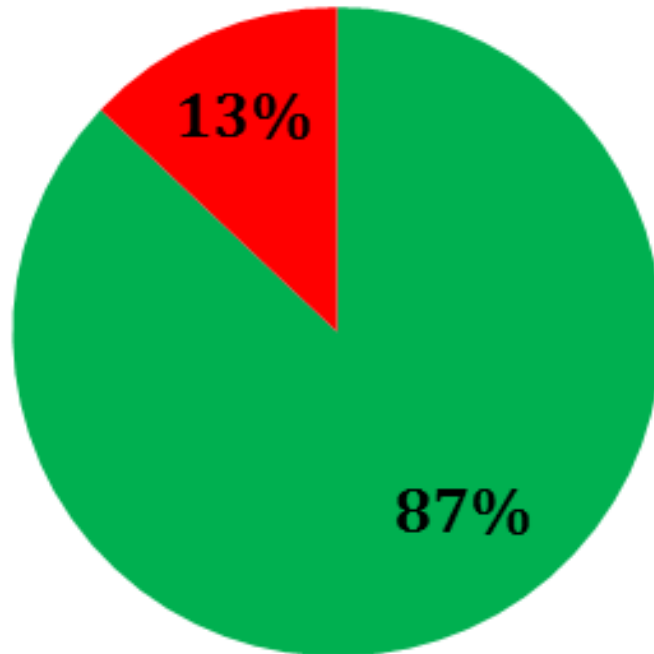
# Sonoma-Marin-Mendocino Groundwater: Nitrate



- Below Background ( $\leq 1$  mg/L)
- Above Background ( $1 < X \leq 10$  mg/L)
- Above MCL ( $10 < X \leq 63$  mg/L)

**n = 101**

# Sonoma-Marin Groundwater: Fecal Coliform



- None Detected (< 2.2 MPN)
- Detected (2.2 ≤ X ≤ 920 MPN)

**n = 100**



04 09 2015 09 17





04.15.2015 08:52



04.15.2015 08:55



1993  
3

1993  
3

1203  
3

PULL-RITE  
Emergency Shut-Off  
Fuel Dispensing System



# Future Sonoma-Marin-Mendocino Sampling

- Dairy Group surface water sampling will continue
- Individual groundwater sampling
  - 60% remaining
- Future Sampling in Sonoma County

# Enforcement Actions

- 95% timely Annual Reports
- Notices of Violation
  - 2 in 2012 - Failure to Enroll
  - 11 in 2013 - late WQ Plans or Annual Reports
  - 7 in 2014 - late Annual Reports
  - 2 in 2015 - late Annual Reports
- Administrative Civil Liability Complaint
  - 2 in 2014 late reports

# Program and Water Quality Summary

- Dairy Enrollment
- Education and Reporting
- Water Quality Data
- Inspections
- Water Quality Improvements
- Water Quality Concerns

# Next Steps

- Continue staff inspections
- 6 dairy closures, 2 new dairy facilities opening
- Continue group surface monitoring
- Groundwater data collection
- Potential fees for Waiver
- Waiver & NPDES permits expire January 2017





Thank You!  
Questions?

