

# Nutrient Management Planning at Dairies

---



Doug Patteson  
Dairy Program Manager  
Central Valley Water Board  
28 August 2013

# Dairy Operations

---

- Dairy General Order (Order No. R5-2007-0035)
- Three phases of operations:
  - Production area
  - Storage
  - Land application

# Purpose and Expected Outcome

---

- Apply nutrients efficiently
- Maximize plant uptake
- Minimize percolation and runoff
- Protection of water quality

# Nutrient Management Planning

---

- Land Application Area
- Sampling and Analysis
- Nutrient Budget
- Reporting

# Land Application Area

---

- Map
- Fields
- Storage and conveyance
- Acreage and crops grown
- Sampling locations
- Third-party agreements

# Sampling and Analysis

---

- Wastewater
- Manure
- Soil
- Plant tissue
- Irrigation water
- Groundwater

# Nutrient Budget

---

- Crop need on a field scale
- Planned rate and timing of application
- Nitrogen Balance
  - 1.4 total N vs. N removed by crop
  - 1.65 if needed and no pollution
- Certified Nutrient Management Specialist

# Reporting

---

- Field inspections
- Nutrient monitoring
- Groundwater
- Nutrient Management Plan



# Reporting Tools

## ■ Merced County reporting tool

The screenshot shows a web browser window with the URL <https://apps.co.merced.ca.us/EnvironmentalHealthWM/pages/login/Login.aspx?ReturnUrl=%2FEnvironmentalHealthWM%2Findex.aspx>. The page title is "California Central Valley Dairy Waste and Nutrient Management" and the sub-header is "User Login".

Navigation links: [Home](#) | [Links](#) | [Glossary](#) | [What's New \(09/10\)](#) | [Contact](#) | [Log in](#)

**Login**

Enter your login and password below (sent to your e-mail address when you registered) to log into the system. The password must be entered using the same case that appears in the registration e-mail. If you have not yet registered, please visit the [REGISTRATION PAGE](#). If you have already registered but need to create reports for another facility, please create a new login at the [REGISTRATION PAGE](#).

Login:   
Password:  (case sensitive)

**Lost password retrieval**

Only if you have lost your password, enter your login in the first box, and the text from the image into the second box. Any letters must be entered with the same case (upper-case or lower case) as in the image.

Login:   
Image Text:

Version 1.0.0

# Measures of Success

---

- Effective implementation of nutrient management
- Understanding impacts to water quality
- Water quality meets objectives or is improving

# Benefits and Challenges

---

- Benefits:
  - Protection of water quality
  - Efficient use of resources
- Challenges:
  - Complicated
  - Requires commitment
  - Differing opinions
  - Tracking compliance at 1,300+ dairies

# Questions?

---

