EXECUTIVE OFFICERS REPORT
North Coast Regional Water Quality Control Board

August 2014

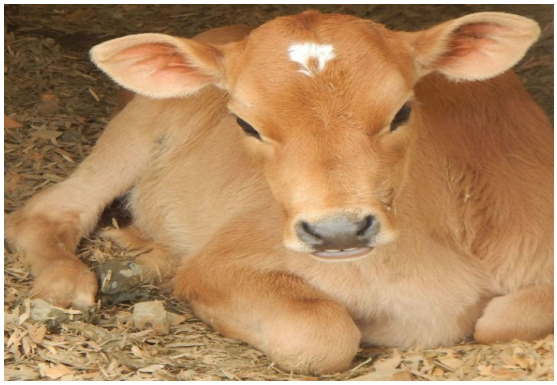
North Coast Dairy Program by the Numbers *Cherie Blatt*

On January 19, 2012, the Regional Water Board adopted the following Orders comprising the North Coast Dairy Program:

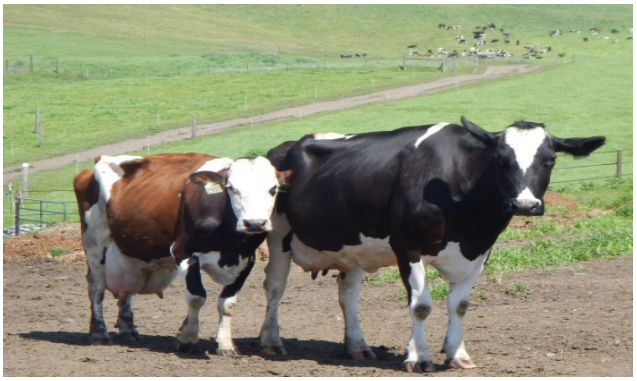
- R1-2012-0001: NPDES permit for Concentrated Animal Feeding Operations (NPDES)
- R1-2012-0002: General Waste Discharge Requirements for existing Cow Dairies in the North Coast Region (GWDR)
- R1-2012-0003: Conditional Waiver of Waste Discharge Requirements for existing Cow Dairies (Waiver); the Waiver is scheduled for renewal by January 2017.

Since 2012, all cow dairies have been enrolled:

- 0 under the NPDES permit
- 3 under the GWDR
- 123 under the Waiver



Humboldt County calf. Photo by Cherie Blatt



Sonoma County cows. Photo by Cherie Blatt

North Coast dairy statistics:

- Over 50% have Nutrient Management Plans
- Over 60% are organic
- 100% are pasture-based
- Dairies average 325 milking cows, ranging from 30 to 2,000 per dairy.
- 5 of these total dairies have sold their cows and are in the process of being terminated from the Waiver. Three of the five have termination inspections pending.

Inspections

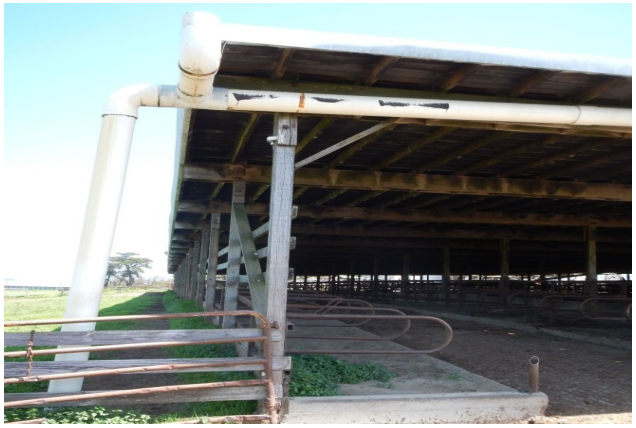
From 2011 to 2012, under contract with U.S. EPA, Tetra Tech staff trained Regional Water Board staff to perform water quality inspections on about 50 of our dairies. Since 2013, staff has:

- 100 dairy inspections completed
- 26 dairies remaining will be inspected during the 2014-2015 State Fiscal Year.

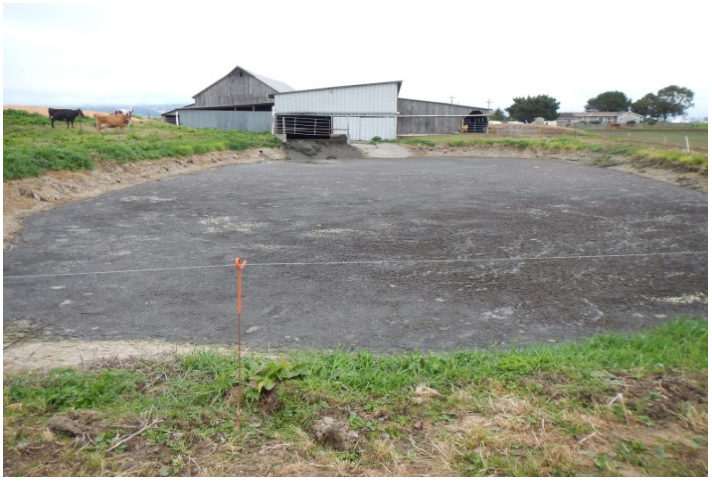
It is important to note that dairy assistance representatives often attend these inspections helping the dairy operator to understand funding options if water quality improvements are needed.

Of the 100 inspections completed, common inspection report requirements to continue permit coverage include:

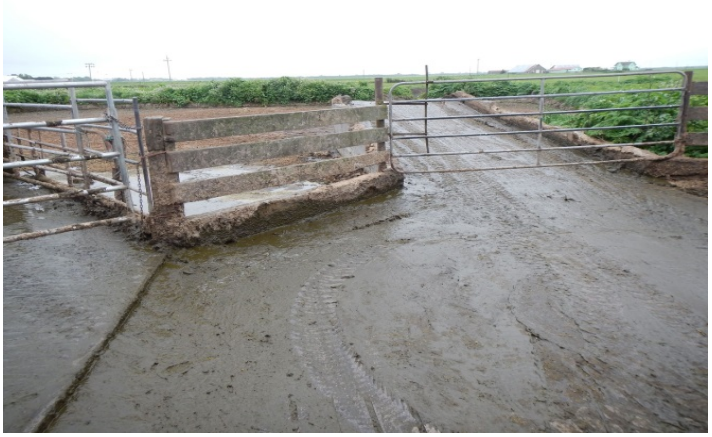
- Ensure manure ponds do not leak;
- Ensure manure ponds can hold the 25-year 24-hour storm plus normal capacity;
- Installation and routing of rain gutters to pastures to optimize needed manure pond capacity;
- Keeping weeds trimmed on the berms of the manure ponds for ease in checking for leaks;
- Routing of stormwater runoff within manured areas to the manure ponds and away from drainages that could discharge to surface waters;
- Revegetation of bare areas prior to winter;
- Fencing cows away from watercourses;
- Volunteer to obtain a Nutrient Management Plan to help plan future water quality improvement projects; and
- Protecting groundwater from nutrient leaching.



Roof gutter system diverts clean rain water away to optimize needed space in the manure ponds. Sonoma County. Photo by Cherie Blatt.



Keeping vegetation trimmed around manure ponds makes it easy to check for leaks or cracks. Humboldt County. Photo by Cherie Blatt



Concrete lanes and concrete curbs help control manure runoff and assist in the daily maintenance of the ramp to the manure pond. Humboldt County. Photo by Cherie Blatt

Workshops

Since permit adoption, 12 workshops have been hosted in the North Coast by the California Dairy Quality Assurance Program (CDQAP). These workshops, held in Rohnert Park, Ferndale, and Eureka, educate the dairy operators about permit requirements, and help them fill out the reports needed to comply. Deanne Meyer, University of California Cooperative Extension, and Denise Mullinax, CDQAP, usually lead these trainings. Participants include dairy operators, staff from

the Regional Water Board, and dairy assistance representatives from the Resource Conservation Districts, Western United Dairymen, County Farm Bureau, Natural Resource Conservation Service, and the milk companies. Three more workshops will be held this fall to assist dairy operators in filling out the 2014 Annual Report, which is due November 30, 2014.

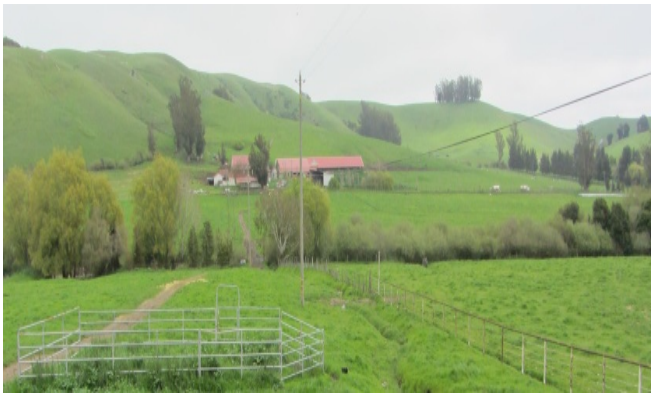
Monitoring and Reporting

The Waiver and GWDR Monitoring and Reporting Programs (MRPs) require rainy season sampling of surface water for electrical conductivity, temperature, pH, and ammonia. Surface water results are required to be submitted to the Regional Water Board each year. Group sampling is an option. About 92% of North Coast dairies joined one of the three groups: Del Norte, Humboldt, and Sonoma/Marin. Other dairies must collect their own surface water samples when qualifying storms occur. The three groups and individuals report results to the Regional Water Board annually.

The MRPs require a total of four representative fall and spring groundwater samples to be collected for nitrate and fecal coliform. Results are to be submitted to the Regional Water Board with Annual Reports. Over half of this information has been collected so far to give us a snapshot of groundwater quality surrounding the dairies.

2015 Regional Board Informational Item

A Regional Water Board informational item is scheduled for early 2015 to update the Board on permit implementation and to illustrate details of the dairy program. By then, two years of data on surface and groundwater sampling results will be submitted and analyzed, all the dairy inspections will be completed, and we will have some great photos of the dairy operations from each county.



Fencing cows out of the stream riparian area (center) protects water quality. Sonoma County. Photo by Cherie Blatt

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The Drought and Dust Abatement on Logging Roads

Jim Burke and Cherie Blatt

On April 25, 2014, Governor Edmund G. Brown Jr. issued an Executive Order to strengthen the state's ability to manage water and habitat effectively in drought conditions and called on all Californians to redouble their efforts to conserve water.

In February 2014, staff from timber harvest review agencies (i.e. Regional Water Board, CalFire, CDFW) met to discuss issues and potential problems related to the use of water for dust abatement on logging roads in light of the drought.

Water is widely used to control dust and help compact and stabilize logging road surfaces. With drought conditions persisting, reduced amounts of water will be available and all feasible measures should be taken in order to

conserve limited water resources. The group met to evaluate actions that can be taken to encourage efficient use of water, such as:

- Evaluating the volume of water used for dust control on logging roads;
- Education and outreach about wise water use and alternatives to water and/or drafting methods;
- Listing of BMPs in timber review correspondences;
- Ensuring careful use of alternative palliatives, particularly in areas/watersheds with already high concentrations of salts and other agricultural/industrial runoff; and
- Regulatory solutions; such as water rights, emergency regulations, alternative sources of water, and site-specific recommendations.

Scope of problem

Logging roads are typically surfaced with a mixture of fine (silt, sand and clay) and course (gravel) earthen materials. The fines such as clay and sand are the binders that hold the gravel components in place, creating the hard surface as well as the bridge which ultimately spreads surface deforming loads out over a greater area. This is important with respect to shaping of the road for efficient use and winter grading to disconnect runoff. Without the fines component in the material mixture, only gravel size particles remain, with no binding matrix. When timber operations are conducted during dry periods of the year, most logging road surfaces are treated to control dust for visibility and safety, minimizing the transport of fine sediments to adjacent watercourses, and maintaining infrastructure. Treatment methods most commonly used are water drafted from streams or ponds or the application of rock. Less common is the use of groundwater from wells, city water, and the use of dust pallatives such as magnesium chloride, calcium chloride, sodium chloride, petroleum or non-petroleum based organic products such as lignin.

The possibility of temporarily suspending rules requiring dust abatement likely would generate large amounts of dust, which would be transported as fine sediment with the onset of the rainy season, as well as deterioration of road surfaces that could result in long-term maintenance problems.

Regional Water Board staff queried several large industrial timber companies asking for rough estimates of water usage for dust control. Results ranged from 2,000 to 4,000 gallons of water needed per mile of logging road depending upon road conditions, weather, soil, and locality. Each mile of road is watered about twice per day. If it is hot outside, they may re-water the road every 4 to 5 hours, as needed. With the high number of road miles and a typical truck carrying 4,000 gallons, this can mean up to 12 water trucks working at once for larger land owners. Dust abatement may be necessary from May 15 to October 15 depending upon the weather. Landowners may get water from their lands wherever California Department Fish and Wildlife (CDFW) permits it: flowing streams and ponds. Some timber companies also have groundwater wells at various locations.

Lake and Streambed Alteration Agreements

CDFW Code, Section 1603 requires that landowners drafting water from streams typically must notify CDFW for a Streambed Alteration Agreement (SAA) for each drafting site. SAA's in the north coast typically include specific conditions limiting, among other things, water depth, bypass stream flow, and stream velocity.

Anadromous Salmonid Protection Rules

In watersheds with listed anadromous salmonids, water drafting is subject to the Anadromous Salmonid Protection (ASP) Rules, section 916.9(r) of the Forest Practice Rules, water drafting:

"Bypass flows for Class I watercourses shall be provided in volume sufficient to avoid dewatering the watercourse and maintain aquatic life downstream, and shall conform to the following standard:

1) Bypass flows in the source stream during drafting shall be at least 2 cubic feet per second.
2) Diversion rate shall not exceed 10 percent of the surface flow.
3) Pool volume reduction shall not exceed 10 percent."

Statement of Water Diversion and Use

California Water Code §5101 requires each person or organization that uses diverted surface water or pumped groundwater from a known subterranean stream to file with the State Water Board a Statement of Water Diversion and Use.

Beginning on January 1, 2012, diverters of water who file Statements are required to measure their monthly water diversions, and report those amounts when they submit their reports the following year. California Water Code section 5103 (e)(1)

http://www.waterboards.ca.gov/waterrights/water_issues/programs/diversion_use/

BMPs to minimize water use

The quantity of water applied on roads and risks to water quality can be minimized by implementation of BMPs such as the following:

- Use rock surfaced roads when possible, which require less watering than dirt surfaced roads;
- Water in the early morning (1 to 3 am) to allow the moisture to infiltrate the road surface material and not be as prone to flash evaporation;
- Deep infiltration maintains dust abatement over longer periods of use without the need to rewater as often;
- Road surfaces should only be watered as needed based on the number of logging truck loads remaining to be shipped for the day and based on deterioration of the road surface;
- In coastal fog belt watersheds there is usually a dew drop in the morning. Roads in these watersheds can be watered later in the day once the dew moisture has exhausted for the day. Road surfaces on north facing slopes with overhanging canopy may be watered less than fully exposed segments; and
- Minimize driving speed, particularly for logging trucks.

Dust Palliatives Alternative

There are several effective alternatives to water to control dust, such magnesium chloride, calcium chloride, sodium chloride, and petroleum or non-petroleum based organic products such as lignin. Efficacy of each product may vary by geographic region; for example, hydrophilic compounds (chlorides) do have minimum humidity requirements and may not be suitable for dry inland areas. There may be up-front cost for these products, but they may be cost effective in the long term as they may need to be applied only once or twice per season. For instance, the use of magnesium chloride reduces the need for road watering 50 percent. In general, BMPs must be utilized to prevent or

minimize the potential for any of these substances to be discharged to streams that could impact beneficial uses of water.

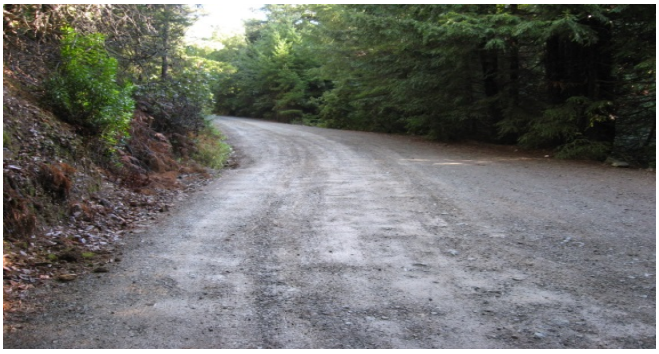
Recycled Water Alternative

Regional Water Board staff from the Core Regulatory and the Timber Units are working to facilitate the use of treated wastewater on logging roads that meet State requirements during the drought. The use of treated wastewater reduces the need to extract surface water and groundwater for dust abatement.

Use of treated wastewater for dust abatement on forest roads is permissible, however there are some limitations that must be observed:

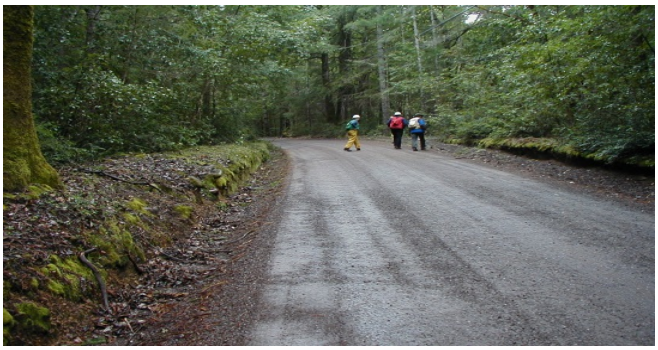
- Landowners need to inform the Regional Water Board regarding the proposed treatment plant that the treated wastewater will come from. Regional Water Board staff are familiar with the water quality of the treatment plants throughout the region and know what use is allowed under the permit for each treatment plant;
- Treated wastewater use may be permitted under a region-wide Waiver. For instance, the Regional Water Board recently enrolled the city of Healdsburg wastewater treatment facility for this type of recycled wastewater use (the adopted Order may be viewed by clicking on the link below then typing in the Waiver Order Number R1-2012-0099 http://water100.waterboards.ca.gov/rb1/adopted_orders/
- Treatment plants must provide a California Code of Regulations Title 22 engineering report for recycled wastewater use. Requirements include procedures for safe handling, placarding of water trucks, and restrictions of application related to domestic water supplies and human contact;
- BMPs conditioned under the Waiver are designed to prevent treated wastewater from entering flowing or ponded water and groundwater; and
- The County Department of Health may need to be notified of the wastewater use.

Landowners with questions regarding the wastewater for dust control are encouraged to contact Regional Water Board staff by calling 707-576-2220.



Gualala River Watershed photo by Cherie Blatt

Eel River Watershed photo by Cherie Blatt



Navarro River Watershed photo by Cherie Blatt

Enforcement Report for August 2014 Executive Officer's Report

Diana Henrioulle

Date Issued	Discharger	Action Type	Violation Type	Status as of July 24, 2014
6/18/14	Barnum Timber Company	NOV	Timber General WDRs	Ongoing

Comments: On June 18, 2014, the Chief of the Nonpoint Source and Timber Harvest Division issued a Notice of Violation to Barnum Timber Company for failure to treat controllable sediment discharge sources on a timber harvest plan (THP) enrolled for coverage under the General Waste Discharge Requirements. The NOV acknowledges that short term measures had been taken to stabilize soil until long-term measures are installed. The NOV directs the Discharger to have these long-term measures in place by October 15, 2014.

Date Issued	Discharger	Action Type	Violation Type	Status as of July 24, 2014
6/30/14	Crescent City Harbor District	ACLO	MMPs	Settled

Comments: On June 30, 2014, the Executive Officer signed a Stipulated Order No. R1-2014-0032 for Crescent City Harbor District (Discharger) after a noticed 30 day-public comment period without comments. The Stipulated Order states that the Discharger will implement a Compliance Project (CP) that will result in diverting the Discharger's effluent discharge from its ocean outfall to an inlet line that will connect to the City of Crescent City's wastewater treatment facility. The penalty amount is $123,000. The proposed cost of the CP is $140,711.

Date Issued	Discharger	Action Type	Violation Type	Status as of July 24, 2014
7/11/14	Occidental County Sanitation District and Sonoma County Water Agency	ACLC	MMPs	Ongoing

Comments: On July 11, 2014, the Assistant Executive Officer signed Administrative Civil Liability Compliant (ACLC) No. R1-2014-0045 to Occidental County Sanitation District and Sonoma County Water Agency for violations subject to mandatory minimum penalties. The proposed penalty is $57,000.