

JMLord
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scientists and engineers



Dairy Issue.

We're on the Web—
www.jmlordinc.com

FRESNO OFFICE

JMLord, Inc.
267 N. Fulton St.
Fresno, CA 93701-1610
(559) 268-9755
Fax (559) 486-6504

COACHELLA OFFICE

JMLord, Inc.
86695 Ave 54, #J
Coachella, CA 92236
(760) 399-8424
Fax (760) 399-8426

Email:
jmlord@jmlordinc.com



Ag^{the}Inform^{er}

Spring 2009

"Start Now" is the new slogan for completing the items for the RWQCB July 1st deadline of the Existing Dairy General Order. This submission is **BIG** and will require more time to collect/gather data and for registered professionals to complete calculations and certify their findings. Because of this, you need to **Start Now** so these professionals have time to review your information. In this issue of the **AgInform^{er}**, we have highlighted some things you will need to do to get ready and to complete the items for the RWQCB July 1st deadline. Enjoy!

CAN YOU COMPLY...

Can you confidently answer "YES" to the following questions?

1. Do you have enough waste storage capacity in your ponds?
2. Can you balance the nutrients produced with nutrients used by crops or exported?
3. Is your facility protected from flooding?

If you answered "No" or "I don't know." to any of these questions, you need to **Start Now** by contacting your team of professionals to answer these questions. Initial *estimates* from the PDFA previously submitted were just that *estimates*. The detailed calculations now required for compliance verification may be much different for your facility than the initial *estimate*. You need to determine if you can **comply** with the General Order requirements as soon as possible because if you can NOT, additional work will be required.

The additional work will require the development of a **Proposal for Modification and Improvement** for each item in which you can not comply. The proposal development is a extensive process, which requires professional development, typically by a registered engineer. Some of the items, which may need to be developed, are new site plans, supporting calculations for changes, design details, construction schedule, quality assurance plan and a monitoring well installation and sampling plan. As defined in the General Order, the proposals should be submitted by July 1st, 2009. **Continued next page...**

CDQAP Informational Meetings for July 1st Deadline

March 16, 10-12 & 1-3 at Glenn Co. Farm Bureau Boardroom, 831 Fifth St., Orland
March 19, 10-12 & 1-3 at Tulare Co. CE Auditorium, 4437 S. Laspina St., Tulare
March 23, 10-12 at Merced Co. CE Classroom, 2145 W. Wardrobe Ave., Merced
March 25, 10-12 & 1-3 at Riverdale Memorial Hall, 3085 W. Mt. Whitney, Riverdale
March 26, 10-12 at Robert J. Cabral Ag Center (aka San Joaquin Co. CE offices),
2101 E. Earhart Ave., Stockton
April 7, 10-12 at Stanislaus Co. Ag Center, 3800 Cornucopia Way, Modesto
April 9, 10-12 at Tulare Co. Ag Center, 4437 S. Laspina St., Tulare
**More information should be coming out soon from CDQAP about these meetings.*

Continued...

You and your team will need to discuss changes and requirements with the RWQCB prior to development and submission of the Proposals. It is possible that the RWQCB will have additional requirements for the changes proposed.

Thus, the sooner you start the process to determine if you can comply with the RWQCB Existing Dairy General Order, the better prepared you and your team will be to address any additional requirements.

Additional Data Needed for NMP & WMP Calculations

Provide as much data by field if possible, at a minimum by crop or whole farm. If available provide multiple years of data. More data will allow the registered professionals developing your plan to better understand how you manage your facility.

- Crop History - Crop rotation, yields, variety, plant & harvest dates.
- Application records - wastewater, manure solids, commercial fertilizers and fresh water.
- Runoff Areas by surface type, such as concrete, roof, dirt, manure.
- Pump Capacities - water wells, canal, wastewater pumps.
- Irrigation Strategies - pipeline delivery capabilities, deficiencies or limitations through the year.
- Lab Analysis - wastewater, manure solids, harvest tissue, fresh water, mid-season tissues.
- Herd Numbers - current animal population, maximum animal population within last 12 months, maximum allowable mature cows.

This is just some of the additional information that will be needed for the registered professionals to complete the calculations to determine if your facility has sufficient waste storage capacity and can balance nutrients produced with nutrients used. Be sure to contact those who will be providing you assistance as soon as possible.

On a lighter note:

What vegetable can tie your stomach in knots?	. . .	String beans.
Why did the horse go behind the tree?	. . .	To change his jockeys.
What do you call a pig that does karate?	. . .	A pork chop.
What do you get if you cross an insect with the Easter rabbit?	. . .	Bugs Bunny.
What happens when frogs park illegally?	. . .	They get toad.
What kind of eggs does a wicked chicken lay?	. . .	Deviled eggs.
Why is a barn so noisy?	. . .	All the cows have horns.

New EPA Air Quality Rule for Animal Farms

Some of you may have received an email from us about the new EPA rule requiring immediate notification. After much investigation, it was determined that the new rule went into affect on January 20th, 2009. All large animals, as defined by the EPA, must report ammonia and hydrogen sulfide releases to local and state agencies, as directed by the Emergency Planning and Community Right-to-Know Act (EPCRA). In high concentrations, these gases can be harmful to humans and livestock. For dairy operations, the new rule applies to farms confining 700 or more mature dairy cows, whether milked or dry or 1,000 or more veal calves or 1,000 or more cattle other than mature dairy cows or veal calves ("Cattle" includes, but is not limited to, heifers, steers, bulls and cow/calf pairs.). Other animal type thresholds can be found in the new rule documentation at http://www.epa.gov/emergencies/docs/chem/CERCLA_EPCRA_final_rule_unsigned.pdf.

The first requirement is to verbally notify the EPA and local emergency agencies. Then a short report must be submitted to each agency notified with an estimate of continuous release of ammonia and hydrogen sulfide. For more information on how to comply with this rule check out our website or contact Betsy for more information.

In the future, we will attempt to notify our clients primarily through email. Email is the most efficient and economical way to keep our clients up to date. If you have not provided your email address, please contact Betsy or Dustin with the information.

WHAT NEEDS TO BE COMPLETED FOR THE JULY 1, 2009 RWQCB DEADLINE?

1. Annual Report including Annual Dairy Facility Assessment with modifications implemented to date.
Refer to the MPR in the Dairy General Order for more information.
 - The following items will be included within the Annual Report (partial list).
 - Sampling analysis summary.
 - Waste application records by field
 - Annual monitoring well report (if applicable)
 - Discharge samples & reports
 - Groundwater well analysis
 - Crop information by field
 - Summation of nutrients produced, applied & exported
2. Documentation of Interim Facility Modifications
 - Documentation of modifications made to date with regard to storage capacity and nitrogen balance.
3. Nutrient Management Plan– Retrofitting Plan to improve nitrogen balance with schedule.
 - Retrofitting Plan and Schedule {Pg. 27, IS-25}
 - Physical retrofits or modifications needed to improve Nitrogen balance (i.e.: pumps, pipelines, meters, etc.)
 - Schedule describing installation of items identified.
4. Statement of Completion (Part IV) for the Nutrient Management Plan
 - Complete all items listed under Part IV
 - Item I.A.2: Next update of Land Application Field Map. {Pg C2, 27, IS-25}.
 - Item III: Nutrient Budget {Pg. 27, IS-25, C4, C7}.
Balance of Nutrients Produced vs. Nutrients Used/Exported. * Must be certified by Registered Professional.
 - Item VII: Nutrient Management Plan Review {Pg. C5, C16}
Information on who will certify Nutrient Management Plan, Schedule for Updates.
5. Waste Management Plan with Retrofitting Plan and Schedule.
 - Retrofitting Plan and Schedule {Pg. 27, IS-25}
 - Physical retrofits or modifications needed to improve storage capacity, flood protection, or design of production area (i.e.: design/construction of new pond, berms for flood protection, grading for drainage, etc.)
 - Schedule for installation of improvements
6. Waste Management Plan (Attachment B) - Additional Documentation Required
 - Item I.F.1.B: Dairy Map Update {Pg. B2, 27, IS-25}
 - Item I.F.2.B: Field Map Update {Pg. B3, 27, IS-25}
 - Item II: Storage Capacity {Pg. 28, IS-25, B3-B5}
 - Engineered report documenting storage capacity. * Must be certified by Registered Professional.
 - Item III: Flood Protection {Pg. 28, IS-25, B5– BC}
 - Show facility is outside flood zone or develop engineering report documenting adequate flood protection.
* Engineering report must be certified by Registered Professional.
 - Item IV: Production Area Design and Construction {Pg. 28, IS-25, B6}
 - Show proper drainage or collection of all runoff from production area.
 - Develop plan/schedule to make changes to fix any deficiencies.
 - Item VI: Backflow Certification of NO cross Connections {Pg. 28, IS-10, IS-25, B8}
 - Verify corrective actions have been completed and Complete Part V of Back Flow documentation form.
* Must be completed by certified specialist.
7. Salinity Report.
 - Anticipate report will be completed by U.C. Davis or C.D.Q.A.P. Expect more details from RB5 & CDQAP on this issue.

SAMPLING ALFALFA HAY

Alfalfa hay may be harvested nearly **9 times** a season. RWQCB Existing Dairy rules require each harvest from each field to be sampled. This can become very costly and many of you questioned if it was necessary to sample each hay harvest. Last fall CDQAP and University of California came out with a protocol for sampling alfalfa hay. To summarize, harvest samples should represent early, mid and late season cutting of hay. The results from these samples would be applied to similar cuttings before and after the sampling event (e.g. sample cuttings 2, 5 and 8; roughly one sample for every three harvest events). This assumes all cutting were baled for hay. When the alfalfa is green-chopped for haylage or silage, a sample should be collected for each harvest event of this type. This is due primarily to the high variability in the moisture content between harvest events. These new guideline for alfalfa hay sampling should simplify your sampling requirements. For more information, refer to the CDQAP website for the "Sampling Protocol for Alfalfa Hay, Greenchop, and Silage (Haylage)."

<http://www.cdqa.org/wdr/binder.htm>

Routine Activity Reminder (Requirements of the Dairy General Order)

1. Inspections

- The dairy site and all land application areas need to routinely be inspected to identify any potential problems which could effect groundwater quality. Document inspections, any potential problems, and corrections on RB5 inspection forms.

- **Weekly Inspections: October 1– May 31**

- **Monthly Inspections: June 1-September 30**

2. Rainfall Events

- After all rainfall events, check the dairy site and all land application areas for runoff which is or may be leaving the site. Document inspections, any potential problems, and corrections on RB5 inspection forms.

3. Monthly Pond Pictures

- Indicate the date the pictures were taken of each pond.

4. Record all Wastewater and Manure Applications. Document all nutrient imports and exports.

5. Collect & document required samples for laboratory analysis as defined in the MRP of the Dairy General Order.

6. Provide a Chain of Custody for all samples submitted to any laboratory.

Sampling Reminder (Requirements of the Dairy General Order)

1. Wastewater Sampling

- First Quarter (Jan1-Mar 31)**, Second Quarter (April 1-June 30),
Third Quarter (July 1-Sept 31), Fourth Quarter (Oct 1-Dec 21)

- Be sure EC is either measured in the field when sample is collected or by the laboratory.

2. Dry Manure Solids Sampling

- First Sample (Jan 1-June 30)**, Second Sample (July 1-Dec 31)

3. Groundwater Sampling

- Must sample all domestic & agricultural supply wells and subsurface (tile) drainage system, **annually**.

- Samples should be collected in containers provided by an ELAP certified laboratory. Analysis of all groundwater samples must be conducted by an ELAP certified laboratory.

4. Harvest Tissue Samples

- Collect a sample of harvested material from each land application area for each harvest event.

- Record the crop planting date, each harvest date and yield for harvest event per land application area.

5. Soil Samples

- Any land applications fields not sampled in 2008 for Total Phosphorus should be sampled as soon as possible or when added to the Nutrient Management Plan. Land application fields should be sampled once every five years.

Refer to the Monitoring & Reporting Program within Dairy General Order, No. R5-2007-0035, specifically pages MRP-2 -- MRP-7. This will provide more information on the sampling requirements and the laboratory analysis requirements. To help assist our clients, JMLord, Inc. has developed the 500 Series testing codes specifically to address the analysis requirements defined in Dairy General Order, No. R5-2007-0035. Check out our website to find a copy of the current price list.