

Dairy Nutrient Management and Environmental Stewardship

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Management of nutrient waste (manure) and other by products from dairy operations is a complex environmental issue. Manure handling can be beneficial when utilized as fertilizer or compost and/or undesirable when it contributes to environmental degradation. The impact of nutrient waste on the environment depends upon the choices of a producer. In December 2002 the Environmental Protection Agency (EPA) revised the Clean Water Act for Concentrated Animal Feeding Operations (CAFOs). A dairy is considered to be CAFO if it has at least 700 cows or 1,000 heifers. The Clean Water Act (CWA) is the federal law regulating wastewater discharges from animal production facilities. The CWA prohibits any nutrient-waste discharge to waters of the United States (including but not limited to: dry washes, creeks, ditches, irrigation drainage canals, and rivers). Once a producer complies with the permitting requirements (AZPDES see below), they will be exempt from possible fines resulting from a storm event beyond the 25-year, 24-hour storm. A 25-year, 24-hour storm event in most areas of Pinal and Maricopa counties is 2.8 to 3.6 inches of rain in a 24-hour period. A map showing this data for Arizona can be accessed at the following web site.

<http://www.wrcc.dri.edu/pcpnfreq.html>

In August 2001, the EPA issued the National Pollutant Discharge Elimination System (NPDES) Concentrated Animal Feeding Operation general permit for Arizona. The NPDES permit regulates discharges and manure utilization at permitted facilities. The Arizona Department of Environmental Quality (ADEQ) regulates the NPDES CAFO permit for Arizona. Currently, ADEQ is writing a new NPDES CAFO permit and state administrative code to reflect the federal CAFO regulation changes into Arizona's regulation. This permit will be known as the Arizona Pollutant Discharge Elimination System (AZPDES) and it will be exclusive to the state of Arizona and will take the place of the NPDES. The **AZPDES** is expected to be completed by the fall or winter of 2004 and it will be **required** for all producers receiving a CAFO permit.

The CAFO permit covers the following practices:

1. Harvest, stockpile, and dispose of animal manure from a concentrated animal feeding operation to minimize discharge of any nitrogen pollutant by leaching and runoff
2. Control and disposal of nitrogen contaminated water resulting from an activity associated with a concentrated animal feeding operation, up to a 25-year, 24-hour storm event equivalent, to minimize the discharge of any nitrogen pollutant
3. Close facilities in a manner that will minimize the discharge of any nitrogen pollutant

If a discharge of manure-contaminated water reaches a "Water of the State" and violates any water quality standards, producers could be fined up to \$25,000 per day per violation.

Questions and Answers Regarding Permitting for Arizona

1. How does a dairy producer get the appropriate permit?
They must submit a Notice of Intent (NOI) to ADEQ. However, ADEQ is currently not accepting NOIs at this time because the permit is being updated. Contact ADEQ for more information regarding when NOIs can be submitted.
2. What will the permitting process cost?
There is no charge to apply for the AZPDES Permit; however, there may be associated costs to gain compliance with the Permit.
3. Who will pay for it?
The producer is responsible for these costs. Cost-share assistance may be available; the producer can contact their local NRCS field office for more information.
4. What can they do NOW?
Operators can contact ADEQ, NRCS, ADA and/or UA Coop. Ext. for more information regarding CAFO regulations and their requirements in AZ. If an operator knows his/her operation will be designated as a Large CAFO, he/she can start the process of obtaining a nutrient management plan, which will be required by the AZPDES Permit. If an operator would like to implement changes on his/her operation, they can contact NRCS to inquire about available cost-share assistance.
5. What if they are relocating (building/expanding) in the near future?
They can contact one of the above mentioned organizations to assess their specific operation's needs to develop and evaluate alternatives.

Contacts Information:

ADEQ: Ken Johnson, 602-771-4469

NRCS: State office 602-280-8801

ADA : Leslie Pierson, 602-542-0873

NRCD; Sandra Naylor, East Maricopa County, 480-977-1078 ext 108

UA Dairy Ext: Matt VanBaale, 520-621-1923 or 520-349-3532