

IOWA DEPARTMENT OF NATURAL RESOURCES

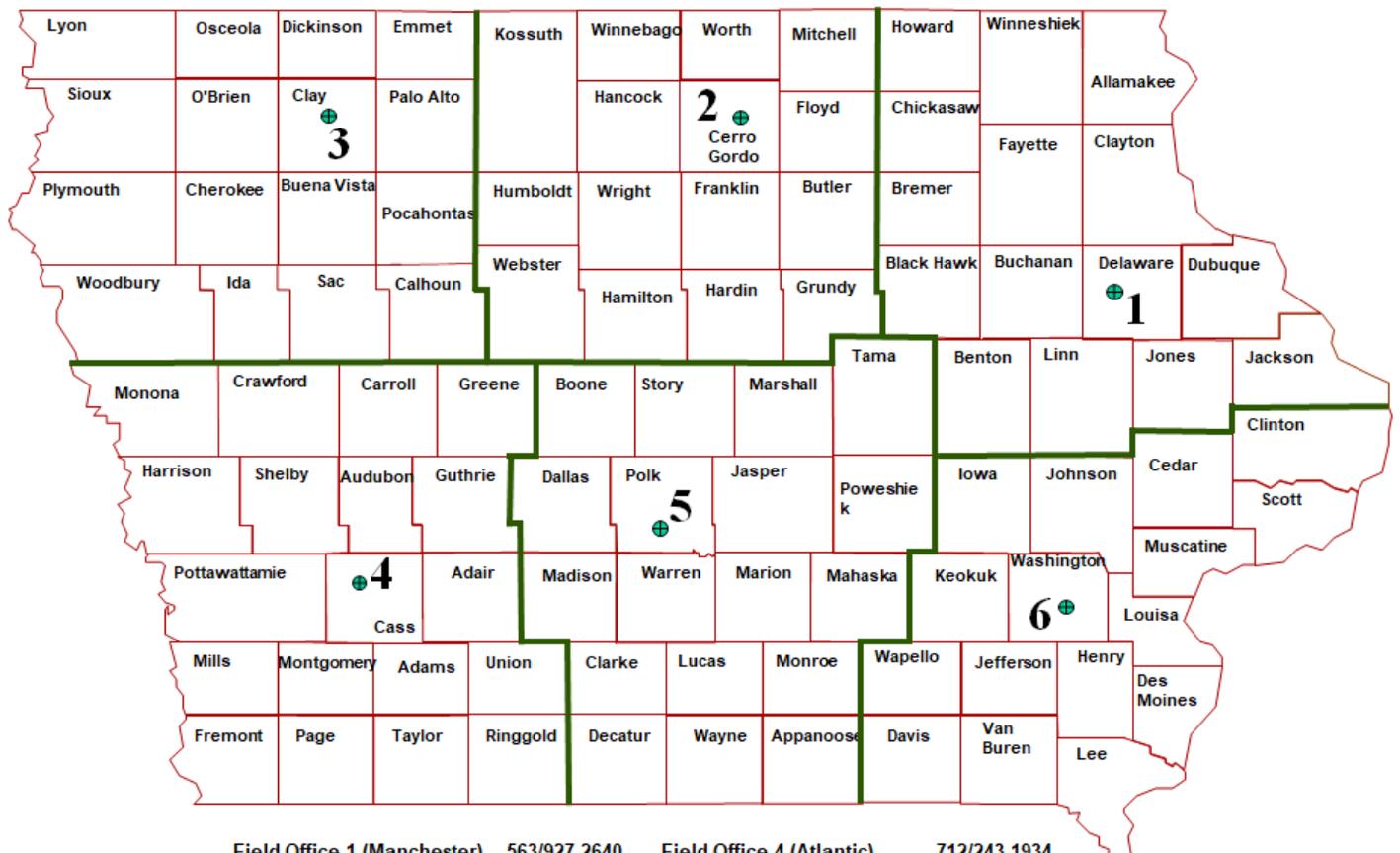
LEADING IOWANS IN CARING FOR OUR NATURAL RESOURCES

KAYLA LYON, DIRECTOR

Emergency Disposal of Milk for Dairy Farms

This document is meant to serve as a guidance document. In accordance with the rules and regulations, the Department reserves the right to take any appropriate enforcement action if the terms of this guidance document are not followed or if there is noncompliance beyond the scope of this guidance document.

Iowa DNR Environmental Services Field Offices



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|-----------------------------|--------------|-----------------------------|--------------|
| Field Office 1 (Manchester) | 563/927-2640 | Field Office 4 (Atlantic) | 712/243-1934 |
| Field Office 2 (Mason City) | 641/424-4073 | Field Office 5 (Des Moines) | 515/725-0268 |
| Field Office 3 (Spencer) | 712/262-4177 | Field Office 6 (Washington) | 319/653-2135 |

After Hours, call DNR's 24-hour Emergency Response #: 515-725-8694

For a map and county-by county listing: <https://www.iowadnr.gov/fieldoffice>

Emergency Disposal of Milk for Dairy Farms

- Milk contains higher concentrations of nutrients than manure and has high biochemical oxygen demand (BOD) which can cause detrimental impact to surface water including fish kills.
- Waste from milk processing, including but not limited to raw milk, processed milk, wash water, and disinfectants, is considered industrial process wastewater.
- Take steps to avoid discharges of milk to surface water or groundwater. Do not discharge to septic systems.
- Milk has a very strong odor as it decomposes. If land applying, use fields farthest from neighbors whenever possible.
- Do not dump milk down the drain with your milkhouse wastewater. Milkhouse wastewater treatment systems are not designed to handle milk that cannot be added to the bulk tank (milk from fresh or treated cows). The biological oxygen demand will overload the treatment system.

Emergency Disposal Options:

- As a temporary option, use manure or other storage structures if available. Also consider this option when forecasted rain increases the chance of surface runoff and water impacts.
- Haul to a permitted wastewater treatment plant.
- Solidification and disposal at a permitted municipal solid waste landfill.
- Haul to an anaerobic digester. Consult the digester company before adding milk to the digester to determine appropriate volumes of milk that can be added without negatively impacting the digester's microbial communities.
- Apply for a DNR Emergency Land Application Permit.
 - PDF: www.iowadnr.gov/Portals/idnr/uploads/forms/5420899.pdf
 - Word Document: www.iowadnr.gov/Portals/idnr/uploads/forms/5420899.doc
- Consult with a representative from the Iowa Waste Exchange for potential byproduct uses.
 - www.iowadnr.gov/IWE

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Guidance on Land Application:

- Land applications should be made only when rainfall is not expected in the near future.
- Apply milk uniformly across a field using liquid manure application equipment. Where possible, consider injecting or incorporating land-applied milk to reduce the risk of runoff to surface waters. Consider making multiple applications with less volume per application to reduce the risk of nutrient losses.
- Find appropriate land to apply on land that:
 - Does not contain very sandy soils
 - Does not have shallow soils or high groundwater levels
 - Was not in alfalfa last year
 - Has not had manure or fertilizer applied this spring or even last fall
 - Is not too steep
 - Is away from streams, rivers, lakes and wetlands
 - Is in pasture that tends not to experience runoff
 - Obtain approval from the Farm Service Agency before application on CRP
- If you have a Manure Management Plan (MMP), review it to determine the best fields on which to apply the milk to meet the nutrient needs of this year's crop and adjust other planned nutrient applications to account for the nutrient content of the milk. Remember to amend the MMP as necessary. Contact your regional DNR field office with any questions concerning possible MMP implications.
- If you do not have a Manure Management Plan, take care to follow the nutrient needs of the crop where you land apply milk so you do not over apply or cause runoff or leaching.
 - Applying 4,500 gallons of milk per acre will provide about 200 pounds of N, 81 pounds of P2O5 and 67 pounds of K2O.
 - All of the N and P in milk are considered immediately plant available, so care must be taken to apply milk to fields that have the lowest risk of groundwater or surface water contamination. Applying to fields with a perennial crop or those recently seeded increase the opportunity for plant uptake of the nutrient applied.
- The solids in milk may plug valves, tanks, pipes, hoses and other storage and spreading equipment. Rinsing may reduce plugging.
- If you are considering an application to CRP, contact your [local FSA office](#) for prior approval and program requirements. <https://offices.sc.egov.usda.gov/locator/app?state=ia&agency=fsa>
- For information on the potential to on-farm feed milk to livestock, please contact the Iowa Department of Agriculture and Land Stewardship (IDALS) Feed Bureau at 515-242-6338.

Credits: Wisconsin Department of Agriculture, Trade & Consumer Protection; Wisconsin DNR; Minnesota Pollution Control Agency