



**EMERGENCY DISPOSAL OF MILK AND PROCESSED MILK PRODUCTS
FROM DAIRY PROCESSING FACILITIES
DURING THE COVID-19 PUBLIC HEALTH EMERGENCY DNR FACT SHEET
*April 7, 2020***

BACKGROUND

Recently, the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) and the Wisconsin Department of Natural Resources (DNR) completed a farmer targeted fact sheet for emergency milk disposal in Wisconsin. This farmer targeted fact sheet communicates considerations and strategies for implementing emergency milk disposal due to business interruptions resulting from the COVID-19 Public Health Emergency.

Similarly, Wisconsin dairy food processors (processors) asked DNR for similar clarity on emergency milk and milk products disposal in response to the current health emergency. This processor fact sheet provides considerations and strategies to implement emergency milk and/or milk product disposal. The considerations and strategies are consistent with Wisconsin statutory and industrial waste land treatment regulations as well as nutrient management requirements should the milk or milk products be beneficially landspread as soil nutrients or soil amendments.

The two fact sheets are similar yet have significantly different disposal requirements and options because agricultural regulations impacting farmers are different than industrial regulations impacting processors.

WHAT THE DNR-WASTEWATER PROGRAM IS DOING TO HELP

- Land application site approval reviews are being prioritized by DNR landspreading specialists.
 - Processors and their contractors should communicate to DNR staff if sites are being submitted to address potential emergency disposal so these sites can be prioritized.
- Priorities are being placed on reviewing and approving new milk processing clients for WPDES permitted contractors.
 - WPDES permitted contractors shall follow the requirements in their permits for notifying the department and for collecting samples.
 - Most WPDES permitted contractors have language in their permits to allow for immediate acceptance with additional parameter monitoring and follow up communication with the department after the disposal event.
- DNR staff will prioritize emergency reviews for milk, milk products and milk related wash water discharges to existing manure storage facilities pursuant to s. NR 214.17(1), Wis. Adm. Code.
 - Processors and their hauling contractors should evaluate the best manure storage facilities with knowledgeable area County Land and Water Conservation Departments to determine:
 - Storage facilities possessing capacity,
 - Storage facilities meeting general design requirements,
 - Storage facilities that have capacity to add additional nutrients into nutrient management plans.
 - DNR staff will work with the processor to submit plan and specification details.



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- The department will expedite requests for industrial landspreading general permit (GP) coverage for entities wanting to landspread wastes that currently do not have a WPDES permit.
 - Completed requests for coverage will be reviewed on an emergency basis.
 - Standardized land management plans will be implemented (and are expected to be followed) as part of the coverage unless the generator wishes to detail a land management plan in preparation of the disposal event. Standardized conditions will include best management practices found in many existing land management plans.

EMERGENCY DISPOSAL OPTIONS AVAILABLE

There are many options available to respond to a milk and milk product disposal emergency relating to the COVID-19 Public Health Emergency. Below is a list of the more common options.

Additional Land Application Sites

WPDES permitted processors can identify additional land application sites to allow more site availability to the processor as larger volumes of waste are expected. Permittees identify sites, then submit a Land Application Site Request form along with required information on DNR's 3400-053 form to the permittee's DNR Landspreading Specialist. Indicate to DNR the purpose of the additional site request is preparing for emergency purposes relating to the COVID-19 Public Health Emergency. DNR staff will expedite review of these sites.

Manure Storage Facilities

WPDES permitted processors have the ability to identify additional manure storage facilities where milk and milk related products could be mixed with manure for future land application. The typical process includes a plan and specification submittal to DNR to approve the manure storage unit prior to use. Disposal events require recording and annual reporting. Milk and related product additions also require the additional nutrients to be added to the farm's nutrient management plan. Often County Conservation office staff have the best local knowledge and can help identify potential manure storage facilities.

If the processor is not a WPDES permittee, the processor is required to obtain a WPDES permit or obtain coverage under a general permit prior to discharging milk and milk related product into a manure storage facility. The department will prioritize work with non-WPDES permitted facilities to obtain permit coverage.

Disposing of a processor's milk and milk related products into manure storage requires the following:

- a. A WPDES permit for the processing facility.
- b. Submitting details about manure storage facility to the DNR commonly referred as a plan and specification submittal.
- c. Receiving approval or acceptance from the department to use the manure storage facility.
- d. Monitoring the characteristics of the milk and milk related products that are discharged to the manure storage facility. This means collecting samples of the material discharged to the manure storage facility, and typically includes monitoring for the following parameters: TKN, ammonia, phosphorus, potassium, volatile solids and BOD (COD). For milk, textbook values can be used.
- e. Recording discharge events into a log and then reporting volumes discharged at the end of the year for all events.



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- f. Communicating to the farmer the additional nutrients in the milk and milk related products so the farmer is able to modify the farmer's nutrient management plan.

WPDES Permitted Contractors. There are nearly 20 different WPDES Permitted Contractors in Wisconsin. These contractors have WPDES permits that allow them to mix, store and landspread wastes such as food wastes, wash waters, sludges and other liquid wastes for beneficial reuse. While many of the wastes accepted by these contractors have elevated concentrations of chloride, nitrogen or BOD, mixing the wastes often reduces individual concentrations and provides a more balanced nutrient load to the soils when land applying. Many of these contractors have specific language in their WPDES permits that allow them to accept food grade related wastes immediately and then obtain post approval from the department.

CAFOs/WPDES Permitted Farms. Many concentrated animal feeding operations (CAFOs) have anaerobic digesters on the farms. These digesters process manure and manufacture methane gas. Milk, milk products and wash waters often have a significant concentration of sugars that can be processed into large volumes of methane for use. However, milk and related products digest quickly and can cause digester upsets and poor treatment results if milk and milk related products are added to the digester in too high of quantities. As a result, these permitted farms are able to accept some volumes of milk and related products and then mix the milk and milk related products with the manure onsite. It is important to discuss details with the farm's digester operators to better understand the ability of the digester to accept wastes.

Wastewater Treatment Facilities. Many larger municipal treatment facilities possess anaerobic digesters and many of those also accept hauled wastes such as milk and related products. Similar to CAFOs, the anaerobic digesters at wastewater treatment facilities require limited feed rates of milk and milk related products into their anaerobic digester. Wastewater treatment facilities while often able to handle some milk and milk products are dependent upon being able to store the high strength wastes and then slowly meter the milk products into the digester at controlled rates. Often it is the storage volume the treatment facility possesses that limits the overall ability of a treatment facility to handle large volumes of milk and related products during an emergency shutdown.

Industrial Wastewater and/or Energy Generation Manufacturer. There are a few energy generation companies in Wisconsin that accept industrial wastes such as milk and related products for the sole purpose of generating energy through methane gas production. These facilities were initially built for the treatment of high strength wastewaters, but now they have converted much of their capacity into treating manures to achieve energy tax credits.

Centralized Waste Treatment (CWT) Facilities. Several Wisconsin CWT facilities treat non-hazardous wastes. While milk and milk related waste are not typical wastes that are treated by a CWT facility, some CWT facilities may consider arranging their configuration to handle an emergency event or have other abilities to accept and treat milk and related wastes.

CREATE AND MAINTAIN RECORDS

Creating and maintaining records may be very important for a variety of reasons including:

- Qualifying for any state or federal programs should they become available to offset business losses due to the COVID-19 Public Health Emergency.



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- Documenting compliance with regulatory programs as required by WPDES permits and other public health and environmental regulations.

At minimum, consider recording the following information: dates, volumes discharged, reasons for disposal and the basis for those decisions, and locations of disposal. Photos, videos and detailed logs may have significant value. Maintain records so the records can be produced upon request.

MILK, MILK PRODUCTS AND WASH WATER ENVIRONMENTAL CONSIDERATIONS

- Milk and milk products contain high concentrations of nutrients and have high biochemical oxygen demand (BOD).
 - DATCP nutrient values: 4,500 gallons of milk per acre (1/6 of an inch of liquid) provides about 200 lbs of Nitrogen (N), 81 lbs. of phosphorus (P₂O₅) and 67 pounds of potassium (K₂O).
 - All of the nitrogen and phosphorus are considered immediately plant available. This means that groundwater and surface waters are at higher risks of damage if contaminated through site overloading or if wastes runoff the site.
 - Substances such as milk and milk related products with high BOD can cause detrimental impacts to surface water including fish kills.
 - Overapplying to existing land treatment systems such as overland flow, ridge and furrow or spray irrigation systems may overload the land treatment system, overwhelm the biological processes within the system and cause long term damage to the system.
- Wash waters often have high levels of disinfectants and anti-bacterial chemicals.
 - Wash waters can have negative impacts on the biotics in the soils and within surface waters.
- Milk and related products have a very strong odor as they decompose.
 - If landspreading the waste, apply to sites away from neighbors if possible.
 - Inject or incorporate the milk and milk related product into the soil to prevent runoff and reduce odor
- Consider
 - Landspreading to sites that are nearly level and have little chance of running off from the site.
 - Using spray irrigation or liquid manure application equipment. Apply in a uniform manner.
 - If surface application is used, spray onto sites consider making multiple applications with less volume per application to reduce the risk of nutrient losses.
 - Working with the farmer to apply the waste to sites that have not had manure or other fertilizer applications applied.
 - Using fields that have a perennial crop other than alfalfa.
 - Using sites that do not have very sandy soils or have high groundwater.
 - If using injection equipment, use equipment that minimize soil disturbance to maximize soil mixing, while preventing soil runoff. Incorporation methods can often create soil erosion events during heavy precipitation.
 - Timing of spreading events if there are pending heavy precipitation events in the forecast.

GENERAL RECOMMENDATIONS

- Plan ahead. Determine a plan that includes best management practices and contingency disposal options.
- Reach out to DNR and County Conservation staff for assistance.



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- Obtain DATCP animal feed licenses as an outlet for your milk or milk products. To distribute milk and milk products as animal feed, appropriate commercial feed licensing must be obtained through DATCP. [See ss. 94.72(5)(a) and (b) and 94.72(2), Wis. Stats.]
- Understand the negative consequences of milk products when discharged into the environment including high nutrients, high BOD and the relatively quick decay that result in strong odors and potential environmental harm.
- Do not discharge milk or milk related products into areas that will impact groundwater or surface waters.
- Don't dispose of milk and milk related products down the drain. Wastewater treatment facilities are not equipped to handle large volumes of milk or milk products as these products are considered high strength wastes. Milk and related products can cause issues in the sewer collection system and once received at the wastewater treatment facility, will cause significant issues to facility operations. Most often the excessive BOD resulting from the milk will cause overloading of the biological processes and almost always will result in effluent discharges that exceed WPDES permit limits and threaten surface water quality.
- Don't overload land treatment systems such as spray irrigation systems or ridge and furrow systems. Overloading these types of systems could impact the land treatment systems and groundwater quality for years.
- Don't wait until the last moment to find disposal options that could require a week or two to implement.

COVID-19 EMERGENCIES

Request special assistance if you foresee COVID-19 posing a potential compliance issue at your site or facility.

- Access additional information at the DNR COVID-19 Public Health Emergency link: <https://dnr.wi.gov/emergency/COVID19Compliance.html>
- Spills, imminent compliance problem or actual threat to health or the environment report immediately upon discovery to: **1-800-943-0003 (select #1 when prompted.)** This number is monitored 24 hours per day.
- Prepare a progression table for use in a true emergency to minimize health and environmental issues when compliance with permit requirements is impossible.



Wisconsin Department of Natural Resources
COVID-19 ENVIRONMENTAL COMPLIANCE PROCESS



If you foresee **COVID-19** posing a **POTENTIAL COMPLIANCE ISSUE** at your site or facility, follow these steps to request special DNR assistance.

EMERGENCIES

Contact the DNR immediately if there is an **imminent or actual danger or threat** to human health or the environment.
Call 1-800-943-0003 • select #1

As part of DNR's response, staff will initiate a request for compliance assistance, where applicable, once the threat is addressed.



NON-EMERGENCIES

If there is no threat or danger, request Pre-Approval for Compliance Assistance:

FIRST | Email DNR point-of-contact to submit a request.

IF | If a confirmed DNR contact is not established...

THEN | Submit DNR's online form:
www.surveymonkey.com/r/WDNRCmplAssist





The DNR will evaluate requests on a case-by-case basis.

The DNR will work as quickly as possible on a solution in response to the compliance assistance request.
Do not implement alternative methods until receiving DNR written approval.

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PROGRAM CONTACTS

Due to the COVID-19 Public Health Emergency, DNR wastewater program staff are not available near their office phones. The department suggests copying several staff members on your emails as detailed below:

General Permitting Questions (Permitting a facility currently without a WPDES permit)

Stephen Warner	Stephen.Warner@Wisconsin.gov
Richard Douglas	Richard.Douglas@Wisconsin.gov
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Landspreading Specialists (Site Approvals & Manure Storage Facility Approvals)

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