



## On-Farm Emergency Disposal of Raw Milk for Ohio Dairy Farms

### General Guidance Sheet

April 03, 2020

#### Purpose:

This guidance sheet is intended for all dairy farm facilities in the State of Ohio. On-Farm emergency disposal of raw milk is a possible short-term solution and can be managed through direct land application or transfer to on-site liquid manure storage structures.

#### Environmental Concerns:

- Discharge of raw milk to surface water or groundwater is prohibited. Raw milk is considered a pollutant as that term is defined in Ohio Revised Code Chapter 903.01.
- Raw milk has a high concentration of Biochemical Oxygen Demand (“BOD”). BOD, if introduced to surface water or groundwater, will rapidly deplete dissolved oxygen (“DO”). Reduction in DO will negatively impact aquatic life.
- As compared to typical liquid dairy manure, milk contains higher concentrations of nutrients.
- Decomposing milk has a very strong odor.

#### Ohio Laws:

- Ohio Revised Code chapters 903 and 939 and Ohio Administrative Code chapters 901:10 and 901:13 defines manure as *wastes used in or resulting from the production of agricultural animals or direct agricultural products such as milk or eggs: animal excreta, discarded products, bedding, process waste water, process generated waste water, waste feed, silage drainage, and compost products resulting from mortality composting or the composting of animal excreta.*
  - Disposed raw milk is considered manure.
- For land application of disposed milk:
  - Non-Permitted dairy facilities shall follow land application management practices outlined in Natural Resources Conservation Service’s Conservation Practice Standard 590: Nutrient Management.
    - For questions related to land application of disposed milk, contact your local Soil and Water Conservation District.
  - Permitted dairy facilities (“CAFFs”) shall follow land application management regulations identified in Ohio Administrative Code 901:10-2-14, operating record requirements identified in Ohio Administrative Code 901:10-2-16, and conform with your Permit to Operate’s manure management plan. See “Other Considerations” section for nutrient management tracking.
    - For questions related to land application of disposed milk, contact your ODA-DLEP Inspector.



- For on-site storage of disposed milk in existing liquid manure storage structures:
  - Non-Permitted dairy facilities:
    - Store disposed raw milk in a manner that prevents discharge to waters of the state.
    - Prior to any expansion/modification of existing manure storage structures or construction of new manure storage structure to accommodate raw milk, or in the event land application of disposed raw milk is not possible and the facility does not have sufficient storage capacity to accommodate production of raw milk, non-permitted dairy facilities should contact their local Soil and Water Conservation District.
  - Permitted dairy facilities (“CAFFs”):
    - Store disposed raw milk in a manner that prevents discharge to waters of the state.
    - Existing liquid storage structures included in a Permit to Operate are approved to store disposed raw milk.
    - Expansion/modification of existing manure storage structures or construction of new manure storage structures to accommodate raw milk disposal is prohibited. In the event land application of disposed raw milk is not possible and the facility does not have sufficient storage capacity to accommodate production of raw milk, ODA-Division of Livestock Environmental Permitting (“ODA-DLEP”) shall be contacted immediately.

**Other Requirements:**

- All dairy facilities shall create a record that includes the date of milk disposal, volume of disposal (*in gallons*), reasoning, and method/location of disposal. Records shall be maintained on site.
- If a permitted dairy facility is required to dispose of raw milk on-site, the facility shall contact their ODA-DLEP Inspector immediately.

**Other Considerations:**

- Direct Land Application
  - Disposed raw milk shall be applied using liquid manure application equipment to maximize uniformity of application.
  - Application Rate – Generally, applying 4,500 gallons of raw milk per acre will provide approximately 200 pounds of N, 81 pounds of P<sub>2</sub>O<sub>5</sub>, and 67 pounds of K<sub>2</sub>O.
    - Avoid covering the same acres through multiple application events.
  - Raw milk is highly mobile on the surface. Avoid land application areas with a slope greater than 6% and minimize application rate to mitigate runoff from land application area. Increase frequency of subsurface drainage outlet inspections.
  - Consider injecting or incorporating raw milk within 24-hours to reduce both the risk of runoff to surface waters and for odor mitigation.
  - Follow Ohio’s forecast restrictions for land application of manure.
- On-Site Storage
  - Use of on-site storage for emergency disposal of milk should not cause a facility to exceed maximum operating levels in their manure storage structures.
  - If possible, thoroughly agitate raw milk with manure if disposed into existing manure storage structures for odor mitigation purposes.

