

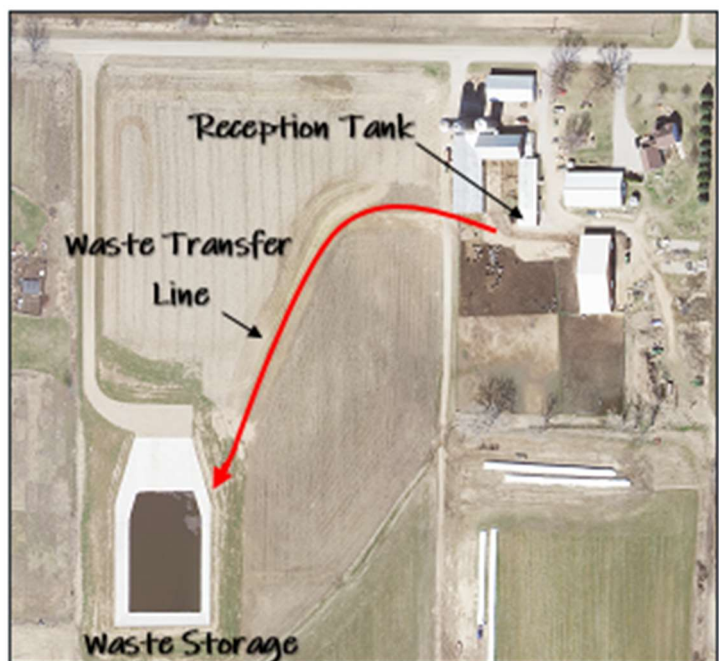
# Waste Storage Facility



Waste Storage



Reception Tank  
& Pump



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Outagamie County Land Conservation Department provided assistance to plan, design and oversee construction of a waste storage facility in the Town of Center in the summer of 2020. The farm was interested in a waste storage facility to eliminate the need for daily hauling manure out of their barns. Waste storage is a tool that can help the farm apply nutrients during optimal times of the year. The farm utilizes waste storage in conjunction with a nutrient management plan which dictates where and how much manure is needed for each field. This helps the farm safely apply their source of organic fertilizer.

Several things go into the design of a waste storage and transfer system. In this case, 11 soil test holes were dug to determine the best location of the waste storage. Soils on the site were analyzed and samples were taken to a lab for testing. The waste storage site location was determined based on soils and economic feasibility of construction. This waste storage facility has a concrete and soil composite liner. This means the concrete and clay soil beneath the concrete work together to form the liner for the waste storage. The waste storage facility can hold a total of 2.3 million gallons at maximum operating level. This holds manure for 130 cows, 25 dry cows, 130 heifers and milkhouse wastewater for 365 days. The waste storage facility is designed for a total volume including precipitation, evaporation, and additional depth for safety.

The manure from the main dairy barn is transferred to a newly constructed concrete reception tank through the existing barn cleaner. From there it is agitated and pumped through an 8" PVC transfer line to the waste storage. This farm also has a freestall barn. The manure from this barn is loaded into a spreader and hauled to the waste storage. At the time of construction, expansion of the freestall barn was discussed. In the future the freestall barn may be expanded and connected to the waste transfer system. The entire north end of the waste storage facility is a ramp to accommodate daily haul and unloading from the freestall barn.

This project was made possible by utilizing a combination of funds provided by the Wisconsin Department of Natural Resources Targeted Runoff Management Program (TRM), the Natural Resource Conservation Service Environmental Quality Incentives Program (EQIP), and landowner contributions. - **Elly Magdanz**