

This guidance document is advisory in nature but is binding on an agency until amended by such agency. A guidance document does not include internal procedural documents that only affect the internal operations of the agency and does not impose additional requirements or penalties on regulated parties or include confidential information or rules and regulations made in accordance with the Administrative Procedure Act. If you believe that this guidance document imposes additional requirements or penalties on regulated parties, you may request a review of the document.

Municipal Solid Waste Disposal Areas Locational Criteria Documentation Waters of the State Location Criteria

A solid waste disposal area cannot be located in an area where the Department finds that the activities will have a detrimental effect on the waters of the state based on the following criteria:

1. Current and projected use of water resources in the potential zone of influence. Potential Zone of Influence is the vertical and horizontal ground water travel time based on hydrogeologic setting (time of travel during active and post-closure life of the facility).
 - Water Well Usage:
 - Public, Private, industrial, irrigation, livestock, etc.
 - Well construction, yield, static water levels, etc.
 - Documentation available from the Department of Natural Resources or local well driller.
 - Surface Water Usage:
 - Streams: perennial/intermittent
 - Ponds, wetlands
2. Ground water elevation and proposed separation between the lowest point in the cell and the predicted maximum water table elevation.
 - Areas having high ground water tables may be restricted to maintaining a safe vertical distance between deposited refuse and the maximum water table elevation.
 - Requires site specific information from hydrogeologic characterization
3. Potential interrelationship of the local aquifers and surface waters based on historical records or other sources of information.
 - Hydrogeologic characterization
 - Natural Resources District (NRD) Ground water management plans
4. Background and initial quality of water resources in the potential zone of influence.
 - Basic drinking water quality parameters
 - Others based on previous land use
5. Description of soil and bedrock to a depth that will allow accurate evaluation of the water quality protection provided by the soil and bedrock.
 - Detailed description from hydrogeologic characterization.

6. Potential leachate generation and the potential for pollution of the waters of the State.
 - Hydrogeologic characterization
 - Hydrologic Evaluation of Landfill Performance (HELP) model

Other Locational Criteria

1. Cannot be located within 1,000 feet of an existing state, interstate, or federal highway unless screened by natural objects, plantings, fences, or other appropriate means.
2. Airport Proximity
 - Demonstrate that the facility does not pose a bird hazard, if the facility location is within:
 - 10,000 feet of any airport runway end used by turbo aircraft; or
 - 5,000 feet of any airport runway end used only by piston-type aircraft.
 - If the facility is located within a 5-mile radius of any airport runway, the affected airport must be notified of the construction. Place a copy of the notification in the site operating record.
 - SOURCE: Nebraska Department of Aeronautics
3. Floodplains:
 - A new municipal solid waste disposal area or a lateral or vertical expansion thereof cannot be located in a 100 year floodplain.
 - SOURCE: FEMA – Flood Insurance Rate Maps (FIRM)
4. Wetlands:
 - A new solid waste management facility or lateral expansion cannot be located in a wetland.
 - SOURCE: National Wetlands Inventory Maps.
5. Fault Areas:
 - New municipal solid waste disposal areas (and lateral expansions) cannot be located within 200 feet of a fault unless it can be demonstrated that an alternative setback distance of less than 200 feet will:
 - Prevent damage to the structural integrity; and
 - Be protective of human health and the environment.
 - SOURCE: U.S. Geological Survey 1978 publication on the location of Holocene faults in the United States.
6. Seismic Impact Zones:
 - New municipal solid waste disposal areas (and lateral expansions) cannot be located in a seismic impact zone unless it can be demonstrated that all containment structures, liners, leachate collection systems, and surface water control systems, are designed to resist the maximum horizontal acceleration at the site.
 - Seismic impact zone: An area with 10% or greater probability that the maximum horizontal acceleration of lithified earthen material expressed as a percentage of the earth's gravitational pull (g) will exceed .10g in 250 years.
 - Maximum Horizontal Acceleration: Depicted on a seismic hazard map with a 90% or greater chance the acceleration will not be exceeded in 250 years, or site-specific findings.
 - SOURCE: U.S. Geological Survey Open-File Report 82-1033 titled "Probabilistic Estimates of Maximum Acceleration and Velocity in Rock in the Contiguous United States."
7. Unstable Areas:

- New municipal solid waste disposal areas (and lateral expansions) located in an unstable area must demonstrate that engineering measures have been incorporated that ensure the integrity of the containment systems. The demonstration must be recorded in the operating record of the facility.
 - Karst terrains
 - Poor foundations-loess
 - Areas susceptible to mass movement
- SOURCE: U.S. Geological Survey's National Atlas map titled "Engineering Aspects of Karst" published in 1984.

8. Threatened and Endangered Species:

- Refer to Nebraska Game & Parks Commission – (Title 163, Chapter 6).

RESOURCES:

- NDEE Home Page <http://dee.ne.gov/>

Contacts:

- NDEE Waste Management Section (402) 471-4210
- NDEE Toll Free Number (877) 253-2603
- NDEE Hazardous Waste Compliance Assistant (402) 471-8308
- Email questions to: NDEE.moreinfo@nebraska.gov

NDEE Publications:

- [Title 132 – Integrated Solid Waste Management Regulations](#)
Titles are available on the NDEE Home Page under "Laws/Regs & EQC", "Rules & Regulations"

Produced by: Nebraska Department of Environment and Energy, P.O. Box 98922, Lincoln, NE 68509-8922; phone (402) 471-2186. To view this, and other information related to our agency, visit our web site at <http://dee.ne.gov>.