



GUIDELINE 23 - WASTE DISPOSAL VARIANCE

North Dakota Department of Health - Division of Waste Management

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I. Introduction

The North Dakota Department of Health (Department) regulates solid waste storage, transportation, and disposal through the North Dakota Solid Waste Management Rules (NDAC 33-20). In most instances, regulation is accomplished through permits issued to waste haulers, transfer stations, or landfills. The Department, however, may issue a variance from permit requirements for one-time waste disposal events based on various practical factors, including: (1) waste characteristics, (2) waste volume, (3) emergencies, (4) proximity of the waste source to permitted landfills, and (5) characteristics of the proposed waste disposal site. The duration of the waste disposal variance must be limited to no more than 90 days to accomplish the project, and must be restricted to waste disposal.

The Department's Solid Waste Program (SWP) has prepared this guideline and an application packet to provide information and guidance for those persons interested in applying for a one-time, 90-day waste disposal variance. The application packet includes: (1) the waste disposal variance application; (2) supplemental forms for open burning variances and asbestos inspections; and (3) information on prohibited wastes and recycling. Chemical analysis of the waste may be required at the discretion of the Department. At a minimum, the waste disposal variance form must be completed to receive the variance. Supplemental forms (at the discretion of Departmental staff) for certain activities (open burning, asbestos inspection) may also require completion to receive the variance. Please refer to applicable sections of this guideline to determine which supplemental forms may be required with the application, or contact the Department's SWP at (701) 328-5166 with questions.

II. Exemptions

The following waste disposal activities do not require a variance from the Department:

1. Demolition and on-site burial of farm or ranch structures on unplatted land in unincorporated areas of the state provided no nuisance or they create a health hazard;
2. Demolition and on-site burial of single family dwellings and associated structures (garages, storage buildings) provided no nuisance or health hazard is created; and
3. Rock and dirt fills that receive any combination of rock, dirt, or sand.

4. The disposal into the mine spoils of the following wastes generated in the mining operation:
 - (a) Rock, boulders, and dirt; and
 - (b) Trees and brush.
5. The disposal of the following mining operation wastes into areas designated in a surface coal mining permit issued by the North Dakota public service commission for such disposal:
 - (a) Waste from inspected farmsteads;
 - (b) Wood materials including pallets, lumber, lathe, cable spools, fence posts, etc.;
 - (c) Brick, concrete block, and cured concrete; and
 - (d) Plastic material and pipe.
6. Agricultural waste generated by farming operations, unless handling of this waste by these operations is not in keeping with the purpose of this article;
7. The disposal of household waste generated by any individual who resides on unplatted land in unincorporated areas of this state, on that person's property, unless handling of this waste is not in keeping with the purpose of this article.

These exemptions apply only to disposal and do not imply an exemption from other requirements such as asbestos inspections or local permits.

III. Prohibited Waste or Materials

- A. A disposal variance will be granted only for disposal of waste identified in the variance application. All waste should be carefully inspected to ensure it contains only wastes identified in the application. Chemical analysis may be required; contact the Department to determine what testing requirements are applicable. Limiting disposal to these materials will help alleviate public health concerns, long-term liability, and concerns on saleability of the disposal site property.

The following wastes are prohibited from disposal under a waste variance. These wastes must be removed and properly handled or disposed before demolition or disposal:

1. Liquids, solvents, and paint;
2. Laboratory supplies and cleaning supplies;
3. Insecticides, herbicides, or fungicides and their containers;
4. Oil and oil containers, lead-acid batteries, and all appliances;
5. Fluorescent light fixtures and bulbs, mercury-containing electrical switches and thermostats, and transformers; and
6. Regulated asbestos-containing material.

- B. **Liquids, used oil, lead-acid batteries, and major appliances (white goods)** are prohibited from disposal under a variance or at permitted landfills. Small appliances may contain heavy metals and must be disposed in permitted landfills or be recycled. Established recycling markets exist for used oil, lead-acid batteries, and major appliances (see North Dakota recycling directory in application packet). Departmental Management Outline statements on lead-acid batteries and used oil are included in the application packet. Please contact the Department's Hazardous Waste Program at 701.328.5166 with questions about used oil or lead-acid batteries.
- C. **Solvents, paints, chemicals, or pesticides** must be removed from structures scheduled for demolition or segregated from waste. If not usable, very small quantities (household quantities) of these wastes may be disposed in permitted municipal waste landfills. Large quantities of these wastes may require handling by a hazardous waste management firm. The Department's Management Outline statement on disposal of pesticides and their containers is included in the application packet. Please contact the H.P. at 701.328.5166 with questions about pesticides, solvents, paints, and chemicals.
- D. **Mercury-containing fluorescent light bulbs, thermostats, and electrical switches** must be removed from structures scheduled for demolition. **Fluorescent light bulb fixtures and electrical transformers** must be removed from structures scheduled for demolition because these items may contain Polychlorinated Biphenyls (PCBs). Depending on the quantities of these items, and the concentration of mercury or PCBs, disposal may be allowed in permitted municipal waste landfills. The Department's Management Outline statement on mercury or PCB-containing waste is included in the application packet. Please contact the Hazardous Waste Program at 701.328.5166 with questions about mercury or PCB-containing waste.
- E. **Regulated asbestos-containing material** must be properly removed from structures scheduled for demolition. Asbestos is a known carcinogen, and proper handling is critical to protect public health and safety. Depending on what type of structure is being demolished, an inspection for regulated asbestos-containing material may be required. The Department's Division of Air Quality (DAQ) regulates asbestos inspection, removal, and transportation to a disposal facility. A "Notification of Demolition" form is often required for structure demolition projects and must be submitted to the DAQ at least ten (10) days before beginning demolition. Regulated asbestos-containing material must be disposed at permitted landfills approved for asbestos disposal. A "Notification of Demolition" form and DAQ guidelines for asbestos handling are included in the application packet. Please contact the DAQ Radiation and Asbestos Control Program at 701.328.5188 with questions about asbestos.

IV. Recycling Waste

Depending on the type and location of the waste, it may be practical to recycle or reuse a portion of the waste. For example, road construction contractors may be interested in

crushing a large concrete or brick structure into road base material. Metal recyclers may be interested in recovering steel structural members or special metals such as copper from structures. Wood materials can be used for heating purposes or shredded to reduce volume and provide a mulching material. Hardwood flooring or woodwork in some structures may be of use to commercial or hobby woodworkers. The Department encourages waste reuse and recycling provided no nuisances are created by the activity.

V. Disposal Site Selection

The waste disposal site must be carefully selected. Avoid environmentally sensitive or unstable areas that will not provide safe, long-term waste disposal. For example, wetlands, gravel pits, floodplains, and shallow water table areas are environmentally sensitive because of surface and groundwater pollution concerns. Ravines, woody draws, and steeply sloping terrains are unstable areas subject to accelerated erosion which may expose the waste.

To assure safe, long-term waste disposal, the site should be nearly level to moderately sloping, well drained, and meet the following criteria:

1. Maximum site slope of nine (9) percent;
2. Minimum distance of two hundred (200) feet to nearest surface water;
3. Minimum depth of four (4) feet to seasonal high water table (waste disposal in the water table is generally prohibited); and
4. Underlain by loamy, silty, or clayey soils (sandy or gravelly soils are unacceptable).

Soil survey maps, available through local Natural Resources Conservation Service (NRCS) offices (formerly the Soil Conservation Service) provide the necessary information for disposal site selection. Soil survey maps depict soil types on an aerial photo base. The maps are very useful because they show not only soil types, but also drainage and cultural features such as streams, wetlands, roads, field boundaries, and building sites. Soil types depicted on published soil survey maps are described in the survey report. The survey report includes soil descriptions and tables which describe soil slope, texture, depth to seasonal high water table, and other soil properties.

Most North Dakota counties have a published soil survey. Contact the local NRCS office to ask if published soil survey information is available, and to receive assistance for soil map interpretation. Some North Dakota counties do not have published soil survey information. In these counties, the survey may be completed but not published, or the survey is in progress. To obtain soil survey information in these counties, you must request a preliminary soil survey of a specific area from the county NRCS office. Preliminary soil survey maps usually produce poor quality photocopies. Request the NRCS staff to produce the best possible photocopy of the specific area. In very few cases, soil survey information may not be available for a specific area. If soil survey information is not available, the Department may have other information sources to assess site suitability, or an on-site Departmental inspection may be necessary. Please contact the Department's SWP at 701.328.5166 for assistance in disposal site selection if soil survey information is not available for a specific area.

The site proposed for waste disposal must be accurately depicted on a legible map accompanying the disposal variance application. Legible photocopies of published soil survey maps are acceptable for this purpose; however, photocopies of unpublished soil survey maps are unacceptable because of poor reproduction. Where published soil survey information is unavailable, an aerial photograph photocopy from the Consolidated Farm Services Agency (CFSA), formerly the Agricultural Conservation and Stabilization Service, can be used to depict the proposed disposal area. These photocopies cover one section of land and are available for a nominal fee for all areas of the state. Contact the county CFSA to request a photocopy for a particular section of interest.

VI. Land Use and Zoning Concerns

Applicants for a waste disposal variance must ensure that the disposal activity is acceptable to the landowner and local zoning and health officials. The variance application requires information from the landowner and local zoning authority. Careful planning and assurances that all waste will be can help ease any concerns on the proposal. It is also beneficial to keep neighboring landowners informed throughout the project to help avoid any delays and undue alarm.

VII. Site Control and 90-Day Variance Duration

Disposal operations must be tightly controlled and completed as soon as possible to avoid potential problems. Access control through fencing, barriers, gates, or supervision as necessary will help avoid open dumping, prohibited waste disposal, scavenging, vandalism, and possible injury. The variance requires waste disposal to be completed and the site properly closed within ninety (90) days. Extensions will be considered only in cases of emergency or significant extenuating circumstances.

VIII. Disposal Site Preparation and Operation

A. Stormwater Control

Stormwater control measures shall be in place before beginning any dirt work at the waste disposal site. Stormwater is simply precipitation or snowmelt. The concern with stormwater is not the water itself. Rather, the concern is the soil or other pollutants which may be carried in stormwater off the disposal site and deposited in drainageways, stormwater sewers, or surface water.

Effective stormwater control involves methods or materials to prevent pollutants, mainly soil, from leaving the disposal site. Methods and materials for stormwater control include:

1. Careful site selection and development, and diversion of upslope surface water run-on;
2. Minimizing the area disturbed for waste disposal, especially if the disposal area has existing vegetative cover;

3. Maintaining a "buffer" of undisturbed vegetative cover around the disposal area to trap soil before it leaves the site; and
4. Placing straw bales, silt fences, or similar material where concentrated surface water runs off the disposal site. Straw bales or silt fences must be anchored in the ground to be effective in trapping soil before it leaves the site.

If the waste disposal area exceeds five acres, a permit for stormwater discharge may be required by the Department's Division of Water Quality (DWQ). Please contact the DWQ Wastewater Facility/Permits Program at 701.328.5210 with questions about stormwater discharge permits.

B. Stripping Suitable Plant Growth Material (SPGM), Topsoil and Subsoil

SPGM (topsoil and upper subsoil) is the dark colored surface layers of soil that is rich in organic matter and nutrients. It is critically important to establish vegetation for reclamation of disturbed areas. It is important, therefore, to strip topsoil and the upper portion of the subsoil from the waste disposal area before excavating the disposal trench. Depending on the disposal site's geographic location and landscape position, topsoil may be as little as three (3) inches or more than fifteen (15) inches thick. SPGM must be stripped from the excavation area and saved at the site for reclaiming the disposal area. If SPGM is not available onsite, at least six (6) inches of material must be imported to reclaim the site.

C. Open Burning

Open burning, as opposed to recycling, reuse, or burial, may be a disposal option for trees or non-salvageable wood from structures. Open burning trees and wood is an option, however, only under the following conditions:

1. All other forms of recycling, reuse, or disposal are either impracticable or prohibitively expensive;
2. The wood must be clean burning, i.e., it must be free of materials that will produce unreasonable smoke (asphalt shingles, rubber, etc.) or will smolder for extended periods; and
3. A burn variance must be received from the DAQ's Air Quality Compliance Program. A burn variance application is included in the application packet. All portions of the application must be completed, including the local fire department coordination approval, and district health unit coordination approval if the county belongs to a district health unit (district health unit list included in application packet). Upon receipt of a burn variance, open burning may proceed after notifying the local fire department. Please contact the Air Quality Compliance Program at 701.328.5188 with questions about open burning.

D. Trench Excavation and Debris Compaction

The disposal trench may be excavated after stripping and stockpiling disposal site topsoil. Depending on the site selected, disposal trench depth may be limited by soil conditions or by the seasonal high water table depth. Disposal beneath the water table should be avoided. Depth of the seasonal high water table in glaciated portions of North Dakota is usually indicated by a change in subsoil color from brown or tan to gray with increasing depth. Construction of a clay or composite clay-synthetic liner may be required depending on site characteristics, waste characteristics, and waste volume. Guideline 5 “Quality Assurance for Construction of Landfill and Surface Impoundment Liners and Caps, and Leachate Collection Systems” provides information on common construction and testing procedures for liner placement.

The waste should be compacted with heavy equipment as it is placed in the disposal trench. Waste compaction serves two purposes: (1) it reduces the size of excavation required for waste disposal by maximizing use of disposal trenches, and (2) it reduces potential problems of soil settling (subsidence) after the disposal area is reclaimed. Other forms of waste volume reduction, besides compaction, may serve to reduce required size of the disposal excavation. For example, wood or trees can be shredded to reduce disposal volume.

IX. Disposal Site Closure

Disposal trenches should not be filled to excavation capacity. Instead, maintain at least three to five feet between the waste and designed closure grades, depending on the required cover specified in the state rules. The entire site should be cleaned and all waste, including burned debris ash, must be consolidated in the trench. The disposal area must receive soil cover, including reapplied SPGM as specified in the applicable section of the state rules summarized as follows:

Waste Type	NDAC Rule	Cover Requirement
Inert Waste	33-20-05.1-04	2 feet, lower 12 inches compacted, 6-inches SPGM or 4 feet, uncompacted, 6-inches SPGM
Municipal Solid Waste Putrescent	33-20-06.1-03	3 feet, lower 18 inches compacted, 6 inches SPGM See rules for specifics.
Special and Small Industrial Waste	33-20-07.1-02	5 feet, lower 24 inches compacted, 6-inches SPGM

Certain wastes may require additional cover. Guideline 5 “Quality Assurance for Construction of Landfill and Surface Impoundment Liners and Caps, and Leachate Collection Systems” provides information on common construction and testing procedures for final cover systems. The soil cover should be carefully graded to form a slightly convex, or domed, surface that will promote surface water runoff. Erosion control measures such as incorporating straw and planting a cover crop is necessary.

Generally, the attached "Guideline 24 - General Native Grass Seeding" may be used for site revegetation. Maintain stormwater control measures for at least one year after the site is closed.

X. Notification of Disposal Activity

As a condition for a waste disposal variance, the Department requires that a Notice of Disposal activity be filed with the County Register of Deeds office. The notice informs anyone conducting a title search of the disposal site property that a specific area of land was used for waste disposal. Limiting the disposal to the waste specified in the Department's approval letter, maintaining an orderly operation, and careful site closure will help minimize future landowner concerns on the site and may help ensure future saleability of the property.

An affidavit which may be used for filing the notice is included in the application packet. Blanks on the affidavit should be completed to describe the disposal location and type of waste. The affidavit must be signed by the property owner and notarized. Use the partial section notation, e.g., NE ¼ of the NE ¼ of the NW ¼ of Section 14, to describe the disposal area as accurately as possible. In the example given, the disposal area is described as ten (10) acres. The partial section notation can describe very small disposal areas, provided they are in corners of quarter sections where landmarks (fence lines, tree rows) can be used to identify the area on a map.

The original of the Notice of Waste Disposal form should be filed with the County Register of Deeds office. A nominal fee is usually required for filing. When filing the notice, the property owner should ask the Register to forward a certified copy of the notice to the Department's SWP. Contact the Solid Waste Program at 701.328.5166 with questions about the waste disposal notice.

List of Required Documents for a Waste Disposal Variance:

1. *SW Form*: SFN-51098 Waste Disposal Variance Application.
2. *SW Handouts*: (1) Notice of Waste Disposal; (2) Guideline 24 - General Native Grass Seeding; and (3) ND District Health Units.

"Optional" Documents:

1. *Hazardous Waste Management Outlines (Mo's) for*: Polychlorinated Biphenyls (PCB) Wastes; Used Oil Filters; Antifreeze; and Agricultural Spills, Reporting and Remediation.
2. *SW Handouts*: Division of Air Quality's Form SFN-8509 Application for Open Burning Variance; Form SFN-27987 Notification of Demolition and Renovation (includes instructions); and Memo "Inspection and Handling Requirements for Asbestos During the Demolition and Renovation of Facilities."
3. *SW Guideline 5*: "Quality Assurance for Construction of Landfill and Surface Impoundment Liners and Caps, and Leachate Collection Systems."
4. *SW Guideline 9*: "Signs Required at Solid Waste Management Facilities."