Prepared by the North Dakota Legislative Council staff for the Advisory Commission on Intergovernmental Relations
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SOLID WASTE MANAGEMENT - BACKGROUND MEMORANDUM

Section 1 of House Bill No. 1338 (2009) (Appendix A) directs the Legislative Council to study solid waste management, with an emphasis on the siting and zoning of landfills on a statewide or regional level while allowing adequate protection for political subdivisions and property owners in the siting and zoning process. The study may include information on new solid waste sciences that affect the overall issue of siting, the reduction of landfill waste through the encouragement and coordination of public and private recycling programs, and the potential for development of methane processing from landfills for power generation. In short, the study of solid waste management may be separated into four areas:

1. Regional and state siting of landfills.
2. Recycling programs.
3. Methane processing.
4. New solid waste sciences.

The focus on state or regional siting comes from House Bill No. 1338, as introduced. As introduced, the bill created a state landfill siting board. This board had exclusive jurisdiction to site a landfill unless the landfill was operated by a political subdivision within the zoning jurisdiction of that political subdivision. The board would have consisted of the State Health Officer, State Engineer, State Geologist, director of the Environmental Health Section of the State Department of Health, a representative of the North Dakota League of Cities, a representative of the North Dakota Association of Counties, and a representative of the North Dakota Township Officers Association.

A person would have needed a permit from the board before the construction of a landfill. Upon receiving an application for siting a landfill, the board would have held two public hearings and within six months issued a permit if:

1. The site was compatible for the landfill.
2. There was adequate need for the landfill.
3. Adequate mitigative measures were taken to address the negative effects of the landfill.

In addressing compatibility, the board was to consider scientific evidence of the effect on the environment and the ability of the design of the landfill to address those concerns. In addressing need, the board was to consider the benefit to persons in the political subdivision and surrounding political subdivisions and the relative cost of an alternative. In addressing mitigative measures, the board was to consider buffer zones, trees, odor control, wind control, bird control, and other circumstances.

The legislative history reveals the major issues with the bill as introduced were eminent domain and the determination of acceptable sites and selection of a site from acceptable sites. The legislative history also reveals that the language on the study of recycling programs and methane processing is the same as the language in Senate Bill No. 2417 (2009), which was not selected for study by the Legislative Council. As introduced, Senate Bill No. 2417 required a study by the Department of Transportation of the feasibility and desirability of building, financing, or encouraging construction of a glass recycling plant for the purpose of providing materials to be used in road construction and maintenance. It was changed to a study by the Legislative Council because North Dakota does not have enough glass to be recycled in an amount that may be effectively used in road construction and maintenance.

2009 LEGISLATION

In addition to the previously mentioned House Bill No. 1338 and Senate Bill No. 2417, there were three bills during the 2009 legislative session which related to solid waste: House Bill No. 1532, House Bill No. 1536, and Senate Bill No. 2382. These three bills failed to pass in the house of origin. As introduced, House Bill No. 1532 would have required recycling infrastructure on any property owned or operated by the state on which individuals publicly gather. This property would include the State Capitol, institutions of higher education, state parks, and rest areas. The bill would have required the provision of recycling infrastructure to collect recyclable materials that may be expected to be otherwise disposed as solid waste.

As introduced, House Bill No. 1536 would have created a waste reduction fund to be funded by public and private municipal solid waste landfills through a $1 per ton fee. The fee would have been collected from the person hauling or producing the waste. Money in the fund would have been provided as grants to political subdivisions for waste reduction and recycling programs that meet or exceed waste reduction and recycling goals of the department. The goals would have been based on the reduction of waste in a landfill on weight of waste per capita and would have been comparable for each political subdivision. Five percent of the fund could have been used for cost of administration and 5 percent could have been used for funding programs of the department for solid waste reduction and recycling education and awareness.

As introduced, Senate Bill No. 2382 would have extended the precondition for the State Department of Health to issue a permit from a permissive vote by the board of county commissioners of the county in which a landfill is to be sited to a city, county, or township in which a landfill is to be sited.

HISTORY OF SOLID WASTE MANAGEMENT IN THIS STATE

The basis for solid waste management law in this state comes from House Bill No. 1056 (1975). This

bill was recommended as the result of a Legislative Council study. The final report for the Natural Resources "B" Committee for the 1973-74 interim states that most of the interest in solid waste legislation came from farmers and ranchers who were disturbed by the conditions caused by uncontrolled solid waste disposal facilities. House Bill No. 1056, which was recommended by the committee, authorized the State Department of Health and Consolidated Laboratories to control the design and operation of solid waste facilities through a solid waste permit system administered by the department. In addition, the department was authorized to provide technical assistance to political subdivisions, inspect and review all solid waste management facilities, and require the filing of plans of a completed operation. The bill provided an exemption for the disposing of household waste by natural persons who reside on unplatted land in unincorporated areas. Solid waste management facilities existing on the effective date of the bill had to comply with the provisions of the bill within 12 months. The bill provided that cities, townships, counties, and agencies may by ordinance or contract join in a regional solid waste management agency or program.

The next major change to solid waste law in this state was the result of a Legislative Council study conducted by the interim Political Subdivisions Committee during the 1989-90 interim. The committee reviewed a report of the findings of the North Dakota Waste Management Task Force established by the Governor in 1988. The task force developed the following general recommendations:

1. An increase in the State Department of Health and Consolidated Laboratories' resource base would facilitate development of an integrated waste management program in the state.
2. A study of municipal wastes should be performed to define potential resources and to address leaching characteristics in the waste stream.
3. A comprehensive economic analysis of a proposed integrated waste management program must be performed.
4. A comprehensive environmental educational program should be developed.
5. The waste management problem presents numerous business opportunities that should be considered.
6. The task force should be continued for the next two years.

The director of the State Department of Health and Consolidated Laboratories' Division of Waste Management organized an informal task force to continue the work of the Governor's task force and to develop a statewide solid waste management plan. The plan suggested that legislation should be considered implementing the following concepts:

1. Creation of regional solid waste management authorities in which counties and cities would be required to participate.
2. Revision of state laws relating to littering and open burning.
3. Creation of a state solid waste fund.
4. Establishment of a state goal for waste reduction.
5. Establishment of certification of landfill operators.
6. Establishment of increased penalties for noncompliance with the Solid Waste Management and Land Protection Act.
7. Establishment of specific requirements for large volume landfills.

The committee recommended a number of bills that were combined into House Bill No. 1060 (1991). This bill created the waste reduction goal of at least 10 percent by 1995, at least 25 percent by 1997, and at least 40 percent by 2000. The bill required all the land in the state to be part of a solid waste management district. Each district was governed by a board with a representative of each county within the district, from a city within each county within the district, the licensed disposal facilities within the district, and the waste haulers within the district. The bill required solid waste to be managed at solid waste management facilities identified in the district's solid waste management plan subject to a civil penalty of up to $25,000 per day per violation. The solid waste management districts were required to submit a comprehensive solid waste management plan to the State Department of Health and Consolidated Laboratories. The department was required to incorporate all of these districts' solid waste management plans into a comprehensive statewide solid waste management plan by July 1, 1993. In addition, the bill allowed the governing bodies of political subdivisions participating in a solid waste management district to establish a waste management authority and a solid waste program. The waste management authority or program was allowed to provide solid waste management services and determine charges for those services. The chairman of the governing board of each solid waste management district was required to select a representative to serve on a statewide solid waste management coordinating committee. The coordinating committee was required to assist districts in managing and regulating solid waste and coordinating efforts of the districts with state agencies. In addition, the coordinating committee reviewed alternative means of managing solid waste, including a review of forms of public ownership and financial assurance mechanisms.

The bill prohibited littering, open burning, and dumping certain items in landfills. The bill required a preconstruction site review, a review of existing municipal landfills, an individual certified by the department to be onsite at municipal waste landfills and waste incinerators, and the development and dissemination of educational materials to encourage voluntary municipal waste reduction, source

separation, reuse of materials, recycling efforts, and appropriate management of municipal waste.

House Bill No. 1061 (1991) was another bill recommended by the interim Political Subdivisions Committee. The bill created the solid waste management fund and a surcharge on each household account and commercial account. Money in the solid waste management fund was used to make grants or low-interest loans to political subdivisions for waste reduction, planning, resource recovery, and recycling projects with an emphasis on marketing. In addition, there was an appropriation of $350,000 from the state aid distribution fund to the State Department of Health and Consolidated Laboratories for distribution to the solid waste management districts to assist the districts in developing comprehensive solid waste management plans for each district.

During the 1993-94 interim, the Legislative Council's Natural Resources Committee studied the problems associated with solid waste management and the operation and effect of solid waste management districts and solid waste management plans. The committee also received a comprehensive solid waste management plan that assessed the ability of each state agency to reduce the amount of solid waste it generates and increase the amount of recycled products it uses from the Office of Management and Budget.

The committee reviewed the North Dakota solid waste management plan. The eight solid waste management districts were each required to prepare and submit to the State Department of Health and Consolidated Laboratories by January 1, 1993, a solid waste management plan that included each district's ability to manage and plan for adequate capacity, accessibility, and waste flow control, and that took into consideration existing waste transportation patterns and the ability of existing landfills to handle solid waste. The department incorporated all the district solid waste management plans into a comprehensive statewide solid waste management plan. The plan reviewed existing conditions in the state, including the state's demographics, economics, geology, hydrology, and climate, and the existing solid waste management systems in the state. The plan reviewed the governmental role in solid waste reduction and recycling and summarized the goals of each of the eight solid waste management districts. The plan contained recommendations relating to education, waste reduction, recycling, yard waste management and composting, incineration and energy recovery, waste disposal, and ordinances and enforcement. Representatives of the department reported that the primary focus of solid waste management in the state will be on educating the public concerning the recycling and composting alternatives available.

In addition, the committee received information on the comprehensive solid waste management plan that assessed the ability of each state agency to reduce the amount of solid waste it generates and increase the amount of recycled products it uses from the Office of Management and Budget. The plan included information on how the comprehensive solid waste management plan was developed, the history of waste management efforts in state government, and the future of waste management in state government. The plan also reviewed existing state government waste management efforts and the existing solid waste management system in the state. The plan also contained goals and objectives for state solid waste management. The goals identified by the plan were to manage the cost of waste disposal for state government, reduce the amount of waste generated by state government, identify current and possible recycling efforts by state government, identify current and possible uses for recycled products by state government, make waste management a responsibility of all state government employees, and assure state government waste is managed in an environmentally sound manner. The plan also contained objectives concerning education, the reduction in the volume of waste generated, the reuse of waste materials, recycling and composting efforts, energy recovery efforts, the use of landfills and incinerators, review of the procurement of recycled products, and the control of costs through waste management.

The plan recommended that each state agency, facility, or institution designate an employee as a solid waste coordinator and educator. The plan recommended that all state agencies begin aggressive paper product recycling programs and that state agencies responsible for waste negotiate waste disposal fees on a volume or weight basis. The plan specified that state agencies, facilities, or institutions should identify their current costs for waste disposal and those state agencies that handle large volumes of inert waste should manage this material separately from other municipal solid waste.

The next major change to solid waste law occurred in 1995 with the passage of Senate Bill No. 2103. This bill repealed solid waste management districts, solid waste management authorities, and the statewide coordinating committee. In addition, the bill repealed the funding mechanism for the solid waste management fund.

PRESENT LAW

Most of the law relating to solid waste is contained in North Dakota Century Code (NDCC) Chapter 23-29 and related rules. The chapter begins with a finding of necessity and a declaration of purpose in Sections 23-29-01 and 23-29-02. Although the sections have arguable legal significance, the sections contain language relevant to this study. One of the findings includes that "problems of solid waste management have become a matter statewide in scope and concern, and necessitate state action through technical assistance and leadership in the application of new improved methods and processes to reduce the amount of solid waste and unsalvageable

materials and to promote environmentally acceptable and economical solid waste management." In addition, a declaration of purpose includes the promotion and assistance "in the development of markets for recovered and recycled materials." This finding and purpose are similar to this study's directives.

North Dakota Century Code Section 23-29-03 contains definitions. Solid waste is defined as any garbage, refuse, sludge from a wastewater plant, water supply treatment plant, or air pollution control facility and other discarded material. The term does not include agricultural waste or domestic sewage. The section defines four types of solid waste--industrial waste, infectious waste, municipal waste, and special waste. Industrial waste is solid waste generated from the combustion or gasification of municipal waste and from industrial and manufacturing processes. Municipal waste is solid waste that includes garbage, refuse, and trash generated by households, motels, hotels, and recreation facilities; by public and private facilities; and by commercial, wholesale, private, and retail businesses. The term does not include special waste or industrial waste. Infectious waste means solid waste that may contain pathogens that could cause a human or animal to contract an infectious disease. Special waste is solid waste that includes waste generated from energy conversion facilities; waste from crude oil and natural gas exploration and production; waste from mineral and ore mining, beneficiation, and extraction; and waste generated by surface coal mining operations. The term does not include municipal waste or industrial waste. Hazardous waste is a separate type of waste governed by a separate chapter of law--Chapter 23-20.3. In short, hazardous waste is any waste that may contribute to mortality illness or present a hazard to human health.

All of these wastes, if not hazardous, may end up in a municipal waste landfill, an inert waste landfill, a special waste landfill, or a small volume industrial waste landfill. In conformity with the legislative history, this study is to focus on municipal waste and inert waste landfills.

Under NDCC Section 23-29-04, the State Department of Health has the power and duty to administer the state solid waste management program, provide technical assistance to political subdivisions, encourage self-financing solid waste management systems and intermunicipal agencies, promote planning and application of resource recovery facilities and systems, cooperate with the federal government, require the submission for review and approval of a solid waste management plan from entities in this state, establish procedures for permits, adopt and enforce rules relating to the chapter, and conduct an environmental compliance background review of an applicant for a landfill permit.

Under NDCC Section 23-29-05, a political subdivision may enact and enforce a solid waste management ordinance that is equal to or more stringent than state law.

Under NDCC Section 23-29-05.1, a person must deposit solid waste in a landfill. This section prohibits littering and open burning unless in accordance with the rules adopted by the department. This section creates the criminal penalty of an infraction unless the litter is in excess of one cubic foot or is furniture or a major appliance, in which case the offense is a Class B misdemeanor. Under Section 23-29-05.2, some wastes cannot be placed in landfills. This waste includes untreated infectious waste, lead-acid batteries, used motor oil, and major appliances. The section requires lead-acid batteries to be accepted as trade-ins for new batteries.

Under NDCC Section 23-29-14, a person living in the unincorporated areas of this state may dispose normal household waste on that person's property.

Under NDCC Section 23-29-07, the department may issue permits for solid waste management facilities and requires a facility to have a permit to dispose of solid waste. Upon receiving an application, the department must provide notice in the official newspaper of the county in which the facility is to be located. In addition, the department must notify the board of county commissioners in the county in which the facility is to be located. The board of county commissioners may call a special election to allow the qualified electors of the county to vote to approve or disapprove the facility. The special election must be held within 60 days after receiving notice, and if the electors vote to disapprove the facility, the department may not issue a permit and the facility may not be located in that county. This procedure does not apply to a solid waste management facility operated as part of an energy conversion facility or surface coal mining and reclamation operation.

Under NDCC Section 23-29-07.6, the State Department of Health, in cooperation with the State Engineer and State Geologist, must create criteria for siting a solid waste facility based on potential impact on environmental resources.

Under NDCC Section 23-29-07.11, before the issuance, renewal, transfer, or major modification of a permit, the applicant must submit to the State Department of Health a disclosure statement, which must include name, address, experience with the type of solid waste, and criminal and civil record.

Under NDCC Section 23-29-16, an operator of a landfill must be insured and each officer and director must be personally jointly and severally strictly liable for damages caused by solid waste to the environment. Under this section, to renew or modify a permit, a privately owned industrial waste or municipal waste landfill is subject to a vote of approval. The State Department of Health notifies the board of county commissioners of the renewal or modification, and the board must place the issue on the ballot at the next regularly scheduled election to allow the qualified electors of the county to vote to approve or disapprove the renewal or modification based on

public interest and impact to the environment. If a majority of the qualified electors voting in the election disapprove the renewal or modification, the department may not renew or modify the permit.

Under NDCC Section 23-29-13, the operator of a solid waste management facility, upon completion of the operation at each site, must file a plat of the area with the county recorder and a description of the waste in the facility.

Under NDCC Section 23-29-07.1, the department may charge fees for the issuance of permits. These fees must be reasonable and based on the anticipated costs.

Under NDCC Section 23-29-08, the department may inspect all solid waste management activities and facilities. In addition, under Section 23-29-07.9, at least one individual certified by the department must be onsite at all times at a municipal waste landfill or municipal waste incinerator.

Under NDCC Section 23-29-07.2, a solid waste management fund is created and as provided under Section 23-29-07.5, may be used to make grants or low-interest loans to political subdivisions for waste reduction, planning, resource recovery, and recycling projects. The funding source for this fund was repealed in 1995 and money has not been distributed from the fund since that time.

Under NDCC Section 23-29-07.10, the State Department of Health is required to disseminate educational materials to encourage voluntary municipal waste reduction, source separation, reuse of materials, recycling efforts, and proper management of municipal waste.

These state statutes are provided detail through rules made by the State Department of Health. These rules are contained in North Dakota Administrative Code Article 33-20. These rules generally relate to the permitting, operating, and construction of landfills.

In addition to state law, the Resource Conservation and Recovery Act of 1976 (RCRA), 42 U.S.C. 6901 et seq., gives the United States Environmental Protection Agency authority to manage nonhazardous solid waste. The RCRA and its amendments, including the Solid Waste Disposal Act Amendments of 1980 and the Hazardous and Solid Waste Amendments of 1984, place responsibility for solid waste management with the Environmental Protection Agency. Under the law, the administrator of the Environmental Protection Agency is required to adopt guidelines for state or regional solid waste plans adopted by states and regional authorities. The Act prescribes certain requirements for approval of state plans. One requirement is that the state plan provide for resource conservation and recovery and for disposal of solid waste in landfills in a manner that is environmentally sound.

The administrator is also required to adopt guidelines relating to landfills. Disposal facilities that fail to satisfy the criteria for sanitary landfills must be classified as open dumps. State solid waste management plans must provide for the closing or upgrading of all open dumps and must prohibit the establishment of open dumps. The Environmental Protection Agency has made rules under the Act relating to location restrictions, design criteria, operating criteria, ground water monitoring, corrective action, closure and postclosure care, and financial assurance criteria. The closure and postclosure care requirements require that postclosure care be conducted for 30 years. Due to these requirements, the state evaluated and reduced the number of landfills from a high of 111 permitted municipal solid waste landfills in the 1980s to the current number of 13 regional or multicounty landfills. Not including the recently sited Grand Forks landfill, the last new regional landfill to be successfully sited was in 1989.

OTHER STATE LAW

Under NDCC Section 40-34-01, any municipality may individually or jointly acquire, construct, equip, extend, improve, operate, and maintain inside or outside of the city a plant or system for the disposal of garbage and issue bonds. Any municipality may acquire by gift, grant, purchase, or condemnation necessary lands either within or without the corporate limits of the municipality and within or without the state of North Dakota. The municipality may invoke eminent domain for purposes of acquiring land for the plant or system for the disposal of garbage.

Under NDCC Section 11-11-14, the board of county commissioners for a county may establish a garbage or trash collection system for all or part of the county. This system may include the operation and maintenance of landfill sites or other processing sites. The board may operate a system in cooperation with one or more other political subdivisions through a joint powers agreement.

North Dakota Century Code Chapter 54-40 allows for joint powers agreements. Generally, two or more governmental units may jointly or cooperatively exercise their respective separate powers, common powers, or similar powers, jointly.

Under NDCC Chapter 54-40.1, cities, counties, and organized townships may form regional councils that coordinate planning and development within the region for all matters of regional concern, including among other things, solid waste. In addition, the regional council is required to develop a regional comprehensive plan. The regional council has membership from each of the participating units of general local government.

In addition to the siting permit required from the State Department of Health, which may be subject to a vote of the electors of the county, a landfill would need to have appropriate zoning to be constructed. Presently, in areas surrounding a city in which a city has not exercised jurisdiction, the county is the zoning authority, unless the township has exercised zoning authority.

STATE LAW RELATING TO RECYCLING PROGRAMS

Under NDCC Section 54-44.4-07, the Office of Management and Budget, the institutions of higher education, and other state agencies are encouraged to purchase products that are environmentally preferable products. Where practicable, specifications for purchasing newsprint printing services should specify the use of soybean-based ink. In requesting bids for paper products, the Office of Management and Budget must request information on the recycled content of the paper products. In addition, biobased products should be specified if practicable. The Office of Management and Budget is required to develop guidelines for a biobased procurement program.

There is state tax policy to promote recycling. Under NDCC Sections 57-39.2-04.3 and 57-40.2-02.1, there is a sales and use tax exemption for recycling machinery. To qualify for the exemption, the equipment must be used solely in the process of recycling solid waste that will become a raw material for manufacturing or will become a product for sale at retail or wholesale.

Attached as Appendix B is a copy of *Recycling Works!* provided by the State Department of Health. This brochure provides information on recycling in this state, including public and private recyclers.

METHANE PROCESSING

Attached as Appendix C is a map of landfill gas energy projects and candidate landfills provided by the Landfill Methane Outreach program of the United States Environmental Protection Agency. In North Dakota, there are two operational projects and one candidate landfill. A candidate landfill is one that is accepting waste or has been closed for no more than five years and has at least one million tons of waste and does not have an operational or under construction project, or is designated based on actual interest or planning. The two projects in this state are in the Fargo landfill and the candidate landfill is the city of Grand Forks landfill. In addition to operational projects and candidate landfills, there are potential landfills that do not meet the candidate definition; however, these landfills have potential for producing energy from methane gas based on site-specific needs or if data were complete. These landfills include the city of Minot landfill, Dakota landfill at Gwinner, and McDaniel landfill at Sawyer.

There is a state tax provision on methane gas processing from a landfill. Under NDCC Section 57-38-01.8, there is an income tax credit for the cost of a geothermal, solar, wind, or biomass energy device installed before January 1, 2015. A biomass energy device includes a system using landfill gas to produce fuel or electricity.

SUGGESTED STUDY APPROACH

The commission may wish to receive testimony from experts in the area of solid waste management. This is especially true with the portion of the study relating to new solid waste sciences. Although a list of alternative waste treatment technologies may be found easily, whether the technology is recently developed, widely available, or practical for North Dakota are questions for which technical knowledge is needed to answer. Some of these technologies include:

- Anaerobic digestion.
- Biodrying.
- Gasification.
- Plasma arc waste disposal.
- Pyrolysis.
- Types of composting.

In addition, the commission may wish to receive testimony from township, city, and county officials on state or regional siting and zoning. The commission may wish to receive testimony on successful recycling programs used in this state from private recyclers and cities. The commission may wish to receive testimony from all stakeholders, including citizens, political subdivisions, private waste companies, and landfills.

ATTACH:3