LB 1101
Solid Waste Management Programs Study

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EXECUTIVE SUMMARY

Legislative Bill 1101, passed in 2016, directed the Nebraska Department of Environmental Quality (NDEQ or Department) to "conduct a study to examine the status of solid waste management programs operated by the Department and make recommendations to modernize and revise such programs." Seven Nebraska statutes pertaining to solid waste were reviewed in preparation of this report:

- §13-2001 to 13-2042.01. Integrated Solid Waste Management Act
- §13-1701 to §13-1713. Solid Waste Disposal
- §19-2101 to §19-2111. Garbage Disposal
- §81-1534 to §81-1570. Nebraska Litter Reduction and Recycling Act
- §81-15,158.01 to §81-15,165. Waste Reduction and Recycling Incentive Act
- §81-15,166. Solid Waste Management Plan
- §81-15,167 to §81-15,176. Nebraska Environmental Trust Act

The Integrated Solid Waste Management Act vested the responsibility for the management of solid waste on local governments. Nebraska's local officials have addressed our citizens' solid waste management needs. The recommendations made in this study continue to encourage development of integrated solid waste management programs, including waste volume reduction and recycling programs and education, at the local governmental level through incentives, technical assistance, grants, and other practical measures.

Many comments and recommendations were received from interested public and stakeholders during the preparation of this study. The Department has chosen to concentrate efforts on those recommendations that can best yield substantial statewide benefits. Those recommendations include:

- Merge the Department's Grants Programs
- Assess Data and Information Needs
- Prioritize Solid Waste Management Needs

- Expand Educational and Outreach Opportunities
- Evaluate the Department's Expertise
- Strengthen State Agency Opportunities

The Department plans to follow-up on other suggestions received during the preparation of the study. In some instances, related action has already been initiated. For example, NDEQ has sent all permitted landfills guidance on how to handle used oil. The Department has also initiated planning for a solid waste management workshop to be held in the Panhandle in the first half of 2018. The Department will develop an implementation plan for the report recommendations which will be posted on the Department's webpage.

Consistent with LB 1101, the Department has submitted this study and associated recommendations to the Executive Board of the Legislative Council and the chairpersons of the Natural Resources Committee, the Urban Affairs Committee and the Appropriations Committee of the Legislature. Any questions or comments related to this study or the recommendations may be directed to the NDEQ Director.

ERRATA SHEET

On page 3 of the LB 1101 "Solid Waste Management Programs Study," reference is made to the term "solid waste" where it is stated the term is defined in Appendix C. The term was inadvertently omitted in the Appendix, which has been corrected.

PAGE/LINE CORRECTION – Appendix C, Pg. 3/Line 13

DATE: January 3, 2018

SIGNATURE: _____

Page	Line	Correction
Appendix C, Page 3	13	Definition of "solid waste" added

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1.0
INTRODUCTION AND PURPOSE

In 2016 the Nebraska Legislature passed Legislative Bill 1101 (LB 1101).[1.1] Section 2 of this legislation directed the Nebraska Department of Environmental Quality (Department) to conduct a study to examine the status of solid waste management programs in the State of Nebraska. This study is to include, but not be limited to:

(1) determining whether existing state programs regarding litter and waste reduction and recycling should be amended or merged;

(2) conducting a needs assessment of the recycling and composting programs in the state, including the need for infrastructure development, operating standards, market development, coordinated public education resulting in behavior change, and incentives to increase recycling and composting;

(3) identifying methods to partner with political subdivisions, private industry, and private, non-profit organizations to most successfully address waste management issues in the state;

(4) providing recommendations regarding existing funding sources and possible new revenue sources at the state and local level to address existing and emerging solid waste management issues; and

(5) recommending revisions to existing grant programs to address solid waste management issues in a proactive manner.

Consistent with LB 1101, the Department set up a committee of solid waste professionals to advise the Department on the study (see Appendix A for meeting minutes and a list of committee members). The committee extensively discussed solid waste challenges and examined a long list of waste management priorities. The committee prioritized these issues, selected the top five to be examined, and presented these priorities in a series of issue papers (see Appendix B). The committee selected the following five priority issues for examination: (1) recycling and composting; (2) materials management; (3) information; (4) grant programs; and (5) landfill bans. These issue papers served as a starting point for this study and focused on the issues the committee felt were most important in the examination of the Department's waste management programs.

This report is the culmination of efforts to examine the status of solid waste management programs in the State of Nebraska to continue the positive evolution progress. In addition to working with an advisory committee, Department staff and its consultant met with well over 150 solid waste management professionals at their locations to discuss the LB 1101 effort. The visits with those that deal with waste management issues daily were invaluable in the preparation of this study. Finally, the Department held public meetings and accepted comments on the draft report.

(1.1) Legislature of Nebraska. One Hundred Fourth Legislature, Second Session. Legislative Bill 1101 (2016). *A bill for an act relating to the Department of Environmental Quality; to amend sections 81-15,158.01 and 81-15,160, Reissue Revised Statutes of Nebraska; to require a study to examine the status of solid waste management programs; to create . . .*

2.0
REVIEW OF EXISTING STATE PROGRAMS

The term "solid waste" is defined in the Nebraska Environmental Protection Act;[2.1] this definition can be found in Appendix C. Nebraska's statutory framework for solid waste management also includes the Integrated Solid Waste Management Act[2.2] (ISWMA), a broad statute that addresses most of the requirements and authority associated with the proper management of solid waste, such as permitting municipal solid waste disposal areas and municipal solid waste processing areas. The ISWMA grants authority for the Environmental Quality Council (EQC) to adopt regulations related to municipal solid waste, processing facilities such as compost sites, material recovery facilities, and transfer stations.

As part of this study the Department reviewed and assessed existing solid waste, recycling, and composting programs within the state. Between May and September 2017, staff from the Department's Land Management Division visited all 21 of the state's Subtitle D landfills and met with community leaders.

These site visits facilitated discussions regarding the challenges differing operations face and allowed for a better understanding of Nebraska's solid waste infrastructure. Comments received during these site visits covered all facets of the issues these facilities face – regulations, grants, education, operations, materials, etc. (see Appendix D). Some comments were contradictory; for example, food waste is great for landfills vs. food waste should be banned and recycled; waste has changed since 2009 (when the statewide waste characterization study was completed) vs. waste hasn't changed since 2009. A sampling of the other comments includes:

- There are no great outlets for using waste tires.
- Be strategic when awarding grants.
- Keep Nebraska Beautiful affiliates provide services communities cannot undertake.
- Good, but simple, guidance documents are needed.
- A better exchange of information and communication among landfill operators is needed.

A follow-up survey was electronically sent to each of the 21 landfills; nine responses were received (see Appendix E).

In May and June 2017, the consultant (see Appendix F) visited 30 different recycling operations, communities, and non-profit organizations and interviewed stakeholders. These stakeholders' comments can be found in Appendix G. In addition to these endeavors, meetings were held so the public could provide input on this study. The first meeting was October 17, 2017, in Bridgeport and the second meeting was October 19, 2017, in Lincoln. Minutes from these meetings can be found in Appendix H.

2.1 EXISTING STATE PROGRAMS

The Department's Land Management Division is responsible for several programs[2.3] through its Waste Management Section and Planning and Aid Unit. The following Department programs and solid waste management practices will be discussed in the following sections:

- Solid Waste Regulatory Program
- Waste Reduction and Recycling Incentive Grants Program
- Waste Tire Management Program
- Litter Reduction and Recycling Grant Program
- Materials Management
- Recycling Operations
- Composting Operations
- Landfill Bans

2.2 SOLID WASTE REGULATORY PROGRAM

The Department implements regulations (*Title 132 – Integrated Solid Waste Management Program*)[2.4] specifically for the purpose of managing municipal solid waste, which includes wastes typically collected and disposed in municipal landfills, and other nonhazardous wastes. There are 11 specific program duties:

- Permit issuance, renewal and modification;
- Response to inquiries related to facility operations;
- Compliance inspections and enforcement actions;
- Investigation of citizen complaints;
- Alternate waste management method approvals;
- Groundwater investigations and groundwater/soil remediation projects for permitted and non-permitted facilities;
- Gas emissions monitoring related to landfills and other permitted sites;
- Closure inspections and monitoring of closure and post-closure activities;
- Conducting public information sessions and hearings related to permits;
- Financial assurance review and monitoring compliance; and
- Assisting regulated facilities and the public in recycling, reuse and proper management of waste-like materials.

Three fee sources currently fund the operation of the solid waste regulatory program. These fees are authorized by the ISWMA and include:

- Fifty percent (50%) of the $1.25 solid waste disposal fee (Disposal Fee) charged per ton of solid waste disposed in municipal solid waste facilities;
- An annual operating fee (Operating Fee) collected from all solid waste management facilities; and
- Solid waste management facility permit application, renewal, and modification fees (Permit Fees).

The Disposal Fee was established by statute. These fees, 50% of the $1.25 fee charged per ton of solid waste disposed in municipal solid waste disposal areas, may be used by the Department to:

- Cover the direct and indirect costs of responding to spills or other environmental emergencies.
- Regulate, investigate, remediate, and monitor facilities during and after facility operations.
- Perform regulated activities under the Integrated Solid Waste Management Act, the Nebraska Litter Reduction and Recycling Act, and the Waste Reduction and Recycling Act.

Operating Fees are set by the EQC and are collected annually from all solid waste management facilities in the state. The amount of the fee varies based on the type of solid waste facility (municipal disposal area, construction and demolition debris disposal area, solid waste compost site, etc.). These fees are used to cover the costs of ongoing permit-related work.

Permit Fees, which are established by the EQC, are paid to the Department by those individuals or entities applying to operate a facility pursuant to the Integrated Solid Waste Management Act or the Environmental Protection Act. The amount of the fee varies based on the type of facility and type of permit application – initial, major modification, renewal, or initial application for an existing facility.

There are 16.5 full-time employees (FTEs) budgeted for the solid waste regulatory program and funded by these fees. The budgeted staff includes:

- 7.63 FTEs budgeted to perform solid waste management facility and scrap tire hauler permitting;
- 5.49 FTEs budgeted to perform compliance activities;
- 2.06 FTEs budgeted to perform administrative activities and support; and
- 1.35 budgeted FTEs to provide agency support in the form of legal, fiscal, records management, public information, and environmental assistance.

In addition, 2.48 FTEs are partially funded through the solid waste regulatory program fees to provide emergency response services.

Facility permitting activities are performed by environmental engineers, a financial assurance coordinator, a program specialist, and geologist/groundwater scientists. Compliance activities are performed by program specialists and an environmental assistance coordinator.

2.3 WASTE REDUCTION AND RECYCLING INCENTIVE GRANTS PROGRAM

The Waste Reduction and Recycling Incentive Grants Program was established in 1990. *Title 199 – Waste Reduction and Recycling Incentive Grants Program*[2.5] sets out regulations of this program. Three different fees fund the Waste Reduction and Recycling Incentive Grants Program: (1) Business Fee; (2) Disposal Fee; and (3) Scrap Tire Fee. The Scrap Tire Fee will be discussed in Section 2.4.

The Business Fee is funded through a $25 annual retail business fee on sales of tangible personal property. Political subdivisions and other public, private, or non-profit entities or organizations are eligible to apply for grants funded through the Business Fee. Eligible activities for grants funded through this fee include integrated solid waste management programs and projects.

The Disposal Fee that funds this grant program is derived from 50% of the $1.25 per ton fee collected on solid waste disposed in the state's municipal solid waste facilities. Applicants eligible for grants funded via this fee include counties, municipalities, and agencies. Eligible activities for grants funded through the Disposal Fee include planning and implementing facilities and systems to further the Integrated Solid Waste Management Act.

Along with funding grant awards through the Waste Reduction and Recycling Incentive Grants Program, the Disposal Fee funds two other programs. The first program is the Illegal Dumpsite Cleanup Program, which provides funding to political subdivisions for the cleanup of solid waste disposed along public roadways, ditches, or contiguous areas. The illegally-dumped waste is removed and disposed in a permitted facility or recycled.

The second program is the Landfill Disposal Fee Rebate Program,[2.3] which was ". . . created as an incentive to political subdivisions to support and encourage the purchasing of products, materials, or supplies that are manufactured or produced from recycled material." Municipalities or counties can receive a $0.10 rebate of the $1.25 disposal fee they paid. Eligibility requires that the applicant has a written purchasing policy that has been approved by the Department.

Funds collected through the Business Fee and the Disposal Fee and awarded through the Waste Reduction and Recycling Incentive Grants Program have provided financial support for recycling systems, waste reduction programs, household hazardous waste programs, the identification and development of recycling markets, processing facilities, and solid waste infrastructure. From 2011 through 2016, more than $12 million(2.6) in grants were awarded through this program for waste reduction, recycling and composting.

2.4 WASTE TIRE MANAGEMENT PROGRAM

One of the Department's responsibilities is to administer the Waste Tire Management Program. Nebraska bans the land disposal of waste tires in any form except tires that are non-recyclable, which can only be disposed of in municipal solid waste areas. Non-recyclable tires are considered press-on solid tires, solid pneumatic shaped tires, and foam pneumatic tires. Acceptable uses of waste tires in Nebraska include tires that are:

- Processed into crumb-rubber form and reused or recycled in manufactured products;
- Used as safety barriers for race courses for motorized vehicles;
- Used as tire-derived fuel;
- Retreaded, processed into chip or shred form and used as drainage media in landfill construction or septic drain fields;
- Used as a raw material in steel making; or
- Processed into shred form and used as an alternate daily cover in a landfill or for approved civil engineering projects.

Additional uses include agricultural uses such as bumpers on agricultural equipment, ballast to maintain covers or structures on an agricultural site, blowout stabilization, fish habitat, or for tire mats for bank stabilization. Acceptable uses must comply with regulatory requirements to ensure that the tires are being legitimately used and not used in a manner that would simply constitute a form of disposal.

In order to track the legitimate uses of tires, any person engaged in the business of hauling waste tires is required to obtain a permit from the Department. There are currently 26 permitted scrap tire haulers in the state. Scrap tire haulers are required to provide financial assurance and submit an annual report to the Department on the disposition of tires hauled. In addition, there is a limit on how many waste tires can be accumulated and stored. The speculative accumulation of more than 500 waste tires is prohibited.

In Nebraska, scrap tires are predominantly: (1) used for alternative daily cover at two of the state's municipal solid waste landfills; (2) hauled out of state and landfilled; or (3) hauled out of state and processed into crumb rubber. Other uses for waste tires include livestock watering tanks, drainage media, landscaping mulch, and erosion mats. Waste tires can be used in rubber-modified asphalt and as tire-derived fuel. However, there are no agencies or organizations in Nebraska currently using rubber-modified asphalt and there is an existing ban on using grant funds for tire-derived fuel. Both repurposing processes consume a significant number of waste tires, and could therefore contribute to reducing the nuisance of waste tires in the environment.

The five-year average (from 2012 to 2016) of tires moved by Nebraska's permitted scrap tire haulers is 10,710 tons, while the five-year average of waste tires hauled out of state is 17,794 tons. Nearly 34% of the waste tires taken out of state are processed into crumb rubber because there is currently no tire processor in Nebraska. These waste tires are sent out of state for processing into crumb rubber and then some of the processed material is shipped back to Nebraska for use as playground surfaces, athletic running track surfaces, artificial turf fields, and landscaping mulch. Table 2.1 indicates the in-state and out-of-state uses of Nebraska's waste tires and provides the five-year average for each use.

TABLE 2.1
Uses for Nebraska's Waste Tires
and the Five-Year Average for Each Use

Use	Five-Year Average (in tons)
In-State Use as Alternative Daily Cover *	8,605
Processed into Crumb Rubber	6,015
Landfilled Out of State	5,322
Out-of-State Use as Alternative Daily Cover **	3,904
Out-of-State Use as Tire-Derived Fuel	1,953

* During calendar years 2015 and 2016 there was a significant increase in the in-state use of waste tires as alternative daily cover.

** During calendar year 2016, no waste tires delivered out of state were used as alternative daily cover in landfills.

The Scrap Tire Fee is the third fee that funds the Waste Reduction and Recycling Incentive Grants Program. A fee of $1.00 is charged on each new tire sold in Nebraska. The Department must allocate $1.5 million of the collected fees to the Scrap Tire Management Program and fund scrap tire recycling projects. Applicants eligible for grants funded via this fee include political subdivisions or other public, private, or non-profit entities or organizations. From 2011 through 2016, the Department awarded more than $11 million in grants for scrap tire recycling projects.[2.6] A significant portion of this funding was expended to rid the state of illegal tire piles and hold amnesty days where citizens could dispose of waste tires at no charge.

Several of the uses for scrap tires in Nebraska have been supported by grant funding from the Waste Reduction and Recycling Incentive Grants Program. The types of scrap tire projects that can be funded under this grant program with the scrap tire fee that supports it include the following eligible categories:

- Reimbursement for the purchase of crumb rubber generated and used in Nebraska, with disbursements not to exceed 50% of the cost of the crumb rubber.
- Reimbursement for the purchase of tire-derived product, which utilizes a minimum of 25% recycled tire content, with disbursements not to exceed 25% of the product's retail cost.
- Participation in the capital costs of building, equipment, and other capital improvement needs or startup costs for scrap tire processing or manufacturing of tire-derived product, with disbursements not to exceed 50% of such costs or $500,000, whichever is less.
- Participation in the capital costs of building, equipment, or other startup costs needed to establish collection sites or to collect and transport scrap tires, with disbursements not to exceed 50% of such costs.
- Cost-sharing for the manufacturing of tire-derived product, with disbursements not to exceed $20 per ton or $250,000, whichever is less, to any person annually.
- Cost-sharing for the processing of scrap tires, with disbursements not to exceed $20 per ton or $250,000, whichever is less, to any person annually.
- Cost-sharing for the use of scrap tires for civil engineering applications for specified projects, with disbursements not to exceed $20 per ton or $250,000, whichever is less, to any person annually.
- Disbursement to a political subdivision up to 100% of costs incurred in cleaning up scrap tire collection sites.

Of the eight categories of eligible grant-funded projects, five of the categories subsidize the cost of using scrap tire products, two of the categories assist in startup costs for new scrap tire businesses, and one assists political subdivisions in cleaning up scrap tire collection sites. Although the use of tire-derived fuel is a significant use of scrap tires nationally, projects related to scrap tire fuel are not currently eligible for grant assistance in Nebraska.

A review of the $1.71 million scrap tire grants awarded in 2017 reveals that all the grant-funded projects were either to support the end use of scrap tire derived products or disbursements to political subdivisions to cover the costs of cleaning up scrap tire collection sites. No grant funding was awarded for the startup costs for new scrap tire businesses because there were no applications.

In 2017, the Department awarded $434,304 to political subdivisions to cleanup scrap tire dumpsites. These grant funds were primarily utilized by political subdivisions to establish a temporary collection area that enables the public to bring in their tires and dispose of them at no charge. This ensures the proper management of these tires. Scrap tire businesses are not allowed to bring tires associated with their business to these collection events. Based upon interviews with stakeholders for this study, it is speculated that most of the tires collected during these amnesty day events were from consumers that keep their old tires at the time of purchasing new tires to avoid the expense retailers charge to properly manage the old tires. The program funded the disposal of approximately 4,470 tons of tires from these events at a cost of about $97.16 per ton of tires collected.

The remainder of the 2017 grant-funded scrap tire projects were for the end use of scrap tire products. The Department awarded funding for the end use of approximately 1,565 tons of crumb rubber, primarily for the use of crumb rubber in athletic surface applications, and 301 tons of shredded tires for use as landscape mulch or surface applications. The remaining end-use applications were for the subsidization of the purchase of products like picnic tables, playground surfaces, benches, and other athletic surface products utilizing scrap tire materials or products. The 2017 grant-funded scrap tire projects are typical of grant awards made since the law was changed in 2001 and the eight, scrap tire grant funding eligibility categories were established.

2.5 LITTER REDUCTION AND RECYCLING GRANT PROGRAM

The Litter Reduction and Recycling Grant Program was established in 1979 and is funded through annual fees assessed to manufacturers, wholesalers, and retailers. Applicants eligible to apply for funds through this program include political subdivisions and public and private entities and organizations. Grant awards can fund public education, litter cleanup of public areas, and recycling.

From 2011 through 2016, more than $10 million has been distributed through the Litter Reduction and Recycling Grant Program.[2.6] These funds have been used for: (a) public education; (b) litter cleanup along highways, waterways, public use areas, open spaces, and other public access areas; and (c) recycling programs that address standard recycled items such as cardboard, paper, plastics, and aluminum cans as well as e-waste, paint, pesticides, and household hazardous waste. Communities that have benefited from the Litter Reduction and Recycling Grant Program from 2011 through 2016 are indicated on the map in Figure 2.1.

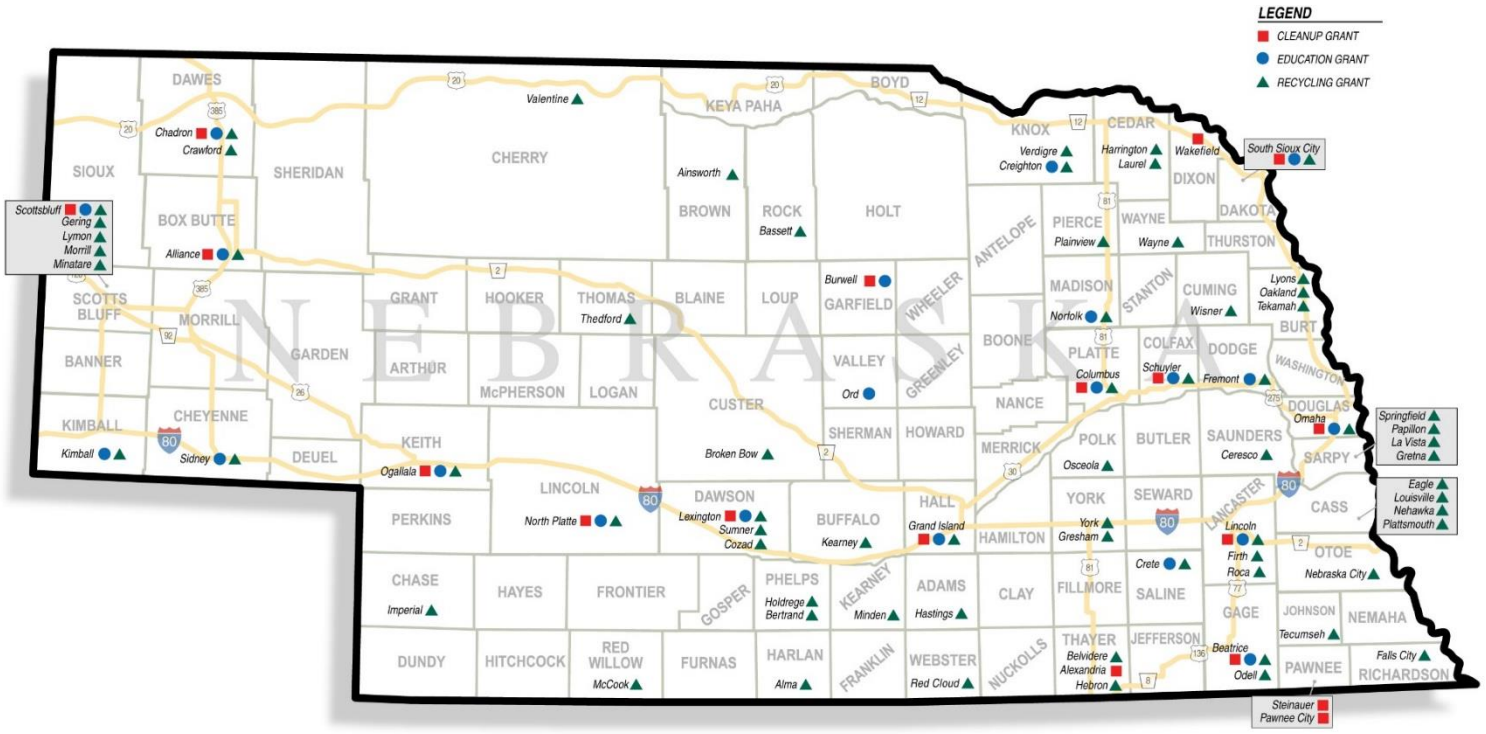

FIGURE 2.1
Communities Awarded Funds through the
Litter Reduction and Recycling Grant Program from 2011 through 2016

As is shown on the map in Figure 2.1, communities throughout the state have received grant funds for a variety of uses. It is important to note that many of these communities have received grants for use in all three areas (litter cleanup, public education, and recycling). These communities identified needs that the Department supported through its grant process as well as through information and guidance as these grants were implemented.

Table 2.2 outlines the number of grants awarded and the total value of these awards for litter cleanup from 2011 through 2016. Note that the number of grants awarded for litter cleanup projects from 2011 to 2016 has increased. The average monetary amount of these awards varies over this six-year period from a low of $6,996 in 2015 to a high of $12,076 in 2013.

TABLE 2.2
Grant Awards for Litter Cleanup Projects
from 2011 through 2016

Year	Number of Grants Awarded	Monetary Amount of Awarded Grants ($)	Average Monetary Amount of Awarded Grants ($)
2011	5	44,203	8,841
2012	9	81,675	9,075
2013	9	108,687	12,076
2014	7	67,164	9,595
2015	14	97,938	6,996
2016	12	108,483	9,040

Addressing litter issues is an area of focus for the Keep America Beautiful (KAB) program.[2.7] The consultant researched and assessed KAB programs in seven states, six that adjoin Nebraska (Iowa, Missouri, Kansas, Colorado, Wyoming, and South Dakota) plus Minnesota. This research indicates that Iowa and Nebraska are the only states of the seven that have a formalized, state-level KAB program.

The KAB program in Iowa[2.8] was further evaluated for comparison to litter control programs through the KAB program in Nebraska. Iowa's KAB program is well organized and coordinates litter control efforts through a centralized system. The program provides training, organizes events throughout the state, and has a diverse board.

Nebraska's state-level KAB organization is also well established. Unlike Iowa's KAB program, which is centralized, Nebraska's KAB organization comprises a Keep Nebraska Beautiful (KNB) affiliate and an additional 20 affiliates located throughout in the state.[2.9] These organizations concentrate on litter reduction, public education, and recycling programs; any affiliate can apply for grant funds through the Litter Reduction and Recycling Grant Program.

In 2013, nine KNB affiliates were awarded grants for recycling through the Litter Reduction and Recycling Grant Program(2.10) and eight affiliates were awarded recycling grants in 2014.(2.11) When Nebraska KAB affiliates were interviewed as a part of this study, several indicated that these grants, as well as the programs they implement, were essential to keeping their affiliates viable. Comments received from KNB and its affiliates through the Department's website and at the public meetings undertaken for this study clearly indicate that the programs they implement could not continue without the funding they currently receive through the Litter Reduction and Recycling Grant Program.

Litter reduction efforts in Nebraska are also addressed through the Nebraska Department of Transportation's (DOT) Adopt-A-Highway Program.(2.12) The DOT's website provides information on the number of miles cleaned each year through the "Great Nebraska Trash Off" campaign. Over the past eight years more than 3,545 miles of road, or an average of 443 miles of roads each year, have been cleaned.

2.6 MATERIALS MANAGEMENT

The management of materials involves controlling and diverting materials from being disposed and identifying options to repurpose or recycle these materials. The extent of the options depends on the value and availability of a diverted material along with its flexibility for reuse. Nebraska has adopted a waste management hierarchy that addresses materials management. Language in the §13-2018 of the Nebraska Revised Statutes(2.13) states:

> ". . . alternative methods of managing solid waste and a reduction in the reliance upon land disposal of solid waste are encouraged. In the promotion of these goals, the following solid waste management hierarchy . . . is established as the integrated solid waste management policy of the state."

Nebraska's hierarchy encompasses five preferred approaches for managing solid waste. The first preferred approach is volume reduction at the source; or stated differently, preventing waste from being generated. This approach is often referred to as zero waste. The second preferred approach is recycling, reuse, and vegetative composting. The third preferred approach is land disposal (placing waste in a landfill for final disposal). The fourth and fifth preferred approaches are incineration with energy resource recovery and incineration for volume reduction.

Nebraska's hierarchy departs from the U.S. Environmental Protection Agency's hierarchy (adopted in 1989). In Nebraska's hierarchy, landfilling is preferred above incineration as a waste disposal method. Nebraska's Solid Waste Management Hierarchy is graphically depicted in Figure 2.2, with the first preferred approach depicted as the pyramid's peak.

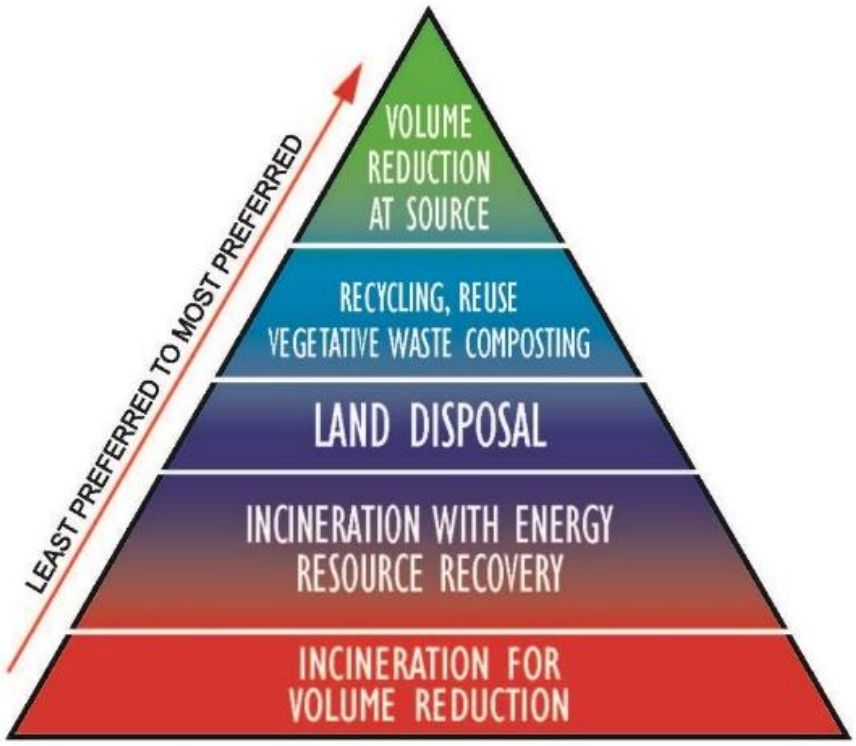

FIGURE 2.2
Nebraska's Solid Waste Management Hierarchy

Nebraska's Solid Waste Management Hierarchy is an important planning and implementation tool for the Department. It is relied upon to guide Department programs in directing efforts related to waste prevention activities. This includes establishing program priority systems for Department grant programs, with waste prevention activities and projects receiving higher priority points. While the hierarchy is a primary factor when evaluating grant applications, it is not the only factor.

It is important to note that the solid waste hierarchy presents a process for managing waste. This process requires behavioral changes over time. Progress toward the goal of preventing waste generation can be seen in Nebraskan's efforts to reuse, repurpose, recover, and recycle materials. Thirty years ago, the third preferred approach – land disposal – was the predominant method of managing waste. Increased recycling, repurposing, reuse, and recovery efforts have resulted in diverting waste from being landfilled – a step up the pyramid. As citizens become more knowledgeable about source reduction and adept in its practice, the waste reduction goal of zero waste or limited waste generation can be achieved.

The Department has relied on Nebraska's Solid Waste Management Hierarchy since it was established. Waste stream characteristics have changed over time as have reduction, treatment, and disposal methods. Nebraska would benefit if the Department continued with periodic reviews – accomplished by interested stakeholders, including the general public – of the hierarchy and the projects that fall under it.

2.7 RECYCLING OPERATIONS

Nebraska's recycling system entails three distinct processes. Recyclable materials are captured at drop-off sites and sorting facilities; or in some communities, they are collected at the curb. The captured recyclables are then sorted at facilities and sent on to a broker or processing facility. If the materials are sent to a processing facility, they are then readied for sale to end users. If the materials are sent to a broker, they are then marketed to end users. Figure 2.3 graphically depicts this process.

Recycling drop-off sites, sorting facilities, and processing facilities in Nebraska are owned and/or operated by public and private entities. These operations focus on specific service areas, usually defined by geographic or political boundaries.

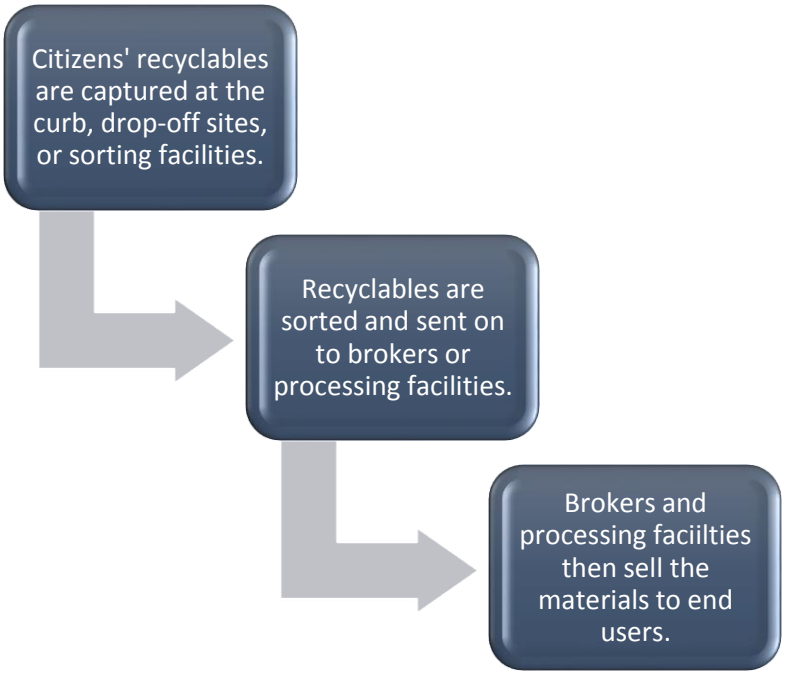

FIGURE 2.3
Nebraska's Recycling System

According to Department records, there are four permitted material recovery facilities in Nebraska, which are considered processors:

- Beatrice Recycling Center
- City of O'Neill Recycling Center
- Recycling Enterprises of NE, Inc. in Lincoln
- River City Recycling in Omaha

Three of these facilities are in the southeast portion of the state; one in Beatrice, one in Lincoln, and one in Omaha. The fourth, in O'Neill, is in the north-central area of Nebraska. In addition to these recovery facilities, there is a recyclables processor with locations in Omaha and Lincoln where recyclables are processed and then marketed to end users.

Communities throughout Nebraska facilitate recycling by providing sites where citizens can drop off their recyclables. Citizens can also drop off their recyclables at sorting facilities. Drop-off facilities can be as simple as a metal box or trailer where recyclables are accumulated, or as sophisticated as separated containers designated for specific recyclables. The recyclables accumulated at these drop-off sites are then periodically collected and taken to a facility where they are sorted. If the sorting facility does not have a baler, the materials are placed into gaylords and collected by processors or brokers where they will be readied for sale to end users. If the sorting facility has a baler, the materials are baled and either collected by, or delivered to, a processor or broker where they are readied for sale to end users.

Information gathered from recycling stakeholders during site visits and interviews indicate that the types of recyclable materials captured in Nebraska greatly vary. Most operations capture aluminum, plastics (#1 and #2), newspaper, cardboard, magazines, and mixed paper. Six operations indicate that they collect other numbered plastics (#3 through #7); some collect only one or two of these other numbered plastics, while others collect all numbered plastics. One operation indicated that it collects household hazardous waste, pharmaceuticals, sharps, liquids, plastic bags, household batteries, car batteries, and bicycles along with shredded paper and cardboard. A limited number of operations collect electronics, pallets, fluorescent bulbs, used oil, or plastic livestock tubs.

2.8 COMPOSTING OPERATIONS

The Department has prepared a guidance document[2.14] designed to present information on the regulatory aspects of composting and the procedures and responsibilities that accompany the operation and ownership of a composting operation. Several compost sites operate throughout the state. These operations vary by material type, purpose, and regulatory requirements. Materials that are composted in Nebraska include, but are not limited to:

- Yard Waste
- Food Waste
- Ethanol Plant Stillage
- Paunch Manure
- Livestock Waste
- Sewage Sludge
- Animal Carcasses

The first three listed materials – yard waste, food waste, and ethanol plant stillage – are considered solid waste. Managing these types of solid waste materials through composting diverts them from being disposed of in landfills and produces a useable end product. Municipal garbage is also considered solid waste. There were several municipal garbage compost operations in the past; however, they are no longer operational.

Livestock waste as defined in *Title 130 – Livestock Waste Control Regulations*[2.15] is ". . . animal and poultry excreta and associated feed losses, bedding, spillage or overflow from watering systems, wash and flushing waters, sprinkling waters from livestock cooling, precipitation polluted by falling on or flowing onto an animal feeding operation, and other materials polluted by livestock wastes." Composting livestock wastes ensures the proper management of these materials and produces a useable end product.

Sewage sludge refers to the residual, semi-solid material that is produced as a by-product during sewage treatment of industrial or municipal wastewater. Title 40 Code of Federal Regulations, Part 503.1 to 503.48,[2.16] establishes standards for the final use or disposal of sewage sludge generated during the treatment of domestic sewage in a treatment works. The primary purpose of composting sewage sludge is pathogen reduction. *Subpart D-Pathogens and Vector Attraction Reduction* of the regulation classifies sewage sludge as either Class A or Class B sludge with respect to pathogens. These classifications are based on the level of pathogens in the biosolids intended to be used or disposed on land. The subpart specifies pathogen reduction requirements for many pathogen reduction alternatives. Composting is one of four methods to further reduce pathogens in Class A sludge, and one of seven methods to significantly reduce pathogens in Class B sludge.

The Department currently has information on the number, size, and type of compost operations in Nebraska that require a permit from the Department. The size thresholds for when a permit is required to compost solid waste is determined primarily by the type of waste and the entity generating and composting the waste. Yard waste compost operations that compost less than 100,000 cubic yards annually, livestock waste compost operations that receive less than 20,000 cubic yards annually (other than that generated by the property owner), and operations that compost less than 1,000 cubic yards annually of any other type of solid waste do not require a permit from the Department.

Currently there are eight permitted compost sites regulated by the Department. In total, these eight sites compost approximately 508,736 cubic yards annually. Table 2.3 lists the permitted compost sites in Nebraska, the types of waste each facility receives, and each facility's maximum amount of storage. Figure 2.4 shows where each of the eight permitted compost facilities are located.

TABLE 2.3
Information on Nebraska's Eight Permitted Compost Sites

Facility Name	Types of Wastes Received	Facility's Maximum Amount of Storage (in cubic yards)
AltEn, LLC	Organic waste from on-site anaerobic digester (includes manure, thin stillage, and food waste)	70,000
City of Beatrice	Sewage sludge and yard waste	100,000
City of Fremont	Sewage sludge and yard waste	35,000
City of Grand Island*	Sewage sludge, straw, and wood chips	50,000
City of Holdrege	Sewage sludge, yard waste, corn stalks, and livestock bedding	10,100
City of Scottsbluff	Sewage sludge and yard waste	102,800
Doernemann	Paunch manure, yard waste, and other organic materials	100,000
Prairieland Dairy, LLC	Livestock waste, food waste, yard waste, paper/cardboard, and wood chips	100,000
TOTAL MAXIMUM AMOUNT OF STORAGE FOR ALL PERMITTED SITES		**567,900**

* This facility still has a permit, but it has not operated for at least the last 10 years.

As with recycling, the proximity to markets, or end users, impacts the quantity of compost generated and its availability within the state. There are several smaller compost operations located throughout the state; however, the Department does not monitor these sites because the amount of waste they compost is less than the permitting thresholds.

When a composting operation is established, it is imperative that compost operators are properly educated and trained. Access to extensive and strong educational tools such as seminars and training videos as well as outreach from Department staff has been vital to the success of composting.

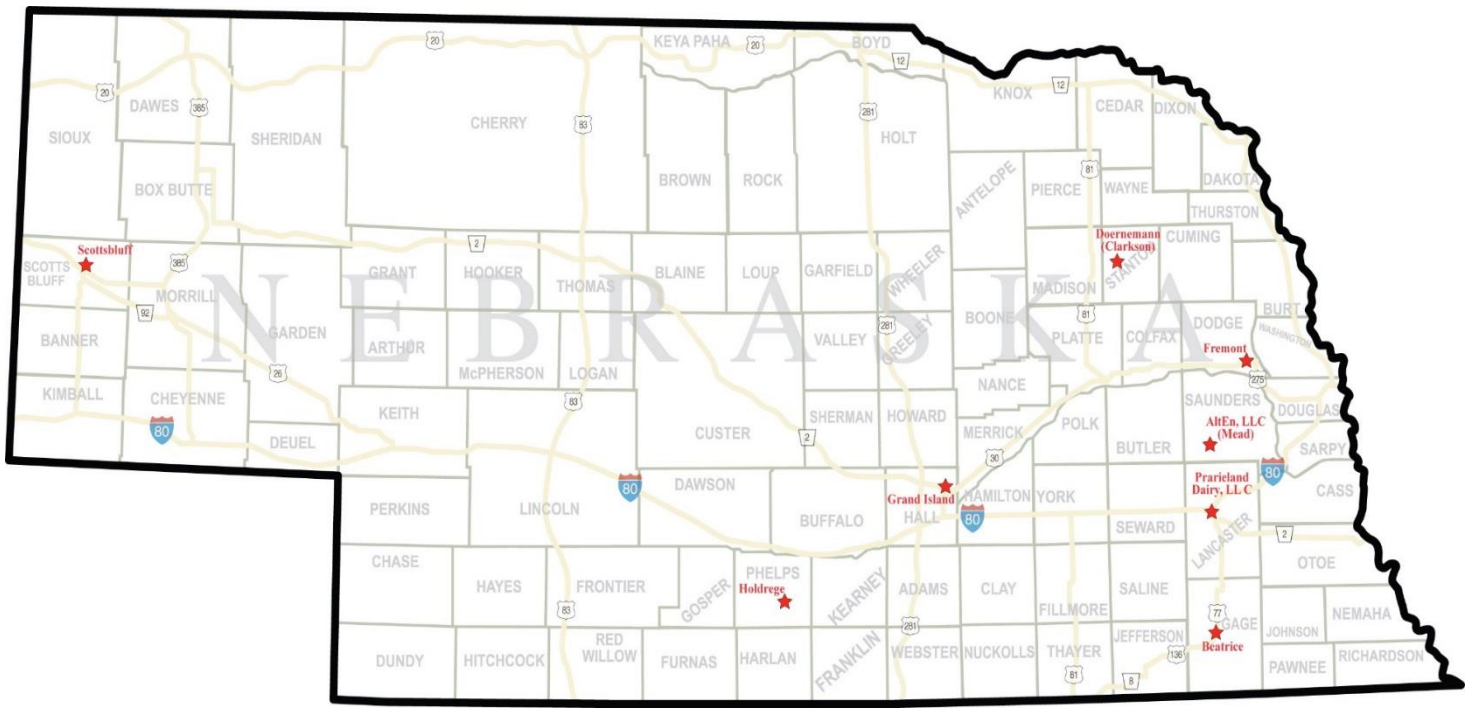

FIGURE 2.4
Location of Nebraska's Eight Permitted Compost Sites

2.9 LANDFILL BANS

Banning specific wastes from disposal in municipal solid waste (MSW) landfills is typically considered for two reasons. The first reason is that the banned material is either hazardous to the community, landfill, or environment or it may adversely impact the operation of the landfill. For example, lead-acid batteries contain hazardous fluids and are banned from disposal in MSW landfills. Similarly, tires are statutorily banned from disposal in MSW landfills because disposal of these materials, and other similar materials, in landfills can adversely affect the environment as well as the facility's operations.

The second reason for banning a material from a MSW landfill is that it may have potential for beneficial reuse or recovery. This type of ban identifies materials that can be taken out of the landfill and either recycled or reused. For example, the state's present yard waste ban or the forthcoming ban of the disposal of cardboard at the City of Lincoln's landfill. Cardboard can be recycled; yard waste can be composted and beneficially used to amend soils, as mulch to protect plants, or to control sediment run-off and fight erosion.

The following materials are banned from being disposed in municipal solid waste landfills in Nebraska:

- Yard Waste (April 1 to November 30)
- Waste Oil
- Lead-Acid Batteries
- Household Appliances
- Unregulated Hazardous Waste
- Waste Tires

The impact of banning certain materials from municipal solid waste landfills in Nebraska has not been thoroughly evaluated. However, it does appear that waste generators and landfill operators have been successful in keeping banned materials out of the waste stream. A major force in the success of these bans is their longevity. For example, yard waste, household appliance, and tire bans have been in effect for around two decades. The yard waste ban was implemented in 1994; the ban on household appliances began in 1995; and, the tire ban was established in 1998. During this time, a generation of Nebraskans have grown up knowing only these bans.

(2.1) Nebraska Revised Statues §81-1501 through §81-1532 (Reissue V5a, July 2014). *Department; declaration of legislation purpose (et al).*

(2.2) Nebraska Revised Statues §13-2001 to §13-2043 (Revised 2016). *Integrated Solid Waste Management Act.*

(2.3) Nebraska Department of Environmental Quality, Land Management Division. http://www.deq.state.ne.us/NDEQProg.nsf/WasteHome.xsp

(2.4) Nebraska Department of Environmental Quality. Rules and Regulations. (Revised May 2014). *Title 132 – Integrated Solid Waste Management Regulations.*

(2.5) Nebraska Department of Environmental Quality. Rules and Regulations. (Revised May 2014). *Title 199 – Waste Reduction and Recycling Incentive Grants Program.*

(2.6) Nebraska Department of Environmental Quality. Annual reports to the Nebraska Legislature (2011-2016). *Annual Report to the Legislature, Chapter 5, et al*.

(2.7) Keep America Beautiful. *End Littering Program*. https://www.kab.org/resources/end-littering.

(2.8) Keep Iowa Beautiful. https://www.keepiowabeautiful.com.

(2.9) Keep Nebraska Beautiful. www.knb.org and http://www.knb.org/affiliates.html.

(2.10) Nebraska Department of Environmental Quality. Annual report to the Nebraska Legislature (2013). *Annual Report to the Legislature, Chapter 5.*

(2.11) Nebraska Department of Environmental Quality. Annual report to the Nebraska Legislature (2014). *Annual Report to the Legislature, Chapter 5.*

(2.12) Nebraska Department of Transportation. Adopt-A-Highway Program. http://dot.nebraska.gov/projects/get-involved/adopt-hwy.

(2.13) Nebraska Revised Statues §13-2018 (Reissue V5a, July 2014). *Solid waste management hierarchy; established; cooperative program; established.*

(2.14) Nebraska Department of Environmental Quality. Guidance document # 06-203. (Revised 2016). *Permitting and Operating Compost Sites (In Accordance with Title 132 Regulations*. http://deq.ne.gov.

(2.15) Nebraska Department of Environmental Quality. Rules and Regulations. (Revised October 2011). *Title 130 – Livestock Waste Control Regulations.*

(2.16) Title 40 Code of Federal Regulations, Part 503.1 to Part 503.48. (2003). *Standards for the Use or Disposal of Sewage Sludge*.

3.0
NEEDS ASSESSMENT

Two types of programs will be assessed in this section. The first set focuses on solid waste, recycling, and composting operations throughout Nebraska. These operations are arranged in every conceivable manner. Some are owned and operated by public entities; some are owned and operated privately. Others are publicly owned and privately operated. Most operations focus on specific service areas, defined by geographic or political boundaries. The level of effectiveness and efficiency of these programs is relatively unknown.

The second set of programs assessed in this section encompasses solid waste management practices and includes: (1) materials management; (2) data collection needs; (3) public education; (4) best management practices; and (5) incentives to promote waste reduction, recycling, and composting.

3.1 SOLID WASTE OPERATIONS

Generally, in Nebraska, fully- or partially-automated rear-, front-, or side-load trucks collect solid waste. Semi-automated trucks are usually operated by two workers, a driver and an assistant who picks up and deposits waste into the truck. If the truck is fully-automated, then there is usually only one worker, a driver who collects the waste utilizing an automated arm that grabs the trash cart and deposits it into the truck.

These collection vehicles run assigned routes and can transport from six to twelve tons of waste. When the truck is full, it is driven to a transfer station or landfill where it unloads. The driver then returns to his/her route and continues to collect waste. Large semi-trailer trucks are utilized to transport waste from transfer stations to landfills. These trucks can transport as much as twenty tons of waste.

Throughout Nebraska, both private and public haulers provide solid waste collection services. Public haulers' primary function is to provide solid waste collection services and some also provide recyclables collection services. Those public systems that do not collect recyclables usually have recycling drop-off centers available for their citizens.

Private hauling companies provide varying levels of collection services and employ a variety of equipment when collecting solid waste or recyclables. The trucks they use vary from completely-automated vehicles to rear-load trucks that require a driver and two assistants to pick up and deposit the waste. As is the case with public collection entities, some private haulers also provide curbside recyclables collection. These private haulers often own and/or operate a recycling facility where their collected recyclables are delivered for processing; or they have arrangements with specific facilities that take their collected recyclables.

Both public and private haulers provide a wealth of valuable information relating to the solid waste systems in use throughout Nebraska. These haulers are instrumental in keeping banned materials from entering a landfill or transfer station. Based upon the types of materials they observe being disposed and waste containers they observe being used, they can assist in identifying waste stream trends.

In Nebraska, landfilling is the primary method of solid waste disposal. There are 21 active Subtitle D landfills in the state. Fourteen of these landfills are in the eastern half of the state, and five are in the state's Panhandle region. Table 3.1 delineates the estimated year each of these landfills will reach capacity. As can be seen in the table, there are only seven landfills with life expectancies of 20 years or less and only two landfills with life expectancies of less than ten years. In turn, there are five landfills with life expectancies of more than 50 years.

TABLE 3.1
Nebraska Subtitle D Landfills and the Year Each is Anticipated to Reach Capacity

Landfill	County	Maximum Capacity (year)	Number of Years of Remaining Landfill Life
Beatrice Area Solid Waste Agency	Gage	2025	8
Butler County Landfill, Inc.	Butler	2034	17
City of Alliance	Box Butte	2095	78
City of Gering	Scotts Bluff	2023	6
City of Hastings	Adams	2037	20
City of Holdrege	Phelps	2034	17
City of Kimball	Kimball	2060	43
City of Lincoln	Lancaster	2036	19
Grand Island	Hall	2046	29
G&P Development, Inc.	Seward	2067	50
J Bar J Land, Inc.	Keith	2040	23
Kearney	Buffalo	2042	25
Lexington	Dawson	2046	29
Loup Central Landfill Association	Loup	2085	68
L.P. Gill Inc.	Dakota	2036	19
NE Nebraska Solid Waste Coalition	Stanton	2043	26
Sidney	Cheyenne	2090	73
Solid Waste Agency of NW Nebraska	Dawes	2097	80
Valentine	Cherry	2058	41
Waste Management - Pheasant Point	Douglas	2164	147
York	York	2063	46

Figure 3.1 divides the state into five regions and locates each of the 21 active Subtitle D landfills. It is important to note these five regions are delineated geographically and do not represent any specific service areas. Table 3.2 provides the number of counties that comprise each geographic region, the combined total population of these counties (from 2012 census estimates),[3.1] the number of landfills in each geographic region, and the average life of the landfills in each geographic region.

When considering the location of the landfills, those landfills with more than 65 years of estimated capacity are in either the far west or middle portion of the state. There is one landfill is in the eastern portion of the state that has an estimated remaining capacity of more than 65 years.

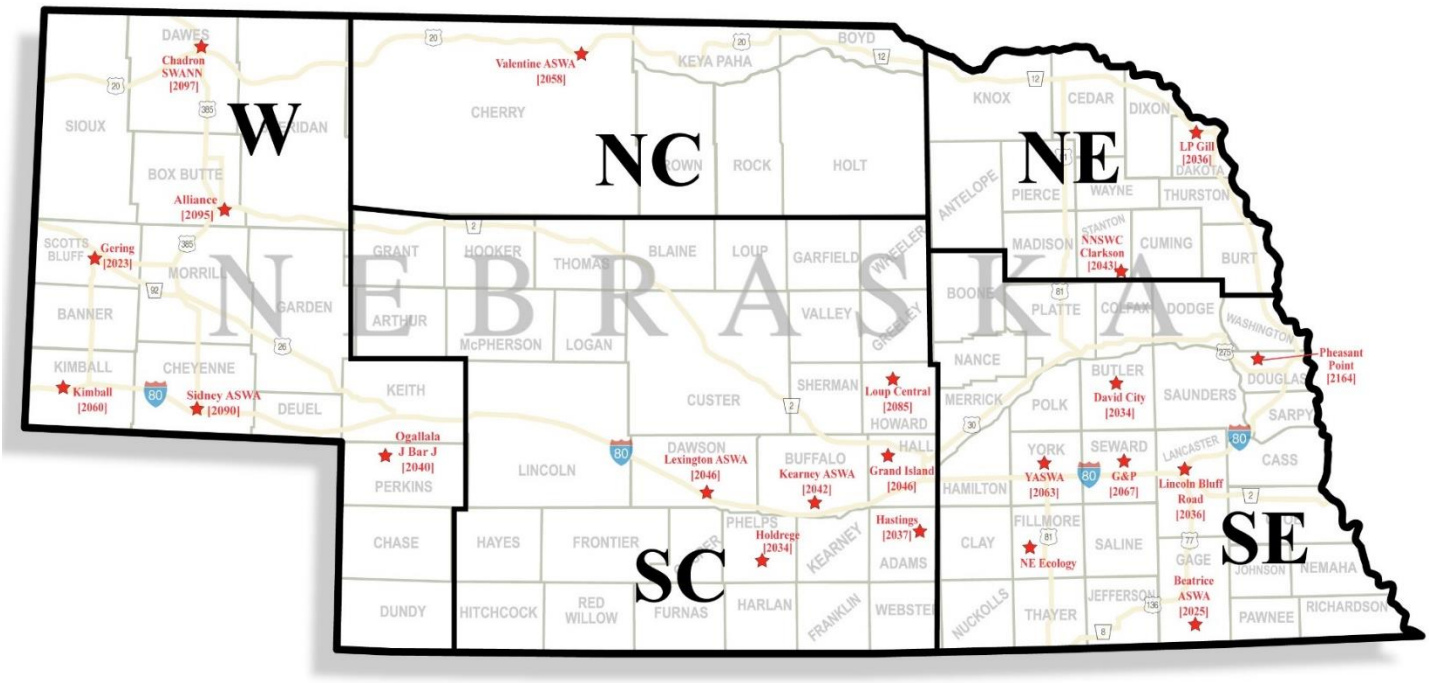

FIGURE 3.1
Location of Active Subtitle D Landfills in Nebraska and Year Each is Anticipated to Reach Capacity

TABLE 3.2
Regions, Number of Counties, Population, Number of Subtitle D Landfills, and Average Life of Subtitle D Landfills in Each Region

Region	Number of Counties	Total Population	Number of Landfills in Region	Average Remaining Life of Landfills in Region (in years)
West (W)	15	104,697	6	50
North Central (NC)	6	23,403	1	41
South Central (SC)	32	285,569	6	31
Northeast (NE)	12	131,220	2	23
Southeast (SE)	28	1,308,644	6	48
NEBRASKA	**93**	**1,853,533**	**21**	**39**

Information presented in Table 3.1 indicates that the City of Gering Landfill in Scotts Bluff County has the least amount of remaining landfill life (6 years) while Waste Management's Pheasant Point Landfill in Douglas County has the greatest amount of remaining landfill life (147 years). As far as the average life of landfills, Figure 3.1 and Table 3.2 reveal that the landfills in the northeast region have the lowest average remaining landfill life (23 years); landfills in the west region have the highest average remaining life (50 years) followed closely by the landfills in the southeast region (48 years). The average remaining life of all of Nebraska's 21 active Subtitle D landfills is 39 years.

As can be seen from the information presented in Table 3.1 and Table 3.2, there is adequate landfill capacity in the state. This abundance of available capacity along with reasonable tipping fees lower interest in other preferred waste management options. However, this situation also provides an opportunity for Nebraska to investigate other disposal alternatives before these landfills reach capacity. There is the opportunity for the state to expand the breadth and reach of its waste reduction programs before these landfills reach capacity, therefore further extending their life expectancies. Regardless of the estimated capacity of Nebraska's landfills, it is important to continue to reduce the flow of waste to these disposal areas to further increase their longevity.

Table 3.3 delineates ten solid waste management strategy options. Although this is not an exhaustive list, these strategies could be implemented in Nebraska with positive outcomes.

TABLE 3.3
Advantages and Disadvantages of Ten Waste Management Strategies

Strategy	Advantage	Disadvantage
Collection of solid waste utilizing automated cart system	Reduces injuries and accelerates collection	Cost of trucks and carts
Control collection of waste through local franchising and establishing hauling agreements	Reduces number of collection vehicles on city streets	Legal and management costs to reduce number of haulers collecting waste
Collection of recyclables utilizing automated cart system	Increases number of recyclables collected	Added collection vehicle costs and need for a second cart
Expand education programs to include waste prevention	Reduces waste stream and saves landfill space	Expense of education program
Work with local commercial and industrial facilities to reduce or zero out waste generation	Reduces waste going to landfills	Increases number of recyclables and loss of disposal fees
Provide collection of green waste	Increases availability of compost	Cost to purchase collection vehicles and establish or expand composting facilities
Establish a clearing house for construction materials and appliances	Reduce constructions and demolition debris entering landfill and provides reuse for appliances	Cost to establish clearing house Cost for personnel to run and maintain clearing house

TABLE 3.3 *(continued)*

Strategy	Advantage	Disadvantage
Capture landfill gas and utilize as on-site fuel or identify other end users	Removes a volatile gas from the landfill without discharging it to the environment	Cost of installing gas collection system and increased maintenance costs
Recycle leachate into landfill to accelerate decomposition of waste	Reduces need for leachate storage and treatment	Potential for pockets of leachate to form which would result in leachate seeping out of the landfill
Divert roll-offs to capture cardboard and other large quantities of recyclables	Increase income to solid waste operation	Potential risk damaging the recyclables during removal Need for temporary storage of materials

3.2 RECYCLING OPERATIONS

Whether the material is recyclable or compostable, it is imperative that it can be collected and transported. Recyclables are typically collected at drop-off centers, returned to the material's point of origin, or captured via curbside collection. Depending upon the system of collection, contamination (where materials that are not recyclable are mixed with those materials that are recyclable) and scavenging can be problematic.

Drop-off centers are the predominant method of collection in Nebraska. Drop-off facilities can be as simple as a metal box or trailer where recyclables are accumulated, or as sophisticated as separated containers designated for specific recyclables. There is a high risk for contamination or scavenging at drop-off locations.

Return centers are typically designed to collect specific recyclables (cardboard, newsprint, white paper, paperboard, select plastics, aluminum cans, and glass). The level of contamination is reduced at return centers because they are usually located in areas where collection receptacles can be observed. In addition, collection receptacles at return centers normally have smaller openings where recyclables are inserted which also reduces the potential for contamination.

Curbside collection is another method of collecting recyclables. Recyclables are accumulated in plastic bags, bins or carts, placed at the curb and then picked up for further processing. The plastic bag system or bin system is less expensive to start up than the cart system. However, the bag system is susceptible to spillage due to tearing bags, is more labor intensive than carts, and slows the sorting process at the material recovery facility (MRF). Bins are sturdier than bags, but have less capacity, are also prone to spillage, and because of their rigidity they tend to crack when exposed to cold temperatures.

The cart system utilizes a wheeled container where recyclables are deposited and then the cart is placed at the curb. The recyclables are then collected by emptying the cart into a side-arm or rear-loading collection vehicle. The side-arm system requires only one operator while the rear-loading system requires at least two and possibly three people. A semi- or fully-automated cart system is safer than manual collection.

After the recyclables are collected, they are delivered to a facility where they are unloaded on to a hard surface for sorting. Material sorting can encompass total separation, selected separation, or no separation. Total separation involves sorting materials into predetermined categories. At a minimum, these categories include cardboard, paperboard, newsprint, packaging, aluminum, metals, plastics (possibly further sorted into PET, HDPE, and numbered plastics), and other materials as desired by the facility or end user.

Selected separation condenses the sorting of the recyclables into fewer and more general categories. Categories normally include cardboard, paperboard, aluminum, PET plastics, HDPE plastics, and other recyclables as desired by the facility or end user.

With the no-separation process, only one or two recyclable materials (typically cardboard and/or aluminum) are separated or no specific recyclable materials are separated. When none of the recyclables are separated, all the co-mingled materials are then loaded onto a transport vehicle and delivered to a MRF or similar type operation. If one or two types of recyclables are removed, they are then sold and the remainder of the comingled recyclables are loaded onto a transport vehicle and delivered to a MRF.

The sorting of recyclables at a receiving facility varies and is dependent upon the distance to a MRF or processing facility. If the collection point for the recyclables is a reasonable distance from a MRF or similar operation, less sorting will occur at the receiving facility. If the collection point is a significant distance from a MRF, then it is possible the receiving facility will sort some or all the recyclable materials. A select number of high-value recyclables may be baled at the receiving facility and sold directly to the mills. By selling some of the recyclable materials and sending the rest to a MRF, the receiving recycling facility can potentially cover some or all of its costs.

It is important to note that collecting and processing glass for recycling can be problematic. Glass is still being collected at many facilities; however, less glass is being collected and recycled because of its low market value and high shipping costs. Glass also poses problems when processed. It contaminates other recyclable materials and can damage the processing equipment.

An often overlooked but critical aspect of the recycling infrastructure is the ability to store materials. Materials storage occurs because of a lack of transport, the low value of the material, or an end user's request to hold a material. In each of these situations, the facility must have the space and the financial ability to store the material.

Materials can be stored in either indoor or outdoor locations. The value of the material is maintained when it is stored indoors because there is limited impact from the elements. In turn, vandalism is a problem when materials are stored outside, and materials stored outdoors can lose value due to their exposure to sunlight and weather elements. For example, the negative impact of temperature and sunlight on plastics can reduce its value by as much as 50% to 65%, depending open the length of exposure to the elements.(3.2)

Comments made during interviews conducted as a part of this study indicated that storage is a primary issue for certain facilities. The most often noted reason for storing recyclables is the material’s low value or the cost to transport the material. It was further indicated that one of the most significant costs they face is a material’s loss in value because of the exposure to the elements or the long-term retention of the material.

In smaller communities and rural areas, materials are often stored due to low collection volumes. Facilities in these areas must sometimes wait weeks or months before their recyclable materials are collected for processing, particularly if the facility is not convenient to a large collection route. When faced with this situation, the facility must often rely on volunteers and use pickups or trailers to transport the materials for processing.

The transport of recycled materials and its impact on the viability of recycling operations in Nebraska can be significant. As with real estate, the issue is location. The further a receiving facility is from a MRF or other processing facility, the higher the transport costs. To address this issue some recyclers have utilized a "piggy-back" system, where two or more recyclers utilize the same truck to transport materials to a MRF or other processing facility. This system works well when all the recyclers are in sync. However, when the recyclers are not in sync, the "piggy-back" system is disrupted and added costs are incurred.

Some facilities choose to have their recyclables transported via vehicles provided by the MRF or similar facility. They will informally or formally agree to have a MRF or similar operation provide a truck to collect their recyclables on a scheduled basis. As with the "piggy-back" system, this program does depend on a schedule. Failure to maintain a schedule or miss a pickup may result in the MRF or similar facility removing the recycling facility from its collection route.

A third approach some recyclers employ to transport their recyclables to a MRF or similar facility is to purchase a truck. Although the initial cost is significant, ownership of the vehicle provides more flexibility when moving materials. In addition, the recycler may gain additional income by utilizing the truck to transport other facility's materials or products for public and private clients.

Recycling programs in seven states, Iowa, Missouri, Kansas, Colorado, Wyoming, South Dakota, and Minnesota,[3.3] were evaluated and compared to Nebraska's recycling programs. Recycling operations in the seven selected states were relatively equivalent to operations throughout Nebraska. Operations in or near the largest communities in each state were typically more sophisticated than in rural areas and provided more options for collecting recyclables. As is the case in Nebraska, recycling operations in the seven selected states varied depending upon a community's or county's commitment to recycling, whether a facility was publicly or privately operated, the volume of materials the facility collects, and the distance between the operation and markets.

Some recycling efforts are hindered by restrictions that limit where these operations can operate or place drop-off bins. Further, barriers to increasing recycling in Nebraska are driven by the state's characteristics. For example, the distances between communities and processing facilities, the cost to transport recyclables, and materials market fluctuations are formidable obstacles.

As noted in the article, *Municipal Recycling Performance: A Public Sector Environmental Success Story*:[3.4]

> "It is important to continue to improve the bottom-line results of recycling programs and sustaining and expanding popular support for recycling in the future depends on making this service as convenient as possible."

Recycling programs that understand the value of service as well as the overarching importance of reducing waste are the most successful.

3.3 COMPOSTING OPERATIONS

Unlike recycling, green or other organic wastes are often collected by communities and individuals and delivered to compost sites. The collection of the green or organic waste is typically accomplished utilizing open-top trucks with high side panels. In larger communities, organic waste is often collected utilizing rear-loader vehicles. If other organic wastes with higher moisture content (e.g., food waste) are collected, then the waste is collected in barrels or similar water-tight containers.

Green or organic wastes delivered to a compost site are typically segregated based upon the level of processing they require. Green waste is separated based upon its ability to be processed by the on-site equipment. For example, if the grinder or shredder that is available can only process materials that are three inches or less in diameter, any material larger than that must be pre-processed to reduce it to a workable diameter.

To ensure that food waste, yard waste, and other green waste can be milled to integrate with bio waste, including food, compost facilities may require some initial screening. If the food waste or other bio waste has a high liquid content, it is allowed to dry before mixing it with yard waste or other green waste.

Inorganic materials, such as plastic bags, plastic containers, and metals, must be removed before organic materials can be processed at a compost operation. Having compost be delivered or picked up loose or in compostable paper bags can reduce, and possibly eliminate, the plastic bag problem. In addition, a compost operation must address the high moisture content of some organics. It is imperative that they have wood chips or other organic materials available to absorb the moisture in the organic waste.

Compost is normally stored in dry bins that a loader or similar piece of equipment can enter. To maintain the quality of the compost, it is critical that excess water drains from the bins. Because the storage area will experience higher volumes of traffic, it is necessary to segregate it away from the compost pads and other operations. It is important that the compost be kept relatively dry so the nutrients within the compost can be retained. It is recommended that the compost piles be covered during winter months.

The Department currently has information on the number, size, and type of compost operations that require a permit from the Department. Currently there are eight permitted compost sites regulated by the Department. In total, these eight sites compost approximately 508,736 cubic yards annually.

The size thresholds for when a permit is required to compost solid waste is determined primarily by the type of waste and the entity generating and composting the waste. Yard waste compost operations that compost less than 100,000 cubic yards annually, livestock waste compost operations that receive less than 20,000 cubic yards annually (other than that generated by the property owner), and operations that compost less than 1,000 cubic yards annually of any other type of solid waste do not require a permit from the Department. Without permitting requirements, the Department does not collect information on any sites that are composting wastes under the current thresholds.

3.4 OPERATING STANDARDS

It is essential that recycling and composting operations establish an appropriate service area to prevent overreaching and missed opportunities. Overreaching can be very detrimental because when an operation exceeds the limits of an appropriate service area, costs for transporting and handling materials as well as the cost of added wear and tear on equipment and personnel ensue. Further, because an operation's manpower and equipment are serving areas outside a manageable service area, opportunities may be missed. Failure to properly maintain an appropriate and manageable service area can result in losing clients and missing opportunities to collect more or a wider array of materials. Both circumstances could ultimately result in an operation’s failure.

In addition, efficient material collection programs result in recycling or composting at a reasonable cost. Efficient collection processes are predicated on proactive scheduling systems that enable effective routes and ensure recyclables or compost are collected on a regular and punctual basis.

Operating standards for solid waste, recycling, and compost facilities should be driven by Best Management Practices (BMPs) as well as the need to maintain safe working environments. BMPs utilized in seven nearby or adjoining states, Iowa, Missouri, Kansas, Colorado, Wyoming, South Dakota, and Minnesota,[3.5] were researched. This information along with information regarding BMPs implemented in Nebraska was evaluated and used to identify optimal practices.

A BMP implemented in the City of Imperial encompasses a pay-as-you-throw (PAYT) system with continual public education. The City has its own trash pickup system and operated recycling drop-off location in its downtown area. City staff devised a system that uses a sticker and bag system for trash pickup, so residents would pay based on the amount of waste they dispose, and which is delivered to the landfill.

The City provides a cart for each property in the community. Then, each property owner, or occupant, purchases stickers to place on the cart to indicate they want the cart emptied. Each sticker costs $7.00. On the day designated for the owner/occupant's cart to be emptied, they place a sticker on the cart and place the cart in the alley or along the street. When the cart is emptied, the operator removes the sticker and records the collection. Only those carts with a sticker are emptied.

At the same time this PAYT was being established, the recycling program was enhanced to take more materials and expanded to a larger building with more space and areas for baling and handling equipment. The fees cover the cost of running the entire system, including labor and fuel for collection activities and maintenance and processing costs for recycling. A more detailed description of this system along with some of the challenges the City of Imperial has faced can be found in Appendix I of this document.

Another BMP, implemented in the City of Kearney, incorporates a solid waste enterprise fund that establishes the cost for services. The City of Kearney Utilities Department manages both the Sanitation Division, which collects refuse and recyclables, and the Kearney Area Solid Waste Agency Landfill. The monies generated by providing these services fund all the activities each agency undertakes relative to solid waste and recycling; no tax dollars are used. A more detailed description of this solid waste and recycling system can be found in Appendix J of this document.

Some of the BMPs utilized in the seven nearby states – Iowa, Missouri, Kansas, Colorado, Wyoming, South Dakota, and Minnesota – are delineated below:

- Using hub-and-spoke systems for recycling and composting programs. A variation in this concept incorporated direct hauling from one outlier community to the hub community along with the standard practice of collecting from several communities before returning to the hub.
- Establishing pay-as-you-throw programs for commercial accounts to stimulate recycling and target specific recyclables.
- Allowing recycling data to be submitted online and accessible from the website.
- Creating a system that is integrated with the waste hierarchy and waste minimization concept and provides information for educating the public, improving recycling, handling yard waste, addressing other activities.
- Providing environmental education tools for teachers to use with students from first grade through high school.
- Employing a standardized recycling and composting message to eliminate confusion.
- Identifying and modifying city, county, and state codes that lower recycling and composting (e.g., littering codes that only focus on waste receptacles or codes that limit where recycling bins can be placed).
- Expanding and improving materials exchange programs.
- Developing programs for businesses and/or residents to reduce food waste.
- Setting targets to establish recycling collection in at least two communities annually.
- Collecting waste on a bi-weekly rather than weekly basis.
- Collecting recyclables and waste on the same day.
- Establishing safety standards corresponding to the specific operation with enhancements to make safety both common sense and beneficial.

This list of BMPs is not exhaustive; however, it does provide a spectrum of ideas and tools other communities and states have utilized to address their solid waste challenges. Implementing some of these BMPs could be relatively straightforward and data from nearby states indicate they may result in exceptional outcomes.

3.5 MARKET DEVELOPMENT

Developing markets for recycling programs in Nebraska involves enhancing present markets as well as recognizing new opportunities. There are two primary approaches to developing markets for recyclables. The first is to identify all existing material recovery facilities in and adjacent to the state and then add facilities in areas of the state that are under served. The second approach is to attract recycled material end users to the state. Examples of potential recovered material end users include manufacturers of:

- Cardboard Containers
- Plastic Crates
- Metal Containers
- Packaging Material
- Large Containers
- Metal Fasteners
- Aluminum Cans
- Plastic Components for Animal Feeders
- Plastic Tables and Chairs
- Signs

Given Nebraska's exceptional transportation network and the number of food processors located within the state, there is the potential to attract a variety of manufacturers that utilize recovered materials in their processes.

Another important element of market develop is ensuring that these materials can be consistently provided in sufficient quantities. The amount of recovered materials should be accurately reported so these materials can be reliably delivered to the end user. Knowing the quantity and availability of recovered materials for manufacturers' use is crucial to establishing and expanding markets for recyclables in Nebraska. This data could assist Nebraska to develop targeted marketing strategies.

3.6 MATERIALS MANAGEMENT

The transition from recycling to waste prevention requires a concerted effort to affect the public's, commercial businesses', and manufacturers' thinking toward reducing and eventually eliminating their generation of waste and away from their current thinking of disposing waste. This education should focus on clearly defining waste reduction and the ultimate goal of waste reduction – zero waste.

The movement toward zero waste is occurring throughout the United States. At the national level, there are companies such as Proctor & Gamble and Nestle USA implementing zero waste strategies; at the regional level, American Packaging in Story City, Iowa and West Liberty Foods, also located in Iowa, are executing this strategy. These firms have identified the potential savings that accompany zero waste initiatives.

To begin moving manufacturers in Nebraska toward zero waste, it is imperative to provide information and examples of how the zero-waste program works. This effort begins with a series of meetings that provide comprehensive assessments of the zero-waste initiatives. Key to these meetings is a candid description of what it will take to reach zero waste and providing approaches that are most applicable to a specific industry.

One approach in starting a zero-waste program is to offer a free waste audit of the facility. This approach allows for frank discussions relative to the facility's current waste control programs and identifies methods to alter these programs to meet zero-waste initiatives.(3.6) Waste audits also provide facilities an opportunity to better understand those waste control procedures that are functioning well and identify those processes that need attention.

Another way to support manufacturers that are working toward zero waste is to recognize and champion their efforts. This could entail: (a) a news article in the local newspaper; (b) a feature piece on television that is broadcast throughout the entire state; or (c) utilizing a website that exclusively promotes and supports manufacturers working toward zero waste or who have achieved the zero-waste goal.

When enlisting manufacturers to move toward zero waste as well as those that are working to become zero-waste generators, it is essential to provide information relating to equipment and reusable packaging and shipping containers. This could be accomplished through a clearing house or similar program manufacturers could access to identify those types of packaging, containers, or materials and equipment that will aid them in reaching the zero-waste goal.

An excellent tool to provide to manufacturers working toward zero waste is examples of firms who have reached their zero-waste goals. As presented in the article, *20 Companies with Zero Waste to Landfill Operations,*(3.7) an exceptional cross-section of companies provide proof that zero waste is possible. These firms, from Nestle USA to Molson Coors Brewing Company and Unilever North America to American Packaging and West Liberty Foods in Iowa, all made the decision to reduce waste and have remained profitable.

Like the littering and waste disposal campaigns of the second half of the 20th century, the transition toward waste prevention must focus on, and encompass, all age groups. Messages and educational efforts must address each age group's attitudes and encourage embracing the concept of waste prevention.(3.8) Further, these messages need to provide ideas, reasons, and methods to implement waste prevention strategies.

As the expansion of the public education process unfolds, it will be important to sync with commerce and industry to allow for balance in developing waste prevention programs. This approach allows for a more uniform education process and will assist in getting the public and commerce and industry on the same page.

Another important aspect of transitioning from recycling to waste reduction is access to products, such as guides to reusing or repurpose materials and product containers that can be easily stored for future reuse, which will help facilitate their ability to ease into and embrace waste reduction and prevention.

3.7 DATA COLLECTION

Regular and updated information relative to recycling and compost markets is needed to assist in identifying fluctuations in these markets. It is important to provide an evaluation of market trends and an assessment of potential long-term impacts. This information could facilitate operators' ability to better anticipate market movements and implement more positive reactions.

Consistent and reliable waste stream data is also needed. A waste stream characterization study conducted periodically, such as every five years, would provide this data. These studies provide a wealth of knowledge for the public, regulators, cities and counties, recyclers, processors, haulers, and transfer station and landfill operators. All these groups need waste stream data to assist them in decisions that impact how waste is handled. Properly designed and implemented waste characterization studies along with tools on how to use the data they provide can meet this need.

One of the most pressing data needs is comprehensive and accurate information relative to the quantity of materials collected, processed, stored, and sold. Local and statewide planning endeavors are hampered without this information. Including this data, along with other pertinent information, in integrated solid waste management plans would ensure local and state government officials are prepared and can quickly and positively address fluctuations within their solid waste management programs. Further, this data is necessary to effectively plan for the closure of solid waste facilities.

Currently, the state does not directly collect data related to recycling. There is no centralized program to collect information pertaining to the amount of recyclable materials collected through drop-off centers and/or via curbside collection. The information that is collected is generated and voluntarily provided, and this information is not consistent from operation to operation. Comprehensive state recycling data would facilitate reviews of the various recycling programs, assist in identifying successful and unsuccessful strategies and programs, and provide the opportunity to focus funding to improve the success rate of operations and programs.

Information gathered during site visits and interviews indicates that each operation collects information differently and they do not necessarily collect the same information. Most operations collect information on the:

- Types of materials they collect and/or process;
- Quantity of materials collected and or processed;
- Number of bales or gaylords that were filled; and
- Where the materials were sent.

To establish a useful database each facility or operation could collect and submit essential data and information in formats provided by the Department. Information that should be incorporated into this database includes, but is not limited to:

- Quantities (in tons) and types of materials accepted and processed;
- Facility size and capacity quantified as tons per day the facility can handle;
- Staff members' level of experience;
- Facility's service area;
- Where collected materials are sent for processing;
- Where processed materials are sold;
- If materials are stored outside; and
- Amount of time materials have been stored outside.

The Department has limited information on the number, size, and type of compost operations in Nebraska. Information is only available on compost sites that require a permit from the Department. This lack of information does not allow for a comprehensive evaluation of the capacity of composting currently taking place in Nebraska. Further, data on materials that could be composted, but are currently being disposed of in municipal landfills, is also lacking. The Department should examine methods of collecting this information on a voluntary basis.

3.8 PUBLIC EDUCATION

Messages and education efforts that provide updated information and strategies to prevent the generation of waste, the best methods to prepare recyclables for collection or drop off, or the best methods for delivering green waste to a compost facility can further positive outcomes relative to waste reduction, recycling, and composting. Utilizing the latest information from a multitude of sources also improves the creditability of these messages.

As with any subject taught in school, the key for individuals to retain information is through the continuity of the learning process. To achieve the goals of waste reduction (zero waste or limited waste generation), citizens need information that explains the goal, how to implement activities to achieve the goal, and an understanding of its importance. As they become more knowledgeable about source reduction, they can begin to put it into practice.

Because the implementation of more aggressive waste reduction will not be achieved instantaneously, the maximum amount of recyclable materials should be recovered in the meantime. Individuals and businesses should be familiar with the concept of recycling materials, clearly understand what can be recycled, and how and where to recycle these materials. To this end, it is important that educating the public and businesses is coordinated, consistent, and fresh.

Coordinated and consistent education encompasses planned programs that present information in a manner that harmonizes with what has been previously presented, what is being presented now, and what is expected to be presented in the future. This requires a set of lessons that complement each other. The message delivered in the first lesson is utilized as the basis for the next lesson. One tenet of this building-block approach[3.9] is to make the building blocks tangible and visible along with allowing students or the public enough time to process the information and make connections. This process results in better retention of the presented information. Employing this approach to educate individuals and businesses about recycling and waste reduction will allow them to synthesize the information which makes implementing the ideas and processes easier.

When tackling public education, the process and the information must be unique, presented in an enlightening manner, and entertaining. It is also important that the message is informative, positive, and presents a call to action. If the recycling and waste reduction information is presented in a proactive and upbeat manner, it is more likely that the audience will be attentive and take actions to reduce their waste and recycle.

Including responsible solid waste management practices into Nebraska's educational system would help students receive coordinated and consistent messaging throughout their years of schooling. Nebraska's Solid Waste Management Hierarchy and its goal of volume reduction at the source could be communicated. Materials that are recyclable along with information on how and where to recycle these materials could be presented. Most importantly, waste reduction and recycling principles could be tailored for each grade level and conveyed from kindergarten through high school. Partnering with Nebraska's Department of Education would be necessary to accomplish this endeavor.

Public education is also vitally important at the business level. Coordinated, consistent, and fresh messages need to be developed to address business challenges. For example, private haulers often view collecting recyclables as a money-losing proposition. Messaging needs to be specifically tailored to counteract this perception; and as with public education, this messaging needs to present a call to action that is relatable to their circumstances.

Another example involves messages that address manufacturers. These types of businesses need to be informed of the quality, quantity, and cost of recycled materials. Sometimes the perception is that recovered and recycled materials are of lesser quality than virgin materials, are not readily available in the quantity they need to efficiently produce their product, and are more costly than virgin materials. This is often a false belief.

Programs with the goal of providing recycling and/or composting experts could be developed at community colleges with the goal of providing a certificate program. Some composting programs are being offered in conjunction with the University of Nebraska–Extension Master Gardner program. However, there is no such program available for recycling. Enlisting the assistance of the University of Nebraska-Extension and community colleges could address this need and reach more people.

3.9 BEST MANAGEMENT PRACTICES

Best management practices (BMPs) from seven states (Iowa, Missouri, Kansas, Colorado, Wyoming, South Dakota, and Minnesota)[3.10] were evaluated to determine their potential for implementation in Nebraska. These BMPs, along with their potential advantages and disadvantages, are presented in Table 3.4.

TABLE 3.4
Advantages and Disadvantages of Potential Best Management Practices for Materials Management, Waste Reduction, and Recycling

Best Management Practice (BMP)	Value of the BMP	Disadvantage of the BMP
Buy food in large quantities or in bulk	Good stewardship Reduces packaging	Smaller families, single households, and older families may not utilize bulk items quickly enough
Purchase products with limited packaging or no packaging	Reduces packaging Less waste	If the product is bulky it may be difficult to handle without adequate packaging
Remove junk mail from your mailbox	Reduces the amount of this material in the waste stream	None
Use towels, rags, and sponges for cleaning and wiping up spills	Reusable materials reduce waste and costs	Storage of materials and increased use of washer and dryer

TABLE 3.4 *(continued)*

Best Management Practice (BMP)	Value of the BMP	Disadvantage of the BMP
Use cloth napkins	Reusable materials reduce waste and cost	Storage of the napkins and increased use of washer and dryer
Use cloth bags for groceries	Reusable material reduces waste and cost	Storage of bags
Utilize glass jars as food storage containers	More durable than plastic bags Washable Reduces odors in refrigerator	Dangerous when broken and consumes storage space
Utilize rechargeable batteries and battery charger	Reduce cost of batteries Removes battery disposal in landfills	Storage of batteries and cost of rechargeable batteries
Establish compost programs for training relating to composting food waste	Reduces number of organics sent to landfill Provides food for gardens flower beds, trees, and shrubs	Potential for odors if composting is conducted improperly
Establish a sustainable purchasing program for businesses and public offices in the community	Good stewardship Potential increases in recycling	Keeping the program active The potential level of effort required to maintain high sustainability levels
Locate green-painted dumpsters, with "Recyclables Only" printed on each side, in alleys in the commercial sections of the community	Commercial businesses have easy access to a dumpster for recyclables Recycling centers have access to more recyclables	The cost of dumpster maintenance Potential for contamination
Modify recycling collection trailers to allow more flexibility in the size of each bin	Accommodates the collection of varying types and sizes of recyclables	Greater potential for cross contamination resulting from confusion with a bin's size

TABLE 3.4 *(continued)*

Best Management Practice (BMP)	Value of the BMP	Disadvantage of the BMP
Monitor the trailer drop-off locations to identify traffic flow and adjust as needed	The ability to quickly adjust to the flow of materials being delivered to the drop-off trailer An early indication of the potential success of drop-off system	The potential cost of monitoring Developing the criteria to determine when a trailer should be moved
Work with large retailers to setup single-stream collection points at the front and rear of the store	The opportunity to capture a greater volume of selected recyclables Monetary value of materials such as cardboard, white paper, certain plastics, and selected metals	The length of time the container may need to be placed at the store Increased risk of contamination and need to clearly mark which container is "trash" and which container is "recyclables"
Arrange collection trailers so smaller recyclables can be collected in removable bags or boxes	Easier unloading from the trailers Safe and efficient speed in which the recyclable can be removed from the trailer	Additional man-hours due to time required to remove the box or bag from its container
Take a census of the materials received during each quarter and determine which materials should be targeted for greater marketing and which materials do not need as much emphasis	Recognizing the ebb and flow of the quantity of materials throughout the year Recognizing the need to direct attention to collecting more materials that may be lagging in volume or weight	Identifying a balanced method to encourage, rather than dissuade, increasing the volume of recyclables collected
Establish a traffic pattern at recycling facilities and use maps and floor markings to demarcate traffic directions and control points	Increased safety Reduction in the number of accidents More efficient movement of materials	Applicability at certain recycling centers, some of which are small enough that an established traffic pattern is not needed

TABLE 3.4 *(continued)*

Best Management Practice (BMP)	Value of the BMP	Disadvantage of the BMP
Store fiber using the first in first out (FIFO) inventory plan to maintain the material's quality	Increased monetary value of fiber materials being sold (cleaner and fresher fiber materials command higher prices)	Attempting to time market swings and the inflow of fiber materials Risk of holding material too long or selling too soon
Take quarterly photographs of the recycling facility to note changes and to identify problem areas	Photographs could be utilized to: track the changes in the facility; document issues with the facility's operation and record how these issues were addressed; recognize workers; and record visitors to the facility	Failure to document the photographs and to share photographs with staff, visitors, and regulators
Conduct hands-on training to ensure students have a clear sense of the difference in materials	Allows direct contact with materials and recognize how materials can be handled	Space to conduct such training and access to variety of materials
Display pictures or drawings of various recoverable materials to insure the correct materials are being recovered	Improve quality control of the product with heightened awareness of the material	Need to replace pictures and drawings if materials change or drawings are damaged
Develop a waste reduction lesson plan for use in schools as well as for conferences and other training locations	Provide a definitive program that enlightens people to the concept of waste	Training may be too limiting or lack the depth necessary for the information to be retained
Offer information sessions with local retail stores regarding waste reduction methods to utilize with customers	Begins the process of expanding the customer's understanding of waste reduction and how it applies to the shopping experience	Potential inconsistence regarding information provided by retail clerks and managers as it relates to waste reduction

An important aspect of these BMPs is their focus on waste prevention and diversion, recycling, and waste reduction. There are fewer BMPs relating to training or public education. Although it is not possible to determine exactly why there are fewer BMPs related to training or public education, a possible reason could be the assumption that public education regarding recycling and waste reduction is well established.

3.10 INCENTIVES TO PROMOTE WASTE REDUCTION, RECYCLING & COMPOSTING

To incentivize the public, it is essential that the program's goals are clear and that there is an ultimate target in place, which requires coordinated, consistent, and up-to-date public education. It is also important that the public believes the benefits of such programs will enrich and improve their lives. Consequently, targets and goals need to be firm, fixed and attainable. For waste reduction, the target is to reduce the generation of waste with the goal of achieving zero waste. For recycling and composting, the target is to increase participation and the goal is to collect and process more materials.

There are several possible incentives that can motivate the public to reduce their waste generation and increase their recycling and composting. Incentives from other nearby states were examined and some of these incentives include:

- Pay-as-you-throw systems where residents are charged for the collection of municipal solid waste based on the amount they throw away.
- A cleaner community translates to higher property values.
- Public processing of yard waste results in clean compost for the community.
- More material recycled or recovered results in using less landfill space.
- Recovered materials that are recyclable can be reused at less cost to the consumer.
- Increased composting provides more nutrients for both public and private gardens.
- Expanding the collection of recyclables reduces litter.
- Compost material can enhance the soils in public parks and public areas thus reducing the cost of fertilizers.
- Increasing the number of recyclables recovered from landfills can result in employment opportunities at local recycling facilities.

- Generating compost for use at public schools will enrich athletic fields, playgrounds, and the school landscaping.
- Recycling large items such as furniture and appliances can provide opportunities for reuse while also capturing metals, fabrics, wood, and fixtures.

This list is far from being exhaustive; however, it does provide examples of the possibilities for the reuse and repurposing of materials presently in Nebraska's waste streams. The incentives provided are relatively localized and do not reflect available opportunities on a regional or statewide level. It is important to note that most programs begin at the local level and then, with success, expand to the regional and statewide level.

Landfill bans can also serve as an incentive. For example, the current yard waste ban provides incentive for Nebraska citizens to find alternative uses for this material. Implementing new landfill bans should be driven by safety or opportunity issues. Safety issues are currently an integral part of the regulatory framework. Environmental regulations allow certain materials, liquid or solid, to be banned from entering landfills in the state. Constituents usually accept these types of bans as a matter of course as the hazards associated with the materials are easily recognized.

Landfill bans driven by opportunity issues are more involved and should be decided locally. Implementation of these bans requires educating the community and businesses on the value of the ban as well how the banned material will be handled. In addition, alternatives to disposing the banned material must be provided. These alternatives can encompass a variety of options – providing drop-off locations, separate collection at the curb, or separate collection bins for large generators.

Potential landfill bans may include many materials, each of which possess certain value or create disposal problems. In either case the need to establish an infrastructure to accommodate each ban should be in place and properly functioning before the ban is in full force. Successfully banning certain materials in MSW landfills relies on effectively communicating the reasons for banning a specific material and the ban's value to the public. More importantly, alternative options for disposing or reusing the banned material must be provided. Education campaigns through the schools, radio, television and social media, public hearings, and signage at landfills are some of the many methods for educating the public. Another outreach effort that can result in positive outcomes is to work directly with waste generators to develop alternative methods to dispose of or reuse the materials. Emphasizing the health and safety reasons for banning a material, together with the consistent reinforcement of this message, are crucial in the success of any ban.

Four methods are conventionally used to enforce landfill bans: (1) conducting spot inspections of loads of waste delivered to landfills; (2) reviewing facility records; (3) performing spot checks at banned-material generators; and (4) inspecting roll-off containers as they deliver waste to a landfill. Spot inspections are conducted at the landfill and involve looking at a load of waste after it is unloaded from the delivery vehicle. The load is spread out and then it is closely inspected to identify whether any banned materials are present in the load.

Reviewing landfill records assists in identifying businesses and industries that generate banned wastes. With this information, landfill operators and staff can be trained to more carefully check where loads are coming from and anticipate delivery of wastes that could potentially contain banned materials.

Identifying businesses and industries that generate banned wastes allows for the implementation of a proactive enforcement approach. This method entails inspectors performing spot checks at these material generators to see how the waste is generated and how it is packaged for disposal. There are circumstances where generators, for ease of transporting the waste, place it in a box or other container. When the banned material is in a container it cannot be visually inspected, and it may inadvertently be placed in the landfill. Inspectors can provide landfill facilities with information on how and in what type of containers these materials are packaged. Landfill operators and staff can then be more vigilant in their inspections of wastes delivered from these generators and prevent these materials from being disposed of in the landfill.

The final method of enforcement encompasses inspecting incoming roll-offs and dumpsters before they can be unloaded at the landfill. These inspections involve removing the tarp and closely looking at the waste in the roll-off or dumpster. Although all the contents of the load cannot be seen, conducting these inspections reduces the possibility of banned materials entering the landfill.

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4.0
PARTNERING OPPORTUNITIES

Nebraska's solid waste management systems are arranged in every conceivable manner. There are few, if any, that do not rely on partnerships. Nebraska's unique and varied circumstances have necessitated the development of many different partnering relationships.

Successful partnerships require mutual respect and collaboration among all partners. Participants must rely on each other and commit to opportunities presented through the partnership. Partners' willingness to share information, adjust as situations evolve, and facilitate positive outcomes are essential for successful partnerships. Further, successful partnerships recognize the need for partnering and that partnering presents more rewards and greater value than going solo. Without a sense of need and anticipated success, partnering is destined to fail. Partnering relative to solid waste programs typically occur for the following reasons:

- One partner has equipment or expertise that the other partner needs.
- The partnership garners greater leverage for purchasing equipment or similar materials.
- One partner has an exceptional skill or knowledge that is needed by the other partner.
- One partner has a landfill and the second partner hauls waste.
- One partner has land that can be utilized by the second party to build a solid waste facility.

Five of the most common strategies[4.1] in creating partnerships are presented in Table 4.1. Along with these strategies, selecting mutually-beneficial partners, sharing information, evaluating the potential risks and rewards, and developing a mutual and flexible approach increases the likelihood of a partnership's success. Partners must be able to: (a) trust each other; (b) believe in the value of the partnership; (c) support each other; (d) find opportunities for joint success; and (e) exercise honesty in all dealings with each other.

TABLE 4.1
Five Most Commonly Utilized Partnership Strategies

Type of Strategy	Description
Horizontal	Businesses in the same area (i.e., competitors) agree to collaborate in a way that will improve their market position.
Vertical	A business collaborates with companies in its supply chain (its suppliers and/or distributors). Vertical partnerships often allow businesses to minimize risk in the supply chain and obtain lower prices in exchange for long-term commitment. Also known as channel partnerships or supply chain partnerships.
Intersectional	Businesses from different areas agree to share their special knowledge for the advancement of all partners.
Joint Venture	Two or more businesses form a new company. The new company is its own legal entity, and its profits are split according to terms spelled out in a formal contract.
Equity	A company acquires a minor equity stake in another business in exchange for a monetary investment. Such exchanges can accompany other types of collaboration and, to a certain extent, agreed-upon access to decision making.

There are also some inherent challenges to partnering. The number of solid waste and recycling organizations now operating, along with each entity's need to capture as many marketable materials as possible, results in overlapping competition. Because most entities do not desire to partner with their competitors, partnering opportunities are limited. Further, many of these organizations and businesses are too busy handling their own agendas, needs, and challenges to envision having the time, means, and ability to tackle the demands a partnership can present.

4.1 STRENGTHENING STATE AGENCY COLLABORATION

The state and its agencies should serve as an example in the pursuit of sound and sustainable waste management practices. Increasing collaboration among Nebraska's state agencies is a partnering opportunity that can continue to be nurtured.

For example, working with the Department of Economic Development to recruit manufacturers to the state that use recycled materials in their processes would provide a more robust demand for these materials. Developing more end uses for recycled materials could be pursued through the University of Nebraska. Collaboration with the Department of Transportation could reduce redundancy in the state's litter cleanup efforts. Working with the Department of Transportation could also result in uses for more of Nebraska's waste tires. The collaboration between the Department and the Department of Agriculture paid dividends when Avian Influenza severely impacted the northeast part of the state in 2015. Disposal of affected poultry was addressed in an effective and efficient manner thanks to the joint previous planning efforts. Pursuing a partnering relationship with the Department of Education could facilitate the inclusion of responsible solid waste management practices in Nebraska's education system. More uses for compost could be pursued with the University of Nebraska–Extension, Department of Natural Resources, Games and Parks Commission, and Department of Agriculture.

Increased collaboration among state agencies could result in a: (1) combined synergy and focus on efforts to meet the state's solid waste management, waste reduction, and recycling goals; (2) identification of efficiencies by identifying redundant efforts between agencies; and, (3) better use of funding.

In addition to pursuing collaboration with state agencies, the Department should strengthen its relationships with the League of Nebraska Municipalities and the Nebraska Association of County Officials.

4.2 PUBLIC ENTITY - PUBLIC ENTITY PARTNERSHIP

The need for partnering between two or more public entities occurs when there is a specific public need that these multiple public entities can address more successfully together than separately. Often these partnerships are related to an infrastructure need. When applied to recycling and solid waste issues, partnerships of this sort are usually based on a need for a specific type of service. Communities and counties have partnered to develop landfills, material recovery facilities, and fleets of collection vehicles. These types of partnerships usually take the form of a utility.

An example of this type of partnership includes the cities and towns of Hemingford, Harrison, Crawford, Whitney, Chadron, Hay Springs, Rushville, Clinton and Gordon, plus the counties of Sioux, Dawes and Sheridan in northwest Nebraska. In 1989, these entities cooperatively funded a study to determine the most cost-effective method to comply with upcoming regulations. Analysis of all the costs involved proved that it was more cost effective to construct either one or two large landfills for all nine municipalities and three counties, rather than each community constructing and building its own landfill.(4.2)

In 1992, the Subtitle D regulations went into effect. During that same year, the Solid Waste Agency of Northwest Nebraska (SWANN) was formed with all the communities and counties signing an interlocal agreement. The governing board of SWANN decided it was best to let this new agency handle solid waste from household to final disposal in the communities and to provide a disposal site for all rural residents. This was the first such organization of this type in Nebraska.

The development of a material recovery facility is another common driving force for a partnership. The facility, along with its level of sortation and how the recycled materials are marketed, varies from partnership to partnership.

In Nebraska, communities and counties have formed partnerships that allow for one community or county to deliver its recyclables to another county or community for processing. Operations in Lexington and Broken Bow exemplify this type of arrangement. Along with offering drop-off services for citizens to use at each facility, recyclables are collected in trailers strategically placed in several communities surrounding Lexington and Broken Bow. These recyclables are then delivered to Lexington or Broken Bow where they are accumulated and sent on to a broker or processing facility where they are readied for sale to end users. In each of these relationships, one partner provides a service by taking the recyclables and the other partner is released from any further responsibility for the recyclables.

These types of public-entity arrangements are advantageous because fewer communities need to invest in the infrastructure necessary to properly manage solid waste. It also allows those communities that cannot afford to invest in a facility access to needed services. A disadvantage of this arrangement results when there is no comprehensive plan in place that promotes establishing facilities in strategic locations. Integrated solid waste management plans that identify possible under-served locations along with the combined areas' needs can ease disadvantageous results. Having a plan in place, along with the commitment to implement its strategies and address challenges as they arise, can facilitate local and area-wide benefits, which can then result in better outcomes for all of Nebraska.

4.3 PUBLIC - PRIVATE PARTNERSHIP

The reasons for establishing a public-private partnership vary; however, in most situations such partnerships are formed because it is necessary to complete a specific project as quickly or efficiently as possible. For example, public entities sometimes face obstacles to completing a project that a private entity would not. Advantages of a public-private partnership include:(4.3)

- A wider array of project solutions;
- Faster completion time and potentially reduced delays;
- The return-on-investment for both parties may be greater;
- The risks of the project are evaluated early on to determine project feasibility;
- Early completion bonuses can be incorporated which can potentially increase efficiency;
- Operational and project execution risk is transferred from government to private participants;
- Increased efficiency of government funds which allows these funds to be re-directed to other important socio-economic concerns; and,
- Quality standards are potentially increased.

Disadvantages of a public private partnership include:(4.3)

- The risk the private sector firm can accommodate may be borne, in part, by the government partner which increases the government's costs;
- If the expertise in the partnership lies mostly on the private side, the governmental partner is at an inherent disadvantage;
- The government is at risk of the private partner defaulting;
- Depending upon the type of project, the government's level of risk may be greater because the project must be completed, with or without the private partner;
- The project profits can vary depending on the assumed risk for either party; and,
- The government's risk increases if the number of private partners who can perform the tasks is limited.

In Nebraska, public-private partnerships are more commonly found with solid waste disposal area operations. The Pheasant Point Landfill in Douglas County is an example of this type of arrangement. The landfill is owned by Douglas County and it is operated by a private company.

This type of partnership, relative to recycling and waste reduction, is rare. However, the recycling facility located in Broken Bow is an example of this type of relationship. The recycling facility is housed within a transfer station that is owned by a private solid waste hauling company and the recycling portion of the facility is operated by Custer County. The county can capture recyclables from the waste stream delivered to the transfer station and, in turn, the transfer station owner captures and uses or sells the metals found in the waste stream.

Recycling facilities have developed based more on the specific wants or needs of a community than on any plan. In most cases, the relationship between the recycling center or drop-off location and the MRF or processing center is as seller and buyer, not as partners.

Employing the public-private partnership concept in Nebraska would involve a very specific circumstance. For example, establishing a curbside collection system in a large community that partners with a material recovery facility. In this example, this type of relationship would utilize the expertise of a public collection program and a private material handling company. Further, this relationship would result in the public entity having a committed processing facility to take its recyclables, which should result in positive results for both organizations.

4.4 PARTNERING WITH PRIVATE, NON-PROFIT ORGANIZATIONS

Private, non-profit organizations have a unique role in recycling programs in Nebraska. These organizations, such as Keep Nebraska Beautiful and the Nebraska Recycling Council (formerly the Nebraska State Recycling Association and WasteCap Nebraska), have been involved in recycling and waste reduction activities for many years. These organizations have championed recycling and waste reduction through educational events, communication with schools and other civic organizations, and by establishing recycling programs in various parts of the state. In conversations Department staff had with municipal waste management officials while visiting solid waste facilities throughout the state, the effectiveness and value of their partnerships with Keep Nebraska Beautiful affiliates were repeatedly mentioned.

This type of partnership is being successfully implemented in Alliance. Keep Alliance Beautiful, a non-profit organization, works closely with the City of Alliance, a public entity, in the collection and processing of recyclables. In turn, the City of Alliance and Box Butte County[4.4] provide financial support.

Non-profit organizations in Nebraska provide an opportunity to further educate the public regarding recycling and waste reduction. Whether a formal partnering with non-profit organizations occurs, coordinating with these groups' capabilities can benefit both public and private organizations. Utilizing these organizations to continue educating and informing the public and Nebraska communities and businesses will benefit the state.

(4.1) Segil, L. Forbes. (2002). *5 Keys to Creating Successful Strategic Alliances.* https://www.forbes.com/2002/07/18/0719alliance.html.

(4.2) Solid Waste Agency of Northwest Nebraska. SWANN History. http://www.swannsites.com/history.php.

(4.3) Rodriguez, J. (Updated 2016). *Public Private Partnership Pros and Cons.* https://www.thebalance.com/public-private-partnership-pros-and-cons-844713.

(4.4) Keep Alliance Beautiful. http://www.keepalliancebeautiful.org.

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5.0
FUNDING SOURCES TO ADDRESS EXISTING AND EMERGING SOLID WASTE ISSUES

Two distinct funding structures will be discussed in this section: (1) fees that fund the resources needed for the Department to administer the state's solid waste programs; and (2) fees and mechanisms that fund solid waste and recycling facilities. The fees and funding methods for the Department's grants program will be discussed separately in Section 6.0 of this document.

5.1 EXISTING FUNDING SOURCES FOR THE DEPARTMENT'S PROGRAMS

In Nebraska, regulations established in *Title 132 – Integrated Solid Waste Management Program* were adopted to manage municipal solid wastes, which includes municipal solid waste typically collected and disposed in municipal landfills and other nonhazardous wastes. The Department administers the state's solid waste programs and is responsible for a variety of activities. Three fee sources currently fund the Department's solid waste regulatory program:

- Fifty percent (50%) of the $1.25 fee (Disposal Fee) charged per ton of solid waste disposed in municipal solid waste facilities;
- Annual fees (Operating Fee) for all solid waste management facilities; and
- Solid waste management facility permit application, renewal, and modification fees (Permit Fee).

The Disposal Fee, where 50% of the $1.25 fee charged per ton of solid waste disposed in municipal solid waste disposal areas, was established by statute. The five-year annual average of revenue collected via this fee is $1,481,017. Monies from this fee may be used by the Department to:

- Cover the direct and indirect costs of responding to spills or other environmental emergencies.
- Regulate, investigate, remediate, and monitor facilities during and after facility operations.
- Perform regulated activities under the Integrated Solid Waste Management Act, the Nebraska Litter Reduction and Recycling Act, and the Waste Reduction and Recycling Act.

Operating Fees, which are collected annually from all solid waste management facilities in the state, are established by the Environmental Quality Council. The five-year annual average of revenue collected via this fee is $273,650. These fees, when established, were intended to sufficiently cover the costs of administering ongoing permit, inspection, and compliance duties. The amount of the fee varies based on the type of solid waste facility (municipal disposal area, construction and demolition debris disposal area, solid waste compost site, etc.). Table 5.1 outlines the facility types that pay Operating Fees, the annual fee each type of facility pays, and the number of facilities regulated.

TABLE 5.1
Annual Operating Fees and the Number of Regulated Entities

Facility Type	Annual Fee ($)	Number of Entities Regulated (2017)
Municipal Solid Waste Disposal Area	7,500	23
Construction and Demolition Disposal Area	750	30
Fossil Fuel Combustion Ash Disposal Area	1,000	8
Delisted Waste Disposal Area	45,000	1
Industrial Waste Disposal Area	2,100	0
Solid Waste Compost Site	2,100	8
Material Recovery Facility	1,500	4
Solid Waste Transfer Station	500	38
Other Solid Waste Processing Facility	500	1
Land Application Unit for Repeated Disposal or Treatment of Special Wastes	2,500	0

Permit Fees are paid to the Department by those individuals or entities applying to operate a facility pursuant to the Integrated Solid Waste Management Act. These fees are also established by the Environmental Quality Council. The five-year annual average of revenue collected via this fee is $31,300. These fees vary dependent upon the type of facility and type of permit application – initial, major modification, renewal, or initial application for an existing facility. Table 5.2 delineates the Permit Fees assessed each type of facility for each type of permit application.

TABLE 5.2
Permit Fees Assessed Based on
Type of Facility and Type of Application

Facility Type	Type of Application			
	Initial ($)	Major Modification ($)	Renewal ($)	Initial Application for Existing Facility ($)
Municipal Solid Waste Disposal Area	15,000	7,500	750	1,500
Construction and Demolition Disposal Area	1,500	500	250	150
Fossil Fuel Combustion Ash Disposal Area	2,500	1,250	300	250
Delisted Waste Disposal Area	45,000	22,500	2,250	4,500
Industrial Waste Disposal Area	3,100	1,500	350	310
Solid Waste Compost Site	3,100	1,500	350	310
Material Recovery Facility	1,500	500	250	150
Solid Waste Transfer Station	500	250	150	50
Other Solid Waste Processing Facility	75	375	100	75
Land Application Unit for Repeated Disposal or Treatment of Special Wastes	3,100	1,500	350	310

5.2 EXISTING FUNDING SOURCES FOR LOCAL SOLID WASTE OPERATIONS

Funding of solid waste operations in Nebraska varies dependent upon whether the operation is public or private, and what type of facility it is – landfill, transfer station, drop-off site, or recycling operation. Landfills and transfer stations are normally funded by the tipping fees each of these operations charge. If the tipping fees and operation charges are not sufficient to address all its costs, local government agencies may also contribute funding.

Recycling and waste reduction facilities and programs are primarily funded through the sale of materials they have collected, local government agencies, and grant awards. This funding can fluctuate dramatically and is dependent upon a facility's capability and capacity to capture materials, the value of materials a facility captures and sells, market prices for the recycled materials, and the local government's economic circumstances and stability.

A local government's funding for solid waste programs is dependent upon its perception of the program's value. For many local governments, the most important solid waste programs are those that address the safe disposal of solid waste. If there are any funds remaining after addressing solid waste disposal, they are divided among the local government's other solid waste programs. Which programs are funded depends upon the needs and wants of the community. For example, some communities will fund collection trailers for recyclables or local litter control campaigns. In smaller- and medium-sized communities, circumstances sometimes dictate that funds for these additional solid waste activities be redirected to address an unexpected situation, (e.g., the unanticipated failure of the community firetruck or dump truck).

Tipping fees fund solid waste programs in most Nebraska communities and counties. These fees are conventionally set by the landfill at a monetary level that addresses the cost to operate a landfill or transfer facility, with reserves for future construction activities, facility upgrades, equipment replacement, and anticipated closure/post-closure costs. However, competitors present in the local marketplace can also influence tipping fees. This often occurs in larger communities. Competing private operators build transfer stations or other disposal facilities to capture solid waste that would normally be handled at the local landfill. In these situations, tipping fees may be held to an artificially low rate, so the local disposal facility can acquire as much waste as possible. When this circumstance occurs, local governments often must provide additional funds so the facility can continue to operate.

Because a tipping fee's primary function is to address costs associated with the operation of a landfill or transfer station, there is often little or no funding remaining to support other solid waste activities. For this reason, very few recycling programs rely on funding from tipping fees. The exception is when the local community or private operator provides both disposal and recycling services at the same location. In cases such as this, the cost to develop the recycling facility may be included in the tipping fee.

The sale of materials can be advantageous for both disposal and recycling operations. For disposal operations, materials delivered to the facility that may be reused or repurposed and can be segregated from the waste stream can provide additional income. These materials are usually: (a) inert materials such as rocks and boulders that contractors and landscapers can use; (b) white goods; (c) large metal items such as sheds or steel plates; or (d) lumber and wood that can be utilized for fencing or wood chips. In addition to potentially providing additional income, removing materials from the waste stream saves air space and the materials are repurposed, which reduces waste.

The sale of materials is a recycling operation's main source of income. These operations target the capture of prevalent and higher-value recyclables like cardboard and metals to sell on a continual basis. They may target white paper and some plastics. Recyclers also receive items that can be reused (e.g., bicycles, lawn mowers, furniture, selected wood materials, white goods) which they then give to other agencies within the community for reuse or refurbishing.

Three grant programs assist in funding solid waste, recycling and waste reduction, and litter control programs in Nebraska:

- Litter Reduction and Recycling Grant Program
- Waste Reduction and Recycling Incentive Grants
- Nebraska Environmental Trust (NET)

The Litter Reduction and Recycling Grant Program provides grants for public education, litter cleanups, and recycling. This grant program has been in place since 1979. From 2011 through 2016, this program awarded $4,223,430.00 in grants for public education; $525,197.00 in grants for litter cleanup; and, $5,920,549.00 in grants for recycling projects.[5.1]

The Waste Reduction and Recycling Incentive Grants Program has been in place since 1990. This program provides financial support for recycling systems, the identification and development of recycling markets, processing facilities, yard waste composting, composting with sludge, waste reduction, household hazardous waste programs, solid waste infrastructure, and incineration. From 2011 through 2016, this program awarded $12,031,448 in grants for recycling, composting, and waste reduction and $11,255,264 for scrap tire recycling projects.(5.1)

The Nebraska Environmental Trust (NET) was established in 1992 and is funded through the Nebraska Lottery. NET funds projects that fall under categories adopted by the trust board: (a) habitat; (b) surface and ground water; (c) waste management; (d) air quality; and (5) soil management. Solid waste grants are included under the waste management category. There are no restrictions on applicants or project sponsors if the project falls within the eligibility criteria established by the trust. Individuals, private organizations, and public entities can apply for funding.

The amount of Nebraska's solid waste project grants, particularly those related to recycling and waste reduction, have exceeded the amounts in surrounding states. Table 5.3 presents a comparison of the Department's grant programs to solid waste grant programs in seven surrounding states.

TABLE 5.3
Comparison of Department's Grants Programs
and Solid Waste Grant Programs in Seven Surrounding States

Funding Source	Eligible Activities	Annual Funding ($)
NEBRASKA LITTER REDUCTION AND RECYCLING GRANTS		
Litter Fees	Public Education, Litter Cleanup of Public Areas, Recycling, and Source Reduction	2,500,000 *(2017 Awards)*
NEBRASKA WASTE REDUCTION AND RECYCLING INCENTIVE GRANTS		
Business Fees	Integrated Solid Waste Management Programs and Projects	4,300,000 *(2017 Awards)*
Disposal Fees (50%)	Planning and implementing facilities and systems to further the Integrated Solid Waste Management Act	
Scrap Tire Fees	Partial purchase of tire-derived products and/or crumb rubber Cost-sharing for manufacturing, processing, and civil engineering applications Collection site cleanups for political subdivisions Capital and startup costs for processing, manufacturing, collecting, and transporting	
COLORADO POLLUTION PREVENTION ADVISORY BOARD		
Solid Waste Fees	Equipment, Construction, Retrofits, Studies	3,600,000
IOWA SOLID WASTE ALTERNATIVE PLANS		
Unknown	BMPs, Education, Market Development, Waste Reduction, and Landfill Diversion	3,500,000

TABLE 5.3 *(continued)*

Funding Source	Eligible Activities	Annual Funding ($)
KANSAS 2018 SOLID WASTE GRANTS		
Unknown	Enhancements to existing recycling, composting, and waste reduction programs	100,000
MISSOURI DEPARTMET OF NATURAL RESOURCES		
Tire Fees	Scrap Tire Cleanups and Reuse	400,000
SOUTH DAKOTA BOARD OF WATER AND NATURAL RESOURCES		
Portion ($0.75) of Per Ton Landfill Fee	Recycling Equipment, Solid Waste Collection Equipment, Education	Varies
WYOMING MUNICIPAL SOLID WASTE CEASE AND TRANSFER PROGRAM		
General Fund	Closure of Small Landfills and Construction of Transfer Stations	16,400,000

5.3 POSSIBLE FUNDING SOURCES

Grant funding continues to be steady and sufficient. However, this study has identified some possible future challenges in funding solid waste permitting and compliance work. In response, the Department proposes to: (1) prioritize its current statutory duties; (2) find efficiencies to perform those duties better without sacrificing accuracy and quality; and (3) only then consider possible fee changes after first consulting with impacted entities and groups. There is no consensus on the need to change or increase fees at the time of this study.

Other solid waste program funding options include teaming with adjoining states to address common problems like material markets, transportation of recovered materials, abandoned landfills, illegal dump sites, contaminated soil sites, and final cover and liner failures. A coordinated teaming effort such as this could facilitate the ability of a group of states retaining one or two specialty firms to focus on addressing these common environmental issues. By teaming together, efficacies would be realized through lower overhead costs and working with fewer contractors. Further, the costs would be distributed among the participants and each participant would shoulder less financial burden than if it procured these services alone.

Nebraska has a very positive history of supporting recycling and waste reduction programs through its grants programs. One new funding source to consider is accessing other private environmental grant, financing, and/or loan programs. Several private organizations and corporations provide grants for environmental programs relating to recycling, waste reduction, zero waste, and similar activities. A clearing house[5.2] for these programs could be established on the Department's website for ease of access. Expanding potential sources of funding for solid waste and waste reduction programs increases the potential to address challenging issues including waste prevention, increasing the types of materials that can be recycled, and long-term security for closed landfills.

[5.1] Nebraska Department of Environmental Quality. Annual reports to the Nebraska Legislature (2011-2016). *Annual Report to the Legislature, Chapter 5* (submitted in December 2011, 2012, 2013, 2014, 2015, and 2016).

[5.2] Terra Viva Grants Directory. (2017). http://terravivagrants.org.

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6.0
GRANT PROGRAMS

The Department and the Nebraska Environmental Trust (NET) have provided grants to both public and private organizations to address environmental issues related to solid waste. The Department's grants are funded through fees established by legislation while NET grants are funded by the Nebraska Lottery. Grants from these programs have provided financial support for recycling and waste reduction programs in all sections of the state. Grant awards have allowed many of Nebraska's recycling and waste reduction programs to grow and expand the services they provide.

Nebraska's grant programs garnered much discussion during interviews conducted with solid waste and recycling operators located throughout state. Interviewees largely agreed that the grant programs provided through the Department and NET are essential for the establishment and growth of their programs. Some of the organizations noted that without these grant programs, their operation would likely not survive.

The City of Kearney provides an example of utilizing funds awarded through Nebraska's solid waste grants programs to implement forward-thinking projects for its citizens. The City of Kearney Utilities Department manages both the Sanitation Division and the Kearney Area Solid Waste Agency Landfill. The Sanitation Division is responsible for the solid waste needs of all residential and commercial customers inside the city limits, while the landfill provides services primarily for the City of Kearney and Buffalo County. The Sanitation Division provides weekly residential refuse collection, which includes bi-monthly curbside recyclables collection, for a monthly fee, and weekly yard waste collection for an additional monthly fee. The division also serves all businesses with refuse and cardboard collection for a fee, and free weekly curbside recyclables collection. In addition to these services, the division operates a recycling center that receives and processes the collected recyclables from the City of Kearney and communities in Buffalo County. Recycling drop-off collection sites have been strategically located within the city limits and the division has helped other communities in Buffalo County establish drop-off sites of their own. A full explanation of the City of Kearney's solid waste program can be found in Appendix J of this document. This explanation states that:

> "The City of Kearney has been able to establish its recycling program with the assistance of grants from the NDEQ and the Nebraska Environmental Trust. Without grant availability, much of the City of Kearney's recycling program may not have been implemented."

Four fees currently support the Department's grant programs. These fees are established by statute. Table 6.1 outlines the Department's grant programs and the fees that fund these grant programs along with the eligible applicants and eligible activities for each fee.

TABLE 6.1
Fees that Support the Grant Programs

Grant Program	Funding Source	Eligible Applicants	Eligible Activities
Litter Reduction and Recycling Grant Program	**LITTER FEE** Annual Fee Assessed to Manufacturers, Wholesalers, And Retailers	Political Subdivisions Public and Private Entities and Organizations	Public Education Litter Cleanup of Public Areas Recycling Source Reduction
Waste Reduction and Recycling Incentive Grants Program	**BUSINESS FEE** $25 Annual Retail Business Fee on the Sale of Tangible Personal Property	Political Subdivisions Public, Private, or Non-Profit Entities and Organizations	Integrated Solid Waste Management Programs and Projects
	DISPOSAL FEE 50% of the $1.25 Fee Charged Per Ton of Solid Waste Disposed in Municipal Solid Waste Disposal Areas	Counties Municipalities Agencies	Planning and Implementing Facilities and Systems to Further the Integrated Solid Waste Management Act
	SCRAP TIRE FEE $1.00 Fee Collected on the Sale of New Tires *The Department must allocate the first $1.5 million of the total collected monies through this fee to the Scrap Tire Management Program and fund scrap tire recycling projects, with very specific categories for the types of project eligible for funding.*	Political Subdivisions Public, Private, or Non-Profit Entities and Organizations	Partial Payment for the Purchase of Tire-Derived Products and/or Crumb Rubber Cost-Sharing for Manufacturing, Processing, and Civil Engineering Applications Collection Site Cleanups for Political Subdivisions Capital and Startup Costs for Processing, Manufacturing, Collecting, and Transporting

6.1 LITTER REDUCTION AND RECYCLING GRANT PROGRAM

The Litter Reduction and Recycling Grant Program was established in 1979 and is funded through fees assessed to manufacturers, wholesalers, and retailers (Litter Fee). The Litter Fee assessed to manufacturers is $175 for each $1 million of gross proceeds of products manufactured and the sales of which are consumed within the state. The Litter Fee for wholesalers is $175 for each $1 million of sales made in the state. The Litter Fee for retailers is $175 for every $1 million of sales of products that commonly contribute to litter.

The Litter Fee is collected by the Department of Revenue and remitted to the State Treasurer for credit to the Litter Reduction and Recycling Fund. The Department may use money from the fund for the administration and enforcement of the Litter Reduction and Recycling Act. The five-year annual average of revenue collected via the Litter Fee and credited to the Litter Reduction and Recycling Fund is $2,088,517.

Grant awards through this program have been used for: (a) public education; (b) litter cleanup along highways, waterways, public use areas, open spaces, and other public access areas; and (c) recycling programs that address standard recycled items such as cardboard, paper, plastics, and aluminum cans as well as e-waste, paint, pesticides, and household hazardous waste. Monies awarded through this program have funded several litter control projects conducted by Keep Nebraska Beautiful affiliates and communities located throughout the state. This same grant program has also assisted in funding recycling operations in Imperial, Kearney, Hershey, Alliance, Scottsbluff, O'Neill, Norfolk, and Fremont along with other Nebraska communities.

During the 2017 calendar year, the Department awarded approximately $2.5 million to 57 grantees through this program. From 2011 through 2016, more than $10 million was awarded through the Litter Reduction and Recycling Grant Program to 331 grantees. Table 6.2 outlines the number of grantees and amounts awarded for litter cleanup, recycling, and education projects through this program from 2011 through 2016.

TABLE 6.2
Number of Grantees and Total Amount Awarded for Litter Cleanup, Recycling, and Public Education Projects through the Litter Reduction and Recycling Grant Program from 2011 through 2016

Fiscal Year	Litter Cleanup		Recycling		Public Education	
	Number of Grantees	Total Amount Awarded ($)	Number of Grantees	Total Amount Awarded ($)	Number of Grantees	Total Amount Awarded ($)
2011	5	44,203	33	1,000,032	17	304,489
2012	9	81,675	27	852,500	21	620,003
2013	9	108,687	23	904,280	21	751,559
2014	7	67,164	27	1,052,402	21	887,141
2015	14	97,938	23	1,176,580	21	821,346
2016	12	108,483	23	891,975	18	613,145

Figure 6.1 identifies communities that have been awarded funds through the Litter Reduction and Recycling Grant Program. In addition to the communities delineated in Figure 6.1, Keep Nebraska Beautiful and all of its 20 affiliates have been awarded funds through the Litter Reduction and Recycling Grant Program. Eight of these affiliates were awarded funds through this grant program every year from 2011 through 2016.

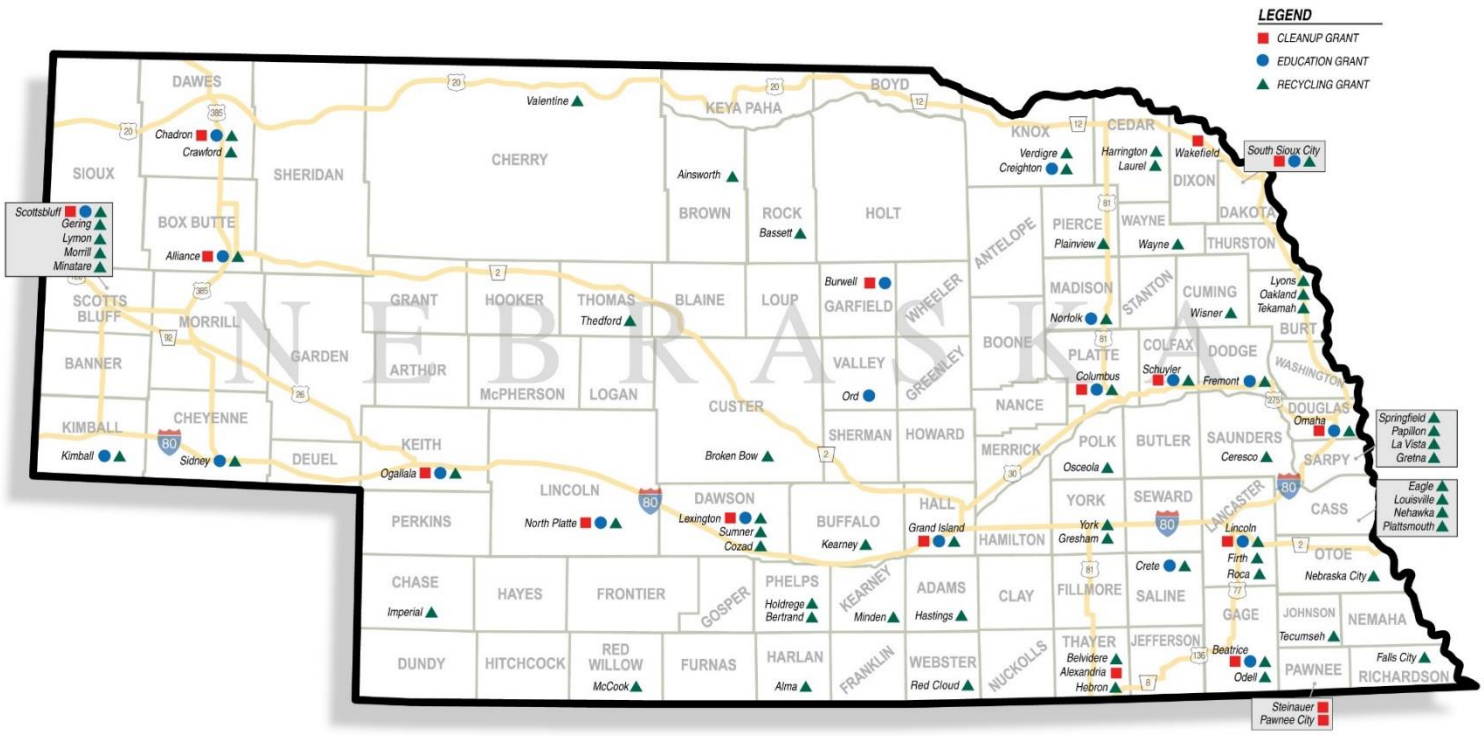


FIGURE 6.1
Communities Awarded Funds through the
Litter Reduction and Recycling Grant Program from 2011 through 2016

6.2 WASTE REDUCTION AND RECYCLING INCENTIVE GRANTS PROGRAM

The Waste Reduction and Recycling Incentive Grants Program was established in 1990 and is funded through three different fees – the Business Fee, the Disposal Fee, and the Scrap Tire Fee. The Business Fee is a $25 annual fee collected from businesses on the retail sales of tangible personal property. The Disposal Fee to fund this grant program is derived from 50% of the $1.25 per ton fee collected on solid waste disposed in the state's municipal solid waste facilities. The Scrap Tire Fee is the third fee that funds the Waste Reduction and Recycling Incentive Grants Program. A fee of $1.00 is charged on each new tire sold in Nebraska. The Department must allocate $1.5 million of the collected fees to the Scrap Tire Management Program and fund scrap tire recycling projects.

The Disposal Fee is collected by the Department and remitted to the State Treasurer of which 50% is credited to the Waste Reduction and Recycling Incentive Fund. The Department may deduct amounts sufficient to reimburse itself for its costs of administration of the fund. The Disposal Fee also funds the Department's Illegal Dumpsite Cleanup Program and the Landfill Disposal Fee Rebate Program, which are administered separately from the Waste Reduction and Recycling Incentive Grants Program. The five-year annual average of revenue collected via the Disposal Fee and credited to the Waste Reduction and Recycling Incentive Fund is $1,369,388.

The Business Fee and the Scrap Tire Fee are collected by the Department of Revenue and remitted to the State Treasurer for credit to the Waste Reduction and Recycling Incentive Fund. The five-year annual average of revenue collected via the Business Fee and credited to the Waste Reduction and Recycling Incentive Fund is $483,584, while the amount collected via the Scrap Tire Fee and credited to this fund is $2,148,001.

Funds collected through the Business Fee and the Disposal Fee and awarded through the Waste Reduction and Recycling Incentive Grants Program have provided financial support for recycling systems, waste reduction programs, household hazardous waste programs, processing facilities, solid waste infrastructure, and the identification and development of recycling markets. During the 2017 calendar year, the Department awarded approximately $4.3 million to 130 grantees from the Waste Reduction and Recycling Incentive Grants Program. Figure 6.2 identifies communities that have been awarded funds through this grant program.

During Fiscal Year 2016, the Department awarded approximately $180,000 to 47 applicants through the Illegal Dumpsite Cleanup Program and Landfill Disposal Fee Rebate Program. From 2011 through 2016, more than $12 million in grants was awarded through the Waste Reduction and Recycling Incentive Grants Program for waste reduction, recycling and composting.

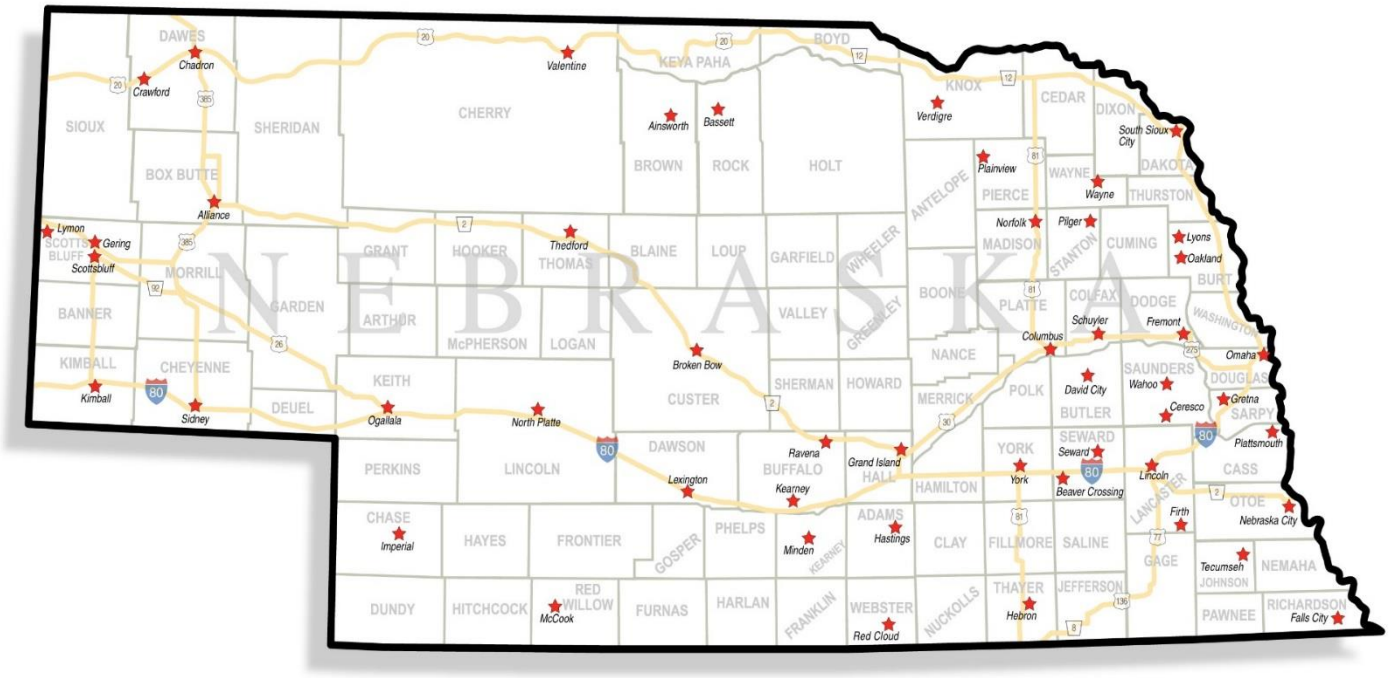


FIGURE 6.2
Communities Awarded Funds through the Waste Reduction and Recycling Incentive Grants Program from 2011 through 2016

Awards through the Waste Reduction and Recycling Incentive Grants Program have funded, or partially-funded, many recycling, composting, and waste reduction projects throughout the state. The repurposing and reuse of materials, collection and reuse of household hazardous products, and recovery and reuse of construction and demolition materials are some of the waste reduction efforts being implemented in Nebraska. The Nebraska Materials Exchange Program established by Keep Nebraska Beautiful[6.1] provides for the repurposing and reuse of materials. As stated on the Keep Nebraska Beautiful website:

> "Since its inception in the Fall of 1994, the number of materials listed and exchanged has grown tremendously. Nearly 2 million pounds of materials are exchanged every month.
>
> Participating in the program saves money and space associated with storage, disposal, and overall landfill waste. Many schools and businesses have saved hundreds of dollars by seeking materials through the Exchange Program instead of purchasing new items.

> The Nebraska Materials Exchange Program encourages businesses and manufacturers across Nebraska to review disposal costs and examine the management of their waste products. Good, usable materials no longer needed can be listed in the Materials Exchange Program. The cost is free. Keep Nebraska Beautiful is proud to offer this program and anticipates continued growth and success."

Omaha's Under the Sink Special Waste Facility provides for the safe disposal and recycling of household hazardous wastes. This facility opened in June 2005 and residents of Douglas County and Sarpy County can use the facility free of charge. The Department provided funding for the facility through its Waste Reduction and Recycling Incentive Grants Program. Additional funding was provided by the Nebraska Environmental Trust as well as other private foundations and organizations.

Materials collected at this facility may be available for reuse. Under the Sink provides items for reuse via a facility feature they call "ReStore." Information from the organization's website(6.2) states:

> "No appointment is needed to visit the ReStore and there is no residency requirement. The ReStore is located inside the office entrance and is stocked with items that are in good condition for reuse. There is no guarantee what material may be available at the time of your visit. All items are free, however there is a 50-pound weight limit per day. All items must be weighed and a release form completed before leaving the facility."

Recovery efforts involve the rehabilitation or remodeling of material or equipment. Two examples of recovery efforts include appliances that are fitted with new or used parts or furniture that is reupholstered or restored to its original or similar characteristic. These materials or equipment can then be purchased at prices that are much less than similar, new items.

EcoStores Nebraska is another example of recovery and reuse services. Information from the organization's website(6.3) indicates that the non-profit organization is ". . . dedicated to diverting construction and demolition waste from Lincoln's landfills while creating a supply of reusable building supplies and material." EcoStores Nebraska's inventory includes cabinets, carpet, doors (storm, interior, exterior), electrical material, flooring, hardware, lumber, sinks, toilets, utility shelves, windows, landscape materials, etc. In addition, several types of cement blocks are available, and they operate a usable latex paint exchange.

6.3 SCRAP TIRE RECYCLING GRANTS

More than 670 grants totaling more than $11 million were awarded through the Waste Reduction and Recycling Incentive Grants Program for scrap tire recycling projects from 2011 through 2016. These scrap tire projects have contributed to successfully removing abandoned tire piles as well as collecting scrap tires. In Nebraska, tires are currently being repurposed for use as: (1) playground surfaces – loose fill, tiles, and poured-in-place surfaces; (2) athletic running track surfaces; (3) artificial turf fields; and (4) landscaping mulch. Table 6.3 outlines the number of grants and the total annual amount of funds awarded on an annual basis from 2011 through 2016 for scrap tire projects.

TABLE 6.3
Number and Total Monetary Amount of Grants Awarded from 2011 through 2016 for Scrap Tire Projects

Fiscal Year	Number of Grants	Total Monetary Amount of Awarded Funds
2011	63	$ 1,152,500
2012	134	$ 1,855,485
2013	104	$ 1,930,714
2014	120	$ 2,176,322
2015	126	$ 2,059,000
2016	127	$ 2,081,189

6.4 NEBRASKA ENVIRONMENTAL TRUST GRANT PROGRAM

The Nebraska Environmental Trust (NET) was established in 1992 and is funded through the Nebraska Lottery. NET funds projects that fall under categories adopted by the trust board: (a) habitat; (b) surface and ground water; (c) waste management; (d) air quality; and (e) soil management. There are no restrictions on applicants or project sponsors if the project falls within the eligibility criteria established by the trust. Individuals, private organizations, and public entities can apply for funding.

Solid waste grants through NET are awarded under the waste management category. These waste management grants are distributed once a year as well as monthly. Annual grants are designated for large projects that typically cost more than $25,000. NET funds up to $15,000 of approved projects for recycling related equipment. Figure 6.3 identifies communities that have been awarded funds through the Nebraska Environmental Trust for waste management projects.

Grants for similar projects may be awarded by both the Department and NET, which illustrates an ongoing collaboration between the two organizations. The Department's director is a member of the NET board; Department grant program staff sit on the NET grant review committee. This arrangement allows for effective communication regarding solid waste management grants. It could be beneficial if a formal agreement between the Department and NET was executed to ensure the current relationship extends into the future.

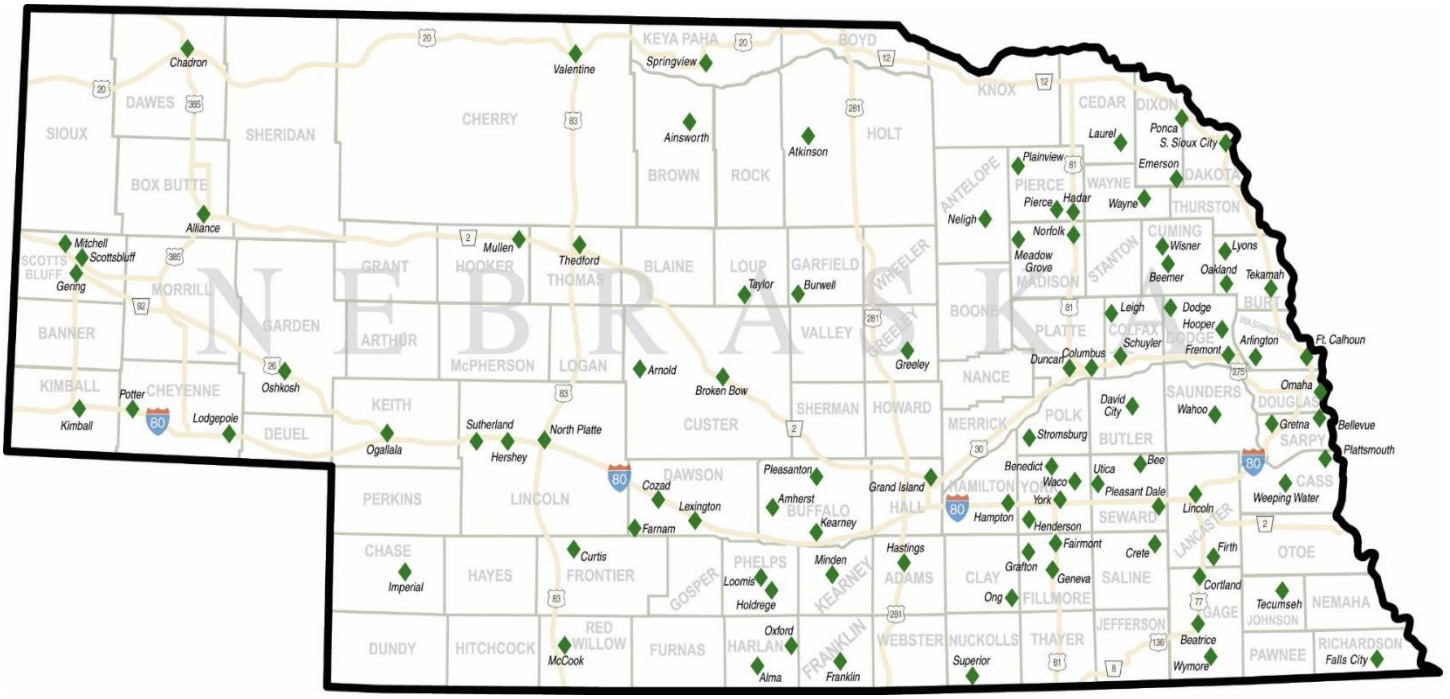


FIGURE 6.3
Communities Awarded Funding from the Nebraska Environmental Trust for Waste Management Projects from 2005 through 2016

6.5 GRANT PROGRAM ADMINISTRATION

There are 2.06 full-time employees (FTEs) within the Department budgeted for the Litter Reduction and Recycling Grant Program. Of the budgeted staff, 1.79 FTEs perform direct grant duties including the review and evaluation of grant applications, grant awards, grant quarterly reports and payments, inspections, correspondence, application assistance, and the preparation of miscellaneous reports. The remaining budgeted 0.27 FTEs provide agency support to the grant program in the form of administrative, legal, fiscal, inspection, public information, and environmental assistance. The administrative costs for the Litter Reduction and Recycling Grant Program for Fiscal Year 2016 were $320,040.

There are 2.78 FTEs within the Department budgeted for the Waste Reduction and Recycling Incentive Grants Program. Of the budgeted staff, 2.21 FTEs perform direct grant duties including the review and evaluation of grant applications, grant awards, grant quarterly reports and payments, inspections, correspondence, application assistance, and the preparation of miscellaneous reports. The remaining budgeted 0.57 FTEs provide agency support to the grant program in the form of administrative, legal, fiscal, inspection, public information, and environmental assistance. The FTEs budgeted to this program also administer the Department's Illegal Dumpsite Cleanup Program and Landfill Disposal Fee Rebate Program. The administrative costs for the Waste Reduction and Recycling Incentive Grants Program for Fiscal Year 2016 were $341,384.

The Department has improved its efficiency in the administration of the grant programs primarily through two efforts over the past five years. The Department went to a paperless process for both the Waste Reduction and Recycling Incentive Grants Program and the Litter Reduction and Recycling Program by creating an online grant application, review, and award process. The new process and the priority scoring systems for the grants programs can be found in Appendix K of this document.

In addition to improving the grant application process, the Department conducted an internal audit of its processes to better utilize its existing resources. These efficiency efforts have shortened the amount of time from application receipt to when award decisions are made and decreased the amount of time it takes the Department to review quarterly reports and initiate payment requests. While it previously took months to review quarterly reports and initiate payment requests, it now only takes days. These customer improvement efforts have primarily benefitted the public.

The application for the Illegal Dumpsite Cleanup Program and Landfill Disposal Fee Rebate Program are not yet online. These programs could be simplified by becoming paperless. In addition, the Landfill Disposal Fee Rebate Program could be streamlined by evaluating and initiating changes to the statutorily required application process.

6.6 EXPAND EXISTING GRANT PROGRAMS

As noted previously, the State of Nebraska has provided grants for recycling since 1979. This financial support increased dramatically in the early 1990's with the advent of a grant program funding from the $1.25 per ton fee placed on all solid waste disposed in the state's municipal landfills. The Nebraska Environmental Trust Fund, which provides grants for waste management projects, was also established in the early 1990's.

Solid waste and recycling stakeholders interviewed for this study greatly appreciate the funds available via grants programs; however, they also voiced opinions that:

- Funding should be expanded to allow for acquiring more equipment, conducting training, and retaining staff.
- The Department should provide more assistance in identifying favorable transportation routes.
- The Department should help to identify potential markets.

Additional opportunities for improved targeting of grant funding exists. For example, the Nebraska Solid Waste Management Hierarchy indicates that volume reduction at the source is the most important solid waste management concern. There would be benefits to increasing attention to the top tiers of this hierarchy in the award of grants. Landfills receive limited grant support, yet land disposal is the third most preferred method of disposal in the hierarchy. Improved targeting of the grant programs to address Nebraska's Solid Waste Management Hierarchy is warranted to ensure the long-term success of solid waste management throughout the state.

6.7 MERGE THE DEPARTMENT'S GRANTS PROGRAMS

Presently, the Litter Reduction and Recycling Grant Program and Waste Reduction and Recycling Incentive Grants Program award grants once a year; however, the programs do not award funds at the same time during the year. Merging the two grant programs would be of significant benefit to potential grantees. For example, merging these grant programs could reduce administrative costs, as only one application process would be required. In addition, implementing one grant program could enable two subsets of applicants: (1) applicants that need to fund significant projects or purchases (e.g., equipment, vehicles); and (2) applicants that need funds for smaller projects or purchases (e.g., bins, carts, trailers, ramps). This second subset of applicants could be allowed to submit grant applications throughout the year, as needs arise.

Repeat grant requests each grant cycle could be simplified. Multiple litter cleanup or household hazardous waste (HHW) collection events might be handled on an almost automatic basis. For example, a community that has consistently and successfully undertaken annual litter cleanup programs for several years and applies for a grant each time to cover the cost of advertising and for bags to collect the litter could submit a shorter letter application instead of the application process currently in place. The same type of letter application could be utilized for HHW programs that conduct annual cleanups or drop-off days. This approach would allow for a less onerous application-award process and would address similar programs at one time.

A definitive implementation plan to merge these two grant programs or modify the application processes currently in place has not yet been developed. It is important to note that the intended objective would be to eliminate redundancies between the two programs, improve efficiencies, continue the present level of project funding, and potentially streamline processes. It is estimated that 0.5 FTEs of the existing staff could be freed up to improve the programs if the programs were combined. Flexibility in how grant projects can be funded could be accomplished by removing current restrictions on the eligibility in grant categories and applicants for the various funding sources.

6.8 ZERO-INTEREST LOANS

There has been discussion over the years regarding the use of loans to support recycling and waste reduction programs. Discussions have ranged from deleting the matching funds requirement to increasing the matching funds requirement. Providing loans with or without interest has also been considered. Past experience with loans in Nebraska includes awarding funds to the Nebraska Energy Office, who in turn loaned out the funds for various projects tied to energy savings.[6.4] An analysis of this program indicates that it resulted in 790 new jobs and contributed $28.3 million dollars to the Nebraska Gross Domestic Product.

One of the biggest issues with loans is the increased work load required for administration. The loan process could create more work for Department personnel who would have to obtain new skills along with an increased commitment of time. This concern is driven by the likelihood that the loans would require repayment over several years and thus increase the prospect for either renewal or default.

Zero-interest loans would provide organizations access to larger sums of money with less limitations than grant funds. In addition, there is the possibility that these loans could be bought or sold which, in turn, could reduce the state's risk. Finally, if the organization receiving the loan is exceptionally responsible regarding loan management and facility operation, consideration could be made for extended loan repayment. This approach allows both the lending organization and the borrower the ability to ensure a project can be successfully completed as well as returning the funds to the lending party for use in supporting other projects.

(6.1) Keep Nebraska Beautiful. Materials Exchange Program. http://www.kb.org/exchange.html.

(6.2) City of Omaha. Under the Sink Program. http://www.underthesink.org/

(6.3) EcoStores Nebraska. http://www.ecostoresne.org/

(6.4) International Institute for Energy Conservation, Nebraska Energy Office. (1994). *Dollar and Energy Saving Loan Program, Profile #112.*

7.0 ANALYSIS

7.1 SOLID WASTE OPERATONS

As detailed in Section 3.1, there is ample landfill capacity in the state at the time of this study. The state's available landfill capacity along with reasonable tipping fees serve to lower interest in other preferred waste management options (i.e., preventing the generation of waste). However, this situation also provides an opportunity for the state to expand the breadth and reach of its waste reduction programs before these landfills reach capacity. Regardless of the estimated capacity of Nebraska's landfills, it is important to continue to reduce the flow of waste to these disposal areas to further increase their longevity.

7.2 LANDFILL BANS

Implementing new landfill bans at the state level should be driven by safety. Safety issues are currently an integral part of the regulatory framework. Constituents usually accept these types of bans as a matter of course as the hazards associated with the banned materials are easily recognized. The implementation of bans requires educational efforts that address the value of the banned material and how it will be handled. Alternatives to disposing the banned material must be established and adequately communicated.

The Department should design compliance assistance and outreach programs that assist with educational needs. Successfully banning certain materials in MSW landfills relies on effectively communicating the reasons for banning a specific material and the ban's value to the public. Emphasizing the health and safety reasons for banning a material from being disposed at MSW landfills together with the consistent reinforcement of this message are crucial in the success of any landfill ban.

7.3 RECYCLING OPERATIONS

Although there are limited regulations specifically designed for recycling, systems for collecting and processing recyclables are quite active in the state and encouraged by the Department. However, recycling efforts may be impeded locally by limiting where these operations can operate or place drop-off bins. Further, barriers to increasing recycling in Nebraska are driven by the state's characteristics. The distance between communities and processing facilities, the cost to transport recyclables, and materials market fluctuations pose formidable obstacles.

7.4 COMPOSTING OPERATIONS

The Department currently has information on the number, size, and type of compost operations that require a permit from the Department. However, the Department does not collect information on any sites that operate under the current size and type thresholds. This situation does not allow for a comprehensive evaluation of the capacity of Nebraska's composting operations. One approach would be to "permit by rule" non-permitted sites and request that minimal information on the location, size, type, and site capacity be submitted to the Department. This approach could be accomplished through forms and guidance from the Department.

Data on materials that could be composted but are currently being disposed of in municipal landfills is lacking. Periodic waste characteristic studies on municipal solid waste disposal areas would be a good tool to determine the type and quantities of compostable materials that are being disposed. Data generated from these types of studies can facilitate local and statewide planning efforts. Information from waste characterization studies undertaken at the local level should be made available to the Department in a format that is consistent from location to location, so it can be more easily compared among all operations within the state. The Department could provide forms to operators to complete on a voluntary basis.

The Department recently reviewed the current framework for the design and operation of compost sites required by regulation to ensure that the regulatory requirements are not overly burdensome for compost operations. The current standards have been established for all material types, whereas some materials can be safely composted with minimal environmental impact under minimal standards.

7.5 MARKET DEVELOPMENT

There is the potential to attract a variety of manufacturers to Nebraska that utilize recovered materials in their processes. It is important that the amount of recovered materials is accurately reported and that these materials can be reliably delivered to the end user. Knowing the quantity and availability of recovered materials for manufacturers' use is crucial to establishing and expanding markets for recyclables in Nebraska.

7.6 MATERIALS MANAGEMENT

Nebraska has adopted a waste management hierarchy that addresses materials management. The preferred approach within this hierarchy is volume reduction at the source; or stated differently, preventing waste from being generated. It is important to note that the solid waste hierarchy presents a process for managing waste. This process requires behavioral changes over time. No individual or society can instantaneously jump from engaging in and using the lower preferred approaches (recycling, reuse, and composting along with land disposal) to the top preferred approach.

Nebraska's Solid Waste Management Hierarchy is an important planning and implementation tool for the Department. It is relied upon to guide Department programs in directing efforts related to waste prevention activities. This includes establishing program priority systems for Department grant programs, with waste prevention activities and projects receiving higher priority points. While the hierarchy is a primary factor when evaluating grant applications, it is not the only factor.

The Department has relied on Nebraska's Solid Waste Management Hierarchy since the Hierarchy was established in 1992. Waste stream characteristics have changed over time as have reduction, treatment, and disposal methods. It would be beneficial for the state if the Department initiated periodic reviews – accomplished by interested stakeholders, including the general public – of the hierarchy and the projects that fall under it.

7.7 DATA COLLECTION

One of the Department's most pressing needs is comprehensive and accurate data relative to the quantity of solid waste (including recyclables and compost) materials collected, processed, stored, and sold. Local and statewide planning endeavors are hampered without this information. Including this data, along with other pertinent, local, and up-to-date information, in integrated solid waste management plans would ensure local and state government officials are prepared and can quickly and positively address fluctuations within solid waste management programs. Further, this data is vital in order to effectively plan for the closure of solid waste facilities.

Consistent and reliable waste stream data is also needed. Conducting a statewide waste stream characterization would provide this data. These studies provide a wealth of knowledge for the public, regulators, cities and counties, recycling and composting operations, processors, haulers, and transfer station and landfill operations. All these groups need up-to-date waste stream data to assist them in decisions that impact how waste is handled.

7.8 EDUCATION AND OUTREACH

An improved, coordinated effort is needed to provide continuing proactive education to Nebraska's citizens, businesses, and manufacturers. Local public education efforts currently in place provide valuable information and should be continued. The benefits of waste minimization should be emphasized along with defining zero waste and its goals. At the same time, specific efforts should be devoted to providing peer exchange opportunities to those involved in solid waste, recycling, and waste reduction endeavors. This would enable an avenue of communication among these stakeholders, and it would allow them to keep abreast of new innovations and developments in the industry.

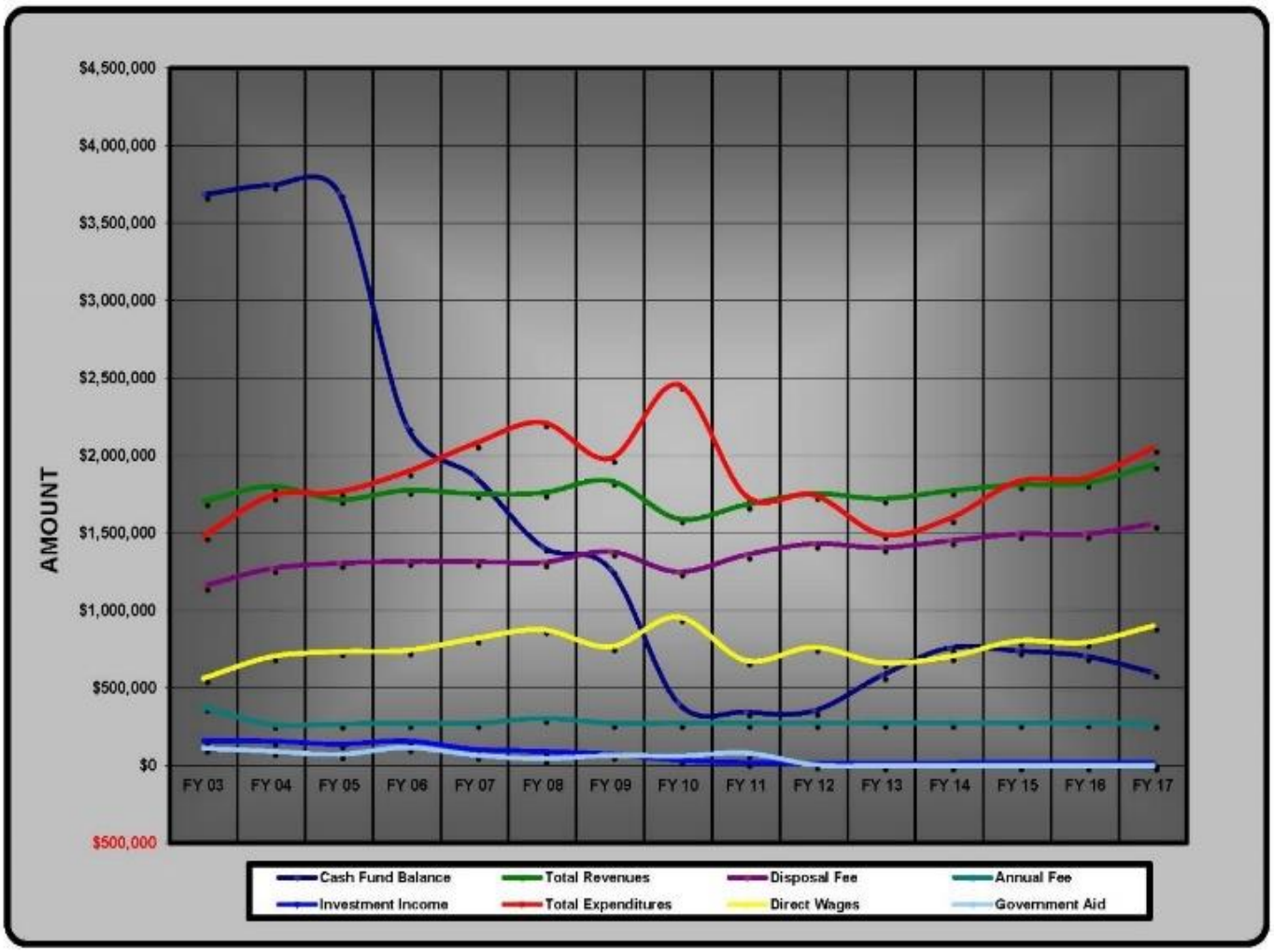
Coordinated and consistent messaging and education efforts need to be developed to address business challenges along with messages and efforts that address manufacturers. In addition, including responsible solid waste management practices into Nebraska's educational system would ensure its citizens receive coordinated and consistent messaging throughout their years of schooling. Nebraska's Solid Waste Management Hierarchy and its goal of volume reduction at the source could be communicated. Those materials that are recyclable along with information on how and where to recycle these materials could be presented. Partnering with state's Department of Education and the University of Nebraska–Extension would be instrumental to endeavor.

7.9 SOLID WASTE REGULATORY PROGRAM

The revenue generated by regulatory program fees has been sufficient to operate the Department's solid waste regulatory program. However, the financial trend indicates that program expenditures will exceed the amount of revenue generated by fees in the future.

Revenue generated from the Operating Fee and Permit Fee has remained relatively flat with a fixed number of entities that pay these fees. The Disposal Fee shows some fluctuation on a quarterly basis, but overall there is a slight upward trend in Disposal Fee revenue. An upward trend in program expenses due to increases in salaries, cost-of-living increases, health insurance costs, retirement contributions, and other operational costs have caused expenditures to exceed revenue.

Figure 7.1 depicts the revenue vs. expenditures for the Department's integrated waste management fund from Fiscal Year 2003 to Fiscal Year 2017. This graph shows the revenue and expenditures for the Department's 16.5 staff doing solid waste regulatory work (permitting, inspections and compliance) but does not include grant funds.



Source: NDEQ Fiscal Services Section

FIGURE 7.1
Revenue vs. Expenditures for Department's Integrated Waste Management Fund from Fiscal Year 2003 to Fiscal Year 2017

The Department will continue to explore areas where program efficiencies can be obtained, identify areas where program expenditures could potentially be reduced, and examine existing services to determine what is essential to protect Nebraskans.

7.10 GRANTS

The Department has significantly improved the grant application process. The amount of time from application receipt to when award decisions are made has been shortened, and the amount of time it takes the Department to review quarterly reports and initiate payment requests has decreased. These customer service improvement efforts primarily benefit the public.

The Department will consider combining the Litter Reduction and Recycling Grant Program and the Waste Reduction and Recycling Incentive Grants Program to further increase internal efficiency, simplify the application process, and allow for more flexibility in how grant projects can be funded. It is estimated that 0.5 FTEs of the existing staff could be freed up to improve the programs if the programs were combined. Flexibility in how grant projects can be funded could be accomplished by removing current restrictions on the eligibility in grant categories and applicants for the various funding sources.

The application process for the Illegal Dumpsite Cleanup Program and Landfill Disposal Fee Rebate Program are not yet online. These programs could be simplified by becoming paperless. In addition, the Landfill Disposal Fee Rebate Program could be streamlined by evaluating and initiating changes to the statutorily required application process.

Should the Department initiate additional work efforts related to the promotion, public assistance, and administration of the programs to improve the effectiveness of the programs and solid waste management in the state, the existing staff resources need to be evaluated in order to accomplish those efforts.

7.11 WASTE TIRE MANAGEMENT PROGRAM

The current regulatory structure established to ensure the proper management of scrap tires in Nebraska appears to be well balanced. It ensures scrap tires are not managed in a way that would be considered disposal instead of reused or recycled appropriately. However, since some of the states that surround Nebraska allow scrap tires to be disposed in monofill landfills, an evaluation of the current Nebraska landfill ban on the disposal of scrap tires in any form in Nebraska should be undertaken, considering that some grant program monies fund the collection and landfilling of scrap tires in other states.

Although the grant program can fund startup costs of businesses that can process scrap tires in a useable form and then used in the state, currently scrap tires in Nebraska are only processed for use as alternative daily cover or for drainage media in landfills or septic fields. No businesses in Nebraska process tires into high-end uses such as crumb rubber. Nebraska exports a large quantity of scrap tires for this purpose to other states and then pays to have those products returned to the state for use. The Department will consider ways to better utilize grant funding to attract new scrap tire processors and manufacturers to Nebraska so more of the tires generated here and now processed out of state could be processed, manufactured into products, and utilized in the state.

In addition, the categories for the types of scrap tire projects that are funded should be evaluated to determine if they are too narrow or should be broadened or eliminated. For example, the use of tire-derived fuels is well utilized in many other states and should not be excluded from funding for Nebraska projects.

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8.0
RECOMMENDATIONS

As part of this study, the Department reviewed seven Nebraska statutes pertaining to solid waste in order to ascertain if there are regulatory or statutory obstacles that hinder solid waste management in the state. The reviewed statutes, found in the Nebraska Revised Statutes, include:

- §13-2001 to 13-2042.01. Integrated Solid Waste Management Act
- §13-1701 to §13-1713. Solid Waste Disposal
- §19-2101 to §19-2111. Garbage Disposal
- §81-1534 to §81-1570. Nebraska Litter Reduction and Recycling Act
- §81-15,158.01 to §81-15,165. Waste Reduction and Recycling Incentive Act
- §81-15,166. Solid Waste Management Plan
- §81-15,167 to §81-15,176. Nebraska Environmental Trust Act

It appears that these statutes present no significant obstacle to addressing solid waste management programs. Solid waste activities are critical in meeting the goals of Nebraska's Solid Waste Management Hierarchy. This is further evidenced by the repetition of the hierarchy in the Integrated Solid Waste Management Act, Nebraska Litter Reduction and Recycling Act, Waste Reduction and Recycling Incentive Act, Nebraska Environmental Trust Act, and the Solid Waste Management Plan.

Throughout this study, activities relating to various aspects of solid waste operations in Nebraska have been discussed and evaluated. Each section touched on issues that have created either road blocks or opportunities to improve solid waste systems. Drawing upon all the information generated for the report and presented in this document, the Department identified a set of recommendations.

Note that the Department will develop a separate implementation plan to pursue these recommendations. Over the course of the preparation of the study it was recognized that some of the recommendations could be pursued immediately and the Department has already initiated some actions. One example is bringing state agencies together to examine how state government can further the goal of responsible solid waste management; those discussions have already started.

RECOMMENDATION 1: MERGE THE DEPARTMENT'S GRANTS PROGRAMS

The Litter Reduction and Recycling Grant Program awards grants for: (a) public education; (b) litter cleanup; and (c) recycling. While the Waste Reduction and Recycling Incentive Grants Program awards grants for projects that address: (a) recycling; (b) waste reduction; (c) household hazardous waste; (d) composting; and (e) scrap tires. Both programs award grants once a year; however, they do not award funds at the same time during the year.

Merging the programs would reduce redundancy between them and present the opportunity to fund more projects. It is expected that the types of projects currently funded through these two programs would continue. In addition, implementing one grant program would allow for two subsets of applicants: (1) those that need to fund significant projects or purchases (e.g., equipment, vehicles); and (2) those that need funds for smaller projects or purchases (e.g., bins, carts, trailers, ramps). This second subset of applicants could be allowed to submit grant applications throughout the year, as needs arise.

Merging the two grants programs would be of significant benefit to potential grantees as well as the Department and would facilitate:

- Further streamlining of the application process;
- Reducing administrative costs;
- Eliminating program redundancies;
- Funding more quality projects by eliminating categorical restrictions; and
- Supporting more programs in accordance with the Nebraska Solid Waste Management Hierarchy.

The Department plans to pursue the development of a legislative proposal, to be introduced in 2019, to merge the litter and waste grants programs. There are many stakeholders with an interest in this legislation; the Department will make every attempt to include all stakeholders in this effort.

RECOMMENDATION 2: ASSESS DATA AND INFORMATION NEEDS

One of the continuing themes of this study is the inconsistency of the data reported to the Department. To be able to understand where any program or organization is presently and to plan for future changes, it is critically important to have concise, accurate, and consistent data. The Department should determine what, if any, additional information is needed, the burden of producing that information, and how that information will be collected and used, in conjunction with the stakeholders.

In addition to addressing these data and information needs, a statewide waste characterization study should be conducted as soon as feasible, and follow-up studies should be conducted every five to eight years thereafter. Many of the recycling and solid waste operations managers interviewed for this study commented on the value of the Nebraska's 2009 statewide waste characterization study. Since 2009, many efforts have been instituted that impact the state's solid waste stream. An updated waste characterization study is needed to reflect the impacts of these efforts and facilitate better planning at both the local and state level.

RECOMMENDATION 3: PRIORITIZE SOLID WASTE MANAGEMENT NEEDS

As is the case in every state, there are a multitude of waste management issues in need of attention in Nebraska. These issues are dynamic and change with time. Awarding grants is one mechanism the Department relies on to address solid waste management challenges. In selecting which projects are awarded grants, the Department has established program priority systems used in the selection process. Furthermore, the Nebraska Solid Waste Management Hierarchy guides the award of grants. For example, applications characterized as waste reduction projects receive more points than projects associated with lower tiers on the hierarchy.

It is important to continue to periodically examine all solid waste management needs related to all Department solid waste management programs and prioritize those issues. The prioritization should be consistent with the principles found in the Nebraska Integrated Solid Waste Management Act. At a minimum, formal discussions should be held with stakeholders every two years. This discussion should be summarized, including specific prioritization recommendations, and a report of the effort should be posted on the Department's website.

RECOMMENDATION 4: EXPAND EDUCATIONAL AND OUTREACH OPPORTUNITIES

When designing educational and outreach programs, it is important to target areas most in need and where expenditures will provide the most benefit. Coordinated effort is needed to provide continuing proactive education so the Department, communities, schools, solid waste management agencies and facilities, and citizens can continue to address waste reduction, recycling, and composting challenges. Efforts at the local and state level should concentrate on the benefits of waste minimization along with defining zero waste and its goals.

Local public education efforts currently in place provide valuable information relative to recycling and should be continued. At the same time, specific efforts should be devoted to expanding peer exchange opportunities to those involved in solid waste, recycling, and waste reduction endeavors. This would enable these individuals an easier avenue to learn from each other's experiences and to keep abreast of new innovations and developments in the industry. In addition, the Department should develop a web-based repository of related information including, but not limited to:

- Best management practices;
- A listing of potential waste management grant opportunities;
- Educational documents prepared by grantees; and,
- A listing of materials management related organizations at the state and federal level.

The Department will convene a group of interested stakeholders to develop an overall educational and outreach strategy designed to move the state forward in its management of solid waste as well as the best use of limited grant funds.

RECOMMENDATION 5: EVALUATE THE DEPARTMENT'S EXPERTISE

The continued growth of Nebraska's solid waste management programs has been discussed throughout this study. Increases in these programs and activities have driven the need for more information and direction from the Department. It is imperative that the Department stays ahead of this growth and maintains its ability to respond to issues as they arise. Staying ahead of the growth curve will allow Nebraska to expand its comprehensive solid waste management efforts instead of being in a position of reaction and catchup.

The desire for more guidance and information from the Department was often mentioned during the public meetings held as a part of this study. The Department will continue to be a proactive participant in the management of the state's solid waste; to accomplish this, it needs to ascertain or maintain expertise in:

- Solid waste management and planning;
- Outreach and education (e.g., how to startup a recycling system; beneficial uses for materials; and waste minimization methods and strategies);
- Systems implementation (e.g., hub-and-spoke systems; pay-as-you-throw programs, etc.);
- Assessing the effectiveness of grants programs; and
- Identifying emerging technologies with the potential to improve solid waste management efforts.

RECOMMENDATION 6: STRENGTHEN STATE AGENCY COLLABORATION

The state and its agencies should serve as an example in the pursuit of sound and sustainable waste management practices. The Department will build on existing relationships with other state agencies and examine steps to further waste management goals. In addition to pursuing collaboration among state agencies, the Department should strengthen its relationships with the League of Nebraska Municipalities and the Nebraska Association of County Officials.

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APPENDIX A

Advisory Committee Members and Meeting Minutes

LB1101
Solid Waste Management Programs Study
Advisory Committee Members

Lash Chaffin
League of Nebraska Municipalities

Kelly Danielson
District Manager, Butler County Landfill & Keep Nebraska Beautiful Board Member

Danielle Easdale
Waste Reduction and Recycling Incentive Project Manager for Cass County

Fred Hlava
Retired, Gordon City Manager

George Hoellen
President, T.O. Haas, Lincoln & Advisory Committee Vice Chairperson

Jo Leyland
City Administrator, Imperial

Ed Sadler
City Manager, Sidney & Advisory Committee Chairperson

Jim Weber
President, Sandhills Plastics, Kearney

Rick Yoder, P.E.
Sustainability Program Lead, University of Nebraska-Omaha College of Business Administration & Pollution Prevention Regional Information Center Director

Solid Waste Management Program Study
First Meeting
October 27, 2016
Younes Conference Center, Kearney

In attendance: John Dempsey, Karla Welding, Angie Williams, Greg Schaffer, Dave Haldeman, Jim Macy, Carla Felix, Tricia Scott, Joe Francis, Gene Hanlon

Committee members present: Danielle Easdale, Lash Chaffin, Ed Sadler, George Hoellen, Jo Leyland, Jim Weber

Committee members not present: Rick Yoder, Kelly Danielson, and Fred Hlava.

Joe Francis began the meeting by reading a statement regarding the Open Meetings Act.

I. Jim Macy
- **A.** Jim thanked the committee members for their participation in the study. This project requires representation from across the state.
- **B.** LB 1101 was introduced by Senators Mello, Haar, Kolowski, and Schilz. NDEQ is to conduct a study of Solid Waste Management (SWM) programs and make recommendations:
  1. Should programs be merged or amended.
  2. Conduct a needs assessment of recycling and composting.
  3. Partnership opportunities to address waste management
  4. Recommendations on existing and possible new funding sources.
  5. Revisions to existing grant programs.
- **C.** Given a relatively short time to complete, given 1 year, and part of that timeline includes hiring a consultant.
- **D.** Nebraska has extremely economically feasible landfill tipping fees.
- **E.** LB 1101 Study Timeline:
  1. Director establishes an Advisory Board
  2. Department may hire a consultant
  3. Department submits recommendations to the Legislature
  4. Report is due December 15, 2017.
- **F.** DEQ Expectations for the Committee:
  1. Keep the "Big Picture" at the forefront.
  2. Strive for consensus.
  3. Focus on areas that will make a difference.
  4. Bring your expertise and life as a citizen.
  5. Respect the positions of all.
  6. Be creative and challenge the Department.
  7. Help us produce a product that doesn't collect dust.

G. Jim added the Committee may want to look at the AWIN program for a reference and resource, as the program takes into account Nebraska's population decline when assessing wastewater needs for communities. Information is available on NDEQ's website: http://deq.ne.gov/NDEQProg.nsf/OnWeb/AWIN

II. Background and History of Solid Waste Management in Nebraska- Joe Francis

A. Joe asked everyone in the room to introduce themselves.

B. What are the Committee expectations for this process?

1. Ed Sadler was asked to chair the Committee by Jim Macy.
2. George Hoellen was asked to be the co-chair.
3. Encourage open and free communication.
4. With the new administration and new Governor, DEQ is getting new perspectives on how we do things.
5. Ed stated Sidney has its own landfill and very much likes the way Nebraska approaches Solid Waste Management. Sidney has the freedom and flexibility to do what they need to do at the landfill without hassle and red tape.
6. George isn't quite sure what to expect. He is bringing a business perspective from the standpoint of running a customer-based retail business with locations statewide.
7. Lash Chaffin said he took part in the initial project to write many of the Solid Waste Management statutes and regulations, which were forged in a crisis. Having an opportunity to review them and offer recommendations with less immediate pressure will be nice.
8. Danielle Easdale has background experience from working in Europe and Australia. She is interested in seeing how modernization and updates will occur. She would like to see a shift in perception from solid waste being considered waste and being viewed as a resource.
9. Jim Weber has always viewed the garbage we dump as a resource. His business is built on using materials which are being thrown out and making them useful.
10. Jo Leyland sits on the Nebraska State Recycling Board. She has seen some help from the state with solid waste management, but everyone is on their own when it comes to recycling programs. It's difficult for smaller communities to keep their programs running, because they don't have the bargaining power or volume of materials larger communities do. She wants to see more of a move towards recycling and some facilitation through the State to allow and help communities form cooperative bargaining units.

C. Notebook materials were distributed to the Committee. Documents included were: Final Agenda for 1st meeting, a copy of the PowerPoint presentation given by Jim Macy, Joe Francis, and David Haldeman, Nebraska Scrap Tire Grant Program History, the State of Nebraska Waste Characterization Study, a map of Nebraska Solid Waste Management Facilities, Lists of Waste Facilities across the state by type with contact information for each, and a packet of Grant Program press releases.

D. Information and documents will be posted on NDEQ's website- http://deq.ne.gov.

E. Committee members are eligible to have their expenses reimbursed. Joe e-mailed a mileage log form and an expense request form to all members. He did not send the tax form Committee Members will also need to fill out in order for the State to reimburse them, but he will send it out. **ACTION ITEM: Send Committee Members Tax Form.**

F. The meeting wasn't advertised far and wide or aggressively because it was the first meeting. Once the Committee has a better idea of direction, then all meetings going forward will be advertised much more aggressively and in more outlets.

G. Legislative and Related Efforts

1. Environmental Protection Act-1971- Established the Department of Environmental Quality in the state. Tasked them to "Provide for the prevention, abatement and control of new or existing land pollution."
2. Litter Reduction and Recycling Act-1979.
   - a. Established a fee on food and beverages, pet food, tobacco products, household paper products, cleaning agents, and kitchen supplies.
   - b. Established a grant program for projects related to public education, cleanup of litter, and recycling.
3. Waste Reduction and Recycling Incentive Act-1990, LB 163, LB 1034
   - a. Had more than 400 landfills operating without permits. Every community had their own and most were unregulated.
   - b. Capacity was a concern.
   - c. Recognized waste reduction and recycling eased capacity issues.
   - d. Established a grant fund-many projects, including those related to tires are eligible for a grant fund.
   - e. Established a fee of $1.00 per tire sold in the state.
   - f. Established a fee of $25.00 on businesses with retail sales of tangible personal property of $50,000 or more.
   - g. Required the Department to contract for the preparation of a comprehensive solid waste management plan to be delivered to the Legislature by 12/15/1991.
   - i. The plan was to act as a guide to assist political subdivisions with the planning of their systems.
   - j. Lash Chaffin stated many issues which are very important to people now were side issues back then.
   - k. Lash Chaffin mentioned one difficulty encountered was presence of three different revenue streams which seem unrelated, except by the bigger picture of solid waste management.
   - l. Lash Chaffin added many public meetings were conducted during the effort.
   - m. Discovered David City landfill was taking waste from New York. It was mostly yard waste consisting of grass clippings.
4. Integrated Solid Waste Management Act-1992, LB 1257

a. Lash Chaffin said LB 1257 regulations aren't about waste management; they're about protecting soil and groundwater.
b. Lash Chaffin stated a system did develop, but it developed out of crisis.
c. Wide range of topics- CAAA 1990 to NET.
d. Assigned responsibility to PSD for waste management.
e. Required a statement of intent by 10/1/1992.
f. Waste must go to a permitted facility 10/1/1993.
g. Required submittal of a local solid waste management plan by 10/01/1994.
h. Keep the state plan current.
i. Established landfill bans-yard waste, tires, white goods, lead acid batteries, waste oil, and unregulated hazardous waste (excluding household)
j. Established the ISWM cash fund-annual fees, permit application fees, landfill disposal fees. Funds operations of the Department.
k. 50% of the fees to the WRR Grant Program for PSD grant project

5. Waste Characterization Study-2009
   a. It is dated.
   b. Eight facilities-collection in all four seasons.
   c. Establish a representative base-line for the state.
   d. Reported waste materials and waste categories.
   e. Three largest portions of Nebraska's waste stream:
      i. Paper fiber component 41.2%
      ii. Plastics component 19.1%
      iii. Food waste category 16.6%
   f. Visual Inspections
      i. E-waste 31%
      ii. Furniture 60%
      iii. Limbs and brush 46%
      iv. Construction and Demo Debris 78%
   g. Recommendations
      i. Develop a program with the eight facilities and the counties they serve and build on it.
      ii. Develop an on-going training program to provide direction on the use of the information collected.
      iii. Develop audit programs and use the data from this study in other areas of the state.
      iv. Consider replicating this effort in other areas of the state.
      v. A follow-up study should be conducted by 2013 and no later than 2016.

6. Jo Leyland has participated in a Zero Waste study with WasteCap in January 2015 in Imperial. **ACTION ITEM: DEQ would like e-copies of the Imperial Zero Waste Study.**
    a. 30% paper fiber
    b. 11% food waste
    c. 4.7% glass
    d. 18% diapers
7. One problem with taking materials out of the waste stream is there needs to be an end user for them. They have to find a market for it. Jo believes a united front is necessary to determine what kinds of materials are collected, then use the collective bargaining power to find a market.
8. Time outlay and volume produced must be considered with regard to recycling programs.

H. Advisory Committee Process

1. Anticipate a couple more meetings. Probably in mid-May and July of 2017. Joe Francis indicated this is an extremely aggressive timeline.
2. RFP for consultant will be released in December 2016.
3. The consultant will be selected in February 2017.
4. Public meetings will need to be held. **ACTION ITEM: Committee Member input is appreciated regarding topics and agendas for public meetings.**
5. A first draft of the report should be drafted July 2017.
6. The final draft will be due September 2017.
7. NDEQ's report on findings and recommendations is due December 2017.
8. This will be a two-step process. The bill calls for NDEQ to prepare a study, then submit our recommendations to the Legislature.
9. Once the report is submitted, action will be dependent upon scope of suggestions. If there are easy fixes, such as simple cleanup of language, then those may be enacted very quickly. Otherwise, it could take another Legislative session unless one of the Senators really grabs onto an issue. It could be two years before we see any results.

III. Existing Solid Waste Management Regulations and Statutes-Dave Haldeman

A. Nebraska Litter Reduction and Recycling Act

1. Litter reduction and recycling grant program.
2. Three eligible grant categories: Public Education, Cleanup, and Recycling.
3. Environmental Quality Council establishes a percent allocation for the three categories.
4. Fees to fund the program.
5. Important definitions (litter, tangible personal property, gross proceeds, recycling, manufacturer, wholesaler, and retailer)

B. Title 133-Litter Reduction and Recycling Grant Program

1. Regulations to implement the grant program.
2. Regulations approved by the Environmental Quality Council.

3. Definitions and funding categories the same as statute.
4. Outlines the administrative requirements for the grant program.
5. Administrative examples: Application content, competitive process, grant conditions (reporting, insurance, equipment service life, and disposition after use).
6. Largest share in 2016 went to Keep America Beautiful Affiliates ($1,103,401.00). Non-profits received $257,017.00. $95,631.00 went to private entities. Public entities received $630,915.00

C. Waste Reduction and Recycling Incentive Act
1. Waste reduction and recycling incentive grant program.
2. Two primary grant categories: Waste reduction and recycling and waste tire management.
3. Program Priority System for waste reduction and recycling applications approved by the Environmental Quality Council.
4. Waste tire grant applications awarded by amount and categories outlined in statute.
5. Two of the three fees to fund the program are listed in the statute.

D. Title 199 Waste Reduction and Recycling Incentive Grants Program
1. Regulations to implement the grant program.
2. Regulations approved by the Environmental Quality Council.
3. Definitions and funding categories the same as statute
4. Outlines the administrative requirements for the grant program.

E. Environmental Protection Act
1. Definitions.
2. Governor's Keep Nebraska Beautiful Committee.
3. Restrict grants or loans for tire derived fuel.
4. Regulatory requirements for composting and composting sites.
5. Violations for not obtaining permits and other unlawful acts.
6. Commercial Hazardous Waste Siting Requirements.

F. Integrated Solid Waste Management Act
1. Solid Waste Management Hierarchy.
2. Political Subdivision Responsibility.
3. Acceptable uses of waste tires.
4. Solid Waste Management Plans.
5. Land Disposal Bans.
6. Permitting Requirements.
7. Regulation Development.
8. Program Fees.
9. Two financial assistance programs.

G. Title 132- Integrated Solid Waste Management Regulations
1. Activities that require a permit and activities that are exempt from permitting requirements.

2. Solid waste management facility types.
3. Permit requirements for each facility type.
4. Annual operating and permit application fees.
5. Waste tire management requirements.

H. Solid Waste Disposal Act
1. Definition of Solid Waste Disposal Area and Processing Facility.
2. Local Site Approval Process must be completed before an applicant can submit a permit application to the department.
3. Construction commencement date.
4. Appeal process of siting denial.

I. Waste Tire Management
1. LB 672- Eliminate the $1.00 Tire Fee.
2. Primary Program Focus: Waste tire piles and market development.
3. Acceptable use of waste tires.
4. Permits required.
5. Use of tires for calendar year 2015
6. Regulatory and Grant Program legislative history.

J. Gene Hanlon suggested talking about staffing and organization. Initially there were 3-4 more employees, but NDEQ lost their Solid Waste Management Planner and the position was eliminated. Staffing is fairly stagnant. Get used to doing more with less and finding efficiencies wherever possible. **ACTION ITEM: Get NDEQ organizational chart provided to Committee.**

IV. Existing Solid Waste Management Infrastructure and Regulated Systems- Dave Haldeman

A. A map was provided to the Committee Members which coordinates with a list of facilities to show the number, location, and various types of Solid Waste Management Facilities located in Nebraska.

B. Nebraska is a very large state with lots of room. The amount of tonnage we put into landfills is very different from other places.

C. To add a new facility or expand an existing one, facilities must go through a Local Siting Approval Process.
1. Sarpy Count looked to expand. A number of counties got together. However, when a site was selected that wasn't in Sarpy County, the effort fell apart.
2. Waste Connections tried to site a new landfill near Mead, but was met with opposition.
3. The Local Siting Process can cause difficulty.

D. There are several bale fill landfills. Locations include Chadron, Gering, and Beatrice.

E. C & D sites cover as needed, unlike other landfills. Some sites have had issues with properly containing the wastes in them.

F. Nebraska does have fossil fuel (coal ash) sites; these are not listed on the map. There are 7 of them, and they are mostly operated in conjunction with Public Power Districts.

G. Nebraska has one hazardous waste disposal site in Kimball.

H. There is one Industrial Waste Site located in Omaha.

I. Kimball built their own landfill and are maintaining it.

J. In other counties, waste is monetized, so they have incentive to reduce how much waste they throw away.

K. Danielle said in England there is an annual report filled out online so data is collected on what kind of wastes are being thrown away.

L. Jim added in Missouri, a similar study was conducted and a Solid Waste Management effort was made afterwards. The state was divided into 18 SWM districts along geopolitical boundaries. Part of the tipping fee supports the grant effort. Things did go a little sideways when some funds were misappropriated.

V. Scope of Work we Want from the Consultant

A. Five Specific Things

1. Whether existing state programs regarding litter and waste reduction and recycling should be amended or merged
2. A needs assessment of the recycling and composting programs in the state, including the need for infrastructure development, operating standards, market development, coordinated public education resulting in behavior change, and incentives to increase recycling and composting.
3. Methods to partner with political subdivisions, private industry, and private, nonprofit organizations to most successfully address waste management issues in the state.
4. Recommendations regarding existing funding sources and possible new revenue sources at the state and local level to address existing and emerging solid waste management issues.
5. Revisions to existing grant programs to address solid waste management issues in a proactive manner.

B. Is there anything you would like to see included that is not on the list?

1. Ed stated in his experience, mandates don't go over well. He would like to see more incentivization rather than mandates.
   a. He would like help finding incentives/ways to create incentive projects.
   b. He would like to see some suggestions and guidance added in DEQ created resources.
2. Jo said she feels as though Midwesterners don't see solid waste as having a cost. The problem is, if we promote recycling and become hugely successful at it, then what do we do with materials when they've been collected. Economics are a huge factor.
3. Danielle added in Europe, rather than calling garbage waste, they call it "residual". It's collected every three weeks, because food and yard wastes are collected separately.
4. DEQ should share what did and didn't work for grant funded projects. Best management practices could be shared.
5. Do Nebraskans have a strong grasp of what landfills cost? We don't have adequate reporting, since there's virtually no record-keeping. Haulers don't do

reporting. Jim Weber does get asked yearly how much material he produces, but it's through an association, and has nothing to do with governance.

6. Jo Leyland said Imperial uses a Pay as You Throw system which works pretty well for them. She is very much in support of these types of programs.
7. May want to consider a "More Bang for Your Buck" approach for grants. Many small communities are marketing their recyclable materials on their own, and they have very little power. Maybe we need to consider at what dollar point it become an incentive to recycle.
8. Is there a need for us to re-evaluate hierarchy? We may need to look more at trying to convert waste to energy.
9. When programs first started, the initial fees were prioritized for closing illegal landfills. An element of reliance was built into the grants which became a kind of entitlement mentality.
10. Jim Weber starts looking at "where am I at and how do I solve it from where I am" and decides on solutions that are still feasible without any grant aid before he applies for any money.
11. Do we need concentrated effort to get government, private industry, and non-profits to work together? Jim Weber feels there's a disconnect. Danielle Easdale wanted to know if DEQ could facilitate discussions. How can DEQ do that? What would it look like?
12. There's a lack of information. Government does collect some, and if DEQ became a sort of clearing house for info, it could be helpful.
13. Should Nebraska ban certain things from marketplace (like plastic bags)? We should also have a look at landfill bans, are they effective?

VI. Public Comment

A. John Dempsey worked with NDEQ for several decades. There are great people there and they'll be a great resource. He came to see how broad or narrow the scope would be. He was curious to see. He was a huge proponent of the Integrated Solid Waste Management Act, but a clause was added to the end of it stating "if technically and economically feasible", which effectively killed the bill. Everyone could say it wasn't economically feasible and didn't have to make any changes.

Education is cheap, but behavioral change costs a lot.

He wants the consultant to evaluate waste vs. non-waste. Most of the time, perception is, if it's waste, then it's the government's problem. However, if it's a resource, then the government should stay out of it.

Dave did a great job outlining where changes are needed. Slides 20-25 were especially interesting.

B. Karla Welding echoes John's statement about the difference between education and behavior change. People always say they should recycle. They acknowledge that they should, but very few of them do.

She encourages to the extent the Committee and the consultant are able to access national and global resources, they should.

National Waste & Recycling Association: https://wasterecycling.org/
Solid Waste Association of North America: https://swana.org/
International Solid Waste Association: http://www.iswa.org/
National Solid Waste Management Association: http://www.nswma.org/

We have devoted a lot of discussion in this meeting to the economics of recycling. Recycling isn't possible if it's got to be profitable. Trying to create apples to apples comparison of costs for disposal and recycling would be very difficult.

When the Committee and consultant look at landfill bans, that's a ban at the curb. Once it reaches the landfill, it's mixed in with other wastes. It becomes both difficult and unsafe to try to separate those items.

Lincoln spent 18 months doing a solid waste study, but they have yet to be able to implement any recommendations, despite there being some very good suggestions.

C. Gene Hanlon added there is a cost to handling society's waste. Once it's disposed, it's gone forever. If it's recycled, resources are conserved. We can't look at the short term, we have to consider the societal impact. There have been published studies indicating when an institute collects 1,000 tons of material for recycling, they create two jobs. It takes another four jobs to reclaim and reuse those materials.

You don't know what you don't measure. The last waste characterization study by NDEQ showed over 80,000 tons being buried in our landfills. That's $5-7 million being buried each year. It makes more sense to spend money to recover those resources. The landfill does require their waste haulers to report each year how much they delivered.

Committee Member's Additional Ideas for Study:

1. Incentivizing -recommendations/strategies
2. Economics
3. Education
4. Market identification
5. Sharing education on best practices
6. Fees
7. Funding opportunities/duplications
8. Effectiveness of grants
9. Working regionally
10. Enhanced record keeping "reporting"
11. Reviewing hierarchy
    - Public Perception
    - Infrastructure
12. Waste to Energy
13. Market creation
14. Materials exchange programs

15. Consider product bans
16. Review landfill bans.

LB 1101 2nd Committee Meeting
December 13, 2016
Holiday Inn Conference Center, Kearney, NE

In attendance: Committee Members Kelly Danielson, Rick Yoder, George Hoellen, Ed Sadler, Jim Weber and Danielle Easdale. Also in attendance Don Arps, Candice Schroeder, Joe Francis, Tricia Scott, Mike Felix, Carla Felix, Dave Haldeman, and Jack Chappelle

Committee Members not present: Jo Leyland, Fred Hlava, and Lash Chaffin

I. Joe Francis led introductions, discussed the Open Meetings Act, and distributed packets of information to Committee Members. The necessary forms for travel reimbursement for the committee were made available.

II. The purpose of the meeting is to establish some actionable items to develop the RFP for hiring the consultant to conduct the LB 1101 mandated study. The Committee also needed to establish how they want to conduct meetings, whether they would need additional meetings, and provide input on having public meetings.

III. Review of minutes. Ed Sadler called for a review of minutes from the first meeting. There were no objections or corrections. The minutes were declared official.

IV. DEQ Presentation
   - **A.** LB 1101 Statutory Purpose
     1. Require a study to examine status of solid waste management programs.
     2. Create an Advisory Committee
     3. Eliminate Obsolete provisions
     4. Harmonize Provisions
   - **B.** Five issues that have to be addressed pursuant to statute:
     1. Existing state programs regarding litter and waste reduction should be merged/amended
     2. Assess recycling and composting programs
     3. Partnering of political subdivisions, private industry, and private nonprofit organizations
     4. Recommendations of existing and possible new funding sources to address solid waste management issues.
     5. Revisions to grant programs to address issues in a proactive manner.
   - **C.** Keep in mind the study will not be able to cover every issue brought up. We hope to have a study that covers 8-10 issues in some detail and includes recommendations for moving the state forward. We would like actionable items so, five years down the road we can look back at the study and say it played a role in what is going on.
   - **D.** A number of the obsolete statutes are provided in the committee notebooks.
     1. In the Litter Reduction and Recycling Act, there are provisions about providing containers and receptacles

2. The Integrated Solid Waste Management Act contains language referring to deadline that have already passed. Communities were required to submit declarations of capacity with regard to landfills for the next 20 years. It is past that timeline.
3. Plastic Container Labeling Act-Talks about requirements the industry area already doing.
4. There are others as well, these are just a few examples. The draft report from the consultant may have a list of regulations with comments about why the regulation is obsolete.

E. Prioritization of issues based on initial round of voting
1. Recycling-13 votes
2. Materials Management- 8 votes
3. Information-7 votes
4. Landfills- 6 votes
5. Regionalization- 6 votes
6. Waste Management Systems-5 votes
7. Local Siting- 4 votes
8. Composting- 3 votes
9. Grant Programs- 1 vote
10. Hierarchy- 1 vote
11. Energy/Tire derived fuel- 1 vote
12. Fees- 1 vote

F. Assessment of issues
1. Looking at issue papers for the priorities being selected. Criteria to be considered for each issue. Criteria to be considered include:
   a. Statutory or regulatory action needed
   b. Obstacles to change
   c. Role of partners- state, private, non-profit
   d. Incentives needed
   e. Information and metrics needed
   f. Educational needs
   g. Fees- appropriate role, source
   h. Emerging technologies/processes available
   i. BMPs from surrounding states
   j. Goals, should they be established and at what level
2. Some of the criteria may provide major part of the paper, or they may not play a significant role at all.
3. The merger of Litter and Waste Reduction programs and revisions to grant programs are very similar. Assessing recycling programs was at the top of the list, but composting programs and grant programs didn't score very high. Both will still need to be addressed in the final rankings.

G. LB 1101 Schedule
1. RFP release- Mid-January
2. RFP deadline- End of February

3. Award Contract-Late March/Early April
4. Public Meetings-May/June (if needed) The RFP calls for two public meetings, one in Omaha/Lincoln and one to be held west of North Platte.
5. Committee Meetings-July/September (if needed) RFP also calls for two more Committee meetings. May not need them, but anticipated the Committee would meet to review the draft report, then meet again to respond to the final report.

V. Expectations

A. Rick Yoder is happy with the prioritization. Wants to know when the Committee will respond to the requirements. That will happen with the draft report.

B. Kelly Danielson thanks everyone for the opportunity to serve on the Committee. He started with DEQ in the early 1990s as a landfill inspector. He believes it's time to re-evaluate the waste management programs. He is currently District Manager for Waste Connections, managing their landfills in eastern Nebraska. He also serves as Chairman of Keep Nebraska Beautiful. Jane has talked about food waste/composting a lot, and it's a priority for him. While Nebraska has a lot of land capacity, landfills are encountering difficulty with siting and capacity issues now. It will only get more difficult 5-10 years from now. He feels they need to stress recycling.

C. Rick came back to Nebraska after 10 years in Alaska where he worked in public works on the North Slope. Pollution prevention has been a passion of his throughout his career. He feels when evaluating any strategy for waste reduction, the environmental impact needs considered as much as the environmental footprint. Oregon and Minnesota are doing great things with materials management especially in their long-term thinking. Prioritizing some materials allows you to focus on materials management rather than waste streams. How can we make green practices more accessible without making them burdensome? Regionalization is also a priority, because he feels we should consider waste management by waste shed approach rather than by political subdivision.

VI. General Discussion

A. Don Arps is a facilitator working through the Center for Operational Excellence. Often finds himself facilitating events like these where he does not have much working knowledge or background. The comments were very helpful in allowing Don to frame what the Committee is here to do.

B. The issues need to have 8 prioritized, which will be covered in the report, as well as two "on deck" issues which will likely be covered. The 8 selected issues will be the core.

C. Danielle Easdale raised the question of the hierarchy needing its own item, as it's not a big workload issue.

D. When Rick looked over the Grant Programs and Fees discussion from the first meeting, he saw several incentivization suggestions. We might want to consider more direct engagement with incentives for grants.

E. Rick also feels composting should be a subset of recycling. More general language in the recycling portion of the report could be used to include composting. He explained materials management is a full lifecycle analysis, maybe 7% of that is on waste management side of it. Composting can be woven into the framework of recycling for a long-term view. Currently, composting is a timely topic, there are a lot of federal

resources available for projects. However, once the focus moves on from it, then it could be ignored completely or forgotten as a strategy.

F. Danielle said a review of fees will require a review of grants because DEQ funds some of their grant programs through fees. When those fees are collected, some of the money goes towards the grants and some of it goes towards managing the programs. Return on investment needs to be considered. Are we getting what we expect from the distribution of those grant funds?

G. Rick suggested if waste reduction is agreed upon as a goal, then a pay-as-you-throw structure may be the best approach.

H. Joe asked Carla Felix if a timeline of 2018 before anything happens with the legislature is accurate. She concurred.

I. When it comes to information, Dave can tell how much is going into each landfill based on the $1.25 /ton fee collected, he does a conversion from the payments which are received quarterly, and can calculate the total tonnage going into the state's landfills. However, they don't require any more information.

J. Lash Chaffin texted (he was unable to attend the meeting), and stated he wanted to see more information being provided as a priority issue.

K. Ed Sadler said information he would like to know is the fees all landfills are charging to their customers. If they aren't charging sufficiently to cover long-term care and costs of the facility, then they need to be made aware of that. If this is a direction the study takes, it needs to be made very clear to the consultant.

L. In response, Dave explained there are different types of financial insurance guarantees to fund closure and post closure operations. DEQ doesn't drill down too deeply on financial assurance. Does a landfill have to charge an appropriate amount to fund itself? DEQ has no such requirement.

M. Jim Weber asked if a facility is a government or public entity, then what's the point of dictating a minimum charge?

N. Ed suggested the consultant could come up with an ideal fee structure and what it needs to cover, more like a prototype recommendation that could be used to determine how to charge fees.

O. Danielle added people need to understand the true cost of a landfill, and that goes into the information category. Data gathering will contribute to being able to give better information. Reports and metrics can be developed when there is data available.

P. Dave explained the fees in the statute are just designed to fund the government programs. If the state charges $1.25/ton how does that affect recycling? As far as any fee goes, NDEQ will look at it towards funding programs. Carla said the Legislature tries to allow local governments to take care of local issues.

Q. Don asked if the Committee thinks fees should be a separate category as it is now. It is included on the assessment list, how much attention do we want on it? Kelly thinks it needs to be its own topic. All Committee members present agree Fees should get its own position paper.

R. Should information be focused on the cost of waste management? Danielle said no, the cost should be the natural output from data gathering. At the last meeting, there was a

lot of discussion about the flow of information between haulers, regulators, landfills, and other facilities.

S. Rick asked when discussing other funding sources, have we talked to other partners? He thinks there are many opportunities for partnerships with other agencies. Do we want to include partnerships as its own topic? Ed said he believes that will end up leading to a whole lot of what if, without much ability to provide concrete suggestions. The Committee agreed they want to use individual topics to narrow the focus on partnerships in relation to each topic.

T. There were no additions to the list of prioritized issues.

VII. Specific Topic Discussions

A. Hierarchy is a pretty simple thing to look at. It requires a change of legislation because it's a policy statement. Does it become important when divvying up grants? The only example Dave could think of is incineration for tire-derived fuels, which is prohibited from receiving grant money. Otherwise, it's not considered. Danielle and Ed both agreed even though the topic is straightforward, they don't want to see it dropped.

B. The question was raised about the differences between local siting and regionalization. For landfills, there is SWDA law for local siting. If you want to do a project that requires local siting, there is a review process.
Regionalization is coming up with the economics of paying for the facility you want to permit.

1. Kelly said most landfills are regional, meaning they often take waste from several communities. However, the local entity where the landfill is located is the one making the decisions. During the 1990s, a consultant originally said 7 landfills could serve the entire state, but there were many parts of the concept that wouldn't make sense. Some portions of regionalization are already in place. Most operating landfills use transfer stations, etc. We focus on waste reduction but not on waste toxicity.
2. Dave said Jo Leyland wanted a spoke and hub recycling system, which would also incorporate some regionalization.
3. Kelly continued that local siting and regionalization have different components and need to be kept separated.
4. George Hoellen said the regionalization discussion at the first meeting included some grant discussion because putting money where it makes more sense is a better use of resources.

C. Waste Management Systems needs to remain separate because it fits in so many areas.

D. The Landfill discussion has been more about bans and capacity, so the topic name should be changed to Landfill Capacity and Utilization to better reflect how the issue should be studied. When the issues list goes to the consultant, there will be guidance included.

E. Rick said Hierarchy fits with Materials Management. Ed said at that point, the topic starts to include Recycling and Composting. The difference is shown on page 2 and page 13 of the Minnesota 2015 report.

VIII. Voting on priorities

A. Each Committee Member got 8 votes. They used a sticky note to put the number of their votes they wanted to use on the appropriate topic poster.
B. Mike Felix needs to have a list of points for each topic to be covered. The priorities list from the first meeting has the appropriate level of detail, but instead of questions, the RFP needs to have actionable items.
C. The assessment of issues list can be used to create the RFP. There are many subtopics, some need to be weeded out.
D. Mike prefers to use the assessment of issues list as a jumping off point for the Committee's input on the scope of work.
E. Results:
    1. Recycling & Composting -13 votes
    2. Materials Management -12 votes
    3. Information -10 votes
    4. Grant Programs, Fees, & Incentives - 4 votes
    5. Regionalization – 2 votes
    6. Landfills- 2 votes
    7. Hierarchy- 1 vote
F. NDEQ needs to release the RFP by the middle of January. It needs to go through DAS first, which will take a minimum of 30 days. The Scope of Work needs to be submitted to DAS by Christmas.

IX. Public Meetings

A. DEQ thought 2 of them would be needed. 1 of them for the Omaha/Lincoln area and one of them in Ogallala or somewhere west of North Platte.
B. The purpose is to go to the public with the priorities and discussion to get public input.
C. The other possibility is to go out to the public with a draft report.
D. The Committee suggested posting the timeline on DEQ's website with a statement somewhere saying if you have ideas please submit them and give a link to a submission form.
E. There would likely be three meetings in August if this plan is followed, the first with the Committee to look at the draft report, then two public meetings
F. Dave believes DEQ could handle the report the same way they do with changes to rules and regulations.
    1. The changes are posted on DEQ's website. The public can submit comments via the website or by sending in written comments.
    2. If there is enough interest to hold public meetings, then the meetings are held.
G. Potential timeline for public review:
    1. The draft report will be submitted to DEQ
    2. The Department will review the report.
    3. The report will be posted to the DEQ website.
    4. In two weeks, have the Committee meet to review and discuss the draft report.
    5. 2 weeks after the Committee meeting, have two public meetings.
    6. Consolidate the feedback from meetings and incorporate into draft.
    7. Finalize the report.
    8. Give the finalized report to the Committee

9. At the end of September/beginning of October, the Department makes their recommendations

H. The LB 1101 Official Notebook should have an index/reference page.

X. Scope of Work Discussion

A. Would it be better co come up with a guiding goal for each topic? If the topics stay with the statutory requirements, then it would be assessed according to those criteria. Not all of the topics may fit those criteria.

B. Information

1. The consultant to evaluate the possibility of processing statewide data
2. From a recycling standpoint, Danielle would like to see what the per ton charges were, including if they varied per customer
   a. Haulers could give data on tons landfilled, composted, and recycled
   b. Recyclers could report tons recycled per commodity
3. Ed was concerned because they aren't recycling, so they would not have the numbers like other areas would. Danielle said if they have the data that shows you aren't recycling, then they can start asking why and what they can do to make recycling more feasible. We need the data to do these kinds of analyses.
4. There needs to be a method of data collection. Does the data collection need to be done incrementally more than is being done now, or does it need to move towards what's being done in other states? They aren't suggesting what the report should do, but would like to see methodology and a plan to eventually get there based on BMPs from other states.
5. Ed believes the report and DEQ need to talk about what DEQ will do with the information so people don't have the perception the government is just collecting information to collect it. Benefit to the public needs to be demonstrated.
6. Kelly said there's very little information on what's getting recycled in the state. Ed added more information could help identify the next thing that needs to get out of landfills.
7. Rick would like to see information at point of purchase to help consumers make informed decisions.
8. The Committee agrees they would like to see the report establish future data collection goals with the intent to use the data.

C. Materials Management

1. Kelly suggested evaluating what other states are doing and how it could be applied in Nebraska.
2. Rick said looking at the 2009 EPA report https://www.epa.gov/sites/production/files/2015-09/documents/vision2.pdf in addition to Oregon and Minnesota. Try to shift from management of waste to prevention of waste.
3. Jim said he views the waste stream as raw materials and feels people need to think about how to use those materials. Rick said tension arises because materials management can be perceived as not allowing the waste to be a low cost resource, because it costs less to landfill waste than it does to find solutions.

4. Kelly added there is a big push towards manufacturers to bring in consultants to help them minimize waste. Jim would like to see some research into these kinds of things in the report. Rick said this topic can bring partnerships in. Ed would also like to see what other state and local governments are doing. Danielle said this would also be a good topic to explore partnerships with economic development agencies, manufacturers, etc. Grant programs can be used in some instances to retrofit existing equipment. They can try to help manufacturers get to zero landfill.

D. Recycling and Composting

1. Ed said some of this is already in the information topic. If he is able to get information on how much material he has to recycle and how much his neighbors have, then they could form a group to consolidate materials and make recycling more economically feasible.
2. Jim wants to see information on methods of recyclable collection. Kearney has a great system. They use a recycling container that, once filled, goes to the recycling station and is hand sorted. Other places have little containers. Which ones work and which ones don't?
3. Danielle thinks the report should include looking at recycling co-ops. That sounds like what Ed wants. Ed said the state is going to have to help facilitate this. If they can help put co-ops together, maybe by making a sort of "match.com" site for recycling data, then they could join forces. Jim said they're also going to need data on transport costs.
4. The report will need an ROI on methods.
5. Rick said the Waste Shed idea should at least be considered. There are areas of the state where it's not feasible. The environmental impact of transport needs considered. There needs to be a data driven strategy to develop state facilitated regional co-ops. Developing a methodology to collect data will help determine which recycling methods are viable and feasible.
6. Danielle would like to see recommendations to overcome issues and hindrances especially with hub and spoke recycling systems.
7. Rick cautioned sometimes when regulations or programs are set up, they get locked into the initial method, even when better methods come along. He would really like to have the report look into other methods.
8. Danielle would like the report to explore other ways recycling can be incentivized in Nebraska. Jim asked how effective bottle bills are. Rick said pay-as-you-throw should also be mentioned.
9. Rick thinks using the food waste hierarchy for composting is a good idea. There are good opportunities for partnerships at the top levels of that hierarchy.
10. Kelly said because Nebraska has so much agriculture, they should have a good composting program.
11. Rick wants the report to consider food waste used in methane generation. On a city scale, there are several programs in the region that are effective. BMPs from other states should be included.
12. Joe said it sounds like composting and recycling should be separated.
13. Jim asked how large does a methane operation need to be before you break even?

14. Rick said the report could skip methane, but composting needs to be discussed separately, though it should still be kept within the recycling report.
15. Danielle would like to see examples of BMPs for compost and food waste that are working.
16. Kelly would like the report to say something about obstacles Nebraska will encounter.

E. Grant Programs, Fees, and Incentives
1. DEQ has three grant programs, but one project can qualify for more than one program.
2. Ed said Nebraska is a different kind of state. Local governments are limited by what the state allows them to do. He would like to see grant programs left open enough to allow for some creativity. One program for dealing with waste would be great, but the money should not end up earmarked for narrow purposes.
3. Kelly wants to see the programs treat applications equally for public and private industries.
4. Danielle would like information on lessons learned. If this information is shared with the public as part of the grant requirement, then others can learn. She wants to have more information disseminated to the public and more general grant communication.
5. Joe said Dave is committed to sharing BMPs, but having strong recommendations in the report will help DEQ achieve that.
6. Danielle said making grants a learning opportunity for everyone can help make them more strategic towards developing more sustainable programs.
7. Jim wants to see grants become more responsive. If he has to wait for the grant process to take place, then funds arrive way too late because he runs a for-profit business.
8. Danielle asked if administration of current programs is adequate or does it need to be overhauled?
9. Kelly said some money is available throughout the year.
10. Rick said if grants are awarded based on minimum requirements, then you're building infrastructure. If grants are awarded competitively, then it spurs creativity and innovation to develop programs. Both are valid but achieve different things.
11. Jim would like to see grants to businesses look more like the Community Block Development Grants, where it functions like a 0% loan. It would be like an SRF fund for waste. Danielle asked if that would be similar to the Closed Loop Fund, which is a national program. http://www.closedloopfund.com/

F. Landfills
1. Danielle said when it comes to bans, they mandate enforcement. The economic reality is, if the ban has no enforcement, it's ineffective.
2. Rick said the EPA Sustainable Materials Management: The Rood Ahead report has a list of items that could be banned.
3. Joe said to keep in mind, a ban is a ban at the curb, not at the landfill.
4. Danielle asked what the objective of a landfill ban is. If you're going to do it, how are you going to do it?

XI. Draft

A. The Scope of Work needs completed, but the turnaround time is going to have to be immediate.

B. Jim suggested Mike could send out a request for things he needs clarification on. **ACTION ITEM: Mike said he could indicate that within the draft.**

XII. Public Comment

A. Jack Chappelle said he appreciated the opportunity to attend the meeting. He was very impressed with how the Committee worked during the meeting and how much they accomplished.

LB 1101 Solid Waste Management Project Study
MEETING MINUTES

October 10, 2017 – Kearney, NE
Fairfield Inn and Suites

Present:

- Joe Francis – Nebraska Department of Environmental Quality (NDEQ)
- Dave Haldeman - Nebraska Department of Environmental Quality
- Jo Leland – Advisory Committee Member & City Administrator for the City of Imperial
- Kelly Danielson – Advisory Committee Member & District Manager for the Butler Co. Landfill
- Ed Sadler – Advisory Committee Chairman & City Manager for the City of Sidney
- Jim Weber – Advisory Committee Member & President of Sandhills Plastics
- Lash Chaffin – Advisory Committee Member & League of Nebraska Municipalities
- Rebecca Chappelle – Engineering Solutions & Design, Inc.
- Kathy Wahl – Engineering Solutions & Design, Inc.
- Jack Chappelle – Engineering Solutions & Design, Inc.

Not Present:

- Danielle Easdale – Advisory Committee Member & WRRI Project Manager in Cass County
- George Hoellen – Advisory Committee Member & President T.O. Haas, Lincoln
- Rick Yoder – Advisory Committee Member & Chief Sustainability Officer at the University of Nebraska-Omaha
- Fred Hlava – Advisory Committee Member & Retired, Gordon City Manager

Audience:

- Larissa Binod – Keep Keith County Beautiful
- Carla Felix – Nebraska Department of Environmental Quality

Ed Sadler called the meeting to order at 10:08 am and began by reading the Open Meeting Act.

Joe Francis Comments:

The last committee meeting was held on December 16, 2017. Upon review of the minutes there was one typo and one other error where "financial insurance" was used instead of "financial assurance." There were no other changes to minutes.

Distributed agenda and public meeting press release, stamped draft, that Brian McManus prepared for the public meetings.

Public meetings will be held on Tuesday, October 17, 2017 in Bridgeport and Thursday, October 19, 2017 in Lincoln. We will have plenty of Brian's handouts at the door so if someone doesn't want to speak, they can provide their written comments. There are also instructions on the handout on how to access the Nebraska Solid Waste Management Study website: https://ecmp.nebraska.gov/DEQ-SWMS/ and provide their comments. I encourage members to tout use of the website and attend one of the public meetings, if you get the opportunity.

ES&D will be discussing the draft report. One thing to remember, Jim Macy's 80/20 rule for reports: 80% accuracy, 20% leeway. There will be more meat in the final report about the committee and what you have brought to the table.

Distributed listing of committee members and requested each member verify who you represent on the attendance list and note any corrections.

The timeline for the project is:

- Final comments on draft report are due by October 31, 2017.
- The final report is due by December 1, 2017.
- Then the department will have until December 15, 2017 to come up with their recommendations, which will then be forwarded to the legislature.

Dave Haldeman Comments:

Between May and September, we took the time to meet with landfills, community leaders and HHW sites. We put together a list that identified subject areas. Facilities varied across the state and this is reflected in their comments. I'd like to share some of the comments we received.

Some comments were contradictory. For example:

- Food waste is great for landfills – Food waste should be banned and recycled
- Waste has changed since 2009 – Waste hasn't changed since 2009

Other comments included:

- Need good information on what goes into the landfill, especially in areas where you have large volumes of waste.
- Reduce the number haulers. They are currently unregulated. They have a lot of information.
- Local siting requirements should be reviewed. Approval process needs to extend out to all communities that would use the facility, not just where the landfill is located.
- Need to make changes to regulations. Some of our landfill bans need to be updated. The big one I heard is about dishwashers. They get banned from the landfill, get sent someplace to be crushed and then returned for disposal in the landfill. They are now made of plastic not metal and should not be considered white good, but plastic, so they can be disposed in the landfill.
- NDEQ needs to look at the requirements for composting and possibly revise and strengthen them. Food waste to yard waste for composting.
- Banning bags was heard a lot. But on the other hand, there is no outlet for this material. It's a difficult material to manage.
- Used oil was, at one time, valuable. Now you must pay to get rid of it.
- Don't ban items with no use.
- Tires: Our grants' programs provided funds for Amnesty Days in communities, where people could bring in their scrap tires for disposal at no cost. The flip side is that people hold onto tires in anticipation of Amnesty Days. There are no great outlets for using scrap tires. There were no suggestions that were silver bullets to the problems we have with tires. One suggestion was to completely lift the ban or allow whole tires.
- Couches and mattresses should be allowed to be disposed of in C&D landfills. They are problematic to manage at the MSW level.

- Sometimes facilities that have both a C&D and MSW facility at their location spend more time on C&D because of what needs to be removed so it can be allowed at C&D landfill. Often workers at a site throw their MSW trash into the C&D container. This must be removed as it is not allowed in the C&D landfill. One landfill purchased heavy duty bags that they provided to haulers to attach to roll-offs so people could dispose of their MSW in the bag and not put it with the C&D waste.

- Grants: Be strategic. Need an individual to work with the recyclers to find brokers for materials outlets.

- Every community where there is a Keep Nebraska Beautiful affiliate, services are provided that communities can't provide.

- We heard a lot about how landfill operators should be visiting each other, communicating. Not a lot of information is currently exchanged. It's good to go to other facilities to see ideas in practice.

- There's still a need for good, but simple, guidance documents.

- Look at the waste-energy system within the waste hierarchy.

- In some parts of the state, crushed concrete can be used for road bed preparation. In other parts, if there's a lot of sand, all it does is sink in and it doesn't make a good base.

It was a very good trip, we learned a lot.

Ed: Do kilns still use tires for fuel or is it too expensive?

Dave: We only have one cement plant in Nebraska and it doesn't burn tires. At that plant, it's more an issue that the tires must be clean, and conveyance is a problem. They can't use scrap tires from cleanups. There is a statutory ban on granting funds for tire-derived fuels.

Joe F: There are still tires that go to cement kilns. Ashgrove just decided they weren't going to pursue that. The amount of metal in tires is problematic for power plants because it creates a slag.

Ed: Discussed the use of tires for fuel in other states, for example, Missouri.

Jack Chappelle Comments:

Jack introduced himself and expressed that he was glad to have the opportunity to be there. He is the president of ES&D and provided a brief overview of the firm. ES&D has been in business since 1995 and has offices in Kansas City and Albuquerque. Jack then provided a presentation on the study.

I'd like to give you a background on the data we collected for the study. NDEQ visited all the MSW landfill facilities in the state. ES&D visited 40 entities including recycling facilities, Public Works departments, Solid Waste Agencies, non-profit organizations and Keep America Beautiful affiliates.

ES&D looked at several recycling studies done throughout the country for background. The highest number of personal interviews done in any of the other studies was 10. Most interviews were done online. An advantage of sitting down with someone is they're very honest with you and you can look at their facility, see who uses their facility. The entities we interviewed were extremely helpful, proud of what they do, and think it's the right thing to do.

Most of the recycling efforts were started at the grass-roots level. This is important because they are vested in it at that level. It wasn't driven by the state down; it was being driven from the local community up.

ES&D sent surveys electronically to 21 landfills, 9 responded. This was done as a follow-up to NDEQ's visits.

ES&D also attended a series of conferences – Kansas Organization of Recyclers, Missouri Recycling Association, National Recycling Coalition's Resource Recycling Conference. ES&D attended these conferences to see what's going on in the industry and see how it might relate to Nebraska. This was important because of what's going on in the recycling field, waste reduction arena, and reuse field. Reuse is very important because in the state's hierarchy, the primary target is zero waste.

ES&D reviewed state, regional and local plans, funding programs and state agencies in seven neighboring states – South Dakota, Wyoming, Colorado, Kansas, Iowa, Missouri, plus Minnesota.

Our review of these other states indicates that:

- No state is doing more for solid waste than Nebraska!
- Minnesota has an environmental fund that funds their grants. Grants max out at $2.5 million per year.
- The max in Nebraska is $3 million for the two NDEQ grants, with additional funds for NET grants. Nebraska is awarding as much as $1 million more than any of the other surrounding states.

- South Dakota has a 75-cent-per-ton fee on all solid waste disposed at municipal solid waste landfills, which funds their grant program. This doesn't result in a large amount of money because of the smaller population. Their grant funding is less than $1 million.

- Wyoming has no organized grants.

- Colorado's grants max out at $1.5 million per year.

- Kansas hasn't awarded grants in 14 years and just announced $100,000 available for 2018.

- Missouri uses the scrap-tire fee and funds $2 to $2.5 million per year.

- Iowa has no grants, they use loans – forgivable, 0% and 3% loans. That's how they provide support for recycling, waste reduction, and landfills.

- In most states, funding for landfill is limited. It is assumed that the fee they are charging to use their facility covers all their costs for operations, expansion, and closure.

- Colorado just did an update to their solid waste management plan and there are 24 very detailed recommendations in the plan. The problem in Colorado is they don't have the authority to implement them at the state level. Everything is centralized down to the community. The state doesn't have authority to provide grants or direct people regarding waste and recycling. Hence, the number one recommendation is to get authority.

- Bottom line: Nebraska is doing a great job in relationship to the surrounding states.

From Nebraska, the major information we used for our analysis included:

- Annual reports to the Nebraska legislature
- 2015 recycling study
- 2009 waste characterization study
- 2000 assessment of Nebraska's Grant Programs
- Legislation and statutes
- NDEQ grants programs
- NET grant programs

We also prepared issue papers on the following topics:

- Recycling and composting
- Materials management
- Information
- Grant programs
- Landfill bans

Where the state of Nebraska is lacking is in full and consistent information. It's the ability to identify and have information: how much material is being collected; how much is being disposed in the landfills; how much material is collected for recycling. The biggest issue we discovered when preparing the issue paper and this report is the lack of data available. A stronger base of information is needed to know where things are now and for future planning.

Jim: Are you aware of a study done here in Kearney 25 years ago? Two professors, Marv Glasser and Bill Wood (Physics Department at UNK) wanted a MRF in Kearney. They did a waste sort. This information might be beneficial to review.

Jack: We can look at that study and compare it to the 2009 statewide waste characterization study. It's good to have information, because waste stream changes over time.

Recommendation #1: Combine the Litter Reduction and Recycling Grant (LRRG) Program and the Waste Reduction and Recycling Incentive Grant (WRRG) Program

Jack: Implementing this recommendation would streamline the application process. The process would be more efficient, smoother, and could allow for more applicants. It could result in a broader aspect of grantees because there would be a larger pool of dollars for grants and it would move the process along more quickly. It simplifies the process for NDEQ because there is only one application process instead of two. It could result in more applicants and more creative ideas could be considered.

Dave: Currently there is confusion to know which grant to apply for.

Kelly: Previously those grant programs had a specific emphasis. LRRG was for litter reduction, information, and advertising. WRRG was for waste reduction, equipment, and that kind of thing. Is that still the case?

Dave: Previously we used the same rating system for both grants, then one was revised and improved. It's a lengthy process to revise the rating system. LRRG was for recycling, education and cleanup. WRRG has education and recycling components. LRRG does a lot of the same things as the WRRG.

The litter percentage allocation must go before Environmental Quality Council for approval, and then NDEQ has to work within those confines.

For example, tires are not a separate program, it's part of WRRI. There is a tire fee - $1 per tire sold at retail and it is legislated that $1.5 million per year of this fund will be used for tire-type projects.

Kelly: Even if programs are combined, what happens to the legislated tire funds?

Dave: That would be part of the review process. There are 3 fees for LRRG and 3 fees for WRRI.

Kelly: What are those fees and what are the dollar amounts?

Dave: The WRRI fees include:

- A business fee on the sales of tangible personal property.
- The $1 per tire fee assessed on the sale of new tires at retail.
- 50% of the $1.25 per ton disposal fee for waste that is disposed in MSW landfills.

The LRRG fees include:

- Annual fees assessed to: (1) manufacturers; (2) wholesalers, and (3) retailers.
- For manufacturers, the annual fee is $175 for each $1 million of project manufactured.
- For wholesalers, the fee is $175 for each $1 million of sales made in the state.
- For retailers, the fee is $175 for every $100,000 of sales of products that commonly contribute to litter.

For the 2016-2017 fiscal year, for the WRRI:

- Business fees collected $464,085
- Disposal fees – 50% of the $1.25 charged per ton of solid waste disposed in only MSW landfills – collected $1,410,573
- The $1 fee on the sale of new tires, of which it is legislated that $1.5 million must be spent on scrap tire projects, collected $2,252,787

We have a roadside cleanup program which totals 5% of the total $1.25 annual disposal fee funds. There was $146,903 available and $75,000 plus was refunded.

We also have a disposal fee rebate program that is also funded by the $1.25 per ton fee. If a community adopts a policy of purchasing recycled materials, it can get 10 cents of the $1.25 back when it submits receipts for reimbursement. The total amount for this fund was $105,207 and only four entities applied for a rebate. The smallest amount submitted for reimbursement was $105.

Kelly: Could the $1.25 per ton disposal fee be collected on waste disposed in C&D landfills?

Dave: That would require legislated action because as it now stands, the $1.25 per ton fee can only be collected on waste disposed in MSW landfills.

Jo L.: Can you combine the roadside dump cleanup and the 10-cent recycling rebate?

Dave: Yes, we could possibly combine these funds. Language that allows the roadside cleanup fund is in the Integrated Solid Waste Management Act.

Kelly: There is some thought that the county where the landfill is located should be the one to get the disposal fee rebate funds.

Jo L: Along with combining the grant programs, is it the plan to offer grants more frequently than once a year?

Jack: No

Jim: Businesses need grants available more frequently than once a year because they're trying to react to equipment suppliers and doesn't give the flexibility that businesses need. Particularly grants for equipment.

Kelly: Reiterated that there needs to be more flexibility and frequency of grant awards more than once a year.

Jo L: Reiterated that businesses need more frequency for funds to purchase equipment.

Ed: Indicated at the municipal level it's difficult to tie the budget to annual grant cycles.

Dave: Frequency for tire grants isn't so critical. People are accustomed to getting grants once a year.

Lash: There is a lot of overlap in the programs, but each program also has its own unique elements. Is the plan to go back and erase some of those specific requirements in each fund, or is the plan to keep all those elements in the combined grant program?

Dave: There's not a plan at this time. We would need to review what's unique about each grant. If it's combined, it should be a completely new program that takes the elements of both programs and puts it into one. At this point we're not getting into the nitty-gritty of how each recommendation would be implemented.

Larissa: Provides perspective as a grant writer. She has written grants for NDEQ. The waste reduction component includes many aspects. The recycling program is managed differently. If the programs are combined, yes, we can write for larger grants, but then it's how we're going to manage that throughout the year. She would prefer the grants are divided out for specific purposes.

Dave: Do you want the programs combined or left separate?

Larissa: Either way works. However, I like it divided. I have a concern about larger communities asking for a variety of things, while smaller communities could be pushed out. Bottom line, NDEQ gives out grants, so they need to clearly communicate how to apply and what will be funded. In the end it should be whatever is best for NDEQ to administer.

Recommendation #2: Remove the Disposal Fee Split

Jack: The disposal fee is $1.25 per ton of solid waste disposed in MSW landfills. Now 50% of the collected fee goes to grants and the other 50% goes to NDEQ to fund its solid waste program operations. The concept of this recommendation is to allow NDEQ more flexibility in how it works with this money. The 50% NDEQ part could be redistributed so more funds go to grants. This allows NDEQ more flexibility.

Ed: Feels if it's combined, that 100% of the fund instead of just 50% can be re-appropriated to the general fund. He's not trusting that the state government will leave the funds alone.

Lash: How much has total revenue from the $1.25 dropped over the last 20 years, or has it dropped?

Dave: As population increases, revenue goes up; but, there are fluctuations.

Lash: Has recycling and the increased use of C&D landfills reduced the total $1.25 per ton fees collected?

Dave: It's flattened out, but overall the trend is still up.

Jack: In the period from 2011-2016, the $1.25 fund continued to rise. Overall revenue has flattened out. It is impacted more by business and industries than by the general population.

Kelly: It's now a 50/50 split, in the future will NDEQ decide the split?

Jack: It's ES&D's understanding that the focus would be to generate more funds available for grants and give NDEQ flexibility.

Kelly: Has there been a surplus in the grant funds over the last few years?

Dave: No, not necessarily. The way we manage it, we take out the dollars to administer the programs as the programs are being administered. Regarding the 50/50 split, there was a long time where there were more funds for NDEQ than utilized, and the fund built up to about $5 million.

Jim: Could the administration dollars be limited?

Dave: Yes, it could. However, there is a certain amount of money needed to administer the solid waste programs.

Lash: Would a loss of grant money be more palatable if NDEQ had staff dedicated to market identification? If NDEQ became more hands on to make the system across Nebraska more cohesive and assist with brokering, etc.?

Ed: Yes, we need assistance to facilitate our actions, because Nebraska's population density is very diverse. There are things that NDEQ could do to make it easier for us.

Jim: The way it's set up now, if dollars are left over on the administrative side, what happens to those funds?

Dave: They sit.

Jim: How big is the fund right now?

Dave: Right now, it's stable. Here's a short history on the administrative side:

- The fund got up to $5 million.
- Staffing and inflation went up and we still had $5 million.
- Legislature took a big chunk away
- They didn't account for that money earning interest, which stabilized and paid for changes in salaries, etc.
- When they took that away, the fund tanked and then the recession hit.
- During the recession we had to come up with $500,000.
- Now it's getting to a point where the fund is stabilizing

Jim: Why couldn't you leave the fund the way it is? If that fund grows, put a stipulation in there that you can draw it down to a certain level and put the funds into grants and review it over time. In addition, put in a stipulation that the administrative side could only be robbed for grants.

Dave: You can do anything if the legislature approves it, but right now it's 50/50.

Ed: Recommend leaving the fund where it is and review costs as they continue to rise.

Lash: Doesn't want to make it easy for the legislature to divert funds to TMDL's or something unrelated. Very concerned that removing the split will allow the legislature to divert the money.

Recommendation #3: Assess NDEQ Expertise

Jack: There is the need to determine where NDEQ's current expertise is with the staff they now have. Where can it be expanded? Assess the need to have additional staff, have a broader spectrum of knowledge relating to solid waste.

Joe F: For example, do we need additional expertise for brokering, etc. as has been discussed?

Jack: Presented two examples of needing more communication among peers and a point of reference at NDEQ where communities, etc. can get information that applies to their specific circumstances, and a source that is reliable and consistent. What NDEQ is looking at in this recommendation is that you can go to NDEQ and they can give you some guidance. The perspective of the recommendation is the need to assess NDEQ's expertise and their accessibility.

Ed: There's plenty of information in this report that more information would be beneficial for all of us.

Jack: The other thing that there needs to be is a system for sharing ideas with your peers. It could be beneficial for NDEQ to set up a quasi-clearinghouse for ideas and information. Communication among communities and recyclers could reveal more efficient ways of handling materials and could enable better collaboration among the groups. In the interviews, it appeared that recyclers were not communicating much with each other.

Ed: I get a lot of communication from towns, usually with less than 20,000 population on a wide variety of subjects. Communication avenues are out there. There's not a problem talking with other communities/recyclers other than our own issues (i.e., time and more pressing priorities).

Joe F: To clarify, Ed's comments are about all sorts of things, but not necessarily about specific recycling strategies.

Lash: What inhibits communication is that recycling is a lower priority. For example, other more immediate, pressing needs and people run out of time. They have too many other facets and are too busy.

Jo L: City Clerks have a Yahoo Group that people can join that goes out to all clerks. You can only join if you're a City Clerk. She suggests NDEQ set up a similar recycling group. Recycling group participants could post questions that go to the whole group or could seek advice from other group members. Would this be viewed as detrimental for competition?

Jim: No, I already talk to other businesses in my business, and I quiz them about what they do. You must be careful not to release proprietary information, but people are still open about sharing information. Information is out there for established markets. For example, I pay for a service to get information on recyclables because they are a commodity.

Jack: It's always helpful to have another resource, share information. One of the biggest issues is time and how to prioritize your time. The idea of this recommendation is to have another resource communities/recyclers could go to for guidance and ideas specific to their situation.

Kelly: The biggest problems are always transportation and volume. If there was a clearinghouse for recyclable materials, you'd probably have buyers looking at it for materials.

Ed: NDEQ could be helpful by providing this information.

Lash: If NDEQ set up the clearinghouse, a centralized system would be able to weed out some of the erroneous information that is out there.

Clarissa: NDEQ just funded Western Nebraska Resource Group in Ogallala, which is addressing the issue of how you bring together materials on a regional level. This is something NDEQ funded and Sidney doesn't necessarily know about it. Collaboration is happening in Nebraska, but how does NDEQ get the word out there so other communities can use it?

Joe F: There is the need to stay proactive, ahead of the game. The last sentence in the recommendation is important: "Staying ahead of the growth curve will allow NDEQ to expand recycling and waste reduction in Nebraska instead of being in a position of reaction and catch up." This proactive nature is something to keep in mind.

Recommendation #4: Expand Public Education Programs and NDEQ Outreach Programs.

Jack: Recommendation 4 is a continuation of what we just talked about. There needs to be a consistency and continuity in public education and outreach programs. Public education is a continual process, so it needs to be updated and focused on what is going on today. The concept is to expand everything so there is more information out there and more ways to access it, and most importantly, ways it can be presented that are useful.

Ed: Recycling is not part of the core curriculum and it should be, at least for K-12. Unless it becomes part of the core curriculum, this will not be addressed in school. Should work with Department of Education to make it part of the core curriculum.

Joe F: A big part of this recommendation is that it's aimed at the industry itself, not necessarily K-12. For example, some people don't know how to set up a recycling system, and that could be addressed through our education and outreach programs.

Ed: Understood, but we still need to start educating our children about solid waste.

Jack: There does need to be guidance, direction and information on how recycling centers work, what are some of the things that are working now, what doesn't work anymore. SWANA has training programs, but it's inconsistent at the chapter level. Suggest making better use of SWANA to provide better information on solid waste at the school level and at the local level.

Dave: In many situations related to grants, people don't know enough about what could be done or what to ask for grant wise.

Recommendation #5: Assess Information

Jack: A better ability to capture all information possible is needed. Greater info and what's going on in all elements of solid waste. How much waste is being disposed of in landfills? How much material is being recovered? How much material is being recycled? Need to get a firm fix on what's going on; because without that you don't have a sense, for example, what your recycling rate is. You don't have a sense of how much material you're collecting every year. You don't have a sense of all the various aspects of the solid waste system in the state.

Ed: At one point in the report you mention secure information. What does that imply?

Jack: There is sometimes a case, particularly in the private sector, of not sharing proprietary information. What is proprietary varies from processor to processor and from recycler to recycler.

Lash: It was one of the barriers of the university's recycling study completed two years ago. Some people just didn't want to share information.

Jack: What is needed is data. It's very important to have a complete picture of what's going on, solid waste wise, in the state of Nebraska.

Jim: Do you have details on what kind of information is needed to assess?

Jack: For example, how much plastic is recovered every year, how much glass, how much paper? How much MSW goes into landfills in Nebraska? It has nothing to do with what a specific firm or community does, it's more a case of how is the state of Nebraska doing overall? When it comes to grants or anything else, it's going to be an obvious question from the legislature or from the public. How are we doing, what are we capturing? For example, are we capturing as much cardboard as we can, how much more is potentially out there, how much is going into the landfills? The WCS done in 2009 in Nebraska only sampled residential and commercial loads. Since 2009, one of the areas we're really concentrating on is the amount of cardboard in roll offs. In a roll-off study we did in Johnson County, Kansas, 6 of 44 roll offs we sampled contained all cardboard.

Lash: The flip side is, I completely agree with this, suppose Nebraska was intercepting as much glass as they possibly could, why waste money giving grants for glass processing facilities? But the information is just not there. We need more information, so we can be more focused.

Jack: That's a very good point. For example, we did a waste characterization study in Ohio in 2003. I was reading a report that quoted that study. What's going on in Ohio today, is not the same as what was going on in 2003. So that's why information is so important. A company may come in, look at whatever data there is, and they get a completely different read on reality. If NDEQ had more information, and if a business went to NDEQ, and were to ask where are we at and what's going on, NDEQ could provide them a clearer picture.

Jo L.: I'm curious, do you have an example of what would be proprietary information from a recycler or a landfill? Or is it more that providing the information is a pain in the neck and they don't want to do it?

Jack: It's a combination of both. Sometimes businesses just don't like to share. I don't know of anything in the recycling sector that I would say is proprietary as far as the material is concerned. It could be if you have a special sorting technique or you're using optics a little differently, things like that. That could be proprietary because who needs to know that? We just need to know the end results, it's not necessary to know how they got there. It doesn't matter how they operate.

Kelly: Pricing and maybe costing information could be considered proprietary.

Jim: In recycling, not even pricing is proprietary because it's a commodity. You can get those prices on the internet. What's proprietary to me is whatever I do in my business that gives me an advantage over my competitor in that same product line.

Ed: Quantities always seem to be proprietary. If you know that I'm doing 20 billion tons of plastic, you may think that you can get into that and steal some of my business.

Jim: But the quantity you do doesn't have any effect on the market.

Ed: Understood, but it's just a question of if you're a big enough business, can I move in and steal some of it?

Kelly: If you're First Star Fiber, do you want to share that information?

Jo L: You raise a good point, though. Why would they care?

Kelly: Just exactly what Ed said. If I'm a recycler processing 10 million pounds a month of material and that information is out there, his competitor might come in and say that's enough to make it worthwhile to start my business.

Jack: It's more a competition issue, but that's not proprietary.

Jim: Exactly, but that's why they don't want to share it.

Lash: They don't want the competition.

Kelly: They have a market share, they have a revenue stream and they're reluctant to share.

Jo L: So would that be information NDEQ would need to keep secure? Why?

Kelly: If you know how much material I'm processing, you can figure out how much money I'm making.

Jack: But that's still something you can keep secure. It's just a number, it can easily be secured.

Lash: Provided an example related to trash disposal and haulers. Private haulers don't want the competition to know exactly how many customers they serve, what their routes are.

Jim: Landfills don't want anyone to know that information because they make money on how much money goes into their landfill. They don't want the recycler to take the recyclables out of that trash. They want it all to go into the landfill.

Jack: Yes, however if you look at cardboard. It's not the easiest thing to compact in certain conditions. If this material was not disposed in the landfill, it could be beneficial to the landfill as well.

Kelly: It all comes back to volume and transportation. People throw away their recyclables every day because it's cheaper to throw it away than it is to recycle and transport them. It's a problem in rural Nebraska, in rural America, it's difficult to recycle. It comes down to what is the cheapest option for a community or a private citizen or hauler to handle a material? In most cases the consumer doesn't want to pay the true cost to recycle. That's often why recyclable materials go to a landfill. And then, we're different too because NDEQ can request all our information and we're required to give it to them, so there's nothing proprietary from a volume standpoint from landfills. It comes back to recyclers, there's not a regulatory requirement that they provide that information.

Joe F: As was pointed out in the report, in Table 3.1, the capacity in our landfills indicates we do not have a shortage of landfill space in Nebraska. But that's not to say, that we don't want to extend the life of those landfills, because we obviously do.

Recommendation #6: Assess Opportunities for State Agency Collaboration

Jack: More collaboration between the agencies and how they work together is needed to make sure that waste reduction, illegal dumping, and all the different aspects of solid waste are being addressed. Also, it's important that all the other departments within the state understand the impact they have on NDEQ, solid waste, and recycling and vice versa. It's a matter of trying to be more aggressive to get these state agencies to work together.

Joe F: If I could point out Jim's 80/20 Rule. If you add the Department of Education into the list of agencies in this recommendation, that's the 20% we're missing.

Ed: Reiterating that waste reduction and recycling isn't even on DED's radar. Right now, the DED is at a dairy conference. I bet they have never gone to a recycling conference to see if they could attract recyclers or manufacturers that use recyclable materials to the state. So, if you're serious about collaborating with other state agencies, we need to get the DED on the list. Because if it isn't on their radar it's going to be very difficult for me or any of the other towns in NE to make headway with a group that big.

The DED going to these conference does bear fruit. My most recent acquisition came from them going to the dairy show last year. So, if you're serious about that, we need to talk to the DED. Make them aware and see if we can get them to go to recycling conferences. I would really like them to see if they can find someone to use the recycled materials and manufacture something out of them.

Kelly: Our company was looking at developing a processing plant in Nebraska because we're hauling our recyclables to Wichita, Kansas. Nobody is spending a dime on recycling now because the Chinese are not buying anything anymore, so everything has been cut. I'm afraid that's what we're up against. There are no markets if you can't get it from the Midwest to the coast anymore, then we're in trouble for a while.

Ed: If that's the case, then let's take it off the table. Let's not fool ourselves that this is a good avenue if it isn't.

Kelly: Short term, I think it's going to affect what we're doing big time.

Jo L: Does that mean we should pursue markets internally instead of relying on China to buy our stuff? Make something out of it right here.

Ed: I'd rather have the users than the collectors.

Jo L: Me, too.

Lash: Home-grown market development would be a better solution in the long run.

Jim: One of the biggest state agencies we have isn't an agency, it's the University system. I'd like to see them get involved in some research on product ideas. I don't know how to do that.

Ed: If you never ask, you never know.

Jim: Seriously, if cardboard can be composted, and utilized somehow, is the agricultural college doing any research on that kind of thing? Or if you add food waste to it, and you start doing some other things, I think there's research opportunities out there for a big ag state.

Jack: From a plastics perspective, polymers are becoming a much more attractive area, depending on what kind of plastics you have, and how you can break them down, that's one of the areas the university might one to jump on. Another is if you want to use different fibers with the cardboard, for example. Another area could be how to effectively and efficiently handle tires. Tires are a big problem. More options need to be identified. Perhaps this is something the university could jump on and come up with some unique ways to use them. You might have a potential new market. But you need to start with the basics. This is the material, what can I do with it? I think if you look at the larger portions of the waste stream and identified those things that we would have a big pile of, that's the kind of thing you want to attack. Because if you have a big quantity of something you can turn into something else, there are a lot of business people that will take you up on that, because that's their biggest issue. Do you have enough material for me to use so that I can manufacture my product?

Kelly: I would kind of disagree with you that tires are a problem. I think the problem with tires is the reliance on the Amnesty Program. Have we created kind of a monster with the Amnesty Program where people hold onto them? But the amnesties have gotten smaller and smaller. Five years ago, we were shredding tons and tons of tires. There are about three or four processors in Nebraska, of which we are one, and we have an established customer base. Most tire companies are properly disposing their tires and we're shredding them. I would never argue that we're a good end use for those tires. It would be good if someone could come along with a better purpose than alternative cover. I don't think tires are the problem they used to be.

Dave: Part of the problem with the Amnesty Program is people don't want to pay the $12.00 it costs them when they buy a new set. Lincoln and Lancaster County did get a grant for a tire amnesty program, because when they don't get those grants, they see a rise in the illegal dumping of tires in ditches. People will only hold onto those tires for so long.

Kelly: Going back to the education recommendation, that would be something to focus on. Let's try to get rid of the amnesties and encourage proper disposal. I benefit from the amnesties. However, from a personal perspective, I think it would be better if we got people to handle tire disposal at the point of purchase and then those tire companies find the best ways to dispose of the tires.

Dave: Using tires for alternative daily cover is great. High end uses of tires are tire-derived fuels, crumb rubber, and processing them into other products that don't look like tires. We have grant dollars to do that, we have just not had any interest from people coming into the state to do it. We'd like to see some processing, close to the source, of tires into crumb rubber and using them to bring down the cost of roads and the manufacturing of other products.

Ed: Where do most of the tires in Nebraska end up?

Kelly: We process about a million of them a year. Probably another million goes to (inaudible). Another half million goes to River City; another half million to Resource Management in northwest Kansas, which is a tire monofill.

Omaha does maybe 400,000 - 500,000. They process some tires into a size that can be used to replace gravel. Most of the tires in Nebraska are used for alternative daily cover or sent to monofills in Kansas, one in northwest Kansas and one in Emporia.

Dave: A monofill is a landfill specifically for tires.

Jim: Do we have enough product uses for old tires to eat up the supply? Is the supply growing?

Kelly: The supply of truck tires is probably growing.

Jack: Yes, and they are a much bigger problem that auto tires.

Joe F: NUCOR and Ashgrove are the only two potential places that could use scrap tires now.

Ed: The Department of Transportation isn't making roads out of them?

Joe F: The reason the Department of Transportation is on the agency collaboration list is for that exact reason. To talk to them about whether rubber modified asphalt is something we should be pursuing?

Dave: Crumb rubber produced in Nebraska is going to be less expensive than crumb rubber they would use that is made elsewhere. In effect, they are shipping tires out, making them into crumb rubber and then shipping them back for use.

Ed: Any other comments? From NDEQ, what would you like us to come out of this with? These are the priorities we set, as a committee, before the study was done. They've come back and addressed those for us. They're still looking for comments from us specifically on this draft report. From both the committee and NDEQ, are there other things you would like from us today?

Kelly: I would like to add the university system to Recommendation 6.

Ed: Should we go so far as to give suggestions as to what we're expecting from them? For example, studies from DOT for using rubber on their roads? I'd like to at least give some ideas on what we'd like them to collaborate about. Is that reasonable?

Jim: It takes a professor at the university level, willing to write for a grant that he can them get his students involved in. You can always go out and recruit someone like that in the Engineering Department, maybe the Ag Department.

Joe F: I think there's a lot going on at the university that falls into this stuff, but it's the tech transfer thing that we're missing. How do you take information that's produced there and use it in the real world? Sometimes that's the step we miss, and I don't know how to do that. Other than to sit down and talk to them and find out what they've got going.

Jim: A lot of people, when you say university, think Lincoln. But Kearney has a real active Engineering Program, and a Physics Department. They might get involved in something like this.

Joe F: That's a good point. It's the university system we're looking at, not just Lincoln.

Lash: What's the highest priority they should be working on, product ideas in general?

Jim: I think it should be end uses for recycled materials. Because what I see is most of the ideas for end uses for recycled materials come from the private sector, and I don't see anything in the bigger way. So, if someone has an idea what to do with broken glass, and it is usually a tile or decorative thing, it's more crafty than it is business oriented. Tires it's a whole new ball game. End uses don't seem to come from a lot of research being done.

Ed: They're not using glass in road ways here either?

Joe F: They use some. Lance Headquist built a bike path out of recycled glass. Gravel from a gravel pit is probably a lot cheaper than taking glass, crushing it up and using it.

Jo L: Many years ago I read a report done by a university, where using glass as the aggregate in concrete did not hold up as well as gravel.

Jim: I can see that, where the engineering characteristics of glass and concrete are not as good as gravel. When you have a gravel pit in Nebraska, you have to do materials testing and get it certified before it's usable in concrete.

Dave: If we partner with Games and Parks on something, we can make them aware of grant funding opportunities that they can apply for a grant through the competitive process. For example, they use compost, they have food venues. There is a lot of opportunity there where we can partner. What is always difficult is going to an entity and suggesting that they apply for a grant for a specific use because this is a competitive process. Suggesting they apply for a grant for a specific project could imply some favoritism toward their project. So, in terms of working with the university system, for us to fund with them or come up with ideas, what would you see as a way to partner with them and collaborate without taking away someone else's grant money?

Kelly: Maybe you need to take away someone else's grant money. Are we providing money for more processing equipment for stuff we can't sell? If you took 10%, or 20% and put that toward research for product uses that would then would ultimately drive the price up.

Ed: Does the legislature here not set some of those priorities for these agencies?

Jim: I don't think so for the university system.

Ed: I mean DED, etc. They just told NDEQ to do a landfill study.

Jo L: Do you have the latitude to say we're going to give priority to product development?

Dave: Yes. We would need to go through a public process to get stakeholder input. So, if most stakeholders said put your money here, then we would give more points for that. But that doesn't often happen. But yes, we can set up a priority system.

Jim: When you think about it, if you used the university system to do some research in some of these areas, it's research that wouldn't get done by, for example, the City of Kearney at their MRF. They don't have the time, the resources, or the desire to do that. So, if you can convince the university to get something started, it will be easier to sell it at those other levels.

Joe F: You asked what we need from the committee, recommendations for prioritization, that's one of the questions I have. What did we miss? We'll take minutes from this meeting and consider them for inclusion in the final report. We encourage you to use the website or give us a call if you have any comments/questions after this meeting. Any comments you have are certainly appreciated.

Kelly: As you go back to Recommendation 1, combine the two grant funds, there is opportunity there to prioritize what's important?

Lash: The six recommendations are tied together. The report reads quite well. If you combine the grants, that potentially leads to reprioritization and enhanced information helps you reprioritize. The six recommendations do set the foundation for a better system.

Ed: To keep doing the grants you did ten years ago doesn't move us ahead. In order for us to grow, it's time to take that next big step. Now we need to move on to giving more priority to the next phase of industry.

Jo L: The grants have provided Imperial the opportunity to get equipment, etc. However, at this point, I think the higher priority is moving recycling further in Nebraska. As much as I hate to say it, giving grants to small communities is probably not the best use of those funds because we don't generate enough material to matter in the market. I just think the bigger picture is where we need to focus.

Ed: We need to attract those businesses that are coming up with new uses for recycled materials. You could put together a very attractive package if the state would attack it as a whole.

Jo L: We produce a lot of manure, and put that back through compost instead of using chemical fertilizers would reduce the problem of contamination to water, etc. If we could learn how to compost that feasibly, along with yard waste and food waste, and use it for soil enhancements, it would make much more sense than buying chemical fertilizers. We have lots of land out there we can test it on, if we can just get someone to do that research.

Joe F: One other thing when you look at the recommendations, it's important to keep in mind who's going to do the research and carry it through. We need to look at Rick's comments. Materials management is a huge thing.

Kelly: I read through Rick's comments, and most of it comes back to managing or assessing materials before they become waste. Right now, we're really focused on what happens to materials after they become waste. I don't know how you go about it. It could become part of the research and outreach, and public education part of it.

Joe F: The issue papers set the stage for the report, and much of what is in the issue papers is also in the report. Materials management is Rick's major concern. I think Rick may have looked at materials management differently than presented in the issue papers.

Jack: I think the point of a lot of Rick's comments were in the hierarchy, where materials management is the number one priority – no waste, zero waste. What I got from his comments on the issue papers is that he's extremely frustrated. Here's the hierarchy, and there should be a lot more conversation about materials management, about waste reduction, about reuse. That should be the focus. That's what the legislature said when they adopted the pyramid and that's what the ultimate goal is. But the difference is between the issue papers and the final report. When you read about materials management in the report, the way we looked at it was there needs to be a strong education in recognizing exactly what zero waste means, and then begin the process of working toward it. At this point, the vast amount of education has been about recycling and some reuse and waste reduction. It's a matter of changing the focus of education to materials management. In my opinion, I think it's something that will come along, but I don't know if the state is in a position to do it.

Ed: I tend to agree with you. From my perspective, it's way too early to get to that point because I don't know what to take out because I don't know where I can take it so it can be useful. It's a nice goal, but at this point because I do not have enough information, I don't know where to start.

Kelly: For me it's on the manufacturing side. Maybe the recommendation should be that zero waste is the ultimate goal; however, I don't know how we achieve it at this point.

Jo L: Is there the political will in the Midwest to make that happen? I see it on both coasts. For example, in Seattle, if you're a retailer, you cannot use plastic bags.

Ed: It's difficult to get backing for zero waste when my landfill won't run out of capacity until 2090.

Jo L: However, plastic bags are a problem. When I visit the landfill we use, and I see plastic bags all over the adjacent corn fields, it's pathetic. But I know plastic bags is just one little piece of the whole picture and we have a lot of land here. I think it would take some sort of legislative action to ban these kinds of activities.

Jack: I think a good example is Washington and Oregon and California. In all of those states there's some legislation at the state level, but almost all activity is at the local level. The larger communities are more aggressive about it, but in the rural areas of these states, they're not doing much more than you're doing. Because it's the same situation, it's the motivation, it's the infrastructure. It's going to be the same here. You have the populated areas that are going to adopt certain things sooner than smaller areas, but it will evolve. That evolution just takes time.

Joe F: And that leads me to one other thing that has occurred to me through this whole process. I noticed it during my trip to facilities around the state. Nebraska has every conceivable manner possible for handling waste. It's Jack's point exactly. It is a locally driven thing, which leads me to think back to the 90's and the requirement that each political subdivision file an integrated solid waste management plan. Would it be a good idea to have the locals go back to those plans and at least look at them and see if there's other things that can be done. Jo L, you are one of the few doing that. Do you see any benefits?

Jo L: Do you mean PAYT and that kind of thing? We definitely have a reduction in our waste, but our plan right now is in a huge mess. Again, we're a small community. We don't have an effect on the market. I would be delighted if we could do as they are in Scottsbluff, where you can take out certain things, bundle the rest of the recyclables and send them to a MRF for processing. That makes a lot more sense. We need to have a quality of materials statewide. Nebraska is so balanced one way, population is all on the east side. There are pockets of population in the west but for example, it's still a long way from Imperial.

Ed: It really surprised me coming from Iowa to here. Iowa had markets because it is closer to Chicago. Everything we had went to Chicago. With Nebraska away from those large population centers, it surprised how starkly different it is here.

Kelly: In your SWMP's, it's a waste of time and money unless you make those goals requirements. Going through the process of planning, if you're not doing it, and the plan is still where it was when you originally did it and you haven't touched it since, you're just going to open it up, stamp it again and refile it. Unless we make those goals mandates.

Lash: I don't think even that's going to work, because the pyramid is disconnected from rural areas all over the country. I don't know if anyone realized this in the 1990's, but free market systems have developed that run counter to a mandated lifestyle change. The free market system is dictating priorities instead of the pyramid. It's going to be tough to get away from a free market background.

Ed: Particularly, since we have so much landfill capacity available.

Lash: That is a deciding factor.

Jim: Going back to Kelly's point, if we make goals mandates, is it going to encourage illegal disposal? The next step is to have the legislature is to ask the legislature to make them mandates. So, if we ask them to do that, and they chose not to, what do we have to lose?

Ed: When I did hazardous waste, I moved toward making it very expensive to do the wrong thing. The flip side of that is, that it becomes financially advantageous to dispose of things illegally.

Jim: But we do have a system in place. We don't even know if we have an advocate in the legislature. At least if you do something like this, you'll find out where the legislature stands and whether you're going to have any advocates.

Joe F: What is your recommendation?

Jim: Should we shy away from making mandates because people won't go for them, so it gets voted down in the legislature? Isn't that the next step, making them part of the law? So at least it would open up the discussion to find out where we stand.

Ed: If the legislature isn't willing to give a priority to NDEQ to require the university system to conduct research is this area, they're certainly not going to go for mandates. My point is, we need to start small, get support, then move ahead.

Jim: What do you propose?

Ed: I'm looking at the legislature to make mandates within their own realm, government. For example, state agencies and departments, before setting mandates for local governments, businesses, and consumers. If they're willing to go that far, then we can see what the measure of support is to move to the next step. If the legislature is not willing to tell the DOT they're to use a certain percentage of rubber in their roadways, or the university system needs to spend this much of their time to find beneficial uses for recycled materials, then they're certainly not willing to set mandates for you and me.

Kelly: Right now pricing is low, materials are high. There is no end use. So, you need to address that before making policy.

Joe F: I would like to read one of Rick's comments. When we were talking about materials management and education, it was very appropriate. The issue papers present the following BMP from another state:

> "Create a system that is integrated with the waste hierarchy and waste minimization concept and provides information for educating the public, improving recycling, handling yard waste, addressing other activities."

Rick's comment is:

> "I agree with the preference for source reduction (i.e. avoiding waste creation) as described in the hierarchy. There is a large difference between minimal effort "education" programs providing brochures and web page information and those actual environmental outcomes as described in EPA's Environmental Education program. Education does not have to be, nor should it be, solely about end-of-life management. Environmental impact occurs throughout a material's life cycle and raising this understanding, knowledge, and skills needs to occur throughout the entire life cycle."

I think this is pretty reflective of Rick's comments and philosophy. Again, I don't wish to speak for Rick, but clearly there's a materials management preference, there's a strong educational preference. We've certainly talked about education, materials management perhaps not as much.

From here the draft report will be revised based on what we've heard here, what we're going to hear at the two public meetings, and I think it needs to incorporate the discussion we've had in regard to goals. In terms of the recommendations we'll work with Jack to see if there's things we would change. And again, we welcome your comments on those six recommendations.

Kelly: So some of the comments we've had today on the recommendations, you'll incorporate those, right?

Joe F: I encourage you to read the minutes when you get them, and if there's something we missed, definitely let us know. Or if you haven't made a comment today, please let us know.

Ed: Are the recommendations presented in any priority?

Jack: They're all equal. If you want to put them in any order, you need to let us know.

Joe F: We need to put it somewhere in the report that these recommendations are not prioritized.

Rebecca: Is there any consensus on removing the recommendation for the disposal fee split?

Lash: I would say don't remove it.

Ed: Remove the recommendation, or remove the split?

Rebecca: So I'm going to ask this slightly differently. Is the consensus to take out the recommendation?

Ed: No, I think it should be left in for comment.

Joe F: The report is one thing. The recommendations the department makes to the legislature is another.

Dave: The recommendation regarding the disposal fee reads:

> "The disposal fee is presently split equally between the state's solid waste grant programs and support of NDEQ's waste programs. Because these programs' needs fluctuate from year to year, it is recommended that an annual assessment be conducted to determine how the disposal-fee funds should be divided. This process can be addressed by a small panel of NDEQ staff who do not receive any direct support from the disposal fee."

This is the language the committee would be removing from the report.

Jo L: So does that mean that these monies could be shifted as needed?

Dave: That's the way I read it.

Jack: Yes, certain years, more money would go to the grants, other years if there is an issue internally to NDEQ, there could be more money go to them.

Kelly: So are these NDEQ's recommendations?

Joe F: When the study is final, the Director is going to make his recommendations to the legislature with regard to what can be done to modernize our solid waste programs. So, it may contain all the recommendations or none of them. It's up to him. We would be foolish not to pay close attention to this report.

Lash: I trust Dave and Joe and Jim in handling the split, I don't trust the legislature.

Ed: It doesn't seem that this is a legislature that trusts its local governments or state agencies.

Jo L: That's one of the things I see, having more frequent grant application periods would allow NDEQ to use excess funds for grants so the legislature couldn't access the funds. It seems like from what Jim said, and from our perspective as well, opportunities come up, or your business changes and you could use a grant for implementation. If you have to wait nine or twelve months for the next grant cycle, the opportunity is gone.

Ed: So, you're talking about grant periods, not the split.

Jo L: Yes and no. If you have the split, the money would be more flexible. If those grant cycles were more frequent, the money could be utilized on a more timely basis, then there wouldn't be that pot of money for the legislature to access.

Ed: My concern is, without the split, the legislature can find uses for all that money, other than grants. Right now, 50% of it has to be used for grants. If there is no restriction, what will stop them from using all of it to fund anything other than grants? It would be legal for them to do it and leave only $10,000, for example, for grants.

Lash: In previous years, all those check off funds that were dedicated solely for specific uses, the legislature went in and stripped all the funds for use in the general fund.

Ed: It's naturally what they do when times get tough. I'm afraid they will raid the fund for their own use without the restriction of the split.

Dave: It's not really a restriction. If they want to take the funds, they will.

Ed: Yes, but it's much more difficult if you must change the law and then take the funds.

Kelly: So they had to establish special legislation to enact the 50% split?

Dave: Yes.

Carla F: Those grant funds now have language in the statute that says the legislature can go in and transfer funds from these particular grant funds. So, they can go in anytime and take dollars. There are certain funds that they can't. Integrated waste is one of them that does not have that language. That language that says the legislature can transfer funds, is not in the Integrated Solid Waste Cash Fund language.

Dave: So they can create special legislation to take dollars. There is no protection.

Carla F: Theoretically no, but they will look first at the availability of funds. Otherwise, they must pass a budget bill that says we're changing our mind. We're going to transfer this fund in. We're inserting new language, so it's not protected anymore.

Ed: I think the recommendation should be left in. Our comments and concerns should be reflected in the report for anyone else who reads it.

Are you good with things, knowing you have until the 31st to provide your comments? There was no response to this question.

Joe F: On behalf of Jim, he really appreciates the time you've put in, recognizing that it comes with a cost. We can reimburse you for travel, but that's it. Your thoughts are very valuable. This is an opportunity for us to move the state forward. So, thank you very much.

Ed adjourned the meeting at 1:13 pm.

APPENDIX B

Issue Papers

ISSUE PAPERS

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INTRODUCTION

Legislative Bill 1101 directed the Nebraska Department of Environmental Quality (NDEQ) to study the status of solid waste management programs operated by the department and make recommendations to modernize and revise such programs. Five priority issues – recycling and composting, materials management, information, grant programs, and landfill bans – were identified as key components of this study. To further define these issues and identify potential options and opportunities for improvement, papers addressing these five priority issues were prepared.

Recycling and composting operations in the State of Nebraska focus on specific service areas, defined by geographic or political boundaries. Each of these operations have developed programs that focus on their specific service area. This issue paper examines recycling and composting in Nebraska through the best management practices of successful programs, from data required to establish a statewide strategy for waste reduction, identifying the economic advantages and disadvantages of selected waste management strategies, successful partnership strategies, and regulatory and statutory obstacles.

Materials management as it relates to solid waste in Nebraska, involves the collection, processing, and shipment of recyclables and solid waste. To identify and address materials management issues, this paper assesses Best Management Practices (BMPs) utilized in adjoining states, potential strategies to move from waste management to waste prevention, and methods for manufacturers to move toward zero waste landfilling.

The lack of comprehensive information regarding recycling, waste reduction, and waste disposal is of significant concern. Without a centralized program to collect information pertaining to these activities it is impossible to clearly understand the success or failure of any recycling, reuse, or disposal operation in the state. This issue paper identifies the value of thorough information and comprehensive, statewide data.

Grants provide significant support to a variety of solid waste programs throughout the state. This issue paper addresses Nebraska's present recycling and waste reduction grant programs and considers expanding those activities eligible for grant award, awarding grants more frequently, and utilizing zero-percent-interest loans or a state revolving loan program.

Landfill bans are utilized for a variety of reasons and purposes. The State of Nebraska's waste hierarchy emphatically emphasizes volume reduction at the source to divert wastes from landfills. An emphasis on removing more materials from the solid waste stream has resulted in more recycling and waste recovery programs. This issue paper considers the need for increasing or decreasing the number of bans at municipal solid waste landfills in Nebraska and methods to enforce these bans.

RECYCLING AND COMPOSTING

Recycling and composting operations in the State of Nebraska are owned and/or operated by both public and private entities. These operations focus on specific service areas, defined by geographic or political boundaries. The level of effectiveness and efficiency of these recycling and composting programs is relatively unknown. This issue paper examines the following five components of recycling and composting in Nebraska in an effort to better understand these programs.

- Best Management Practices of Successful Recycling and Composting Programs
- Data Required to Establish a Statewide Strategy for Recycling and Composting
- The Economic Advantages and Disadvantages of Selected Waste Management Strategies
- Successful Partnership Strategies
- Regulatory and Statutory Obstacles to Increasing Recycling and Composting

BEST MANAGEMENT PRACTICES

Information regarding recycling and composting programs from seven states was evaluated to determine how operations in these states compared to Nebraska. The seven states are Iowa, Missouri, South Dakota, Wyoming, Colorado, Kansas, and Minnesota. Recycling and composting operations in these states were relatively equivalent to operations throughout Nebraska. Operations in or near the largest communities in each state were typically more sophisticated than in rural areas and provided more options for collecting recyclables. As is the case in Nebraska, recycling and composting operations in nearby states varied depending upon a community's or county's commitment to recycling and/or composting and whether a facility was publicly or privately operated.

Best Management Practices (BMP) from the seven nearby states were examined. Some of these BMPs are delineated below:

- Using hub-and-spoke systems for recycling and composting programs. A variation in this concept incorporated direct hauling from one outlier community to the hub community along with the standard practice of collecting from several communities before returning to the hub.
- Instituting mandatory recycling to establish a program or revitalize a program.
- Establishing pay-as-you-throw programs for commercial accounts to stimulate recycling and target specific recyclables.

- Requiring recycling data be submitted online and accessible from the website.
- Creating a system that is integrated with the waste hierarchy and waste minimization concept and provides information for educating the public, improving recycling, handling yard waste, addressing other activities.
- Providing environmental education tools for teachers to use with students from first grade through high school.
- Employing a standardized recycling and composting message to eliminate confusion.
- Identifying and modifying city, county, and state codes that inhibit recycling and composting (i.e., littering codes that only focus on waste receptacles or codes that limit where recycling bins can be placed).
- Expanding and improving materials exchange programs.
- Establishing a sustainable purchasing program for local and state agencies.
- Developing programs for businesses and/or residents to reduce food waste.
- Setting targets to establish recycling collection in at least two communities annually.
- Collecting waste on a bi-weekly rather than weekly basis.
- Collecting recyclables and waste on the same day.

This list of BMPs is not exhaustive; however, it does provide a spectrum of ideas and tools other communities and states have utilized to further increase composting and recycling. Implementing some of these BMPs could be relatively straightforward and data from nearby states indicate they result in exceptional outcomes.

DATA REQUIREMENTS

Presently the State of Nebraska does not directly collect data relating to recycling and composting. The information that is collected is generated and provided by recycling and composting facilities. Information is provided voluntarily and is not consistent from facility to facility. During recent interviews conducted with many of the state's recycling program operators, it was found that each recycling facility collects information differently and facilities do not necessarily collect the same information. Most facilities collect information on the:

- types of materials they collect and/or process;
- quantity of materials collected and/or processed;
- number of bales or gaylords that were filled; and
- where the materials were sent for either additional sorting or final processing.

To establish a useful database, it is imperative that each facility or operation collect and submit data in formats provided by NDEQ and that the most essential information is identified for inclusion. The information that needs to be incorporated into this database includes the four items listed above as well as, but is not limited to, the following:

- quantities and types of materials accepted and processed;
- facility size and its capacity quantified as either the number of bales or tons per day the facility can handle;
- staff members' level of experience;
- facility's service area; and
- age of the material.

It is also important to understand the needs of these recycling and composting facilities. These needs may encompass not only financial support, but also knowledge, logistics, and training. At a minimum, data collected for inclusion in the database encompasses a facility's:

- level of funding and sources;
- access to reliable transportation;
- available equipment and methods to acquire additional equipment;
- staff training and public education endeavors; and
- activities related to upkeep and enhancement.

Using this information, opportunities to improve existing recycling and composting facilities could be better identified and implemented. Improved or expanded facilities could enable capturing more recyclable materials and augmenting composting activities within the state.

ECONOMIC ADVANTAGES AND DISADVANTAGES

Recycling operations have employed numerous waste management strategies in their efforts to boost the quantity of recyclables they can capture. Four strategies have been identified as potentially useful in Nebraska; a discussion of each strategy follows.

Strategy 1: Pay-As-You-Throw

The pay-as-you-throw (PAYT) strategy has been utilized throughout the United States and has produced varied results. The concept is relatively simple. Each household or business is given the option of using varying container sizes for their waste. The cause-and-effect of this strategy is direct. Lower collection or service charges result from electing to use smaller-sized containers.

A three-phase process is usually encountered when the PAYT strategy is implemented. The first phase encompasses customers choosing an adequately-sized container for their waste. Many containers are exchanged throughout the first few months of the program as users determine which container is "right sized" for them.

The second phase begins after the first few months of implementation and extends for one to three years. During this period, residential and business users experience changes that affect their waste generation. Residential users face changes in the size of their families, the range of ages in their household, and increased or decreased income levels. Increasing or decreasing business size and revenue are the most impactful changes commercial users confront. During this period, users are more likely to react to alterations in their waste generation and exchange their container for a more-appropriately sized for their circumstance.

After the program's first three years, users become more complacent and changes affecting their waste generation do not as often result in exchanging containers. In addition, because the container is attached to the dwelling or building and does not belong to or move with the resident or business owner, new residents or business owners will typically keep the container already in place unless there is a significant difference in family or business size.

One key problem of pay-as-you-throw programs is complacency on the part of both service providers and system users. Service providers become less committed to educating users about container sizes and related savings. They can make more money if the users select larger containers which can breed negative motivation and reduced education efforts.

Service users' complacency lies in their decreased desire to change containers as circumstances change. As household members age and families decrease in size, service users' urge to exchange their containers for ones smaller in size is limited. Instead, they often use the larger waste container to dispose of clothing and other items that could be recycled or reused as they begin "downsizing" in anticipation of relocating to a smaller dwelling.

Strategy 2: Bottle Bill

Bottle bills have been in place for many years. Most bottle bills concentrate on keeping glass out of the waste stream. Instead of placing their glass bottles in the trash, users return the bottles for redemption and the bottles are cleaned and reused or the glass is crushed for use as a construction material or finely crushed and used in the production of new bottles.

Data from Nebraska's statewide waste characterization study (conducted in 2007 and 2008) indicates that glass comprises only 4.91% of the state's municipal waste stream. Additionally, glass is an inorganic material that does not contain any hazardous elements. Because glass is inert and does not comprise a large portion of the waste stream, it exerts limited negative impacts to the environment when properly disposed.

The multi-faceted costs associated with handling and processing glass bottles via a redemption program (bottle bill) often outweigh any benefits. This, together with its limited presence in the waste stream and impact to the environment, overshadows the advantages of diverting glass via a bottle bill.

Strategy 3: Hub-and-Spoke Systems

The aim of a hub-and-spoke system is to facilitate recycling among a group of communities and efficiently collect and process recyclables. The system includes a recycling process center – the hub – that receives recyclables and prepares them for shipping, and a series of recycling drop-off centers – the spokes – where users deposit their recyclables which are then collected and delivered to the hub.

Implementing a hub-and-spoke system reduces transportation costs for collecting recyclables and eliminates the need for balers and forklift trucks at the recycling drop-off centers. This system also allows for cost and income sharing among the communities. Hub-and-spoke systems have been effectively implemented in rural areas similar in nature to portions of central and western Nebraska. Successful hub-and-spoke systems identify optimal routing to and from the drop-off centers and the recycling process center.

There are two primary disadvantages to the hub-and-spoke system, logistics and relationships. From a logistics standpoint, it can be difficult, and sometimes impossible, to develop an efficient routing scheme and schedule for the collection of recyclables. For the system to successfully function, it is imperative that collection routes among the drop-off centers are direct and accommodate the shortest distance possible. Additionally, it is essential that collection frequency maximizes the amount of recyclables available for collection in order to defray costs.

Maintaining a positive relationship between drop-off centers and the recycling process center is another issue of the hub-and-spoke system. These relationships can become complicated because of the number of people involved, the specific needs of each community served, and the support each community must provide to encourage recycling.

Strategy 4: Target Programs

Targeting programs are a relatively new concept and results from increased scrutiny of the municipal solid waste stream. Data from waste characterization studies conducted during the past two decades is facilitating a better understanding of materials present in the waste stream and is being used to target materials for removal. Targeting cardboard for diversion is a case in point. Roll-off containers are now being placed in strategic locations, at shopping centers for example, to capture just cardboard.

Congestion around drop-off locations is one of the disadvantages of this strategy. Another is that organizations and entities other than the local recycling center "cherry pick" high-value recyclables, sell these recyclables, and pocket the funds. This process circumvents the local recycling center and affects the revenue it can generate. Taking a high-value material out of the waste stream before it reaches the recycling center can be devastating as it can cause the center's operation margins to precipitously decrease. Many times, recycling centers rely on the income generated through the sale of high-value recyclables to fund its processing of less valuable recyclables. Diverting high-value recyclables away from the recycling center can result in the center's ultimate failure and the loss of recycling services for a community.

SUCCESSFUL PARTNERSHIP STRATEGIES

Successful recycling partnerships require mutual respect and collaboration among all partners. Participants must rely on each other and commit to opportunities presented through the partnership. Implementing the strategies outlined below can boost a partnership's success. These strategies provide a disciplined avenue to partnering, assist in maintaining trust among participants, and encourage the partnership's ultimate success.

Strategy 1: Select Mutually-Beneficial Partners

In recycling, the most important considerations for identifying partners include:

- understanding partners' access to the materials and each partner's integration with the markets;
- finding partners who can bring the elements of the materials and markets together;
- cultivating an appreciation of partnerships that foster loyalty and longevity in a volatile market; and
- vetting partners to ensure long-term compatibility and commitment.

Strategy 2: Share Information that Fits the Circumstance

A successful partnership relies on sharing information. This sharing is based on:

- identifying the type of information needed;
- determining how information will be shared among partners;
- recognizing the specific uses of the information; and
- insuring the focus of the partnership and utilization of information are in sync.

Strategy 3: Evaluate the Risk/Reward of the Partnership

In any partnership, a clear understanding of the level of risk at stake and the size of the possible risk must be considered. For many recycling operations in Nebraska the risks or rewards include:

- financial and staffing risks of partnering;
- each partner's commitment to the community and region;
- partners' obligations to utilize existing infrastructure; and
- the level of education, experience, and commitment each partner brings to the relationship.

Strategy 4: Understand and Agree on a Market Approach

In a partnership, all parties must understand what is expected relative to the markets and material movement. To this end, they need to:

- agree on changes to the existing situation of each organization or participant to advance the partnership;
- clearly voice their expectations;
- agree on how to approach the recycling market;
- maintain a clear understanding of their obligations;
- understand the anticipated risk; and
- understand the expected reward.

Strategy 5: Develop a Mutual and Flexible Approach

With recycling partnerships, it is important that all partners:

- agree and commit to providing the information needed to successfully operate;
- specify what information is needed and agree that this information will be shared among the participants;
- determine how success and failures will be measured;
- stipulate how profits or losses will be distributed; and
- identify how any partnership plans, programs, or adjustments will be handled and approved.

Partners' willingness to share information, adjust as situations evolve, and facilitate positive outcomes are essential for successful recycling partnerships.

REGULATORY AND STATUTORY OBSTACLES

The State of Nebraska has prepared a guidance document, *Permitting and Operating Compost Sites (In Accordance with Title 132 Regulations)*. This guidance document is designed to present information on the regulatory aspects of composting and the procedures and responsibilities that accompany the operation and ownership of a composting operation.

Although there are limited rules or regulations specifically designed for recycling, the systems for collecting and processing recyclables are quite active in the state and encouraged by the Nebraska Department of Environmental Quality. Because the rules and regulations related to recycling are not extensive, obstacles to increasing recycling, from a state regulatory perspective, are slight. In turn, local codes/ordinances/regulations can potentially impede certain recycling efforts by limiting where these operations can operate or place drop-off bins. Further, impacts to increasing recycling in Nebraska are driven by the state's characteristics. For example, the distances between communities and processing facilities, the cost to transport recyclables, and the markets for the recyclables can be formidable obstacles.

The impact of regulations on composting is more significant, but not excessive. The guidance document, *Permitting and Operating Compost Sites (In Accordance with Title 132 Regulations)*, clearly describes the regulations and procedures to undertake to meet these regulations. As with recycling, the proximity to markets, or end users, does impact the quantity of compost generated and its availability within the state.

Important in the establishment and successful operation of a composting facility is the education and training of compost operators. Vital to the success of composting is access to both educational tools such as seminars and training videos as well as outreach from NDEQ staff or others. The success of the compost programs is providing a strong educational base that is supported by continuing training and on-site support.

CONCLUSIONS AND POINTS OF DISCUSSION

While the industries are intimately related, the contrasts between recycling and composting warrant examination. The logistical challenges of transportation, market management and siting are magnitudes less in composting than recycling. A composting facility, once sited and built, often operates under inertial force. These concerns, transportation, siting, and market management, are ever present in recycling.

Recycling and composting both present many issues which require consideration and resolution. For example:

- How are costs to be controlled or reduced to make recycling a break-even proposition?
- With the potential increase in food waste entering composting operations, how will odors be controlled?
- Are there methods where local governments can be more involved in transporting or marketing recyclables without negatively impacting private enterprise?
- Although not available throughout the entire state, can wood chipping and the sale of wood chips be a part of composting operations?
- How can the state be more aggressive in motivating commercial and industrial business to recycle more cardboard and metals?
- Should a determination be made as to the impact of having grass clippings included or excluded from compost operations?
- Should the state conduct a survey to determine the level of interest in placing recycling facilities in all parts of Nebraska?
- Should compost from public composting operations be offered for sale at garden shops, grocery stores, and home improvement stores?
- Should the state establish goals for recycling and provide incentives to meet those goals?
- If a compost operation has excess compost, can it provide the compost to area farmers?

In recycling and composting, resolution of today's issues historically results in producing a new group of issues. With a concerted effort by all parties and a commitment to the recycling and composting processes, these programs can thrive and provide improved services and options in the areas they serve.

MATERIALS MANAGEMENT

Materials management, as it relates to the recycling system established in Nebraska, involves the collection, processing, and shipment of recyclables. This same system can also be tied to the collection, transport, and disposal of solid waste. In both instances, the material is collected or received from a generator, transported by truck, wagon, cart, or similar method, and delivered to a processing or disposal facility. Both systems attempt to complete the process as efficiently as possible.

Recycling materials management begins where recyclables are accumulated for collection. This point can be a: (1) trailer with compartments where a variety of recyclables are sorted and placed; (2) building with a series of chutes where various recyclables are inserted; or (3) cart where users place a variety of recyclables and then place it at the curb. In each case, recyclables are captured and the process of returning the recyclable to a raw material state is begun.

Once captured, collected, and delivered to a recycling facility, management of the recyclable material begins. Here, the materials are processed before they are shipped out for final processing or further sorting. Depending on the layout of the recycling facility, the material may be processed through as many as ten steps. The materials are:

- pre-sorted where they are separated into major components such as plastics, paper, and metals;
- sorted again to further segregate them into categories such as newsprint or white paper, HDPE or PET plastics, aluminum or tin;
- screened to remove contamination, which may consist of food, soils, or different materials fused together;
- sent through a trommel or similar device to remove any other non-desirable contaminants;
- placed in a bin with other like materials;
- accumulated in the appropriate bins until a sufficient quantity is assembled;
- moved from the bins to a packaging location once the quantity of material has reached a predetermined volume or weight;
- placed in gaylords, plastic tubs, or possibly baled;
- packaged and moved to storage; and finally
- moved to a loading location where they are placed on a truck, boxcar, or container for final shipment.

The ten-step process described above can vary dramatically from recycling center to recycling center. Several factors can affect the process and include the:

- size of the facility;
- age of the facility;
- geographic size of the facility's service area;
- population within the facility's service area;
- level of commitment to recycling in the facility's service area;
- availability of funds;
- availability of staff; and
- distance to the nearest material recovery facility or mill.

Subsequent sections of this paper present: (1) an assessment of the Best Management Practices (BMPs) utilized in adjoining states and their applicability in Nebraska; (2) potential strategies to move from waste management to waste prevention; and (3) possible methods for manufacturers to move toward zero waste landfilling.

BEST MANAGEMENT PRACTICES FOR MATERIALS MANAGEMENT

Best management practices (BMPs) from seven states was evaluated to determine how operations in these states compared to Nebraska. The seven states are Iowa, Missouri, South Dakota, Wyoming, Colorado, Kansas, and Minnesota. Ten BMPs were identified for possible implementation in Nebraska. These BMPs, along with their potential value and disadvantages, are presented in Table 1.

TABLE 1. ADVANTAGES AND DISADVANTAGES OF IDENTIFIED POTENTIAL BEST MANAGEMENT PRACTICES FOR MATERIALS MANAGEMENT

Best Management Practice (BMP)	Value of the BMP	Disadvantage of the BMP
Establish a sustainable purchasing program for businesses and public offices in the community.	Good stewardship Potential increases in recycling	Keeping the program active The potential level of effort required to maintain high sustainability levels
Locate green-painted dumpsters, with "Recyclables Only" printed on each side, in alleys in the commercial sections of the community.	Commercial businesses have easy access to a dumpster for recyclables Recycling centers have access to more recyclables	The cost of dumpster maintenance Potential for Contamination
Modify recycling collection trailers to allow more flexibility in the size of each bin.	Accommodates the collection of varying types and sizes of recyclables	Greater potential for cross contamination resulting from confusion with a bin's size
Monitor the trailer drop-off locations to identify traffic flow and adjust as needed.	The ability quickly adjust to the flow of materials being delivered to the drop-off trailer An early indication of the potential success of drop-off system	The potential cost of monitoring Developing the criteria to determine when a trailer should be moved
Work with large retailers to setup single-stream collection points at the front and rear of the store.	The opportunity to capture a greater volume of selected recyclables Monetary value of materials such as cardboard, white paper, certain plastics, and selected metals	The length of time the container may need to be placed at the store Increased risk of contamination and need to clearly mark which container is "trash" and which container is "recyclables"

TABLE 1. ***(continued)***

Best Management Practice (BMP)	Value of the BMP	Disadvantage of the BMP
Arrange collection trailers so smaller recyclables can be collected in removeable bags or boxes	Easier unloading from the trailers Safe and efficient speed in which the recyclable can be removed from the trailer	Additional manhours due to time required to remove the box or bag from its container
Take a census of the materials received during each quarter and determine which materials should be targeted for greater marketing and which materials do not need as much emphasis.	Recognizing the ebb and flow of the quantity of materials throughout the year Recognizing the need to direct attention to collecting more materials that may be lagging in volume or weight	Identifying a balanced method to encourage, rather than dissuade, increasing the volume of recyclables collected
Establish a traffic pattern at recycling facilities and use maps and floor markings to demarcate traffic directions and control points.	Increased safety Reduction in the number of accidents More efficient movement of materials	Applicability at certain recycling centers, some of which are small enough that an established traffic pattern is not needed
Store fiber using the first in first out (FIFO) inventory plan to maintain the material's quality.	Increased monetary value of fiber materials being sold (cleaner and fresher fiber materials command higher prices)	Attempting to time market swings and the inflow of fiber materials Risk of holding material too long or selling too soon
Take quarterly photographs of the recycling facility to note changes and to identify problem areas.	Photographs could be utilized to: track the changes in the facility; document issues with the facility's operation and record how these issues were addressed; recognize workers; and record visitors to the facility.	Failure to document the photographs and to share photographs with staff, visitors, and regulators

STRATEGIES TO SWITCH FROM WASTE MANAGEMENT TO WASTE PREVENTION

Waste prevention activities have been undertaken in the United States and Nebraska for many years. The Keep Nebraska Beautiful Material Exchange Program, reuse of bottles, donating clothing to charity organizations for sale or re-distribution to others, sending food waste to compost facilities, and recycling a variety metals, paper, and plastics are all examples of waste prevention. Interest in expanding waste prevention activities and techniques is growing as recycling and reuse programs continue to be successful at diverting materials from disposal. In Nebraska, waste prevention activities encompass recycling metals, paper, and plastics, as well as construction and demolition materials, appliances, automobiles, and other manufacturing and transportation equipment.

Some strategies can be employed to foster a stronger commitment to preventing waste rather than managing waste. The first of these strategies is to emphasize using the term "waste prevention", which will re-focus attention away from "waste management" and toward a more positive outcome – environmental improvement.

This effort to alter attitudes relative to waste could be coupled with establishing new and expanded educational programs. Using previous education programs as a basis, these new programs could focus on keeping waste out of solid waste collection vehicles, which results in preventing it from being disposed in landfills. Education could emphasize diversion techniques that can be implemented at the household level and the positive outcomes of waste prevention.

Expanding education programs to include all waste generators is critical. Along with programs directed toward individuals, it is imperative that commercial waste generators are likewise educated. These generators should be supplied with information that provides actionable techniques to prevent waste generation.

Employing education programs at the individual and business level that emphasize waste prevention rather than management can re-direct attitudes about waste. Attitudinal shifts about waste should open opportunities for the introduction of more aggressive waste prevention techniques specifically tailored to circumstances Nebraskans face.

METHODS FOR MANUFACTURERS TO MOVE TOWARD ZERO WASTE LANDFILLING

Over the past 20 years, many U.S. manufacturers have adopted methods to send minimal or zero waste to landfills. Molson Coors Brewing Company, Proctor & Gamble Company, Nestle USA, Unilever North America, and Cargill, Inc. have all embraced the zero-waste-to-landfill approach. Techniques these companies employ are tailored to their unique manufacturing processes coupled with methods that are common among many manufacturers in a range of industries. Some examples of these techniques include:

- Molson Coors Brewing Company connected all floor drains to a common drain that then connects to a treatment pond system that filters the water and removes the solids. The water is then recirculated to the plant while the solids are screened and segregated for use as road base, soil enhancement, and fines for use in concrete mixes.

- Unilever North America places bins at each press to collect metal scraps. Bins are labeled to allow for segregating the metals. All metals are either reused through an on-site reconditioning plant or shipped to other plants for reuse.

- Cargill Inc., captured the fats and tailings from meat processing activities and renders them for use in gelatins and soaps.

- Nestle USA eliminated plastic wrap for shipping purposes and utilizes cardboard and paperboard for containers.

- Proctor & Gamble Company established collection bins for white paper, colored paper, packaging, and miscellaneous wastes on each floor of district offices. Miscellaneous papers are shredded and utilized for packaging.

- At a Nestle USA plant all floors are covered with a mix of paper and wood that is ground to a coarse consistency. This mixture is swept up at the end of each production day and sent to an on-site compost operation.

- A subsidiary of Proctor and Gamble Company collects the mixed paper cut from documents generated each day and sends this material to a recovery facility located adjacent to the printing plant.

CONCLUSIONS AND POINTS OF DISCUSSION

The management of materials involves controlling and diverting materials from being disposed and identifying options to repurpose or recycle these materials. The extent of the options depends on the value and availability of a diverted material along with its flexibility for reuse.

Recycling and waste recovery programs rely on their ability to manage and control materials. The collection, storage, and packaging of recycled materials are integral to successful materials management. Controlling inventory and addressing aging materials impact the success of any recycling or waste reduction operation. Proper control and materials management are critical for a successful operation.

Issues relating to materials management vary with the type of material and the goals of a recycling or waste reduction program. Important issues to consider for successful materials management include:

- balancing storage space and aging inventory;
- finding reliable and consistent buyers;
- recognizing fluctuating markets for materials;
- meeting the interests of the public and the agencies supporting and/or directing the recycling facility;
- developing a sound business plan;
- pinpointing opportunities to team or establish a joint venture with other recyclers to handle and market certain materials;
- identifying methods to utilize or repurpose materials with low market value; and
- utilizing public education programs to control material flow and promote material reuse.

INFORMATION

Present recycling programs in the State of Nebraska have evolved into sophisticated programs. Recovered materials are viewed as commodities, bought and sold throughout the nation and rest of the world.

A key component of this industry is the financial support the Nebraska Department of Environmental Quality (NDEQ) and the Nebraska Environmental Trust (NET) have provided for various recycling programs in Nebraska. This financial support has helped fund the state's recycling infrastructure and aided in its growth. Similarly, the amount of material removed from the waste stream and collected via these recycling programs has grown dramatically.

One of the concerns about the present recycling efforts conducted throughout the state is the lack of comprehensive data regarding these endeavors. There is no centralized program to collect information pertaining to the amount of recyclable materials collected through drop-off centers and/or curbside collection. This issue paper identifies the value of thorough information and comprehensive, statewide data relative to recycling.

STATEWIDE ISSUES

The State of Nebraska, through NDEQ, has assisted with funding for recycling programs since 1979 (Nebraska Revised Statute 28-523). These funds are generated through three sources: (1) a business fee; (2) a tire fee; and (3) 50% of the $1.25 per ton disposal fee. In addition to funding available through NDEQ, the Nebraska Environmental Trust, which was established in 1992 and is funded through the Nebraska Lottery, provides grants for recycling programs. Neither organization collects thorough information relative to the types and quantity of materials recovered and recycled throughout Nebraska.

Without more robust data, it is not feasible to identify what impacts the grant programs have had on recycling in the state. Further, there is no opportunity to assess how recycling has improved year over year, or what materials are being collected.

NEED FOR INFORMATION

Comprehensive state recycling data would facilitate an annual review of the various recycling programs, assist in identifying successful and unsuccessful strategies and programs, and provide the opportunity to focus funding to improve the success rate of recycling operations and programs.

In addition, more information is needed regarding the marketing of the recyclables. With limited information, it is difficult to recognize problems or issues with the marketing of recyclables. Reliable, accurate, and comprehensive data would aid in more easily addressing issues, responding to fluctuating markets, and adjusting programs to meet the changing materials and markets.

The state currently collects tonnage data from all solid waste facilities. This data is a robust resource for the same tracking and projections desired in state recycling. While the recycling industry may be more complex, by means of material tracking and reporting, the precedent and basic infrastructure is already in place and utilized in a related arena.

TYPES OF INFORMATION

Recycling is a sophisticated industry, and appropriate analysis of the industry requires a likewise sophisticated database. Some potential datasets for this database include:

- types of material;
- monthly, quarterly, and yearly quantities of material (weights and volumes);
- age of the material;
- method of collection;
- method of transport;
- material buyers; and
- material values.

Information identified in this list is needed to determine trends, identify fluctuations in material collection, anticipate future recycling program needs, and ascertain the frequency specific materials are found in the waste stream. This information could also be used to evaluate: (1) variations in waste disposal options in different areas of the state; (2) differences between urban and rural recycling and disposal operations; and (3) unique materials generated by specialty manufacturers or agricultural endeavors.

PROTECTION OF INFORMATION

As information is collected, it will be imperative to recognize what information recycling facility owners, managers, and operators consider proprietary. It will be essential to establish database controls that maintain confidentiality and that the data collection team and facility operators respect this confidentiality. There are a variety of methods to control the security and confidentiality of information. Some examples of these methods include:

- eliminating the use of any specific facility names;
- assigning random, unique numbers to each facility;
- protecting the portal to allow for discreet data submittal;
- utilizing protected spreadsheets; and
- using protected files to segregate data.

As important as it is to protect the data, it is also important that the information provided is as complete and accurate as possible. To this end, establishing a data format that allows for consistent and comparable data to be collected should be considered.

CONCLUSIONS AND POINTS OF DISCUSSION

The ability to access information relative to recycling programs operating within Nebraska would allow NDEQ and NET the opportunity to develop a clearer picture of the impact of their investments in the state's recycling efforts. More importantly, with more comprehensive data available, detailed analyses can be conducted that provide a more thorough understanding of the industry for all stakeholders.

The ability to have a reliable and steady flow of information regarding recycling efforts in Nebraska would also provide insight into potential waste reduction efforts as well as the possibility to quickly address changes in recycling generation and recycling markets. Access to recycling information should also facilitate the development of long-term plans and strategies that can further aid in increasing waste reduction, recycling, and reuse efforts in the state.

There are several issues that will need to be addressed in order to reach a point of collecting consistent and reliable information. Some of these issues include:

- establishing a secure method of collecting information;
- requiring recycling programs to regularly report specified data regarding their programs;
- creating formats to present useable and understandable information and data;
- presenting data in a manner that does not identify any program as a winner or loser;
- making electronic equipment available to securely submit data;
- establishing a system to share information on markets and transportation opportunities;
- developing a system to share techniques to optimize the collection, sorting, storing, and transporting of materials;
- providing on-site training; and
- establishing an annual gathering of recyclers to disseminate information and conduct training.

An issue that was consistently echoed during recent site visits conducted as a part of NDEQ's Solid Waste Management Programs Study was the volatility of the recycled materials markets and fluctuating transportation costs. Some recycling operations are wholly dependent upon receiving funding through the state's annual grant programs. This limits their ability to conduct future planning; and retaining staff is a continual problem. These issues are paramount for many of the state's recycling operations and programs.

GRANT PROGRAMS

The Nebraska Department of Environmental Quality (NDEQ), and the Nebraska Environmental Trust (NET) have provided grants for recycling and waste reduction throughout the state. During this time, many recycling facilities have received financial support to purchase equipment, hire and retain staff, acquire working space, and educate the public on recycling and waste reduction issues.

Grant programs garnered much discussion during the recent interviews conducted with recycling operators located throughout Nebraska. Interviewees largely agreed that the grant programs provided by NDEQ and NET were essential for the establishment and growth of their programs. Some of the organizations noted that without these grant programs, their operation would likely not survive.

This issue paper addresses Nebraska's present recycling and waste reduction grant programs and considers:

- expanding those activities eligible for grant award;
- awarding grants more frequently; and
- utilizing loans with zero percent interest or a state revolving loan program.

EXPANSION OF EXISTING GRANT PROGRAMS

As noted previously, the State of Nebraska has provided grants for recycling since 1979. This financial support increased dramatically in the early 1990's with the advent of a grant program funded from the $1.25-per-ton fee placed on all solid waste disposed in Nebraska municipal landfills. The Nebraska Environmental Trust Fund, which provides grants for recycling program support, was also established in the early 1990's.

Recyclers greatly appreciate the funds available via grants programs; however, they also voiced their opinion that the amount of funding should be expanded to allow for acquiring more equipment, training, and staff. In addition, several recyclers voiced their desire for assistance from NDEQ regarding the sale of recyclables and identifying more-favorable transportation options.

There is a lack of consensus among the interviewed recyclers about expanding activities eligible for grant award. However, there is agreement that if materials to be accepted for recycling are increased or the mandatory recycling of certain materials is implemented, then an expansion of the grant program will be needed.

The landfill tipping fee of $1.25 per ton is currently split equally (50% each) between grants and NDEQ waste programs. It has been considered that more of the funds should go to the latter programs and less to grants, or raise the tipping fee to better accommodate both the programs and grants.

Consideration should be given to increasing the landfill tipping fee. The tipping fee was established in the early 1990's and it has not been increased since its inception. The impact of inflation has decreased the value of the tipping fee to less than $0.75. In addition, a case could be made that an increased tipping fee is justified as the number of solid waste facilities has significantly increased, and the dramatic increase in recycling and waste reduction programs is straining present fund levels. Further, an increased tipping fee could facilitate expanded recycling collection and processing in the state which, in turn, could increase waste diversion.

FREQUENCY OF GRANT AWARDS

Presently, grants are awarded once a year; however, the various grant programs do not award funds at the same time during the year. NDEQ has considered combining programs and then awarding grants more often or even continuously, which raises the issue of the availability of funds throughout the year.

Increased frequency in awarding grants would allow NDEQ to react more quickly to the need of grantees and other issues that may occur. The grant application award and review process may need to be shortened if grants are distributed more frequently. The recently-implemented online process should aid in shortening the application and review processes. However, it is important to note that this online process is a statewide system designed to do a variety of things and it may need to be modified to more specifically address the grant application and award process.

An alternative to more grant award dates would be making all grant award dates the same. This approach may simplify the grant process and allow for consolidation of grant programs. The major difficulty with this approach is that the various programs were created at different times, with different legislation and different funding sources.

Treating common similar requests the same and awarding them on a less onerous basis should be considered. For example, all litter cleanup, or all household hazardous waste (HHW) collection events might be handled on an almost automatic basis. This approach would allow for a more rapid grant response and addresses similar programs at once.

ESTABLISHMENT OF A LOAN PROGRAM

There has been discussion over the years regarding the use of loans to support recycling and waste reduction programs. Discussion has ranged from deleting the matching funds requirement, to increasing matching fund requirements. In addition, there was consideration to providing loans with or without interest. Past experience with loans included awarding funds to the Nebraska Energy Office, who in turn loaned out the funds for various waste reduction activities. These loans were usually for projects tied to energy savings.

One of the biggest issues with loans is the perceived increase in the work load required for administration. The loan process could create more work for NDEQ personnel who would have to obtain new skills along with an increased commitment of time. This concern is driven by the likelihood that the loans would require repayment over several years and thus increase the prospect for either renewal or default. If a loan program is considered it would be prudent that the program be administered by the private sector and overseen by a government agency such as NDEQ.

Zero-interest loans would provide organizations access to larger sums of money with less limitations than grant funds. In addition, there is the possibility that these loans could be bought or sold which in turn could reduce the risk for NDEQ. Finally, if the organization receiving the loan is exceptionally responsible regarding loan management and facility operation, consideration could be made for loan forgiveness. Loan forgiveness would be based upon meeting certain criteria, benchmarks, and other parameters.

CONCLUSIONS AND POINTS OF DISCUSSION

The grant programs for recycling and waste reduction in the State of Nebraska have been successful and allowed for the addition of several recycling facilities located throughout the state. The grant programs have facilitated improvements to the environment, established new businesses in every part of the state, and added jobs to the state's economy. These efforts have afforded the State of Nebraska the opportunity to establish a recycling and waste reduction industry that has flourished.

Adjustments to the grant programs described in this issue paper are considered enhancements and not wholesale changes. Each of the potential enhancements has certain aspects that could enable improvements and further expansion of recycling and waste reduction programs in the state. Any changes to the present grant program process should be carefully thought out and gradually introduced.

Some issues facing grant programs relative to the programs' operations include:

- developing a single application for grants from any of the granters;
- attaining long-term commitments to the waste hierarchy through more consistent public education;
- implementing procedures that result in site visits to each facility, community or county that has received grant funding within 12 months of grant award;
- identifying long-term funding for grant programs and protecting this funding from uses not consistent with the purposes of the grant programs;
- linking the submittal of data to NDEQ with access to grant funding;
- expanding grant support for household hazardous waste programs;
- clearly identifying the needs and not wants of a particular program; and
- establishing a format that highlights the grantees.

LANDFILL BANS

Banning specific wastes from disposal in municipal solid waste (MSW) landfills is typically considered for two reasons. The first reason is that the banned material is either potentially dangerous or may adversely impact the operation of the landfill. For example, acid-lead batteries are a potentially dangerous material and are banned from disposal in MSW landfills. Similarly, tires are statutorily banned from disposal in MSW landfills. The disposal of these materials, and other similarly dangerous materials, in MSW landfills can adversely affect the environment as well as the facility's operations. The second reason for banning a material from a MSW landfill is that it may have potential for beneficial reuse or recovery, yard waste, for example.

The State of Nebraska waste hierarchy emphatically emphasizes banning or diverting as many wastes as possible from landfills. A stronger emphasis on removing more materials from the solid waste stream has resulted as recycling and waste recovery programs throughout Nebraska have flourished. This has put pressure on state and local entities to implement bans on certain materials entering the municipal solid waste landfills. This issue paper considers the need for increasing or decreasing the number of bans at municipal solid waste landfills in Nebraska and identifies possible methods to enforce these bans.

PRESENT MATERIAL BANS

The following materials are banned from being disposed in municipal solid waste landfills in Nebraska:

- Yard Waste (April 1 to November 30)
- Waste Oil
- Lead Acid Batteries
- Household Appliances
- Unregulated Hazardous Waste
- Waste Tires

Most of these banned materials either contain hazardous materials or are problematic for the proper operation of the landfill. Although a definitive study of the success of these bans at Nebraska landfills has not been conducted, anecdotally it does appear that the bans have had an impact on landfills and reduced the amount of these banned materials from entering landfills.

IMPACT OF PRESENT MATERIAL BANS

As noted previously, the impact of banning certain materials from municipal solid waste landfills in Nebraska has not been thoroughly evaluated. However, it does appear that waste generators and landfill operators have been successful in keeping banned materials out of the waste stream. A major force in the success of these bans is their longevity. For example, yard waste, household appliance, and tire bans have been in effect for around two decades. The yard waste ban was implemented in 1994; the ban on household appliances began in 1995. A tire ban was established in 1995 with an exception for properly processed tires; in 1998 all tires were banned from landfills. During this time, a generation of Nebraskans have grown up knowing only these bans.

POTENTIAL MATERIAL BANS

Banning a material from municipal solid waste landfills should not be undertaken without thorough evaluation. It is important to consider the impact the ban may have on both residential and commercial waste generators and avenues for safely collecting and disposing of the material.

There are two types of materials banned from disposal in MSW landfills: (1) materials that pose a hazard to the community, landfill, or environment; and (2) materials that have the potential to be beneficially reused or recovered. The first type of materials pose public health and/or operational issues for facilities. As noted previously, most of the bans implemented in Nebraska encompass these materials.

The second type of ban identifies materials that can be taken out of the landfill and either recycled or reused, for example the state's present yard waste ban or the forthcoming ban of the disposal of cardboard at the City of Lincoln's landfill. In both cases the banned material can be recycled (e.g. cardboard) or beneficially utilized (e.g. yard waste).

Implementing new landfill bans should be driven by safety or opportunity issues. Safety issues are currently an integral part of the regulatory framework. Environmental regulations allow certain materials, liquid or solid, to be banned from entering landfills in the state. Constituents usually accept these types of bans as a matter of course as the danger of the materials is easily recognized.

Landfill bans driven by opportunity issues are more involved. Implementation of these bans requires informing and educating the public and businesses as to the value of the ban as well how the banned material will be handled. In addition, alternatives to disposing the banned material must be provided. These alternatives can encompass a variety of options – providing drop-off locations, separate collection at the curb, or separate collection bins for large generators.

As noted previously, an example of an opportunity-issue type of ban is the cardboard ban that was recently approved for implementation by the City of Lincoln. This material will not be banned from the City of Lincoln's landfill until 2018. It is anticipated that between now and the implementation date in 2018, the City of Lincoln will prepare an aggressive public education campaign as well as establish locations to drop-off cardboard.

Potential landfill bans may include many materials, each of which possess certain value or disposal problems. In either case the need to establish an infrastructure to accommodate each ban should be in place and properly functioning before the ban is in full force.

POTENTIAL OF BANNED MATERIALS

Experience gained from more than 20 years of recycling and recovering a variety of materials along with the growth of the recyclables and reuse market makes it possible to determine a banned material’s potential value. In addition to the material’s possible value, it is important to recognize the level of effort needed to collect the material. Table 1 presents an evaluation of a material’s potential value if it is removed from the solid waste stream together with an assessment of the volatility of the market for the material. Two elements comprise the rating of a material’s potential value, the material’s consistency and its availability; market volatility is based on the stability of the material's value and fluctuations in the value of the material.

TABLE 1. POSSIBLE BANNED MATERIALS AND POTENTIALS

Material	Potential Value	Market Volatility
Cardboard	Excellent	Limited
Aluminum	Excellent	Limited
Newsprint	Very Good	Potential
Plastics	Good	High
Food	Good	Limited
Construction and Demolition Debris	Good	Limited
Glass	Fair	High
Other Metals	Fair	Potential
Other Paper	Fair	Potential
CRT	Limited	High
Televisions	Fair	Fair

Of the materials presented in the table, those that are most reliably found in the municipal waste stream and have the most stable marketability are aluminum and cardboard. These two materials are most in demand in the commodity market and the market for these materials has been the most stable from year to year. Further, these two materials are consistently found on the list of materials collected by recycling operations.

Other than these two materials, the remaining materials presented in the table vary in both availability and potential value. Newsprint, for example, has been diminishing in availability as the interest in newspapers as a primary source of information has declined. In addition, given the potential options for uses of newsprint the value of the material is in flux.

Plastics provide another example of a material that can be recycled but its accessibility and value varies significantly. From an accessibility perspective plastic can be very easy to recycle. The complication with plastics is the ease of segregating plastics into specific types. Even the most common plastic containers, PET and HDPE, can be challenging to successfully segregate as they often contain plastic materials that are not PET or HDPE.

Shipping and storing plastic materials presents another challenge. Although some plastics can be baled using a standard baler, there are other plastics that are either too rigid or too flexible to easily bale. Other methods such as the use of gaylords or heavy-duty bags are often utilized for these types of plastics. When gaylords or bags are used, the amount of space these plastics consume increases which, in turn, increases shipping costs.

When the commodity market demand for plastics is down, the issue of storage and material degradation become more prevalent. Some plastics, including PET and HDPE, have limited life and are susceptible to degradation from deformation, temperature, and light.

The success or failure of banning a specific material from MSW landfill's is ultimately dependent upon the material's long-term value or long-term risk. In either case the decision to ban a material from MSW landfill's must be clearly thought out and evaluated to ensure there are alternatives in place for the material's final disposal or reuse. If alternative options for disposal or reuse are not available, the banned material may become a burden on both the economy and environment.

ENFORCING MATERIAL BANS

Successfully banning certain materials in MSW landfills relies on effectively communicating the reasons for banning a specific material and the ban's value to the public, and providing alternative options for disposing or reusing the banned material. Education campaigns through the schools, radio, television and social media, public hearings, and signage at landfills are the most prominent methods for educating the public. In addition, working directly with waste generators to develop alternative methods to dispose of or reuse the material affect a ban's success or failure. Further, emphasizing the health and safety reasons for banning a material from being disposed at MSW landfills together with the consistent reinforcement of this message are crucial in the success of any ban.

The best example of the enforcement of bans is the success the Nebraska Department of Environmental Quality (NDEQ) has had with present landfill bans. The measures NDEQ has taken to make these landfill bans successful should be followed if new bans are considered for implementation.

CONCLUSIONS AND POINTS OF DISCUSSION

The potential to utilize landfill bans to remove selected materials from landfills is a relatively new concept. Historically, landfill bans have been utilized to control the disposal of hazardous or dangerous materials in municipal solid waste landfills.

Utilizing landfill bans to remove recoverable materials from the waste stream will require a similar infrastructure as has been established for hazardous materials banned from disposal in MSW landfills. Alternatives for accepting a banned material must be in place; a regular public awareness and education program needs to be undertaken; changes in the operation of landfills and the collection of wastes to ensure the banned materials are being captured must be implemented; and a conduit to recycling facilities to process and market the material must be established.

Along with identifying specific materials that would be beneficial to ban from MSW landfills, the following issues need to be addressed.

- What new public education programs are needed?
- What alterations to the present recycling system will be required?
- What level of funding will be needed to assist recycling facilities to prepare for the influx of the banned material?
- What preparations for the ban will be needed and/or required at the municipal solid waste landfills?
- What role should the Nebraska Department of Environmental Quality play in assuring the ban is effective?
- What adjustments to the recycling and waste reduction grant programs will be needed?

Although the issues listed above are not the only aspects of a material ban to be considered, these issues do identify the breadth of the elements and concerns that need to be addressed. When considering the implementation of a landfill ban it is important to recognize that impacts of such a ban will create a series of winners and losers across the state. These groups must be carefully handled and respected to ensure the endeavor's long-term success.

APPENDIX C

Definitions

DEFINITIONS

For purposes of this report, the following terms are defined as:

Administrative Costs	Expenses for services or fees relating to product or service.
Banned Material	Material that is not allowed to be placed in a landfill or other disposal site.
Bags	Non-rigid plastic containers that are filled with solid waste and placed at the curb or in alleys for collection.
Best Management Practice	Procedure or operation that produces positive results.
Bio Waste	Food materials or animal parts.
Cans	Rigid metal or plastic containers that are filled with solid waste and placed at the curb or in alleys for collection.
Carts or Toters	Rigid plastic containers that are filled with solid waste and placed at the curb or in alleys for collection. These containers have wheels and are designed to be utilized by collection vehicles that have automated mechanisms for lifting the container.
Certificate Program	Class or seminar that is registered with organization or State.
Clearing House	An agency or organization that collects and distributes something, especially information or materials.
Closure/Post-Closure Costs	The expense to close a solid waste facility and to monitor the closed facility.
Collection Trailers	Wheeled vehicle for collecting materials including recyclables.
Commercial Waste Generator	A business that generates waste.
Compost Turner	Equipment utilized to mix and separate green waste and compost.
Construction and Demolition Debris	Materials generated during the construction, renovation, and demolition of buildings or structures. These wastes include materials such as concrete, bricks, wood and lumber, roofing, drywall, landscape and other wastes.

Drop-Off Site or Location	Manned or unmanned facility or area for dropping off recyclables where they are accumulated and then delivered to a facility for further processing.
Curbside or Street Collection	The process of placing bags, cans, or carts filled with solid waste at the curbside or edge of the street for collection.
Disposal Fee	A fee collected by solid waste disposal facilities and paid to the state.
Dumpsters	Rigid metal or plastic containers that are filled with solid waste. These containers are typically rectangular and utilized to service large commercial waste generators.
Final Cover	A multilayered system of soil or synthetic materials which are primarily used to reduce the amount of stormwater that will enter a landfill after closing.
Front-Load Truck	A solid waste collection vehicle that collects waste utilizing two forks to lift various size containers or dumpsters.
Green Waste	Vegetation removed from a property.
Habitat	The natural home or environment of an animal, plant, or another organism.
Household Hazardous Waste	Any waste generated from the use of a product containing hazardous material, which if misused or improperly disposed of, could pose a threat to human health or the environment.
Hauler	Business or individual that collects municipal solid waste.
Infrastructure	Buildings, utilities, roads, or other government or private services.
Landfill Life Expectancy	Estimated time landfill will operate before it is at capacity.
Local Government Agencies	City or town division or department.
Mandatory Recycling	A community where recycling is required by code or law.
Master Gardener Program	Volunteer programs that train individuals in the science and art of gardening. These individuals pass on the information they learned during their training, as volunteers who advise and educate the public on gardening and horticulture.
Materials Management	The use and reuse of materials in the most productive and sustainable way across their entire lifecycle.

Material Recovery Facility	A specialized plant that receives, separates, and prepares recyclable materials for marketing to end-users.
Measurement Standards	The fundamental reference for a system of weights and measures.
Pay-As-You-Throw	A system that allows for variable costs to dispose of waste.
Plastic Bag Problem	Contamination to recyclables or compost caused by plastic bags in the material.
Rear-Load Truck	A solid waste collection vehicle that collects waste by placing it in an opening at the rear of the truck, via manual or automated means.
Recycling Facility	A facility where recyclables are prepared for shipment.
Regulations	Rules or orders for the protection of the environment.
Repurposing	Utilizing an object for a task or function that it was not originally identified to perform.
Reuse and Repurposing	Identify new approaches to utilize materials.
Roll-Off	A solid waste collection vehicle that collects waste deposited in a large metal container (dumpster) from one location, such as a construction site, large store, or industrial site.
Side-Load Truck	A solid waste collection vehicle that collects waste by placing it in an opening at the side of the truck, via manual or automated means.
Solid Waste	Any garbage, refuse, or sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, and mining operations and from community activities. Solid waste shall not include slag, a product that is a result of the steel manufacturing process and is managed as an item of value in a controlled manner and not as a discarded material; solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 402 of the Clean Water Act, as amended, 33 U. S. C. 1251 et seq.; or source, special nuclear, or byproduct materials as defined by the Atomic Energy Act of 1954, as amended, 42 U. S. C. 2011 et seq.:
Stakeholders	Individuals who are committed to plan or program.

Subtitle D	The federal rules and regulations that govern the environmental operations of municipal waste landfills.
Tipping Fees	A fee charged for the amount of waste disposed of by customers at a landfill or transfer station.
Transfer Station	Building or open space where solid waste is transferred from a small vehicle to a larger vehicle, typically a semi-tractor trailer.
Vandalism	Purposeful damage or destruction.
Waste Hierarchy	List of waste management options in priority order.
Waste Minimization Concept	Program to reduce the quantity of generated waste to an acceptable level.
Waste Reduction	Method to shrink quantity of generated waste.
Waste Tire or Scrap Tire *	Any unwanted or discarded tire that has been removed from its original use; tire shreds or pieces are also defined as waste tires.
White goods	Appliances
Zero Waste	A philosophy that encourages the redesign of resource life cycles so that all products are reused.

* *Waste tire and scrap tire are used interchangeably throughout this document.*

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APPENDIX D

Solid Waste Stakeholer Comments

Discussion Summary

A summary of comments provided by those involved with Solid Waste Management programs

Compiled by the Nebraska Department of Environmental Quality
Sept. 22, 2017

Comments and Suggestions from Nebraska Solid Waste Management Professionals

Introduction

The following comments were recorded subsequent to conversations between NDEQ staff and a variety of individuals across the state involved in waste management programs. From May to September of 2017, NDEQ staff (primarily Joe Francis, David Haldeman, Kara Valentine, Ron Hines and Kaitlyn Steinwart), visited with approximately 100 representatives of solid waste management programs, including those responsible for:

- municipal and construction/demolition landfills,
- recycling operations,
- transfer stations,
- household hazardous waste facilities,
- non-profit organizations involved in waste management.

The intent of the conversations was to provide NDEQ staff, and Engineering Solutions and Design, the consultant preparing the LB 1101 report, with a general understanding of the state of solid waste management in Nebraska and to develop a better understanding of issues of concern.

The conversations are captured in bullet form and divided into general categories of topics covered. There is no prioritization of the categories or the issues contained in the categories. There is some duplication, for example similar comments are contained in the grants and the recycling categories. Perhaps most importantly, the conversations reflected the remarkable variety in operation and organization of Nebraska's waste management systems. A wide variety of positions were expressed and there was both agreement and opposition on many issues. It was evident that those at the local level were in a position to determine the best manner by which waste should be addressed.

NDEQ staff found the conversations very beneficial. Many ideas were shared and action has already been initiated on some of the suggestions. For example, guidance on used oil collection and disposal has been sent to all landfills as a result of the discussions. NDEQ will continue to pursue many of these suggestions and our waste management programs will benefit from the effort.

The following pages contain summaries of the comments NDEQ received during those discussions – they are not recommendations made by NDEQ, but rather a compilation of ideas provided by those involved in waste programs (not state employees) across the state. All comments will be considered by the consultant, ESD, preparing the LB 1101 report.

Topics are organized under the following headings: Municipal landfills, bans, tires, construction/demolition landfills, best management practices, grants, systems, recycling, education, household hazardous waste, fees and miscellaneous.

Municipal Landfills

- There needs to be a thorough examination of the economics of landfills. The examination should be done in conjunction with an assessment of information related to the landfill – volume, waste composition, capacity, etc.

- There needs to be good information on the wastes going into landfills so plans can be developed to reduce the large volume wastes.

- Haulers should be required to provide information.

- All landfills should have cells designated for specific wastes – white goods, tires, C/D wastes, E-waste, etc.

- The local siting process should be examined – it is difficult to locate a regional facility when only those in the immediate area have to approve it.

- Composition of waste has not changed significantly since the waste composition study conducted in 2009.

- Composition of the waste has changed since the waste composition study of 2009, primarily due to increased recycling of cardboard and paper.

- Good information on the demographics of service areas is needed.

- Grants should be provided to all landfills for low-speed, high-torque grinders – any tires that go through the grinders should be allowed in landfills.

- Landfill Regulations – Title 132 Considerations

    - Alternate Daily Cover (ADC) – There is no need for extensive demonstrations of the acceptability of ADC when demonstrations have occurred elsewhere, e.g. the use of street sweeping and shredded tires.

    - Title V regs (Air Quality) are much more problematic than Title 132 regs.

    - Dishwashers should not be banned from landfills – they're made of plastic.

    - Operators sometimes pull materials from the working face, sometimes for the value of the material (metals) sometimes for safety, e.g. materials that could damage landfill equipment.
    - It should be easier to get liquids into a landfill that have gas and leachate collection systems. Greater consideration should be given to bioreactor landfills.

- Problematic Wastes at landfills:
  - Plastic bags (they could reduce staff costs (litter pickup) if plastic bags were banned from landfills)
  - Mattresses
  - C/D waste – as much as 30% of their waste is C/D
  - Tires – especially those on rims
  - E-waste
  - Meat processing waste – including paunch
  - Trees and tree stumps
  - Small business hazardous waste
  - Used oil – used to be paid for it, now paying to get rid of it
  - Large grain storage/silage bags
  - Hay bale netting
  - Big bulky wastes e.g., large chunks of concrete, tree stumps
  - Shingles – often receive them when they've "melted" into big wads
  - Hoses from industrial sources
  - Wire and hose
  - Moisture laden waste – have to set up a specific bulking area
  - Metals

Bans

- Ban plastic bags - we could reduce the size of our staff (litter control) if plastic bags were banned

- Do not ban food wastes:
  - It would be impossible to enforce
  - Don't assume it can be composted – that's not as easy as you may think from an operational standpoint
  - It is not a problem, and in fact it helps in terms of compaction
  - If the landfill has gas recovery food waste helps in the generation of gas
  - Efforts could be devoted to large institutions and grocery stores

- White goods – they used to charge for them, then they started showing up in ditches, now they take them with no charge.

- Many questions were asked about handling and disposal of used oil. Can they give it to individuals and/or businesses to burn in used oil burners?

- If you have bans – you need effective enforcement.

- Bans have to be at the curbside, not the landfill. If it gets to the landfill in a packer truck, it's going in the landfill and the landfill shouldn't be liable.

- If you have a ban have a way to effectively enforce it. This will take education and you have to make getting rid of banned material convenient

- Don't ban anything you don't have a good option for.

- Landfill bans have definitely extended the life of the landfill

- Allowing yard waste to go to landfills, even when they have methane recovery, should not be allowed.

- Yard waste should be allowed in landfills that have gas/energy recovery

- Appliances containing Freon is a concern – there is significant doubt that the Freon is recovered as required by pertinent regulations.

- They used to get paid for used oil, .90/gallon, now they are paying .20/gallon to get rid of it.

- Keep electronics out of landfills – Goodwill has been a huge help on electronic waste

- Implement a product stewardship effort with E-waste.

Tires

- Tire amnesty grants enable hoarding of tires. There's not been a drop off in the tons received. However, if we don't have amnesty days, tires will end up in ditches.

- Farmers and businesses should be paying a fee to get rid of tires at amnesty days.

- Tires used to be a problem at landfills but they currently don't see them much anymore.

- Most landfills would be willing to take tires f they had grant funded equipment to process them.

- Consideration should be given to the Dept. of Transportation (DOT) requiring rubber modified asphalt in their projects. There could be a requirement in their bid specifications.

- Retailers should play a larger role in addressing the waste tire issue.

- Tire manufacturers should assume more responsibility in addressing waste tires; to this point they have been absent in trying to solve the problem.

- Kansas did away with amnesty days and did not experience a great increase in illegal dumping.

- There is a need for viable disposal/processing operations in Nebraska. This could include a tire processing operation, or allow waste tires to go into landfills if processed in an acceptable manner.

- DEQ and DOT should collaborate and see what the state can do to address waste tires.

- Entire (a waste tire processing business in Missouri) was being used to handle waste tires, now that Entire is out of business, a company in Kansas is being used and it's more expensive.

Construction/Demolition (C/D) Landfills

- NDEQ needs to examine what can and can't go into a C/D site. For example pallets, furniture, and a certain amount of incidental waste, should be allowed in C/D sites.

- C/D landfills are only lightly regulated.

- Concrete crushers should be set up at each C/D site.

- Shingles should not be allowed at C/D sites due to leachate concerns.

- There should be relief from incidental waste found in C/D sites – plastic wrapping and cardboard is impossible to separate out; fast food waste often goes in with contractor's roll offs.

- Wood waste should be chipped and given away, or used on landfill roads

- Some landfills spend more time managing the C/D site than they do managing the municipal landfill.

- The municipal landfill relies on private sites to take C/D waste; but they also willingly take C/D waste in their landfill.

- Mattresses and couches should be allowed in C/D landfills.

Best Management Practices

- A landfill gives out a roll of trash bags to roll-off companies doing business with the landfill. The roll-off company places a bag on reach roll-off and workers use that bag to put their incidental waste in.
- Some landfills use kitty litter to bulk up fry oil.
- Some landfills divert food waste by feeding it to hogs.
- Recovering landfill gas and using it is a great best management practice.
- Many BMPs have been developed by landfills for both safety and compliance purposes.
- Most landfills would benefit from a repository of BMPs.

Compost

- Walmart separates food waste and composts it.
- Food waste should be able to be composted along with grass clippings without regulatory hurdles.
- Composting is not an environmental issue and the regs should reflect that.

Grant Programs

- Grant applications are too complicated – at a minimum there should be a two-tier application – a short simple one for projects below a certain threshold.
- Grant programs should be strategic; priority should be given to wastes and projects that provide the best return on investment.
- A broker should be available, particularly for small recycling systems and communities, either on DEQ staff or through a grant funded position. This position could also be utilized to provide needed training.
- All grant applications should be required to include a sound business plan.
- The grant application process has been significantly improved by the on-line application system.

- All successful grant awards should have effectiveness measure requirement and associated reports submitted to NDEQ.

- Industries should not have to rely on grants for their existence.

- Deconstruction grants should be more available; the recycling requirement is overly burdensome as many dilapidated buildings don't have anything worth recycling.

- Getting three bids for some applications is difficult, e.g. household hazardous waste services.

- Roadside clean-up grants: education is needed; many don't know about this portion of the grant programs; the price allocation should be increased.

- Some portion of the overall grant funds should go directly to municipalities/counties without going through the grant process.

- Grants should be proactive.

Systems

- Waste management information is a critical prerequisite to having efficient systems.

- There should be incentives for systems that approach things in an innovative manner.

- Systems, and anything having anything to do with waste management, has to be convenient.

- A limited number of systems have reviewed, and subsequently revised, their solid waste management plans – they have realized benefits from doing so.

- Transfer stations taking uncompacted waste do not need permits – this creates a void in information on solid waste management and probably results in lost tipping fees.

- There is a sense of satisfaction with existing systems and there is little need seen for change.

- The Keep Nebraska Beautiful Affiliates have been tremendously beneficial in helping with all kinds of waste management efforts – everything from education to tire amnesty days.

- C/D waste goes to their municipal landfill (as much as 1/3 of the waste) and they would like to do something else with it. However, it would take significant resources – staff and physical resources, on top of what they already have.

- They have sufficient property – for landfills far, far, into the future.

- They are extremely limited in landfill property and we are not sure what will happen in the next few years.

- Some would like to get out of the landfill business.

- They now take wood waste for free and chip it. They are very concerned about the impact of the emerald ash bore – they feel they may be overwhelmed with ash trees.

Recycling

- Haulers have pulled their recycling trailers and roll-offs from the community for economic reasons.

- It is very difficult to recycle glass. Recently they lost $200/semi load. They are getting paid the same now as they were 20 years ago.

- Economically, recycling just does not make sense.

- The city will be getting rid of plastics that cannot be recycled thanks to Hefty's bag and burn system.

- Recycling would not occur without grants; recycling has to be subsidized.

- In order to save space at a landfill, the state should mandate recycling.

- The only recycling that occurs is citizens taking materials to drop-off locations.

- Recycling has not matured; they are no further ahead than they were in the 90's.

- City and Village Clerks can be critical to the success of waste management systems, particularly recycling systems.

- They have to have grants to exist. But even with grants they have a difficult time recycling because of manpower shortages. They used to be able to rely on volunteers but there are few volunteers these days.

- Cardboard makes sense to recycle. There has been an "Amazon Effect" related to the increased cardboard associated with Amazon shipping and packaging. It is noticeable in both increased cardboard recycling and increased cardboard at the landfill.

- There is a paper recycling operation in the state that relies on out-of-state suppliers of paper. At the same time, recyclers in Nebraska are shipping their paper out of state, this doesn't make sense!

- Some grants are given to recycling operations and the grantee does not know how to best use the equipment.

- Recycling has to happen at the curb; landfills are no place for recycling to occur.

- Those receiving grants should demonstrate a proficiency in setting up and running recycling systems. The state should provide education to those in need.

Education

- Some suggest that a couple of hundred dollars for a brochure on integrated waste management would do untold good.

- Many, particularly those in the western part of the state, don't have the luxury of being able to send people to Omaha/Lincoln for educational conferences. They have a small staff and they can't afford to have staff gone from the landfill.

- The only viable training option they have is on-line. Some have visited other landfills and that has proven to be tremendously beneficial.

- There is a need to bring people together; peer interaction has paid dividends.

- Guidance on the handling and disposal of used oil and e-waste would be beneficial.

- There should be specific educational effort devoted to the waste management hierarchy – the public needs it!

- Educational efforts should be directed to kids, they'll take care of the adults

Household Hazardous Waste

- Mr. Bill Elliot and Red Willow County were mentioned numerous times as providing a great service to the state.

- Household hazardous waste activities and operations are very dependent on grant programs.

- There should be seven permanent household hazardous waste facilities spread around the state.

- They do HHW grants every year, they would like to get a multi-year grant.

Fees

- The state needs to do something – not having fees raised in so long is crazy.

- The $1.25 tipping fee is a joke – increase it.

Miscellaneous

- The Waste Characterization study completed by Engineering Solutions and Design (2009) was a very helpful tool.

- Waste has changed since the 2009 study – much cardboard has been removed.

- Waste composition has not changed at all since the 2009 study.

- Markets should be relied upon to take care of waste – they don't receive much concrete anymore as there is a market for it.

- The state could serve as an example and be more active in diverting waste. There should be recycling in state parks and the waste from fish cleaning stations could be composted.

- The waste management industry, particularly the transportation segment, is among the most dangerous industries in the country. It would be great if the state could do something about this.

- DEQ needs to be more proactive and get out in the field. The only time upper management is encountered is at conferences.

- To change waste management practices you have to get information to the public in a segmented manner. Don't provide too much at once – and the information must include the full economic story.

- The used oil collection system established by Keep Nebraska Beautiful has been very helpful.

- It would be great to do something for the agricultural producers in the state e.g. help them get rid of old pesticides/fertilizers.

- Why are there two state agencies, DEQ and DHHS, involved in disposal of asbestos?

- The state should be looking at waste to energy.

- The economics of methane recovery at landfills is questionable.

- Our society is in a disposable mode – we should view our waste as a resource.

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APPENDIX E

Landfill Survey Responses

LANDFILL SURVEY RESPONSES

Q 1 Does the landfill post a list of recycling or recovery facilities at its gatehouse?

no

Q 2 What material or materials that have been banned or removed from the waste stream have had the greatest impact on the landfills operation?

tires-expensive to dispose.

Q 3 Does the landfill have a public drop-off area for recyclables and are there any recycling containers at the drop-off location?

the public does not have unrestricted access to our landfill. They use our transfer station for disposal/unloading unless large loads. we do have containers available for recyclable materials such as cardboard, scrap iron(white goods) office paper, oil, aluminum and auto batteries. We also provide these recycling opportunities at disposal sites provided in each of the communities we serve.

Q 4 When a load of recyclable materials is observed does the landfill gatehouse staff advise the driver to divert the load to a nearby recycling operation?

we are pretty much the recycling operation in our communities. we do not receive large loads of segregated recyclable material.

Q 5 What types of waste does the landfill receive from local industries? For example, is there a large amount of cardboard, plastics, plastic film or bags, or foam packaging.

Chadron State College provides office paper and cardboard via an agreement with Keep Chadron Beautiful.

Q 6 Over the past 10 years has there been a marked increase, decrease, or the same amount of waste being delivered to the site?

steady amount

Q 7 What types of waste does the landfill receive from agricultural facilities? This would include farms, feedlots, dairies, meat processors, or grain storage facilities.

empty pesticide containers, entrails from a meat processor, and old grain from elevators on occasion.

Q 8 Does the landfill have an on-site structure that collects and or processes recyclables?

our transfer station located in Chadron Ne

Q 9 Does the landfill train its staff to look for recyclables and/or note the recyclables?

when they can be recovered from the waste stream efficiently, which is very seldom.

Q 10 Is the landfill considering developing or expanding its present recycling efforts?

not really!

Q 1 Does the landfill post a list of recycling or recovery facilities at its gatehouse?

No, we currently do not.

Q 2 What material or materials that have been banned or removed from the waste stream have had the greatest impact on the landfills operation?

(Did not answer)

Q 3 Does the landfill have a public drop-off area for recyclables and are there any recycling containers at the drop-off location?

Yes, We offer two locations and all nearby towns offer at least one as well. We have no drop-off containers on site, however, we do offer " At the door unloading ", for customers.

Q 4 When a load of recyclable materials is observed does the landfill gatehouse staff advise the driver to divert the load to a nearby recycling operation?

Yes

Q 5 What types of waste does the landfill receive from local industries? For example, is there a large amount of cardboard, plastics, plastic film or bags, or foam packaging.

We receive very little recyclable waste from our local industries. Most are currently involved id some sort of recycling program.

Q 6 Over the past 10 years has there been a marked increase, decrease, or the same amount of waste being delivered to the site?

Our computers do not go back that for, However, we have seen an increase of about 300% in the last four years.

Q 7 What types of waste does the landfill receive from agricultural facilities? This would include farms, feedlots, dairies, meat processors, or grain storage facilities.

occasionally we receive some rotten feed,(corn, soybean meal).

Q 8 Does the landfill have an on-site structure that collects and or processes recyclables?

yes

Q 9 Does the landfill train its staff to look for recyclables and/or note the recyclables?

yes

Q 10 Is the landfill considering developing or expanding its present recycling efforts?

yes, currently looking for a new baler, which would allow us to recycle more products.

Q 1 Does the landfill post a list of recycling or recovery facilities at its gatehouse?

No, NNSWC landfill is designed to only receive waste from Transfer Stations and not the general public.

Q 2 What material or materials that have been banned or removed from the waste stream have had the greatest impact on the landfills operation?

	no impact noticed
Q 3	Does the landfill have a public drop-off area for recyclables and are there any recycling containers at the drop-off location?
	refer to #1
Q 4	When a load of recyclable materials is observed does the landfill gatehouse staff advise the driver to divert the load to a nearby recycling operation?
	no, refer to #1
Q 5	What types of waste does the landfill receive from local industries? For example, is there a large amount of cardboard, plastics, plastic film or bags, or foam packaging.
	cardboard, rubber hose, food, animal feed, wire insulation, feed sacks and syringes
Q 6	Over the past 10 years has there been a marked increase, decrease, or the same amount of waste being delivered to the site?
	Steady amount of waste, storms are the only factor in any increase. Several area tornados increased waste
Q 7	What types of waste does the landfill receive from agricultural facilities? This would include farms, feedlots, dairies, meat processors, or grain storage facilities.
	damaged grain, feed that was mixed incorrectly. Seed corn, and bales of feed/seed sacks
Q 8	Does the landfill have an on-site structure that collects and or processes recyclables?
	no
Q 9	Does the landfill train its staff to look for recyclables and/or note the recyclables?
	no

Q 10	Is the landfill considering developing or expanding its present recycling efforts?
	no

Q 1	Does the landfill post a list of recycling or recovery facilities at its gatehouse?
	NO, BUT WE DO HAND OUT FLYERS AT OUR CITY HALL AND LANDFILL OFFICE. WE ALSO PUT IT IN THE PAPER FROM TIME TO TIME AND WE HAVE RECYCLING ROLL OFFS AROUND TOWN THAT SHOW WHAT CAN AND WILL NOT BE RECYCLED.
Q 2	What material or materials that have been banned or removed from the waste stream have had the greatest impact on the landfills operation?
	PLASTIC BAGS. THEY GET STUCK ON AND IN EVERYTHING.
Q 3	Does the landfill have a public drop-off area for recyclables and are there any recycling containers at the drop-off location?
	YES. WE HAVE TWO ROLL OFF RECYCLING CONTAINERS THROUGHOUT TOWN AND MOST RECYCLABLES THAT COME TO THE LANDFILL ARE PLACE IN ITS OWN BUILDING. WE ALSO PROVIDE 90 GALLON CARTS TO RESIDENTIAL CUSTOMERS AND 3 YARD CONTAINERS TO COMMERCIAL CUSTOMERS.
Q 4	When a load of recyclable materials is observed does the landfill gatehouse staff advise the driver to divert the load to a nearby recycling operation?
	YES. WE HAVE A SEPERATE BUILDING FOR OUR RECYCLABLES. MOST CUSTOMERS ARE MORE WILLING TO RECYCLE THAN ADD TO THE LANDFILL.
Q 5	What types of waste does the landfill receive from local industries? For example, is there a large amount of cardboard, plastics, plastic film or bags, or foam packaging.

MOSTLY CARDBOARD. WE DO GET A BIT OF PLASTIC CONTAINERS, ALSO.

Q 6 Over the past 10 years has there been a marked increase, decrease, or the same amount of waste being delivered to the site?

THERE HAS BEEN MORE WASTE THROUGH CONSTRUCTION MATERIAL BUT IT HAS DECREASED SINCE OUR RECYCLING PROGRAM HAS BEEN PUT IN PLACE.

Q 7 What types of waste does the landfill receive from agricultural facilities? This would include farms, feedlots, dairies, meat processors, or grain storage facilities.

MOST WASTE FROM AGRICULTURAL FACILITIES ARE PLASTIC DITCH, COW HIDES, AND BAD GRAIN. WE DO GET LIVESTOCK CARCASSES ONCE IN A WHILE.

Q 8 Does the landfill have an on-site structure that collects and or processes recyclables?

WE HAVE A BUILDING THAT WE COLLECT OUR RECYCLABLES. WE THEN BALE IT AND SEND IT TO ANOTHER FACILITY THAT PROCESSES IT.

Q 9 Does the landfill train its staff to look for recyclables and/or note the recyclables?

YES. MOST OF OUR STAFF ARE ON THE RECYCLE PROGRAM SO WE ALL KNOW WHAT TO LOOK FOR.

Q 10 Is the landfill considering developing or expanding its present recycling efforts?

WE ARE HOPING TO EXPAND OUR EFFORTS BY GIVING ALL RESIDENTS A CART TO RECYCLE.

Q 1 Does the landfill post a list of recycling or recovery facilities at its gatehouse?

No.

Q 2	What material or materials that have been banned or removed from the waste stream have had the greatest impact on the landfills operation?
	We operate a transfer station, not a landfill. Large concrete pieces and large tree trunks along with liquids have been banned.
Q 3	Does the landfill have a public drop-off area for recyclables and are there any recycling containers at the drop-off location?
	We operate a transfer station, not a landfill. There is a drop off area for white goods and tires to be recycled.
Q 4	When a load of recyclable materials is observed does the landfill gatehouse staff advise the driver to divert the load to a nearby recycling operation?
	Wood wastes and large concrete pieces that are banned from the transfer station.
Q 5	What types of waste does the landfill receive from local industries? For example, is there a large amount of cardboard, plastics, plastic film or bags, or foam packaging.
	All sorts of municipal solid wastes are received, including all of those listed.
Q 6	Over the past 10 years has there been a marked increase, decrease, or the same amount of waste being delivered to the site?
	The wastes delivered to the site have been variable over that time period.
Q 7	What types of waste does the landfill receive from agricultural facilities? This would include farms, feedlots, dairies, meat processors, or grain storage facilities.
	Insignificant amounts of such waste is received at this transfer station.
Q 8	Does the landfill have an on-site structure that collects and or processes recyclables?
	We operate a transfer station, not a landfill. There is no structure that is used for such purposes. There is drop off areas for tires and white goods.
Q 9	Does the landfill train its staff to look for recyclables and/or note the recyclables?
	We operate a transfer station, not a landfill. No, there is no such training. The staff is trained to look for banned materials.

Q 10 Is the landfill considering developing or expanding its present recycling efforts?

We operate a transfer station, not a landfill. The County is operating a one-time waste tire collection event in October and will continue the waste tire and white goods drop off areas.

Q 1 Does the landfill post a list of recycling or recovery facilities at its gatehouse?

no

Q 2 What material or materials that have been banned or removed from the waste stream have had the greatest impact on the landfills operation?

(Did not answer)

Q 3 Does the landfill have a public drop-off area for recyclables and are there any recycling containers at the drop-off location?

yes collected by personnel on the site

Q 4 When a load of recyclable materials is observed does the landfill gatehouse staff advise the driver to divert the load to a nearby recycling operation?

no we collect it in our Material Recycling Facility

Q 5 What types of waste does the landfill receive from local industries? For example, is there a large amount of cardboard, plastics, plastic film or bags, or foam packaging.

cardboard, aluminum, plastic, paper,

Q 6	Over the past 10 years has there been a marked increase, decrease, or the same amount of waste being delivered to the site?
	the same
Q 7	What types of waste does the landfill receive from agricultural facilities? This would include farms, feedlots, dairies, meat processors, or grain storage facilities.
	anything that is not hazardous
Q 8	Does the landfill have an on-site structure that collects and or processes recyclables?
	yes
Q 9	Does the landfill train its staff to look for recyclables and/or note the recyclables?
	yes
Q 10	Is the landfill considering developing or expanding its present recycling efforts?
	no

Q 1	Does the landfill post a list of recycling or recovery facilities at its gatehouse?
	Yes

Q 2 What material or materials that have been banned or removed from the waste stream have had the greatest impact on the landfills operation?

Oil, paint, household cleaning supplies.

Q 3 Does the landfill have a public drop-off area for recyclables and are there any recycling containers at the drop-off location?

Yes

Q 4 When a load of recyclable materials is observed does the landfill gatehouse staff advise the driver to divert the load to a nearby recycling operation?

When possible.

Q 5 What types of waste does the landfill receive from local industries? For example, is there a large amount of cardboard, plastics, plastic film or bags, or foam packaging.

Most of the stuff mentioned in the example of the question is recycled.

Q 6 Over the past 10 years has there been a marked increase, decrease, or the same amount of waste being delivered to the site?

Somewhat decreased.

Q 7 What types of waste does the landfill receive from agricultural facilities? This would include farms, feedlots, dairies, meat processors, or grain storage facilities.

Seed bags or old grain.

Q 8 Does the landfill have an on-site structure that collects and or processes recyclables?

Yes.

Q 9 Does the landfill train its staff to look for recyclables and/or note the recyclables?

No, our recycling center is not operated by City employees.

Q 10 Is the landfill considering developing or expanding its present recycling efforts?

Continue to educate the public for recycling.

Q 1 Does the landfill post a list of recycling or recovery facilities at its gatehouse?

no

Q 2 What material or materials that have been banned or removed from the waste stream have had the greatest impact on the landfills operation?

paint

Q 3 Does the landfill have a public drop-off area for recyclables and are there any recycling containers at the drop-off location?

yes two different areas

Q 4 When a load of recyclable materials is observed does the landfill gatehouse staff advise the driver to divert the load to a nearby recycling operation?

yes recycling biulding

Q 5 What types of waste does the landfill receive from local industries? For example, is there a large amount of cardboard, plastics, plastic film or bags, or foam packaging.

cardboard, plastics, paper

Q 6 Over the past 10 years has there been a marked increase, decrease, or the same amount of waste being delivered to the site?

same amount

Q 7 What types of waste does the landfill receive from agricultural facilities? This would include farms, feedlots, dairies, meat processors, or grain storage facilities.

plastics, paper

Q 8. Does the landfill have an on-site structure that collects and or processes recyclables?

different site which is recycling building

Q 9 Does the landfill train its staff to look for recyclables and/or note the recyclables?

no

Q 10 Is the landfill considering developing or expanding its present recycling efforts?

developing a more efficiently recycling program

Q 1 Does the landfill post a list of recycling or recovery facilities at its gatehouse?

yes.

Q 2	What material or materials that have been banned or removed from the waste stream have had the greatest impact on the landfills operation?
	Green waste, always picking out banned items (i.e. tires, white goods etc.)
Q 3	Does the landfill have a public drop-off area for recyclables and are there any recycling containers at the drop-off location?
	Yes, metals, tires, appliances, wood waste, green waste,
Q 4	When a load of recyclable materials is observed does the landfill gatehouse staff advise the driver to divert the load to a nearby recycling operation?
	Sometimes.
Q 5	What types of waste does the landfill receive from local industries? For example, is there a large amount of cardboard, plastics, plastic film or bags, or foam packaging.
	Everything
Q 6	Over the past 10 years has there been a marked increase, decrease, or the same amount of waste being delivered to the site?
	Same
Q 7	What types of waste does the landfill receive from agricultural facilities? This would include farms, feedlots, dairies, meat processors, or grain storage facilities.
	Seed Corn Residue, Soybean Meal Fines, Treatment Flocculant,
Q 8	Does the landfill have an on-site structure that collects and or processes recyclables?
	No
Q 9	Does the landfill train its staff to look for recyclables and/or note the recyclables?
	Metals, and banned items.

APPENDIX F

Consultant Information

Engineering Solutions & Design, Inc.

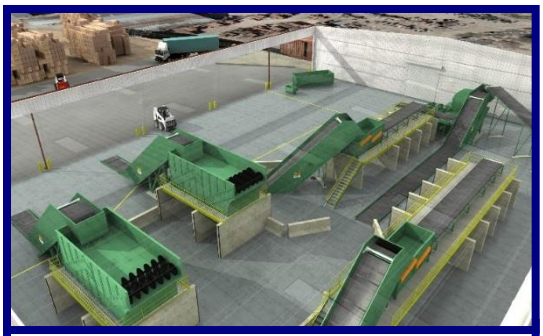
SOLID WASTE PLANNING, DESIGN AND CONSTRUCTION SERVICES

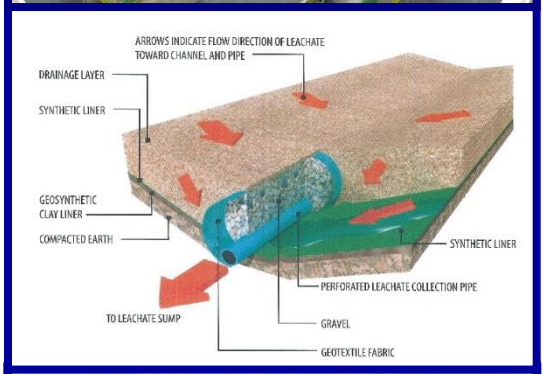
Two Park Square
6565 Americas Pkwy NE, Ste 200
Albuquerque, NM 87110

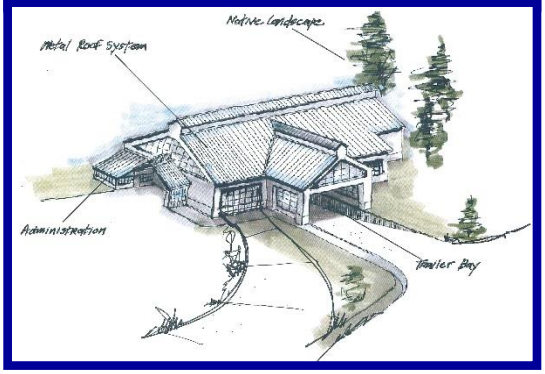
T: (800) 298-1851
www.esdworks.com

51 Corporate Woods
9393 W. 110th Street, Ste 500
Overland Park, KS 66210

Engineering Solutions & Design, Inc. (ES&D) was founded in 1995 to specifically address solid waste issues facing public and private entities. We have completed a broad spectrum of projects that include solid waste management studies, facility operations analyses, waste characterization studies, landfill and transfer station designs, and construction oversight services. More specifically, ES&D provided solid waste services relating to waste characterization studies, training in how to utilize waste study data, and engineering support to further refine the waste characterization study data in relation to recycling goals and waste reduction potentials for the Nebraska Department of Environmental Quality.







Jack P. Chappelle, P.E., a registered professional engineer in Nebraska and six other states, served as the consultant's project manager for the LB1101 Solid Waste Management Programs Study. Jack has more than 39 years of environmental engineering experience, with the past 28 years focused exclusively on solid waste. His experience includes involvement in a wide range of management and engineering projects and encompasses: (a) feasibility and financial analyses studies for solid waste systems; (b) solid waste planning studies; (c) rate studies; and (d) the permitting and design of landfills, transfer stations and recycling facilities.

APPENDIX G

Recycling Stakeholder Comments

RECYCLING STAKEHOLDER COMMENTS

1. Does your facility use funds from the State of Nebraska, and if so from what agency (NDEQ, Dept. of Agriculture, Nebraska Environmental Trust, other)?
Yes, easy process
Hazardous waste grant. Received grant funding for roll offs.
Through NDEQ. Work with KAB-NP. Tire Amnesty Fund. Baler, chipper truck.
NET - baler
Equipment: Small baler, skid steer loader, pickup, glass crusher, state recycling trailer, tree chipper
Yes, from NDEQ. Relief funding from city, county.
Rear loader - NDEQ
KKB, NDEQ - Baler MF 60 and 30, NET - Forklift, shredder, roll-offs, scanner/fax/printer.
NDEQ - Litter and waste recovery
NDEQ
Yes, NDEQ and Nebraska Environmental Trust. Funding from city and county.
City of York pursues grants, MOSAIC Operating Facility
NDEQ & NET
NDEQ & NET
Recycling trailer, 8 years old. Have roll off at burn pile that they collect metal.
Nebraska Environmental Trust: Trailer with 5 containers on each side of trailer, 10 years old.
Trailer. City compactor to compact trash. Bale cardboard, bale aluminum, newspaper, magazines, office paper, plastics - All. Take trailer to York facility.
Pay $6,500/month; Paper, metal, glass; 20 hours/ week; Mixed bag of recycling
Colfax County facility. Yes
Not for 17 years; Recycling
Yes. NDEQ - Grant: Trailers & pickup for recycling, walking floor trailer
NDEQ grant, Nebraska Recycling Council
Two drop off boxes. Third party MRF, have contract. Curbside added.
NDEQ Grants, NET Grants
Nebraska Recycling, about 3 years. Cost share.

NDEQ
NDEQ and NET
Yes, NDEQ, recycling
2. What benefits does your facility derive from the state funding?
Building expansion, extra-large horizontal
Picking up recyclables in city and county.
KAB - Public education, litter control.
Equipment for ease of operation
Funds the entire operation. Western Resources Group is non-profit, household recycling Keith Co.
Utilized rear loader to collect recyclables
Community development. Able to process more material.
Pays for all operations
Tire amnesty, past 3 years, contract chipper, recycle trucks, roll off box dumpsters.
Do some fund raising, but are dependent on continuing the operation going.
NDEQ: Operating & project grants, basic programs - on line recycling guides, education, BMP's related to achieving zero waste, NET: Weekly events, recycling equipment grants
Public education, equipment for composting (large & small), recycling containers for city and county, villages pilot projects in city parks, Keep Lincoln Beautiful, HHW facility
Recycling trailer (cardboard, paper, tin cans, plastic, aluminum). Take to York every 2 weeks.
Trailers
Submitted grant application to NDEQ, Jack Lifts part of grant. Waste Connection
2 haulers provide curbside recycling, minimal amount captured. Waste Connection
Able to provide recycling for throughout the county. Used grant for leased equipment, electrical expenses, personal expenses.
Limited
Cardboard roll-off, trailer for picking up recyclables, semi-trailers, Burwell & Calloway, NDEQ grant for baler replacement
Burwell have contract drop off
Trommel, 3 skid steer loader, recycling carts, baler, cardboard truck, trailer for outside community, compost turner, carts, baler 93-94, recycling box, forklift, HHW, light bulbs: THEY DO EVERYTHING
Forklift

Purchased truck for office paper
NET - Baler and marketing research; tissue converting machine. NDEQ - have won 3 grants and haven't used any of them. Lack of enough funding.
Building for cans and cardboard, additional Bob Cat.
3. If you received state funding what was the application process like?
Simple process
Not experienced. For hazardous waste, getting bids for work on hazardous waste, application on line.
KAB prepares the application
Fairly simple on-line application. System is on and off.
Cleanup, reduction and recycling. Very easy, very user friendly. NDEQ IT staff very friendly.
Very good process. On-line process is very easy. Minimal problems, respond very well.
Paper work, then went to on-line. First two were a nightmare. Later, it got much easier.
NDEQ fairly self-explanatory. They expect a lot of information. Appreciate the funding.
On-line system has bugs, log-in complications should be improved. Wait a long time to see if grants approved which complicates staff & planning.
Reasonable system. Do not like electronic version but have acclimated
Very easy process
Very easy
Tedious, took time to complete
City of Ainsworth did application
The grant applications are easier. No problem. Did have one glitch but it worked out.
Fairly simple; straight forward. Timing is an issue. Planning is needed. Nebraska State Recycling are ready to help out communities.
Better than 4 years ago. Michael, IT, fairly straight forward.
NET - better focused and more accountable to project. NDEQ - on-line application is better
Fairly long, but not too bad.
4. How was the state agency (or agencies) to work with and what monitoring process was involved?
Come out to visit site annually. North Platte typically.
Easy to work

NDEQ easy to work with
NET was very easy to work with. Matching grant.
NDEQ is really good to work with
Cash flow issue with funding. Changed with cash flow.
Easy to work with. It is very good.
NDEQ is easy to get ahold. Keep track of all receipts.
Very good
NDEQ is good to work with. Very helpful.
People they have worked with have been great. Require supporting documents for reporting. The match requirement is too high & not sure why.
Fine to work with. NDEQ inspects equipment. Data tracking by department on impact; no indication on how many bags collected and do not tell story on what they provide. NET does a reporting system quarterly and final report.
Easy to work with
Very responsive, communicates well. IT Tech is God send to work through system.
Very good to work with
Very easy. Through quarterly reports and on-site inspections.
Very easy to work with. Rich Tatum very friendly. NDEQ did follow up on if they have.
NDEQ - very simple and easy to use
Good. Good response.
5. Other than state program grants what other forms of financial or in-kind support do you pursue?
Nebraska State Recycling Association. 15-16 year process.
No
NET Grants - yellow lidded carts
Nebraska Environmental Trust, Nebraska Recycling Association
Membership campaign, city support, KAB funding.
$2.00/person/month fee
Natural Resources District. Scottsbluff & Gering provide matching funds and in-kind. Local business & public donation.
Rapid Station discounts and other in-kind support. H&R Block, strong community support.

Pursue smaller foundation. Not many others funding sources in Nebraska. Funding from membership, selling ads on web sites.
Lincoln has occupation tax of $11.00/ton. Utilize National Purchasing Alliance.
Fairly easy
Sell products they collect. Receive equipment grants from Nebraska Recycling Association.
Through Recycling Association which is not funded
Closed Loop Fund
6. If you could change the state programs grant process what aspects of the grant process would you change?
No, time limited
Hazardous waste grant. Received grant funding for roll offs.
Through NDEQ. Work with KAB-NP. Tire amnesty Fund. Baler, chipper truck.
NET - baler
Open time line for grant reception to provide real time.
Quicker reimbursement, from on line issues. Ability to remove old documents. Need to have larger space for support documents.
Doing things right. Feels balance between state and operators.
Need to get the bugs worked out
Nothing
Why isn't NDEQ driving the application process? They should know what is needed.
Compile data and impart information. For HHW & E-waste, establish performance standard. Have people in the field. May have better selection process. Community more skin in game & private high criteria.
Simplify grant application so spend less time on application and communication. Glitches in system stops submittals. Need to address glitch.
Length of wait for NDEQ, funding compared to Nebraska Environmental Trust
Would not change. Process more than adequate.
Continue to update software to make it more user friendly.
Take DEQ out of process and send to Dept. Economic Development. NDEQ involvement puts pressure on regulation. NDEQ doesn't have business acumen. DED may be able to find more funding sources.
None

7. Should the NDEQ grant program be separated into sub-groups such as equipment, education, personnel, and training?
Possibly. Mostly focus on equipment.
Could be more beneficial if more focused to subdivide.
If there is subdivision may impact KAB and revenue might be smaller
Training
Issue would be how money goes to each subgroup
Possible but looking at overall proposal is better.
Some sub-division already exists. Change to reimbursement.
HHW grants they use. Keep as is.
Positive to divide
Not a good idea. Like it the way it is.
Not the smartest way to go. If starting up a program would require multiple grant apps.
*Have state prioritize needs & focus on it. *Solicit proposals to target materials. *More flexibility & discussion with NDEQ. State could play leadership role statewide to benefit all programs. *Needs assessment based on goals & focus on the sources to fund.
Would add work to present process
Works fine for now
Might be appropriate. Categories are important. Rating system should supersede the other categories.
Do education process, and do not need grant fund.
Lobby
Broke into four groups. If they got a truck would be serious about curbside.
8. What assistance from NDEQ would be most helpful for your facility?
Look for markets and moving material
Training on contaminated soil. Resources in general. Go through Nebraska Recycling for questions and to get results.
Local support. Use Ron Heinz for questions.
No

Somebody needs to organize a statewide recycling program. Needs to be driven by regulations to establish continuity.
Secure funding for present and future. Continue partnership, to make goals obtainable, to provide resolutions for waste reduction.
Help with educating adults. Feels that kids are aware of recycling.
Split on point system. Give variable for in-kind support. Non-cash consideration.
Provide list of companies to handle HHW, sharps, pharmaceutical, Variance 3 Bid Program for unique items.
Better define areas of grants.
Nothing
Have NDEQ identify their priorities. Base it on research & studies.
Be more proactive & show leadership & prioritize SW reduction & diversion, even legislation.
Assistance with working through grant application process. Need more technical support. Must make user friendly and simplified.
Make more places to drop off for electronics.
Recycling training, what can that apply. Comments - increase manpower
Nothing at this time
Always available, good communication. NDEQ needs to provide guidance documents; should could go back to special waste issue in small business. As industry is bad and needs more aggressive cleanup.
Market issues a challenge.
Lobby legislature to pass decent legislation. Take their mission seriously.
Other training for recycling and other operations. Make things efficient for everybody.
9. Have you any indication what impact public education has on your facility and do you have examples of the types of education that work best?
School tours. No public information.
Best education is working with kids. Public is challenging to work with. 30-yard containers
Meet monthly with KAB. KAB does education.
Cleanup day for community
Has larger impact since they do "Pay As You Throw." Follow-up on education for "Pay As You Throw."
Students in Ogallala, state and national awards. School received one million containers. Green Team in midschool focus on student. Works in elementary & midschool. Lots of coverage with recycling bins at all events. Do cleanup at community colleges.

Very limited education for public.
Eco Club for kids, flyers, public education (cause and effect).
Each year collection increases. 1 - HHW. Recycle bikes, oil, anti-freeze, pharmaceuticals collection up to 2 events.
Monthly radio show
Start a club at middle school. Work with teachers. Interaction with kids. Radio spots and senior shut-ins. Pick up recyclables from shut-ins.
Public perceives operation as beneficial. MOSAIC is a non-profit organization that gets mentally challenged into work force
Trying to develop chapters and connect to entire state. Ideas on assistance for handling materials & uses. Better chance to respond successfully through establishment of chapters.
Direct mail to apartments, dwellings and saw increase in recycling in areas where mailer distribution, are conducting some measurement efforts at drop off sites.
Advertise at trailer site
Word of mouth, Chamber of Commerce, interaction with communities in Colfax County. Schedule also do public education with bins at elementary & high school.
No public education. Limited effort.
No public education
Need to do more. Talk to radio stations about talk shows.
Tire redemption, clothing recycling, recycle crayons, cardboard recycling
City does own publicity. Flyers in utility bills, Face Book page. They target specific materials and on certain issues.
School tours
Increase in materials
Minimal
Impact on recycling a lot. Put in city newspaper questioning info about what is recyclable and not recyclable. New customer gets brochure. Important: NO PLASTIC BAGS
10. Are the local government entities (City, County, or other) supportive of your efforts?
City operates facility. Council supportive.
Yes. 42 entities.
Strong support for recycling. City has drop off for recycling.
Yes *(several responses)*
City/county operation. City staff to haul waste

Yes. Ogallala received "Best Recycling City" in the state.
City is supportive. County is uncertain.
Yes, city and county fee.
Yes, except smaller communities can't support as well.
Yes, in the communities where they have workers.
Yes. Evidence is cardboard recycling Ban.
Yes. Complain of the recycling drop off trailer being full.
100% supportive of recycling
Yes, some in-kind time is through city employee assistance.
Yes, businesses involved
Yes and No. Lack of desire to do recycling.
11. Have you experienced contradictions from different state or federal agencies relative to recycling efforts? Please provide an example.
Fairly consistent
No *(several responses)*
NET came out to visit site
They take materials to Ogallala.
Don't have any experience
Yes, inconsistency.
12. What types of recyclables do you capture?
Paper, newsprint, slicks, magazines, cardboard, tin, aluminum, plastics 1 & 2.
Cardboard, (newsprint, office paper, magazines together), tin, aluminum, plastics 1 - 7 (bundles tough with some sort).
Cardboard, newsprint, magazines, 1 & 2 plastics, aluminum, tin.
Used oil, plastic 1 - 7, cardboard, aluminum, tin - metal, magazines, waste paper. Ogallala takes HIS material.
Cardboard, newspaper, magazines, glass, aluminum, steel cans, plastic 1 - 7. Use glass for trench bedding and give it away to citizens.
Cans, aluminum, plastic 1 - 7, newspaper, cardboard, magazines, mixed paper.

List provided: Cardboard, PET #1 & #2, milk jugs; white paper, office pack, magazines, books, newsprint, bagged shredded paper; aluminum & steel cans; clear, brown & green glass; electronics; metals & most appliances.
HHW, pharmaceuticals, sharps, liquids, plastic bags, household batteries, car batteries, cardboard, shredded paper, bicycles. Interact with both Gering and Scottsbluff.
Paper products, cardboard, newsprint, white paper, metals, aluminum, plastics - Just Store It
Paper, cardboard, paper board, aluminum and stell cans, plastics 1 & 2, electronics, batteries including car, pallets, magazines, newsprint, books.
Cardboard, tin cans, aluminum, newsprint, books, phone books, magazines, white paper, misc. paper, plastics 1, 2 & 5
Fluorescent bulbs, batteries, newsprint, mixed paper, plastics 1-5, aluminum, tin, glass
Cardboard, paper (newsprint, magazines), mail, aluminum, tin, plastic 1 & 2
Metals, tin, cardboard, plastics - all, newspapers, white paper
Cardboard, all types of paper, all plastic. NO oil, aluminum, tin
Newsprint, office paper, magazines, phone books, paper boards, aluminum, steel cans, plastics 1 & 2 only, E-waste, cardboard.
Cardboard, newspaper, clean paper, aluminum cans, 1 & 2 plastic. Tin cans - not typically moved
Newspaper, cardboard, Aluminum, tin cans, mixed paper, metals
Cardboard, newsprint, office paper, mixed paper, aluminum cans, tin cans, plastics 1 - 7, used oil, plastic livestock tubs, University Nebraska Lincoln pesticide container program
Cardboard, plastics 1 & 2, aluminum cans, tin cans, newsprint, magazines, batteries
Drop off sites and curbside: cardboard, white paper, newsprint, plastics 1, 2, 4 & 5, steel cans, aluminum cans, pesticide containers, glass, composting (yard & trees, tires, concrete and asphalt, HHW.
Cardboard, 1 & 2 plastics, milk jugs, shredded paper, magazines, newsprint, tin cans, aluminum cans. First star, fiber
Cardboard, newspaper, white paper, plastic 1 - 7, tin cans, aluminum cans, magazines, books no cover. NO Styrofoam, shrink-wrap, hard plastic.
Anything they can find markets for, including non-recyclables. Hefty energy bags, 8-gallon bags that can be filled with non-recyclables for fuel source. Public wants to recycle and needs guidance.
Single stream cardboard, plastics, tin cans, aluminum, newspaper, white paper.

13. Do you process the recyclables at your facility? Once processed, what do you do with the recyclables?
Public delivers recyclables and presorts.
Clean. (Same baler as when did WCS)
Everything is baled and shipped out.
Sort and send to Ogallala. Sell newsprint and cardboard. Pickup once every 3 weeks. To Ogallala once a month.
People sort recyclables. Do not do a lot of drop off drop off sorting with bins. 20% one full time staff.
No *(3 responses)*
Yes. Bale and ship.
Minimal
Sell to brokers: First Star Norfolk, Commerce City
Western Resources in Ogallala. Bales separate. Local person takes electronics.
Materials are sorted
Primary recyclables to process: Demanufacture appliances and then recycle metals, compost operation.
Bale cardboard, bale aluminum
Different bins for each recyclable, bale materials, First Star, green fiber, retro fit horizontal baler.
Bulk plastic & cardboard; Gaylord remaining; Sioux land remaining
Sort them; 16 trailers; Horse trailers & for cardboard
Separate materials into bins
No processing. Just take them to Broken Bow. Batteries go to Grand Island.
All over. Brokers, direct mill.
Bale and put in boxes
Bale shredded paper
Bale recyclables. Shipped to Waste Management in Colorado. First Star in Omaha take cardboard.
14. Is storage of materials an issue and if so, what remedies have you tried?
Most material is moved quickly, except for plastics.
No, move materials as soon as can. First Star, MDK.
No *(14 responses)*

Try to save until there is a truck load. May have to dispose of it sometimes
No, use trailer for storage.
Not really, except it can't be stored outside
Only if people picking up material are delayed
No, move once every 2 weeks
No storage issue
No, once every 3 weeks ship to York
Not usually
No, have semi-trailer for cardboard and livestock lid tubs. Have other materials in trailer.
Plenty of room
15. What materials are easiest to process? Hardest to process? Why?
Easiest is cardboard; Hardest is plactics
Hardest - plastic, cardboard; Easiest - Aluminum and tin, low impact. Greatest contaminant everyday trash
Baling of everything.
Self-sorting
Doesn't say
Easiest is paper. Hardest is plastic and steel.
Easiest: Cardboard, aluminum; Hardest: Plastics
Easiest: Paper; Hardest: Glass
Cardboard - easiest; Sorting paper is a challenge
Depends on equipment they have. Getting things to market.
Cardboard easiest, metals the hardest
Cardboard, shredded paper, plastic bottles. Balers have tendency to fail due to bottles. Shredded paper bales poorly.
Newspaper easiest; Plastics hardest due to sorting
Cardboard easiest; Aluminum & tin cans hardest
Cardboard - easiest; Plastics - hardest
Cardboard easiest; Glass hardest
Most everything is easy to handle. Cardboard can be hard if there is a lot.

Newspaper and office paper
Cardboard
Single stream easiest
16. How do you address materials that are difficult to handle?
Put into transfer station
Take it to face
Set out barrels for disposables
Not a lot
Do not take
Easiest: Cardboard, aluminum; Hardest: Plastics
Easiest: Paper; Hardest: Glass
Not a problem
Do take tires & appliances, hire contractors to move, refer to private sector. Local grant program for food waste & other compostables. Rebate companies for recycling.
Contracted Shred Monster so they take without baling. Also use shredded paper for fire fighter training.
Stock pile metals
Biggest problem is "Missed Throws"
Clothes are taken to a church
Larger plastic tanks require cutting up.
Not an issue
Charge
Use skid steer for handling. 6 bales of cardboard a week. 12-14 bales of single stream. NDEQ put in a grant for drop off roll offs for our city parks.
17. What, if any, piece of equipment have you found most helpful and useful in your recycling operation?
Baler *(8 responses)*
Skid steer
Skid steer loader

Fork lift *(5 responses)*
Hook lift recycling truck
Bob Cat *(2 responses)*
Roll off boxes
Move trailer with pickup truck
Skid loader
Semi-truck trailer
18. If you send your recyclables to a MRF or processor, what recyclables are rarely accepted or not accepted at all?
Cardboard. Phillipsburg. Metal picked up. Bales.
Dirty or too contaminated loads; not specific
Plastics
None (5 responses)
Saran wrap, 5 - 7 sometimes a problem.
Very easy to work with. Clean Harbor, Cities, Docushred.
No problem with materials. Mid-America is where they send recyclables.
MRF will assess fee if materials are contaminated.
Never had a rejection
Other plastics
First Star; Cardboard to Kansas, Phillipsburg, KS
Never had that problem
Not a problem
Take nothing that is not pre-sorted. Marathon baler.
19. Are the buyers of your materials easy to work with and do you believe you are getting fair treatment?
Yes, easy to work with.
Very good to work with
Yes *(13 responses)*
Most go to First Star. Very happy with, and some go to Ogallala.

Very easy to work with. Clean Harbor, Cities, Docushred.
No
They do not receive money for their materials
On some products, yes, some no. Plastics, no.
Yes, only First Star
First Star - yes; WM just takes it out, does not take it
20. Have you tried incentives to increase the recycling rate and if so, what were they and did they have a positive result (i.e. did the amount of recyclables increase, what types of materials increased, etc.)?
Motivation is landfill is 100 miles away. Save 17-20 trips to landfill.
No motivation to expand service aggressively
Limited based on markets. Other recyclables - tires, white goods, other metals, batteries, used oil
Encouragement to recycle. Citizens are involved.
"Pay As You Throw" early 1990's
Reservoir recycling, education, free events.
New city management wants to increase recycling
Through accommodation through Boy Scouts.
Not really
We do not push recycling because it costs
Contests for kids that impact parents. Radio station is very helpful. Senior shut-ins.
Not really. Competition (Kopchos Sanitation) is local hauler and provides recycling.
Tried CFS bulbs and didn't work due to logistics
Yes, assistance programs with rebate. Great to increase commercial and recycling rebate 10 cents/ton to haulers who increase recycling.
No *(5 responses)*
Youth activities and incentives for pop bottles with youth for prizes. Community wide cleanup and hamburger feed.
No. City has debt that minimizes recycling effort.
Run ads in newspaper or do flyers
Trying to get more paper
Increased recycling rates. Spoke with outlying cities and villages.

21. Do you interact with other recyclers through partnering and if so how?
No *(7 responses)*
No, not considered. Recycling is secondary service.
Not aggressively
Workshop and attend conferences. Interaction with City Clerks.
Limited success
Yes. Define specific areas for hub and spoke. Also provide sources of material for WRG business. "Recycling Right" program to provide sustainability.
Town of Potter brings in recyclables. Lodgepole brings in recyclables.
WRG (Western Resources Group) - Ogallala, Coors, Scrap Co., Regional meetings through KNB.
City of Gering, City of Scottsbluff. Looking at tires.
Keep Chadron Beautiful. They recycle cardboard and office paper at any business
District meeting KNB
Do a tour and promoting through site visits. Promotions on web site & transfer info.
Partner with local haulers & recyclers; Bid out recycling processing; Share risk & revenue for materials
Discussed trailer overhaul
No, except for First Star. Interact & monitor other recyclers to see what they are doing.
Negative - cost to collect adds to debt
Negative; because of lack of manpower
Positive
Plus: Adds cardboard; Minus: Site not good if contaminated
Yes, interact with other haulers.
Yes, brokerage services
22. Does your facility use any Best Management Practices (BMP's)? If yes, which ones have you found to be the most useful to your operation?
No *(5 responses)*
Look for strategies internally
No. Time flexibility.
Given the work staff focus on unique skills

Try to at drop off site & composting facility. Community based marketing. Use research
Drive through facility
Yes
Yes. Conduct evaluations of plastics.
Longevity
Yes
Utilization of loader
23. Do the landfill bans presently in place (yard waste from April 1 to November 30, waste oil, lead acid batteries, household appliances, unregulated hazardous waste, waste tires) impact your operation either negatively or positively?
No *(5 responses)*
Impact is limited. More isolated.
Compost ban
Have more problems with yard waste. Do not have man power or equipment.
Impact from tree dumps at lake.
Stabilized, with the exception of farmers with chemical jugs
Yes
Provide outlet for banned items
Neither
It does not affect them.
Yes, Bans were successful. Voluntary recycling goes only so far.
Any landfill Ban is a double-edged sword. Extends life of landfill but does add burden on staff.
Waste oil
Liquids & tires
Neutral
Take these banned materials. Trail Blazers come once a year to take liquids. Through the non-recyclables.
Maybe
Negatively, impacts drop off site
Little

24. Would a ban on cardboard or plastic bags have a positive or negative impact on your operation?
Positive (cardboard) to get it out of waste station, but it is a pain for labor.
Problem with plastic bags is getting dirty. Positive for cardboard.
Positive. Ban plastic bags is most important.
Cardboard very positive
Positive effect on recycling
Negative impact, but bans are good.
Plastic bags bigger impact than cardboard
Yes, on cardboard
Getting plastic bags possibly
Negative due to man hours to handle, pulling out the cardboard.
Positive effect
Have positive impact
Positive impact. Reduce waste stream & save space
Positive with recycling. Greater monitoring.
Cardboard not a bad thing. Plastic bags no good.
Increase in litter
Can move
Positive impact
Negative - cost to collect adds to debt
Negative; because of lack of manpower
Positive
Plus: Adds cardboard; Minus: Site not good if contaminated
Positive, but need to consider impact on business and citizens.
Good for them for cardboard. Not good for plastic bags.
They are close to getting all cardboard. Concern with how haulers would manage it. Positive.
Cardboard is positive. Plastic bags are a problem.
Ban plastic bags would be beneficial

25. What do you believe is the public perception of this recycling operation?
Very positive. Rural bring in glass to not pay across scale.
Recycling positive. Non-recyclables waste of time or money.
Good public perception. Good communication.
Very positive
For the most part, people are happy to have it. At times site can be messy and that get complaints.
As a leader in community for litter reduction and recycling through achievements and efforts.
Public seems to be happy. Sometimes confused.
Is great and positive
Providing recycling and collection opportunities. Excellent clearing house.
Getting better every day
Very supportive
Really like facility based on staff
They will know in about a year
Generally, public desire for recycling exceeds public official's expectations. Public wants more efficient recycling efforts.
Citizens like it and do monitor it
Have been recovering from problem of 3 years ago
Good Perception
Very good & stable
Recyclers use it and like it.
A lot of positive reaction
Favorable to what they do
Community enjoys having bins and cardboard drop-off
People are pleased. Easy to use.
Very positive
Only recycler perceived as Best in City.
Good
Not very good because many people didn't think it would, given size of community. 10% know.

26. Do you see yourself staying in this industry in five to ten years and why?
Enjoy the work and would stay with.
Yes, if move to more regional system and to maintain "Pay As You Throw."
Yes, long as NDEQ is supportive with funds. KNB provides someone, focuses on waste reduction and litter control. Provide bridge between community and government.
Maintain existing facility
Yes *(7 responses)*
Yes. Don't want to quit because have done it for so long.
Not likely
Yes
Plan on retiring in next 2 years will pursue in retirement.
No
Yes, want to continue with recycling.
27. Do you have any comments to add?
Get a list of companies that take recyclables.
Markets and shorter distance. Attract companies to do recyclables. Look at waste shed.
Government partnership. Government operating fiscally responsibly. NDEQ optimal mandating to make things worth it.
It is all made possible by the state. If more mandates the better.
Be as transparent and work with NDEQ.
Communication & sharing info between NDEQ & organizations
Leadership needed from NDEQ. Targeting funds. More proactive approach. Comparing data and presenting results. Establish goals & target funding to meet goals.
Need to rebury recycling
Grateful for funding from NDEQ. No recycling if no funding.
Better drop off for E-waste
No *(2 rseponses)*
Difficult to compare community to community. What fits here, doesn't fit somewhere else.
If they could come up with a system to know about stability.

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APPENDIX H

Public Meetings Minutes

LB 1101 Solid Waste Management Project Study
PUBLIC MEETING MINUTES

October 17, 2017 – Bridgeport, NE
Prairie Winds Community Center

Present:

- Joe Francis – Nebraska Department of Environmental Quality (NDEQ)
- Dave Haldeman - Nebraska Department of Environmental Quality
- Ed Sadler – Advisory Committee Chairman & City Manager for the City of Sidney
- Jack Chappelle – Engineering Solutions & Design, Inc.
- Rebecca Chappelle – Engineering Solutions & Design, Inc.
- Eighteen (18) Public Attendees

Joe Francis began the meeting at 6:00 pm by reading the Open Meeting Act and then introducing himself, Dave Haldeman, and Ed Sadler.

Joe Francis: What we're here tonight to do is review the draft study. The consultant, Engineering Solutions and Design, has prepared the draft study. I want to emphasize that it is a draft. Jim Macy, the director, likes to work by an 80/20 rule. If you wait until you get something one hundred percent right, you're never going to get anything done, or anything completed. So, this is a draft. I think it is 80 percent of the way there, but we have some holes to fill in, and hopefully you'll help us do that tonight.

We're on a short timeline. We want to get as many comments as we can tonight, but our real deadline for taking comments from the public, and from other state agencies, anyone interested in LB 1101 effort, is October 31st.

After October 31st, it's the department and ESD's responsibility to get the study final. It's really a two-step process. The study has to be done and then the department presents our recommendations in a report to the legislature.

So basically, we'll review on what we've done to get the study prepared, including the meetings of the advisory committee, these public meetings, the many conversations that we've had over the last number of months, all to prepare a report and recommendations that go to the legislature. They are due December 15th to the legislature.

Again, we want to get your comments. There are comment cards here that you can use. Also, if you didn't pick one of these up, we can hand them out, but there's instructions on how to get to our website.

The website is probably the best way to make sure that your comment gets on the record. We'll take these written comments, but Dave and I can lose things, so the website really is the best way. But we'll certainly take these if you would prefer to write them.

Also, if you want to write questions for Jack Chappelle to answer tonight as he goes through his presentation, you can write them on there if you don't want to talk. But we are a small group, so I'm sure we can keep it informal.

With that, I'd like to introduce Jack. We've been talking about this effort for a long time and Dave and I went around the state this summer talking primarily with those that are responsible for landfill operations. Jack went around and talked to, I don't know, 45 or 50 recyclers and is continuing to do that.

I say that we want to get comments by October 31st, but really, we'll take comments until the last minute, so we'd like to hear what your thoughts are, and again, we appreciate your coming, and with that, Jack?

At this point, Jack Chappelle began his Powerpoint presentation (see attached presentation printout).

Jack Chappelle: Again, my name is Jack Chappelle. I'm with Engineering Solutions and Design. We were retained by the NDEQ to do this study, in response to Legislative Bill 1101.

What I'm going to go through tonight, is a very brief overview of the draft report and the information that we put in it. Then you have two options. One is going to be if you want to write down a question, that's fine. Or a comment. If you would like to comment, the only thing we're requesting, if you want to make a verbal statement or comment, is you fill out that sheet at the end of the table. And the only reason for that is, is that we have to do minutes of the meeting, and I want to make sure I spell your name right.

The purpose of the study. Now for the most part, what we focused on was the solid waste management in Nebraska, but we also focused on the various programs that NDEQ does. We knew that there was a specific interest by the legislature in recycling and composting programs and there was a very strong interest in reviewing the existing funding sources, how they work, and finally, the other thing is they wanted to see how Nebraska sizes up in relationship to the surrounding states.

So that's the basic purpose and the basic function of the study. As far as the study process is concerned, we did interviews. As was noted earlier, we went out and physically interviewed over 40 different solid waste operations in the state. We did electronic surveys of the landfills. We also talked to landfills, recyclers, and waste reduction efforts in the various parts of the State.

If you want to compare that to how it's done in other reports or studies that have recently been conducted: For a study that was completed just recently in Minnesota, they did everything electronically. They didn't go out and talk to anybody. They just did an electronic survey and based all their information on that. And that's typical of a lot of these studies. But the problem is, if you don't physically go out and talk to people, you don't get a real sense of what's going on and you don't get a strong input on where things are and what specific issues there are.

Second thing we did were the electronic surveys, and then we also attended a lot of conferences to find out new information on what's going on. Recently, we went to recycling organization conferences in Kansas, Missouri and the National Recycling Coalition conference, which was in Minneapolis this year.

From these conferences, we found the presentations to be valuable along with interaction with other recyclers throughout the country, finding out what they're doing, finding out what's working in different locations.

The issue papers that we prepared were done in the very early stages of the project. The purpose of this was to identify what we felt and what NDEQ felt were the key issues that we're facing in the State of Nebraska and attempt to address the list of items that the legislature had identified as part of this legislation.

We also did a very detailed analysis of various programs, studies, state regional plans, in the seven states that surround Nebraska. Now, as all of you know, with your geography, there's only six states that actually touch Nebraska. But because Minnesota's so close we found that they're provide a very valuable piece of information as far as what the State is doing.

There's some very interesting things about these states and what their activities have been. We evaluated their state regional plans, their funding programs, their regulations, the entire list here.

What we found was that no other state, of the seven states that surround Nebraska, funds recycling at the level done in Nebraska. There is no state, the other seven states that we're talking about, that have the focus on training and on interaction with their various programs as the State of Nebraska does.
In addition to that, of the seven other states, only three offer grants. So interestingly enough, we found that the state you're in is actually probably one of the best ones to be in, as far as how they support recycling from a financial perspective.

Speaker 1: What are the other two states that do grants?

Jack Chappelle: The other two ... One is Kansas, and the Kansas grants have just started up again. The last time they did grants was over 10 years ago. And then there are grants that are issued infrequently in Wyoming and South Dakota, and in Colorado, they do grants. That's on a varying basis. So those are the ones that do that.

For Nebraska, we looked at NDEQ's annual reports, their 2015 Nebraska Recycling Study, Waste Characterization Study, legislation and statutes. We looked at the NET grant program, and the NDEQ grant programs. Our effort, or our focus there was to see what's been happening most recently, and what's been happening in the past, to get an idea of how things have progressed in the state.

This slide presents an example of some of the information we found. The locations marked in red indicate an active landfill site along with the year each of these landfills will reach capacity. In Nebraska, we have one landfill that will not close until the year 2164. Of the five landfills in the western part of the state, except for Gering, the others have capacity until 2090 or more.

The part of the state that has the least amount of long-term, or greatest longevity in their landfills, is in the northeast corner and in the central part of the state.

In effect, what this tells you is that there is a significant amount of capacity in the State of Nebraska, as far as landfills are concerned. What that means to you, and to the citizens of the State of Nebraska, is that landfill disposal is economical and readily available. So, it makes recycling, waste reduction, reuse, all of those programs more challenging, because you have such a high volume of air space to work with.

The next area is we looked at was what the grants have looked like from 2011 through 2016. This is the Litter Reduction and Recycling Grants Program, if you'll notice, it covers pretty much the entire state. There are a number of communities that have received grants more often. Note the legend in the upper right-hand corner. The top one is for cleanup. The second one is for education. And the third is recycling. So, the square is cleanup, the circle is education, and the triangle is recycling.
This is a very interesting map, because it does indicate that there is a very decent spread of grants throughout the state. What we did not take into consideration at any great depth, was how the amount of money is spread throughout the state. The reason we did that is because the population falls off from east to west. You're not going to be able to generate the amount of grant moneys in the west, or even in the central part of the state, that you would in the eastern part of the state, because one there are more communities and more population in the east.

Your competition in certain instances, has to do with the population. Now the nice thing about the grants program is that NDEQ and NET both have very specific requirements as far as what you need to submit, as far as your grant applications are concerned. So, they're considering the application more than they are the location, population size, or anything else. So that is a good result for you.

On the Waste Reduction and Recycling Grants, Incentive Grants, these are pretty much the same. It's about the same result. You have locations throughout the states where the grants have been distributed. This map shows a good distribution of grants, a good distribution of opportunities, and I think it's a credit to all of you in the audience that do recycling or waste reduction, because you're very aggressive about going after the grants. They're there, and hopefully you are pursuing them and helping your operations further improve.

Finally, this map shows the NET grants. NET is the environmental trust, it's based on portions of the money generated from the lottery. This is one area that we thought there could be much more aggressive actions on the part of NET regarding being able to support recycling, waste reduction, education programs. They've given out a number of sizable grants, but the thing is given the amount of money they have, and where their focus is, that they could expand upon that greatly in the state.

Finally, I'm going to briefly go through the six recommendations that we've given to the Nebraska Department of Environmental Quality regarding how to address the legislature's questions.

The first is to combine the Litter Reduction and Recycling Grants Program with the Waste Reduction and Recycling Incentive Grants Program. The reason for this it will result in one grant cycle and there'll be a larger amount of money to work from. And third, it does allow NDEQ to have a specific focus and not separate their focus between the two grant programs. So that is recommendation one.

Recommendation two is to remove the disposal fee split. If you don't know what that is, there is a fee of $1.25 per ton charge to each ton of MSW disposed of in a State of Nebraska landfill. Half of that money goes to the grants. The other half goes to the management and operation of the NDEQ programs.

The situation is the $1.25 generates a varying amount of money each year, based on the tonnages. You have some higher years and some lower years. And secondly, the needs of NDEQ, as far as their programs are concerned and those activities, have resulted in having excess money at times. In effect, they don't spend all the money on the program side, but because of the way the system is set up, they can't then move that money to release it for the grants.
So, this is a way for them to have much more flexibility as far as how much money is available for grants from year to year.

Recommendation three is to assess NDEQ's expertise. What this has to do with, is looking at NDEQ as far as their capabilities. What can they provide you as far as training, education, help in issues you may have regarding any kind of operation you have, from being simply a private citizen, to running an operation, to being involved as a party in one of the operations where you're on a committee or something.

It's very important to make sure that NDEQ assesses their expertise and determines where they can further improve it. And this is an area that, when we went out and did the interviews, we had a lot of very nice compliments of NDEQ. At the same time, we did have some comments about the limited amount of access to some of their staff. So, I think it's very important during this time period when you can submit comments that if you feel that there's an area that you would like NDEQ to focus on more, or to look at more, this is an opportunity for you to do that.

Recommendation four is to expand the public education programs and the outreach programs. One of the things that we had comments on from a couple of individuals is they were concerned about the State of Nebraska's waste reduction hierarchy. If you know what the hierarchy is in the State of Nebraska, one of the highest, or most important things in the hierarchy, is zero waste. That's what the state is moving toward.

The thing about it is that in the State of Nebraska, as in most every other state in the union, the recycling and waste reduction efforts started at the grass roots. They did not start at the state level. And so, in each of those instances, it's you that have started the programs, are interested in expanding the programs, it's now an opportunity for you to get better and stronger public education, not only for yourself, but more importantly for the public.
And one of the biggest areas that where needs to be public education is in how to we get to zero waste. What is materials management about? How are we going to reach this goal that the legislature set, that the State has set, that says, "We're moving toward zero waste." And you can't do that without educating the public. You can't do that without being consistent in your education and being able to identify those areas of education that people think are most important.

So, again, take the opportunity tonight to write down or make comments on the area of public education if you feel strongly about it. As you can tell, I do.

On the outreach programs, one of the things we noticed with a number of the different facilities that we went to, was there were questions on how to improve an operation. What are some of the efficiencies defined and how to find them and to do them as economically as possible? Those kinds of programs, that kind of outreach, I think is going to be very valuable as you move forward and try to expand the programs you have.

Recommendation five is to assess information needs. One of the things that we found quite odd in the State of Nebraska is the level of reporting. There's a certain amount of reporting on the solid waste, on the landfill disposal side. Each landfill must report how much they dispose each year, what kind of materials ... some of the materials they dispose. There's a whole list of things that they need to report. But, for recyclers, for waste reduction efforts, for other solid waste programs, there are no such requirements. Because of that, it's very important to try and fill in that missing information.

The reason it's very important is because without that information, there is no indication to NDEQ, or to the citizens, exactly what the waste reduction and recycling rates are in this state. If you don't know specifically what's happening and how successful you're being, it's very difficult to trumpet that to the citizens.

It is information like that, and other information that could be beneficial in understanding what the entire solid waste system is doing. That's the focus of this recommendation.

And finally, the sixth recommendation is to assess opportunities for state agency collaboration. One of the things that we also got from our interviews, and from our investigations, was there needs to be a better interaction among different state agencies.

There are things the Nebraska Department of Transportation, is doing. For example, they have a litter program, and their litter program is something that NDEQ could work with them with to interact even more closely with Keep Nebraska Beautiful, as far as doing litter programs, and to assess the Department of Transportation as far as if they have grants or other funding sources that could be a benefit to other organizations.

By working more closely with other state agencies can have a financial benefit to it. You can be more efficient when you're interacting between agencies. You can be more helpful, and sometimes you can go between the departments and find technical expertise that would reduce the need to hire a consultant.

So, with that in mind, I believe that's it. Because this is a public meeting, you have the opportunity to stand up and ask questions, or give your opinion of things as far as what we're talking about tonight. Like I said, you can just write out your question, and we can answer it later, or your opinion, or anything else. As indicated earlier, we're taking comments until the end of the month. And actually, we can take comments beyond that. We just have to submit our report to NDEQ by December 1st, and they have to report to the legislature by December 15th.

Chris Vail: Want me to stand back here? Because I've got a whole bunch of comments. I've got three pages.

Jack Chappelle: All right. Have at it.

Chris Vail: My name's Chris Vail, and I'm the executive director of Keep Keith County Beautiful in Ogallala, Nebraska. I have been an executive director for the past four years, and we have taken our program from being a part-time job to a full-time recycling facility and promotion management agency.

We have established programs throughout western Nebraska, with the Keep America Beautiful affiliates. As a matter of fact, we have one program that we are in our second year of granting through DEQ to be partially funded, that's called Western Nebraska Regional Recycling Program, and it is a spoke and hub program that we have incorporated Alliance, Kimball, Oshkosh, Arthur, numerous places going east of Ogallala.

I'm glad we came to this tonight, because when I read the draft study, I have to honestly say I didn't think you heard a thing I said when you came to visit us. Because we spent a lot of time on public education, the Keep Nebraska Beautiful affiliates, it's our job, and we're continuously trained through Keep America Beautiful affiliation, that has already established a number of educational opportunities for a Waste in Place program that is in the school curriculum.

We have done a lot of things in our areas, one being North Platte and Ogallala, for the past two years in a row have won national awards at Keep America Beautiful. One is our school recycling program. We've placed first in the country for the PepsiCo Recycle Rally. And we want to bring this to all the places in western Nebraska, because we realize there isn't a lot of money to be made in recycling.

So, we feel it's imperative that you hear us and how important we are because we do something that's very different. We write our grants. We pay for our salaries. We get reimbursed. We cash-match all this stuff, and we have huge passion for what we do.

We are integrated into the schools, into the communities, we receive grants from both our cities and our counties, and we try to do the best we can, the most frugally, with the little amount of money that we get.

So, I just wanted to make sure that you understood that we are really out there and because I came tonight, I realized you do. Because when at first, when I read this stuff, I'm like, "He doesn't get what we do." And you really do, and you really need to ... We really do need to expand public education. We need to continually educate people. We need to work with the school systems and the communities. We need to have proclamation days through our city councils, and America Recycles Days.

And also, in terms of what we do, I would just like to make a comment on your recommendation number one, in combining these two things. First of all, I do believe that the money all comes from different sources, and some of it is specifically allocated to tires, to recycling, that kind of stuff. So, I don't know if we can legally do that, if that's the right way to go about it, but that's not up to me.

I noticed that three of your comments were specifically in regard to public education. Whether DEQ becomes more resourceful to us in the field. We're the people in the field making the things happen. We look at DEQ as the ones that hold us to a certain standard, because if our grants weren't good, and our reporting wasn't good, we wouldn't get them again.

The other thing I think that you are very, very correct on, and I want to see how we could do this almost as rapidly as next year, is how do we go to the DEQ on-base sites at a quarterly basis, when we do our reporting, and we put in all the materials that we've collected. Because what you said about not being able to determine our recycling rates is true. The only reason we know that we recycle 30 percent in Ogallala, is because I talk to the landfill manager.

So those are the kinds of things that I think are important for us to know what we're doing. Give us the accolades. Say we're making a difference, and that's what we want to do, make a difference. That's my comment.

Jack Chappelle: Thank you very much for your comments. I appreciate it. Anyone else?

Speaker 5: My question is, on your Solid Waste Management Study Advisory Committee, you were talking about the various entities, and I'm wondering, do you have any agriculture representation on your committee or any representation by water entities? By that I mean ditch companies, that sort of thing.

Jack Chappelle: No. Anybody else?

Speaker 6: Our fear, if you will, being in the panhandle of Nebraska, is that we will be forgotten. But I think as you explained it, it all depends on how well you wrote your grants, and so forth, and what you're applying for, and that you will be awarded in that capacity. Not about where you are, or how small your operation is. Is that right?

Jack Chappelle: That's the intent as I understand it. That's the intent as it's written, that it doesn't really matter where you are. Everybody should be ... I'm saying, "should be" because I'm not on the committee or anything, but you all should be treated equally.

The idea is when that you get the grant forms and you fill them out, you've got to be creative, you've got to explain in detail what you're doing, and most importantly, you have to be very enthusiastic about it. It's not that, "Hey, the mayor called me up and said you've got to start recycling, so get me a grant, or he's going to kick me out of town." I don't know that that's going to work.

Speaker 6: No. We have great enthusiasm for recycling, and it's really building very much in our community. We're looking at doing some new things with that, but again, that would be our fear, being small and in the western part of the state. How will this affect us? And when you pool the money together, is it still available there for education?

Jack Chappelle: That's a very good question. Yes.

Speaker 6: That's what we want to know. When you put them together, because you do have more people needing recycling grants as I read it, rather than education, those are dwindling. Will a certain amount of money be there for just education, or how will that be? What will the difference be? And what it is now.

Jack Chappelle: Well, I really can't answer that, because it has to be put together, but what I would suggest to you is that you talk with the NDEQ people here tonight. One is Dave, he's the one in the back. And there other is Joe. They have been very helpful with us as far as providing information. They want to award the money. They have the grant money, let's use it. Let's use it on something that's going to work and be successful, and people with the enthusiasm to do it and keep on going ...

Speaker 6: And so, will they offer direction to us, maybe in the way of education programs, in a way that they would like to see us go? Therefore, we would be more apt to receive those dollars if we're going in a direction that they would like to see us go.

Jack Chappelle: My sense is that part of it's going to be a statewide thing, because you want everybody doing something that's somewhat similar. But at the same time, you want to also be as local as you can be. What's applicable to your community? What can your community do, and what can't it do? I think you need to be realistic about that.

Speaker 6: No. We've got a great sense of that right now, and we're trying some things, but ...

Jack Chappelle: And if you do, then that's great.

Speaker 6: I think so, too.

Jack Chappelle: The only thing I'm a little concerned about, is I don't get the sense that you all interact enough. Maybe you do, and maybe you don't, but I think ...

Speaker 6: Yeah, we do, and we don't. I mean, we are individual, and our hours are spent doing any number of things so it's a little hard to think, "Oh gee, I'll phone up so-and-so."

But for instance, we bundle, we bale, and take our recyclables to Western Resources Group. And so that's what we do. We reach out. There's a community that is not even in our county, that had a need for recycling, and we go and pick theirs up.

But I do want to say one thing about NDEQ. I'm new to my job for two years now, and we have an all new staff, except for at the recycling center, and we've never had anything but wonderful luck with whomever we needed to talk to at NDEQ, when it came to grants, or reporting, or any of that. Very, very helpful. I wanted to say that.

Jack Chappelle: Very good. Anybody else?

Chris Vail: One other thing that I'm want to make a comment on. One of the things that I've taken upon myself in Ogallala, is we have areas that don't have any Keep Nebraska Beautiful affiliates around us. So, when I wrote my tire grant, for example, we did like 336 tons of tires. And we invited the regional communities. People came from Perkins County, and Chase County, and Lincoln County, and Arthur, and Deuel, and Garden, so although we may be located physically, what we see is our programs are reaching out into various communities.

As a matter of fact, we just stopped on the way up here and looked at what we're doing with Oshkosh and can we improve this. So, we're looking at regional programs, especially in areas that transportation's costly.

Jack Chappelle: Good. That's very good.

Holly Heath: Hi. Holly Heath. I'm assistant director at Box Butte Development Corporation and a board member with KAB and Alliance and with Western Nebraska Development Network.

Some of the concerns and questions, I guess is what Chris has been discussing is, how can we help to make sure we go regional? I know we're making a great effort that the panhandle really starts reaching out to each other with the different programs, and I know Cathy with reaching out to Hemingford and Berea, which is part of our county, and even Gordon, which is outside, and I think you kind of just touched on it a little bit what I was going to ... was reaching out our surrounding communities.

I was a little concerned when I first started reading it, that, "Oh no. The State's going to make all the headquarters in Lincoln and nothing's going to come back out here." And that's a big concern.

We've seen it happen with our workforce development and it's like, "Whoa, wait a second. We've got a great program going. We don't want to lose that." And how we keep supporting them, even on the economic side, because it does affect ... People look at us and say, "Are you recycling?" when they're looking at our communities to bring business in, to bring families in.

So, it's a big concern, to see if this is going to shift, that it's going to take away ... We have a great education program in the schools, which I think is just essential. I kind of was sensing that maybe that could shift, and it was like, "Oh no. We don't want to lose that." We don't want to lose our local identity, as far as our recycling.

Jack Chappelle: Well, it's not the aim of the report, at least from the way we're looking at it, to have everything change. You need to interact with the local NDEQ people and then go see the Lincoln people. Frankly, you've got to be proactive. You've got to go after this. It is very important to stay in front of people.

Holly Heath: Well, in addressing the issue with our budgets smaller and being clear out here, yes, going to Lincoln is good, but we can't always afford to go. It's a challenge.

Jack Chappelle: Put it in your grant application.

Speaker 8: Easier said, than done. We have to cash-match those grants.

Holly Heath: I've got faces and names, and I will get your cards. So that we can do something in Ogallala, that we find a meeting point, that we can bring the panhandle in together and you can get probably four from Western Nebraska Development. I think we could really bring people in so they don't have to worry that they can't afford to get there, or is that where we want to spend our money?

Yes, we need the information from Lincoln, but to get down there, you've got to stay overnight. It's a three-day trip, really. Yeah, I go down for other things. I try to coordinate, but it's tough, and I'd be happy to come represent them, if I had another meeting going on, but that's where our challenges really come, so if we can meet, like in Ogallala, it would be really great. Because then our whole community areas can make it. Everybody from Chadron, Gordon, you know, it's not such a big trip that they can't do it in a day, or stay over one night and be back. That's really a consideration that would be really appreciated.

Jack Chappelle: Who's next?

Speaker 9: I went to your meeting on October 10th, and you mentioned that specific fees or portions of the fees come to the whole amount of what's in the first recommendation. So, what I'm really curious about, are there priority points? If you're going to do something individual, like Keep Keith County Beautiful, it's going to do something that every one of those hierarchy points, every single one of those priorities for those funds have been reserved for. Is that going to increase their possibility of being funded? Or, how do you funnel some of those monies to make sure that they're going for their intended purpose?

I guess I was under the impression that some of those funds are for waste reduction incentives, some of those funds are going to specifically impact recycling, and those things are different. Waste reduction is different than recycling. So, can you speak to that, just a little bit? Am I clear?

Dave Haldeman: Yes. You did a great job. So first thing I would want to point out is that we have a recommendation before us, but there's no actual proposal on the table by DEQ to do that yet. So, keep that in mind, and I think you were inquiring about combining programs. Would that be legal? That would require a statutory change. That's what would have to occur, so you would have to introduce a legislative bill, and then those whole structures would be looked at, the combination of the two grant programs would be looked at.

Speaker 9: Specifically because of how the money comes in there?

Dave Haldeman: Yes. I can talk about that as well. So your question is, "How do we prioritize grants?" Well, I guess my point being, that would be open. Conceptually, the idea would be to take the best of both programs. There's a lot of duplication between the two programs. You probably have noticed that.

Speaker 9: Yes.

Dave Haldeman: Then combine it in a manner that still would enable an agency to set priorities. And the way we do it right now, is we have a program priority system that we utilize for each of our grant programs. And the way we put that together, is by having a number of stakeholder opportunities so the prioritization of the grants has really been based upon what we've been told would be the smartest, best way to prioritize the grants.

I guess to answer your question, we do have the waste management priorities. There is a lot of employees that are going to the very top and people have suggested that that's where the priorities should be. Certainly, though, through the program priority system, even today, we can put that together however we want to, based on the stakeholders and which direction we think we should go.

The issue about the fees is very complicated. There's a dollar for tires sold at retail that goes to the State of Nebraska to fund the waste reduction grants - 1.5 million of the dollars that come in are specifically earmarked for scrap tire

projects, provided we have suitable projects to fund. That particular fee though, can bring in anywhere from 1.8 to I've seen as high as maybe 2.1 to 2.2 million dollars. So after we've funded all the tires at the 1.5, then the rest of that money moves over into development of other types of waste reduction projects.

The $1.25 disposal fee per ton - the grants programs get 50 percent of that and then of that 50 percent, that's only eligible for political subdivisions. So any of the private, non-profit organizations, they don't have access to that. And that generates about a third of the total revenue that goes into the waste reduction program. I don't have the exact numbers, so please don't hold me to this, probably close to anywhere from 1.2 to 1.6 million dollars annually that goes there. We're limited on what we can do in that with that money, specifically for the subdivisions.

I will also say that that $1.25, also helps fund roadside cleanup projects that we do. And then there's also disposal fee rebate program that's associated with that. So that's another component.

There's a business fee in the waste reduction grants program. That's open to everyone. It doesn't have any specific restrictions on it, but then annual revenue on that is only between 450,000 to 500,000 annually.

So just within the waste reduction grants programs, we may generate somewhere around 3.4 million dollars, but as you look at how each of the statutes are set up, what each of those sources of revenue can be used for, it's generally just kind of all around the board and very restrictive.

Speaker 9: So, taking that recommendation, you have to take it back to your administration, and put that into the format that compares it to your requirements, your loans.

Dave Haldeman: Well, yes. We can't do that. We fund according to what the statutes say we can do. On the litter side of it, we've got three categories, public education, recycling, and cleanup. And KNB affiliates are generally the ones that benefit the most from that. And we fund things like equipment, but then we fund a lot of the operational expenses, and the revenue on that is like 2.1 million that comes in.

If you combined all of these, and removed a lot of the restrictions on how those different sources of revenue can be utilized, you're having much larger grant pool of money that could go to different areas depending upon your priorities. But again, none of this has been set up. This is a recommendation to create efficiencies within the agency as well as provide greater flexibility on how dollars can be spent between the various programs and the entities that would be eligible.

Waste reduction generally doesn't fund the operational aspect. Most of it's programs and equipment, and that sort of thing. But a lot of opportunities, if there is a bill that goes forward by a senator that decides to pick it up, there's a lot of opportunity to shape it in really any fashion that makes good sense to the State board.

Speaker 9: Thank you very much for the information.

So, the next thing was just that three of your recommendations, they do seem to encourage NDEQ to take on some of the responsibilities of public education providing information.

I believe it was the board member from KAB, she indicated that, yeah, somebody in Lincoln has all the information, then how does it get over here? I thought that's why NDEQ was providing grants, was so that they were investing in local communities or communities across the state to fulfill those, instead of having NDEQ fulfill public education. Am I misunderstanding? That was my observation.

Jack Chappelle: The way it works, or the way it could work, is that it would work just like it is now. NDEQ would not physically do the training. It would still be probably granted out. The training that you're talking about, or that I was talking about, that would relate with NDEQ, was in overarching things. For example, NDEQ could have their own conference that would bring everybody together to share information on education, to share information on operations, all of those things.

But the training, and such, at least from where we're looking at, we don't really believe that there needs to be a wholesale change, where NDEQ hires a bunch of people to go do training. It's just the reverse. It's more they have, hopefully, more financial resources to be able to distribute to those people who put in an excellent grant, and say, "We're going to do this. We know how to do it, and this is what we're going to accomplish."

So, I think it's stays more the way it is.

Speaker 9: Well, Keep America Beautiful, we meet at the beginning of the year. We have a regional meeting and then we have an annual meeting. And we invite NDEQ representatives to our annual meetings. That's how we keep connected to NDEQ, is every year that I've ever been, NDEQ comes and they represent, and they talk about our grant programs and we have any questions, they talk ... and when there was going to be this transition, they helped walk us through the transitions that were happening at their location, and how it was going to impact our grants.
I do know that NET, they invest a lot of their money by working with organizations, who then disseminate their grants, just like you're suggesting.

So then, NDEQ will go fund someone like Keep Keith County Beautiful, who says, "Well, we'll provide all the environmental education." But then you're funneling the projects just to one location. Is that what you're suggesting? Because NDEQ is going to invest their grant funds in somebody who's going to be doing that education?

Jack Chappelle: Well, that is a way they could do it. I think what the report does, is it starts the process. And then, from there it's a determination of what is the best way to distribute the funds? What's the best way to improve the grant process, the application process, the whole shooting match?

It's a process that would maintain, or retain, those elements that have been successful. And one of the things that's been successful, is there is good public education occurring. I think what they're looking at, what we've recommended, is even a stronger push in that area, and in particular, a very strong push in expanding knowledge in the areas of recycling, waste reduction, reuse, and as I've mentioned in the presentation, a move toward zero waste.

And all needs to work. But I think the system is in place. It just needs to be refined and further focused so it works for everybody.

Any other questions or comments?

Kurtis Olson: I'm Kurtis Olson. I'm with Western Resources Group. And I really want to thank you guys from DEQ because I don't interact with you guys a lot, but when I first took over from Alter Metals, there were a lot of things that I had to finalize, and you guys were just great on being a resource, so that's greatly appreciated.

A couple of comments I wanted to make since it's a public meeting. I found it really interesting when I went through your report, the longevity of these landfills out here. However, having traveled across the country, and having worked almost coast to coast, I have seen what New York and New Jersey do with their trash. It goes out by trainload, by the truckload, it ends up on, barges, going to rural Pennsylvania.

Well, in the panhandle, you look at these landfills out here in the west, when you figure that Omaha at half million people, Lincoln's a quarter million people, those nests are going to fill up real quick, and they're going to end up coming west. I'll tell you, that's how that works.

So I just want to be on the record that if we get run over roughshod by Lincoln and Omaha, and you'll hear that resounding theme out here, because it's reality. But just the population base, you draw a line by north Nebraska, there's more horses and cattle here than people. So that's really important that as a collective group out here in the panhandle, we protect ourselves and our resources and our ground water.

Lake McConaughy, that's right in our back yard, and from probably Labor Day to Memorial Day, including the Fourth of July, that really almost becomes the third largest city in Nebraska. Fourth of July, what was their numbers?

Speaker 12: Waste Connections took out 70 tons, and we began a recycling program funded by DEQ, for Recycle McConaughy, we took out 30 tons. So, we were pretty pleased. That was over a weekend.

Kurtis Olson: So sometimes, we'll get 150,000 people around that lake. Well, if you look at Omaha at a half million, Lincoln at a quarter million, even the stadium in Lincoln, Nebraska, which is really the third largest city on football Saturdays, but McConaughy actually is there almost all summer long. So, Ogallala sits right in a very unique place to educate a lot of people, even the Denverites and the Coloradans that come in.

The other thing I wanted to talk a little bit about, is the community, the outreach that we do, and the spoke and hub. We service Watts, Alliance, Kimball, Grant, Paxton, Big Springs, Madrid, Oshkosh, Chappell, Hershey, Deuel, and Lemoyne. All that stuff funnels right into our Western Resources Center, and we bale that stuff.

The cardboard and newsprint, we actually, if it's clean and dry, we'll shred that. We convert that to animal bedding, and that gets shipped all across the country. That can go from Carmel, New York, to Walla Walla, Washington. Not only are we trying to recycle, we're trying to be self-sustained by making product in addition to that.

And good job on your report. There's some things in there I had some concerns about, but once you talked about it, I feel a lot better about it, so thank you.

Jack Chappelle: No problem. A consultant always likes to hear that. Any other questions or comments?

Speaker 13: I guess if everyone else is done, I'll go. I didn't want to derail the meeting. I'm a little off subject.

The zero-waste deal's come up about three times now, so I'm curious and I'd like your input about where the New York, and east coast debris, trash goes. At this point, if the ultimate goal for Nebraska is zero waste, how would we entertain a municipal and new landfill that was entertaining bringing in out-of-state waste? And this is a municipal landfill, not a public landfill ... or not a private landfill, I'm sorry.

Jack Chappelle: I'll leave that to the NDEQ people.

Dave Haldeman: Sure. There's really nothing that regulatorily prevents out-of-state waste coming into Nebraska. This has been a concern for many, many years. Going all the way back to when the laws were first formed back in the early '90s, that was a concern. And there was waste I think that was proposed from New York City to David City. That was one of the things that they looked at.

The transportation was regulated by ... I think it's the National Transportation Board ... and they don't really have any regulations on the rail system, the way it runs.

The state would obviously be interested in combining governmental issues, finding some way to at least regulate things coming in. But probably the strongest way that it gets regulated, is there's a local siting approval process. There's a law that's in place that actually is implemented at the same time as part of the statutory changes that occurred in the early '90s. And what it does, is it puts an onus on the local entities to either approve or disapprove siting of a new landfill.

And that process occurs before the DEQ gets involved, and so the local governing body makes the decision of whether or not to approve. Adding a particular location and specific things, factors that they have to consider within that law, as a part of that process, including, not only is it good for the community, and all the other issues, but they have to hold public hearings. They have to look at whoever is coming forward to get through the local siting process. There has to be a notification of entities, citizens that live within a certain distance, and so there's a complete process that has to be carried out before they can even come before the Department to request approval.

Speaker 13: Do the local entities have the authority to limit that and be able to say, "No. We do not want out-of-state trash brought into this facility if it is not a private facility, it's a municipal facility?"

Dave Haldeman: I'm not an attorney, and we actually steer far away from the local siting aspects as possible, but I think at the local leve there's opportunity to deny local siting.

I've heard of it a number of times. There was an expansion proposed for Waste Connections David City Facility, and they denied it locally and that got challenged and eventually went through. But there were also soil dynamics issues in Gretna. They were doing food waste composting and wanted to expand it to be able to take that waste, locally they denied the process.

Is out-of-state waste an issue that they can make a denial on? I honestly don't know if they can base their denial on that. I believe one of the criteria is it is necessary to serve the community.

I can get you the exact statutory language, if you want to look at that. But again, I'm not an attorney, and we don't work with that particular statute. I'm just aware it exists.

Speaker 13: Thank you.

Dave Haldeman: For everybody, I didn't bring a business card, but my phone number is (402) 471-4219, and that's my direct line. And then the line at the agency, is (402) 471-2186. And Joe, I think ... will you do that as well?

Joe Francis: Yes. I've got a few business cards, but my direct number is (402) 471-6087.

Jack Chappelle: And to help you out a little more, Joe’s last name is Francis and Dave’s last name is Haldeman.

Jack Chappelle: Any other questions or comments?

Speaker 16: I would just like clarification on a paragraph here, regarding litter. It says, "Litter control is still an important issue. However, the level of funding required to address it has diminished." So the funding has went down?

Jack Chappelle: Yes.

Speaker 16: OK. It says, "NDEQ and Nebraska's Keep America Beautiful affiliates' successful efforts to reduce littering, have positively impacted littering in the State." I'll agree with that. But then, "which has resulted in needing less funding to address this issue."? It’s a constant, ongoing effort.

Jack Chappelle: One of the things that didn't make it into that paragraph was that the Department of Transportation addressed litter, and Keep America Beautiful addresses litter, and NDEQ addressed litter. This is a circumstance where three groups could get together and make it happen even more effectively.

It's a matter of efficiency and focus. If you put those things together, you can get a lot done, and everybody's on the same page.

I think the one group that's missing, is the Department of Transportation, and getting them involved. I'm from Kansas, myself and Kansas does really well, so don't get me wrong, but there're some real pigsties out there for states. You guys (in Nebraska) do very well and the one thing I compliment all of the plains states on, and you may not notice it, but it can get windy. When that wind blows, and you have litter, it's a major problem, and so to be able to keep your state clean under those conditions, is quite admirable. You should be quite pleased with yourselves. You actually have a very clean state. It's not perfect. Don't get me wrong. But, I think you do a great job of it. I notice it as I drive around the state.

Jessi Hare: My name is Jessi Hare. I am the Education Coordinator at Keep Alliance Beautiful.

I guess the whole day, I'm trying to balance how I felt after reading, and how I feel after listening. And I feel a lot better after listening, but to me it's kind of problematic, just because if there's things that you're saying that are making us shake our heads and be like, "Yeah, he gets it.", but they're not on paper, what does that mean moving forward? Is that something that's going to be added to the paper version later on, or is that something you're going to continue to say no it's not going to be written down? Does that make sense?

Jack Chappelle: Yes. It makes sense. And the answer to the question is that we wrote the report, or finished it October 1st. And even when we did the report, put everything together, it's difficult sometimes to put into words, and to emphasize as much as what you can do verbally. And I think that's what's so valuable about public meetings, presentations, and the like, is because there are opportunities that you have in an arrangement like this.

Number one. You get to hear directly from the person or organization that prepared the document and you get a sense that they're not reading from the document. They're actually emphasizing the overall encompassing concepts.

And then, on top of that, you also have the opportunity to ask questions, to address those areas you have the most concern with. We note all these issues, and from October 1st until now, and from now until December 1st, when we turn in the report, there'll continue to be an evolution of things, and we'll continue to look at things.

All of you that are here, you know how to get ahold of Dave. You know how to get ahold of Joe, and how to get ahold of me.

Jessi Hare: I understand that it's maybe difficult to get things across in paper, but one of the things that you seem to understand is the importance of the local educator, you know, that individualization. Maybe I was just feeling dramatic the other day when I read this, but it just kind of sounded like the idea of creating statewide programs, which is not a bad idea ... but it doesn't really talk at all about local educators.

And so, my interpretation was sort of the programs should be out there on the internet, and people could use them, but there wouldn't be somebody in the field. Just the fact that that's not ... At least I don't see it anywhere in here, I just think that is a problem. And I'll just say it again for the microphone. I know everyone else has said that, too, but I just think it's ridiculously important that there's a local educator.

Jack Chappelle: What about in reverse, that there you are in the field, and you're doing training or education. I don't know much about public schools as far as how they function and everything, so excuse me if I make a mistake, but I always remember that they have very distinct lesson plans. Maybe there should be a consideration for some kind of organized training. That, I know, is not in the document, but I think it is something that probably should be in the document. I don't know if it's as aggressive or detailed as a teachers' manual, or something like that, but just basically, "This is how things work."

Jessi Hare: I don't think that's a bad idea because that's a resource that I think they should take advantage of. But just when I read this, to me it just kind of looked like a secularization of education, like the programs even may be the education professionals being NDEQ, swinging by Alliance once a year, doing a presentation, and the kids never see them again. Now, it's kind of what I interpreted it says.

Jack Chappelle: No. I don't like that.

Jessi Hare: I would like to see it in here.

Jack Chappelle: What page is that?

Jessi Hare: 3-11?

Jack Chappelle: 311. OK. Thank you very much. I appreciate it. Anybody else?

Speaker 18: I just have a question again.

I think it's for NDEQ. So, you indicated in your report that there was a lack of data. And I do understand that there's private recyclers that may or may not give you information. But, we report to NDEQ every quarter. Does NDEQ compile and extract information from those reports to put it in the annual report? I read the document online that just said the annual reports, and what it looked like to me was just an overview of what the programs were. But, we tell you how much we recycle in those reports. Is that extracted and then provided in an overall view?

Dave Haldeman: No, nowhere online. We'd have to come up with some data base.

Speaker 18: Would it be on your on-base, though, it's like how many pounds of plastic you recycled? Enter it. And how many pounds of this? Enter it. How many kids did you educate? Enter it. How many adult programs you did? Enter it. What was your topic? This was the topic. Then that would be a compiled. Would that information be important? Would that information be imperative for your report if all that information was extracted? Or was there still a lot of information out there that is not available about recycling that wouldn't be found inside of those reports?

Jack Chappelle: I guess the answer is, "Yes and Yes." What I mean by that is ... You've got to understand, I'm an engineer, so I want all the information I can get.
The other thing is, I think any information is helpful, but what you just said, the listing of things, all of that is very valuable. And it can be applied in a lot of different ways. And that's what is so nice about a broad spectrum of data. There are a lot of questions that come up from legislators, from other departments, where, just like you said, how many students did you instruct? what was your lesson plan? how can you compare that lesson plan to other lesson plans in the state?

From that information, it becomes much better to say, "OK. This lesson plan or this program works great. You're really getting it. You know, people are getting it. This really works. This lesson plan, it isn’t so good." Or, "It has some weaknesses. Let's touch it up."

If you don't have that information, if you're not sharing information in that kind of detail, nothing would change. And so different people are being trained different ways, because when we went around and interviewed all the recyclers, there are people doing certain things in one location, that are just pure genius, but part of it is, is it's pure genius for that specific location. And other times, it's pure genius for a number of locations. And the key is to be able to have the information, be able to identify that, take advantage of it, work with it, and share it. And all of those things are positive, and you can only do that if you're collecting the information to begin with. And you're only doing that if everybody's comfortable sharing the information.

Speaker 18: I feel like the affiliate network, we do a lot of that already. We have behavior-based modification change, education programs that are passed out to all of us, and we use it, and we share best practices or programs. But I see how maybe it would be helpful at the NDEQ level, where we're affiliate network. We are already doing that. We're already networking together and providing that information amongst our network. But that's why we're affiliates together, because we want that connection. We want those partnerships.

There's another group working together, the Nebraska Recycling Council.

Jack Chappelle: Any other questions or comments?

Chris Vail: One of the things, in terms of creating zero waste, is we then eliminate the need to remove that waste. So, for example, in the Ogallala public schools, we have recently installed through their PepsiCo Recycle program money that they won, $7,000, we put in water refill stations. So, what that then does, is eliminate the need for plastic water bottles. It eliminates the need for them to be recycled. If we go to zero waste, we can have, "This is the way we started."
So ultimately, what we want to reduce the waste that we create. That's one of the things I think is really important, how do we get to that.

The other thing is that we're having ... And we've seen this in Hershey, Nebraska. They have a gentleman there. His name is Jerry Santee. He owns a company called, Bio Ag Solutions. Jerry is one of the geniuses. He has developed an at-farm composting program. So, he's taking 10 acres of a local farmer, and turning it into a composting field, and then he's going organic. He is turning his popcorn fields, Orville Redenbacher, to organic popcorn.

So those are the kinds of things that I think are really, really interesting. How do we get our composting to him? How do we ... you know, food waste is contaminated, and there's lots of it, and it is 45 percent of the stuff in our landfills. So again, how do we share these ideas? How do we make more people aware of them? How do we build private businesses, because Jerry's invested all this money, millions of dollars, to do this composting on farms, and how do we get farmers to accept this thing? Because they're pretty knowledgeable about their own businesses and to change them in ways of going organic, is not what they way they're thinking.

So those are the kinds of things I think, if we can have an information exchange, I think if DEQ could do something to feature, do a monthly feature, and send it out to all the people that get grants, or are involved in grants, "Here's our program of the month. Here's the things that they're doing in Fremont, that might work in Alliance." Another suggestion of featuring is it then it also gives accolades to the successful programs.

Jack Chappelle: Excellent. Anybody else?

Well, that concludes the meeting. I appreciate you all coming out. It's a very nice facility. Any of the audience live here? Wow. Well, this is a great place.

Joe Francis: On behalf of the department, we really appreciate you coming out.

As Dave and I traveled around the state, one thing that really hit us is there are no two places in Nebraska that are arranged the same. It goes from primarily government-owned haulers, everything, to all kinds of different partnerships, and it really is true that the best solutions are found at the local level. And we are really, really sensitive to that.

The other thing that was driven home on those tours was just the fact that was mentioned a number of times tonight. The importance of the panhandle, and the panhandle identity, and in fact, I think half of the state's population, if you take 27th Street in Lincoln and go border to border on 27th Street, half the population of the state lives east of that line. We are very sensitive to that and we know that it's not convenient and even possible to drop everything and come to Lincoln or Omaha for conferences, and that's something that we certainly heard here.

And most important, is your comments. Please get them to us. If you saw something in the report, and more importantly, if you didn't see something in the report that you think should be there, please let us know that. Again, the best way is the website, but I do have a few cards, and certainly you've got our numbers, and give us call. Talk to us any time. So, thank you so much. We appreciate it.

LB 1101 Solid Waste Management Project Study
PUBLIC MEETING MINUTES

October 19, 2017 – Lincoln, NE
Lancaster Event Center

Present:

- Dave Haldeman - Nebraska Department of Environmental Quality
- Kara Valentine - Nebraska Department of Environmental Quality
- Joe Francis – Nebraska Department of Environmental Quality
- Ruth Johnson - Nebraska Department of Environmental Quality
- Brian McManus - Nebraska Department of Environmental Quality
- Lash Chaffin - Advisory Committee Member & League of Nebraska Municipalities
- Rick Yoder - Advisory Committee Member & Sustainability Program Lead, University of Nebraska-Omaha College of Business Administration & Pollution Prevention Regional Information Center Director
- Jack Chappelle - Engineering Solutions & Design, Inc.
- Steve Danahy - Engineering Solutions & Design, Inc.
- Rebecca Chappelle - Engineering Solutions & Design, Inc.
- Eighteen (22) Public Attendees

Dave Haldeman began the meeting at 6:05 pm.

Speaker 1: Good evening, everyone. I'm Dave Haldeman, the Land Management Division Administrator for the Department of Environmental Quality. I'd like to welcome all of you. I need to start out addressing the formalities. I'm required to inform the public that a copy of the Open Meetings Act is available for public review and it is located on the table by the entrance where copies of the agenda and other materials are located. In addition, a notice of the time and location of this meeting has been published statewide. A copy of the agenda has been readily available for public inspection at the Office of the Department of Environmental Quality prior to this meeting. We also have a form if you'd like to submit comments, you could also fill that out. That would be great.

I'd like to introduce our DEQ staff. Ruth Johnson, who is our Planning and Aid Supervisor. We have, of course, Joe Francis; Kara Valentine is our Air and Land Management Deputy Director for the department; and Brian McManus from our Public Information Office.

We have a couple of individuals here that are on our advisory committee for this study. Lash Chaffin form the League of Nebraska Municipalities and Rick Yoder who is with the University of Nebraska at Omaha. Welcome to you all.

What we have here is not a meeting on the broad study that our contractor has put together for us. This study is too broad. Our director talks about it, an 80/20 rule to try and get everything as close as possible to fund the product, but we probably moved it to about 80%. Then like 20% from there. This is the layer, this is the opportunity to provide comment on this study. We had our meeting on Tuesday, the first meeting out in Bridgeport, Nebraska. Surprisingly, we had what I feel was a pretty good turnout. We had about 19 individuals, very passionate people about materials management. We had good conversation about the important recommendations that they put together. I hope we have a similar participation at this meeting here tonight.

Time line. We are on a short time line. I need to get this accomplished, the study done. Ultimately, the legislation we got passed, that was in 2016, it set some deadlines for us. We have internal deadlines for review. We're hoping to get all of the public comments on the last study by October 31st, so that we can compile them and get them to our contractor. We have to have all that put together when we're going to provide it to the contractor, that way, probably report to us by December 1st. Then by December 15th, we have to be able to present our study to the Department, report concerning this process. We need recommendations that the legislature will consider as a result of this process. Other comments can be in written form. We hope to get a lot of comments tonight. Like I said, it always helps seeing things in written formats. We also have our website that you can submit comments that way. That's a good way to do it. Lots of us use a mouse. Just a few clicks and you're in.

I understand we had some problems with the attachments. We're going to have Brian McManus from the Public Information Office to maybe explain the process.

Brian: Briefly discussed website issues, which have been resolved. Explained how to leave comments on the website and view attachments. They got a lot of comments this week.

Speaker 1: That comment area, obviously, you like the theory it talks about, the direction that the states should go as far as solid waste management. One thing I want to encourage people to do also is if you have an opportunity ... I look at this as an opportunity to showcase some of the great things that you can do in terms of management. That's a good location with good information. We'd like to share that information with others, and benefit from the good things that you all have done.

Joe Francis and Kara Valentine and I had an opportunity to go across the state this summer. We visited probably about 100 different individuals. That was primarily Jill's efforts. It was very interesting. It's been a very long time since we had the opportunities to get out and talk to folks. We really enjoyed it. It was a learning experience. I haven't done anything like that in about 25 years. I'd like to be able to do that more frequently. I'll tell you that as you go to J Bar J Landfill you can see a long way and I learned that the landfill promotes crushed concrete. In Valentine there is a problem with using crushed concrete because all it does is sinking in the sand. If you have comments, again, I encourage you to go to the web site. If you wish to make comments, please just come to the mic tonight. I will now introduce Jack Chappelle of Engineering Solutions and Design.

Speaker 2: Good evening. My name is Jack Chappelle. I'm with Engineering Solutions and Design. I'm the Project Manager for this project, and I'm looking forward to a very interesting meeting and discussion. I'd like to begin by going through a few slides to point out how we gathered the information we have for the report, and point out some interesting elements in Nebraska and finish with six recommendations that we've given NDEQ regarding how to move forward. The purpose of the study is as listed behind me here. These items were all included in LB11-01. These were the things that the legislature said, "This is what we want," based on our reading of the legislation and the points that were noted.

This was basically the guiding point for our analysis. It was a starting point for our analysis to ensure that we were going to satisfy the legislature and obviously some other groups, too. The study process involves a number of things. One, as was indicated from Dave, there were a number of interviews that every NDEQ conducted at different landfills and recycling facilities throughout the state. We did 40 interviews of recycling facilities, public works managers, other solid waste agencies, non-profit organizations, o Keep America Beautiful affiliates, and, at the time, Waste Cap, which has now changed its name. But we went out and we wanted to acquire as much information as possible from as many different sources as possible, so we had as clear an understanding as we could for how things are going as far as recycling, waste reduction, materials management, how landfill operations were going, and looked at the system as a whole.

We did an electronic survey that was sent to all the landfill facilities to get additional information regarding how their operations were working, how they worked in relationships to waste reduction, and what kind of materials they were receiving, and how their facilities were operating. In additional to that, we attended a number of conferences. The most recent was the Kansas Organization of Recyclers, Missouri Recycling Association, and the National Recycling Coalition's recent conference in Minneapolis. In addition to those, we did attend other ones to get a sense of what was the latest in recycling and waste reduction and other solid waste management issues.

We also published a number of issue papers. There were five of them that were prepared and submitted to NDEQ, they were submitted electronically. We did receive a few comments on some of the issue papers. From there, we identified additional issues and concerns that people had that we added to the final report. One of the things that we thought was very important, and one of the things that Andy had asked of us was to consider how the states adjoining Nebraska are doing. We looked at seven states. As you all know, from your geography class, Minnesota does not actually touch Nebraska. That's probably good for you and probably good for them, but they are in close enough proximity that there are things they're doing that we thought were very relative to what you are doing here in Nebraska. What we did is we looked at each of the state programs. We looked at their solid waste plans, how they function, what they did as far as grants were concerned, how they supported solid waste operations, and how their operations were going.

As I said, we evaluated the state, regional, and local plans for the funding programs. We looked a lot at their regulations, how their regulations compared, and how they also compared to Subtitle B, which is the basis for a lot of this, all these regulations throughout the country. We looked at the waste reduction reuse programs. We also looked at the state agency as a whole, what was the staff in the solid waste section of each environment department, how many staff members were in the field, how many staff were doing training; looking at a variety of the different options.

As it turns out, one of the things that I will tell you that I felt pretty good about was Nebraska does a better job of funding, recycling waste reduction in landfills than any of those other seven states. We've got more funding for those organizations every year than the other states. Some states do small grants. Some states offer only loans. Some are forgivable loans. The majority are zero interest rates or, at the most, 3%. The grants that are offered varied from Kansas, which had not given grants for 14 years, re-instituted a grant system this year, and they provided $100,000 in grant money.

As a comparison to your neighbors, the state of Nebraska is being very supportive of the system through the amount of grant money they get. As a relationship to your surrounding neighbors. As far as Nebraska was concerned, and what we looked at, the list is there behind you. We did look at a number of different things including the annual reports of the legislature and grass recycling studies, waste characterization study in 2009, legislation status, grant programs, and NET grant programs. They also looked at a variety of studies that we have done in the state of Nebraska. For those of you that do not know, we did the 2009 waste characterization study for the state of Nebraska. We did follow up waste characterization studies for Waste Cap and we also looked at and analyzed solid waste programs in a couple of communities in the state.

One of the things that's important to note is where we are with different operations and facilities. The map behind me identifies the landfills in the state. And, if I can get to this, the landfills in the state, the one in the far east, which is Seven Point, it's life expectancy, it anticipates closing in the year 2164. I plan to be retired by then. In turn, on the far western end of the state, Gering has a life expectancy of the year 2023. Each of those numbers up here, these are the stars representing a landfill in the state. Each of them will also include their closure dates. If you divided the state into five different sections, in the panhandle, you take those five landfills and they average 56 years of life. If you take the west central part of the state, which is Ogallala and Valentine, they have a 32-year life expectancy. With east central, that's the group down here around Haney and Grand Island and such, they have a 38-year life expectancy. In the northeast corner of the state, where they go into two, they have a 23-year life expectancy.

Then finally, in the southeast corner, where we are, they have a 48-year life. What that should indicate to you is that there is a variance, obviously, than what the landfill life is in each of these different corners or sections of the state. In addition, it is not too soon to look at a variety of ways to increase their life expectancy to other forms. Though these were more aggressive ways of reduction, moving toward more management of materials, looking at things that would help to increase the life. That's great that there's a point it has a life expectancy of 2164, but that is the outlier on one side, and Gering is the outlier on the other. You have to work in between that. That's where we're going to make things happen. It’s where it’s going to make things work.

Next up, I wanted to show the litter reduction recycling grant. This is from 2011 to 2016. If you'll notice, there are grants distributed throughout the state. The state is covered very nicely by NDEQ as far as their grant programs are concerned, this grant program is concerned. They supply a lot of communities. A lot of communities have taken a lot of advantage of this. I think it's a very positive thing. It's very positive to see, particularly in the western, the blue gill part of this state, they're very aggressive about going after grants. They're very aggressive about working toward waste reduction and other opportunities. It's also true in the remainder of the state, but it's interesting to see that often times you'll find, for example, I’ll pick on Kansas. In Kansas, recycling works about the way you sometimes see it in most states, where there's a lot of population. There's a lot of strong interest in recycling and waste reduction.

In those parts of the state, where the population drops off, you see less. That's typically what's happened in the western part of the state. There are some aggressive pockets of recycling, but not the broad spectrum as you have here. That's a very good sign in progressive nature of the citizens and you guys, as the rest of the citizens aren’t here. The other money in waste reduction and recycling incentive grants, again, it's a good cross section throughout the state. The state is covered very well as far as the various grants that have been distributed over the last seven years. Finally, this looks a little more interesting. These are the NET grants that have been given out to communities from 2005 to 2016. If there is one area, NET is weaker than relationship to handing out recycling and waste reduction grants than the other two.

The reasoning, I'm not clear on, but as you can see in one of our recommendations, we believe there should be a more aggressive effort to attract and obtain grant funding from NET. I'm not criticizing them as far as an organization. They respond to a lot of environmental things, a lot of cleanups, a lot of things that they do. It does appear this is a weak area that needs to be focused on. There are six recommendations that we have given to NDEQ for them to consider. Again, do remember, as indicated a couple of times, this is a draft report. Your input is going to help to solidify, modify, or even totally change certain things based on the input that you give us, what your concerns are, and what your focus is.

Recommendation number one is to combine the LLRG and the WRRI grant programs. Our recommendation is that we can cut out a lot of the problem areas of these two grant programs by combining them and reducing the limitations that's been put on them by the initial legislation that brought them into being. There are certain limits of the money. For example, there's certain limits on how you can use the money that is captured for tires, the money that is captured by the business sector portion of the WRR grant on the $1.25 tipping fee, the way it's handled now, it's a 50-50 split. Actually our second recommendation is to get rid of that. There's a lot of ways in which these two grant programs is as good as they are, they do have a number of limitations within them that restrict how NDEQ will distribute money.

They need to be cleaned up in order to even get more money and resources out to help those organizations that are really making a difference in the state. Number two, as I said, is to remove the disposal fee split. Right now, the way it works is it's $1.25. Fifty percent of it goes to the grants; fifty percent of it goes to NDEQ programs. What we're saying is, depending on from year to year, how the grant monies are collected, how much money is collected. There needs to be a consideration of really how much is needed to support the NDEQ programs in relationship to how much more grant money we can get out to them on a variety of different organizations.

The third is to assess NDEQ's expertise. One of the things that we have found is that we believe there needs to be a clearer understanding of what are all the capabilities and skills of the NDEQ staff at the present. How can they better support and help the different organizations in the state, whether it be recycling, waste reduction, material management, landfilling, anything in between. There needs to be a better indication of having the skills at NDEQ's level to be able to provide support and to provide information to all of the organizations that are so aggressively working in the state. By doing that and by having that focus, it's going to more effectively and efficiently find help in making these facilities operate.

On the fourth item, this is probably the most important of them all. We believe that expanding public education and outreach programs is essential to long term success. What we've found in a number of the states that we've worked in, and we find in Nebraska, is that there's an effort to do training. It works for a while, and then there's a lull, or it's just the same old stuff, just over and over again. The problem is if you're not moving the line, you're not moving toward a first down, let's say, if you're talking about Nebraska football. What the problem is, is because of such things as materials management and working towards zero waste, working toward more effective collection of materials and even just getting materials out of the waste stream completely.

Looking at this as the bigger picture that by expanding the education program, expanding it aggressively in the state, then you begin to move toward what the state's hierarchy is all about. That is to get towards zero waste. That is to be able to really move in a direction that allows you to have some real long-term success. One of the things we see here in Nebraska is that you've in vested a good amount of money in these facilities. Recycling facilities and transfer stations and material recovery facilities and landfills. The thing is, is that if people aren't using them wisely and learning the most recent techniques and keeping themselves up-to-date on things, then you're not going to get the best bang for your buck.

The state's putting a lot of money, your money into these operations and it's very important that you get something back. This recommendation above all is the most important. As I said previously, we have seen it in other states when there's a real failure of continuity because of a lack of continual education. It cannot be over sold. The next thing is assess information needs. One of the most important things in starting out and really ramping up the whole education process is to be able to have the information you need to make sure that that information is out there, available, that you have a variety of websites to focus on very specific things, that those things are continually updated and that they provide information that's directly related to what you guys are doing.

By doing that, we're able to again be able to grow and expand the operation. The downside to this is that I'm putting a "we", for the company, and what we're recommending to NDEQ, we're putting a lot of emphasis or efforts on their part. I think it is a joint effort here. Not one of you here in this room can stop working. You've got to work together with NDEQ. You've got to push them to say, "We want more information." You've got to tell them what you need. What are you looking for? Where do you want to go? What's going to work the best? By working together, you have a much more successful operation, or you should have a more successful operation. The key is, I said earlier, is continuity.

Finally, recommendation six, we have tried to apply this recommendation in New Mexico. It didn't go so good. I'll be honest with you, the reason was because in that state, they really weren't ready to work together. I will be straight up with you, the Department of Transportation didn't give a rat's ass about litter. They didn't want to do it. They wanted nothing to do with it. They wanted somebody else to do it. We said that the departments like the Department of Transportation and all these highways have people throwing stuff out on these highways all the time. There is a huge component of keeping the state beautiful, keeping it going. That failure was an extremely unfortunate thing because I don't know how many of you have been to New Mexico, but it is a beautiful state. It's unfortunate that something like that could happen. We want to recommend it here because I think you guys are very proud of your state. You're very proud of how it looks. You're very proud of how it is perceived by yourselves, by your children, by your friends, by people that come here.

In our travels throughout the state, we have noticed that it is actually a pretty clean state. You guys don't have a tremendous amount of litter, but it does exist. It exists in a variety of ways. One is abandoned buildings. You can see that in a number of communities, both large and small. There's a focus that we need to consider. Another is in education with children to make sure they understand that putting something in a waste bin, using it again, or finding another purpose for it is something they could learn early, and they can build. In this recommendation, what we're looking at is not only NDEQ to interact with the department of transportation, it’s important for you to interact with organizations, also.

For example, once we looked at economic development, I think it's critical to work with them to make sure that the state is ready to receive any new businesses and that the place is cleaned up and ready. You're going to have a visitor. You might as well clean the place up. Secondly is the Department of Agriculture. The Department of Agriculture and NDEQ should work much more closely together regarding composting. There should be a much stronger apparatus and much more focused effort. It's only going to be beneficial to both, the farmer, the agricultural industry, and to the communities. By working together, you're going to make a product that you can actually use. It was regrettable that we have a client who had us working on a composting operation, and we went to look at it, and the one thing they had a problem with was using it.

They had a pile of compost that rotted. They ended up having to haul it through the landfill. The last thing you want to do with compost, even rotted compost is put it in the landfill. The thing is, is that the opportunity is there. The opportunity has to be continued on to the end. Finally, the Game and Parks Commission. Really Game and Parks working with NDEQ is a no-brainer. I think that the two organizations work together on a maybe of issues and would be able to work quite well, I believe, on the issues of recycling, waste reduction, and improving the environment. With that, that's the end of the recommendations. That's the end of the report, and now it is your turn.

How we would like you to do this, is you can come up to the microphone. You have the opportunity to express your opinion, provide a guidance, providing the information you want. You can ask questions, which I will attempt to answer or others from NDEQ will be able to answer. I want you to have the opportunity to present whatever your opinions are because it will assist us in bringing the report to a good closure. I believe it will make the report more successful. With that, who would like to go first?

Speaker 3: My name is Jane Polson, and I'm with Keep Nebraska Beautiful. I want to thank you for the opportunity to come and talk. My overarching observation is to lack of research conducted on litter reduction, waste reduction, reuse, public education, litter cleanup and activities. Research was overwhelmingly being targeted for recycling. I was interviewed by a staff member and expressed my concern to him. He was asking me nothing about education, waste reduction, or any of the cleanup programs. I then followed up my concern with an online comment hoping that the scope of the research could be expanded to include those kinds of other programs. What I wrote is "I have huge concerns that the data being collected and used by the consultant only covers recycling and landfills. They're collecting absolutely no information about waste reduction programs, litter reduction programs, public education programs, cleanup and composting].

That would be the large gap of information very critical to doing a complete study of solid waste management programs in Nebraska. Without that information, they cannot adequately assess the outlying goals. I'm certainly supportive of recycling, definitely. Keep Nebraska Beautiful has numerous recycling-related programs, including a litter reduction and recycling program for the schools. Our materials exchange program that first looked-for reuse opportunities and markets. We're overwhelmingly able to match as per use probably a 70/30 split. We do a lot of research. We have also recently embarked on a new waste reduction and education program to educate Nebraskans about the 40% of food that is wasted. every year. We're wasting the largest component that's stamped with a "best if used by" date stamped on most food that has nothing to do with the safety. Because they have stored the food properly to maintain the freshness for a longer period of time, it is a major opportunity to reduce some waste in Nebraska.

Keep Nebraska Beautiful as well as all that Keep America beautiful affiliates throughout the state, also do a lot of work at schools to educate students about the importance of waste reduction, reuse as well as recycling, and show students products that are made with recycled content. Keep America Beautiful provides curriculum for both elementary and secondary levels. That includes litter prevention, recycling, and reuse lesson plans and activities.

My comments on your recommendations: Recommendation one. I am totally opposed to combining those two grant programs. The Litter Reduction and Recycling Act was initiated by the business industry who voluntarily agreed to pay litter fees and to establish a grant program to engage grassroots efforts to address a litter problem through cleanup and education.

It has worked as intended, litter was reduced by more than 70%. It is the grant fund that supports the KNB affiliates across the state. I do not want to see those ever diminish by combining the grants and the potential for offering more support for recycling grants for sizeable amounts for buildings and equipment. The percentage amount going to three categories of public education, cleanup and recycling already [inaudible 00:41:50] to determine their percentage splits. The assumption that the amount being asked for in grant applications are higher for recycling and public education, so the need must be greater. I contend that it's the high cost of the equipment, vehicles and buildings that the recyclers want to purchase via the grant who determines [inaudible 00:42:16] equipment is needed or [inaudible 00:42:19].

Number two: Remove the disposal fee split. This seems risky to me because I don't agree with the approach of allowing a small panel of key staff when they receive direct support from the department to determine the split because it's a conflict of interest when it affects the amount that goes to the agency in which they are employed.

Number three, I was just a little bit unclear of what accessing NDEQ's expertise would entail and what the resources for that might be, so I couldn't recommend anything.

Number four: I agree that NDEQ should develop a web based repository for relevant information on the items listed. But providing information is not the same as providing education, which includes the databases strategies to educate and change behaviors, whether it be for increasing recycling, or reducing waste, reducing litter, and encouraging the reuse. KNB affiliates have been thoroughly trained in behavior base and issue practices, and very importantly, for the grassroots level to educate the residents, students, and adults.

That is the most effective way to cause behavior change. I can't see any state agency fulfilling that grassroots level role of public education. I had an open no concerns for recommendation five and six.

Here are my final thoughts: The waste hierarchy refers to waste reduction, then reuse, then recycling, then composting, in that order. I believe more research needed to be done in the study to more justly reflect the importance of waste reduction, reuse and litter reduction, cleanup and public education as an integral and critical part of the report. Because of the lack of research in other critical areas, some assumptions were made without adequate knowledge if it were presently being done in those areas.

There are several assumptions and made throughout the report in correction. I certainly hope a draft can be adequately revised before being included and going on to the legislature. I'm certainly willing to provide assistance to your company and to the department staff to make any changes to ensure more balance in the report. Thank you.

Speaker 2: Anybody else?

Speaker 4: One of the things I noticed in most of these papers is that we're looking at the large landfill operations, the C&D construction and demolition kind of things, a lot of larger operations in the state. I'm on a national committee, a national organization that considers operations in environmental safety. I am environmental chair for the Concrete Aggregate Association, and I work with the Pavers Association. One of the things in these partnerships, we have recently had a ... not the company that I work for, but a small town in southern Nebraska. The hospital was torn down. The company built a parking lot, put up a building, and they recycled all the concrete. We had a problem with the partner with C&D issues. One of the things that I would like this focus, maybe a little bit of this, let's back up a little bit and look at the overall plan for processing demolition debris. We do a lot of work for the Department of Transportation. We pave a lot of roads and things like that.

It is not uncommon for our industry to pay me to recycle a million tons of concrete. That sound like a lot, but it's really not. We tear up the old road. We crush it. We make a base with the resulting crushed concrete to do something a little different. There's a lot of opportunity there that I think we're missing as a state, simply because, the company I work for, we have a portable crusher. There's one in Valley. There's one in Omaha and Kearney. I can get an air permit for that. I can't get a portable landfill to move around to utilize C&D for a specific project, for a road project or something like that. I'd like to see a little bit more looking into some other collaborations and partnerships with that. I don't know what that would look like. Again, I have a luxury where I work in one or two industries where the department has to look at everything. That's a challenge to what you're doing in and of itself.

These partnerships, it seems like that. I think there's something that we miss sometimes in large projects for the state and other states. As far as the grant program goes, those are big issues, big numbers, and those come from a lot of different resources. That has to be like a big picture. One of the things I worked in another state. One of the things we had to do, this was in the pacific northwest, was qualify as a grant recipient. We had to submit our OSHA status and our grades and our safety records, our EPA records, our DOT records, and what we called out there, education training or experience in our focus area for what we need for the grant. I think we miss a lot of that, I think in some cases, some of our grant monies, I won't say questionable recipients, but we could have put some of those monies in some better places. Some of the ones that I looked at. These citizens, I don't know what that would look like, but partnerships often times NDEQ, even our federal government, air doesn't top the water, doesn't top the waste.

A prime example of that is the OSHA regulations. We can't use air because of the resulting pollution. We have to use water to wash off the dust. We have to have use scrubbers that clean the dust off but you can't put that in a drain. Sometimes we have to be careful of the fact that we have to look at some bigger pictures. I look forward to this, and I think this is step in the right direction as far as the state goes. I offer my help in any groups that I work with for any input on these projects, partnerships. Thank you.

Speaker 2: Thank you. Anybody else?

Speaker 6: My name is Diane Roberts. I'm a former teacher in the public schools. I have had recycling opportunities for my students at a local school here. A kid from a club in the area described how the club would pick up cigarette butts. I don't know if anybody remembers him. We have until year end to submit this. I really am having a hard time up to a point, and I thought you were going to comment on it. I'm having a hard time understanding whether or not will there be any place in the report to consider, I would call it, on educational outreach, educational whatever, for young people to be able to get a sense of empowerment, if there's something that they can do to save our earth. Would you care to comment on my concern? I'm not seeing ... I read the report, every word. I'm just not seeing it in the report.

Speaker 2: What I'd say is straight up the one group that needs as much education as any other one is youth. What I'm anticipating is, when we go back, look at all the comments, look at all the concerns. One of them that obviously stands out is to have a public education process for all ages. It's very important that, that education, that training, all those exercises, everything that can be done with working with youth needs to be done to ensure that we're clear in understanding what direction solid waste is going in the state. I don't expect six-year-olds to pick it all up initially. The idea is to go in the right direction and to reinforce that. That is what we would recommend to NDEQ. It's unfortunate it wasn't more strongly indicated or identified in the report itself, but it is what we believe, and it is what we intend to recommend and discuss with NDEQ as we go into the process of itemizing the report. My thing is I think you were spot on with it.

Speaker 6: Thank you. If those two groups are brought together, and I can't remember their names, will there be representatives from each of the two groups that made decisions separately? Or will this decision on say education be made by one of the groups, and the other group then won't be a part of that discussion or that table or whatever?

Speaker 2: Actually, I do not know because that's one of the things that we'll work through and then decide how do we most efficiently set that up. That's what we want to look for.

Speaker 6: Any explanation as to why this segment that I'm speaking about, it didn't seem to get recorded with the data? Any reason why that didn't happen?

Speaker 2: I'll be going back to look at it.

Speaker 6: I had a question about one of your slides. There's a lot in Nebraska that do not have, for a landfill. What do people do that are living in those segments in Nebraska that there’s no landfill?

Speaker 2: Typically, what they do is have a transfer station and some other form to move the waste.

Speaker 6: Okay, I got it now. Okay. Thank you very much.

Speaker 2: You're welcome.

Speaker 7: Good evening. I'm wearing a few hats. One hat is I'm a student getting my master's in public administration at UNL with an emphasis in public policy. I want to make sure that our land legacy provides many, many generations to come. The other hat is that I work for a company that evaluates and develops systems related to solar dynamics and [environmental solutions. My job is actually in sales with waste diversion. The comment I want to say is that when I get a school on board, they want to push waste diversion and recycling. I go in and do a presentation. We show a microscope demonstration that's splitting compost of the various microorganisms. The kids, I've had two kids in the last week, who were strongly affected by our program.

I'm going to start with a question to you, and then I'm going to have a few comments. I did submit some comments in written form for the website. My question is regarding the slide on landfill life and expected population growth. What is the process in collecting the information? Did you incorporate expected population growth?

Speaker 2: The numbers we received totaled over ... I don't recall that specifically, how that was obtained, so I apologize for that, but I will get them for you.

Speaker 8: Hello. I'm Rebecca Chappelle with Engineering Solutions & Design. The number, the site, the year that is provided there is based on information from the Nebraska Department of Environmental Quality, and it is an indication of when the landfill is permitted, when it's expected to close. There were not any population projections.

Speaker 7: Thank you. I'm concerned because I know that Douglas County will double population over the next 50 years, and I don't feel that they'll have as much landfill life as projected and that the date of closure is not accurate. Now for my comments. First, I want to compliment you on your six suggestions for collaboration. I do think that collaboration is key to success. I hope that it involves the agencies both at the state and local level, Department of Transportation, Department of Education, and NDEQ are able to collaborate not only internally statewide, but also externally with other non-profit organizations that provide recycle services and other support and also other business groups, municipalities, etc.

I've been researching this subject for my graduate project. I've read through pretty much anything since 1991 that Nebraska has done with our given subjects. I've found that data collection is consistently mentioned as something that we need to do in the state. I have not seen any progress for that. Your number five suggestion is assessing information needs, but I'd like to make that clearer and say, "Put data collection processes in first place. There will be no way for us to begin diverting if we don't even begin by measuring the materials management that is currently happening across the state. I know that there's some public entities that are reporting some data, but I feel that it's not complete, as that I work for an entity that receives grants and we are very, very grateful of the grant system.

I think the grant systems do a lot to support the growth of waste diversion. It's a great thing that Nebraska has in place. I think that there's an opportunity there. We that are interested in public administration, I don't think that it should be on NDEQ to collect the data and put it in place, such as mandatory reporting for grantees to continue to collect some of that data to make it easier on yourself.

I want to comment on the $1.25 fee. I'm not exactly sure about removing this fee. I'm kind of curious to learn a bit more about that. I understand it hasn't been raised to inflation since 1991. I think that we could at least visit the inflation rates and do more to support the education with those funds.

Also, I'd like to see the waste hierarchy shown in this report in order of waste diversion, management, education of those materials, reduction, reuse, composting. I think there's a lot more opportunities you use as materials in Nebraska and the opportunities to support industry development with materials that can be reused. This needs to be explored a little bit further. My last comment, I love that we look at Minnesota and other waste diversion policies in place, but I think we should expand more at states that are doing a really good job with these efforts and notice how many policies they have in place at the state level to support these practices. Thank you for hearing my comments.

Speaker 2: I did want to let you know that you do not have to give your name when you come up to speak, but I appreciate it.

Speaker 9: I've been with them for close to five years now. We just took over recently as the director. What threw me to their program was public education and outreach. I do want to say I very much agree with you on expanding public education and outreach programs. I think it's essential. I think all of us in this room are adults. We all know how difficult behavior change can be at this stage in life. Many of us already have our mindset as far as activities and behaviors. That's noted clearly when you think about reducing waste. That's where you get pull from many of us. Live a healthier lifestyle, quit smoking. But youth, youth are a great way to introduce this message. I can't remember your name, but teachers are near and dear to my heart. They're great at spreading the word. When you talk about public education and possible changes, I want you to remember the network you already have.

You saw the math and said, "Wow! What these grants are spreading across the state." We have representation across your state. I think use us, use this network that you already have to spread the message that the work that you want we're getting it to the people. I can't speak for every affiliate, but I know they're all doing a lot of work with youth and education, Keep Fremont Beautiful, seize every kindergarten student each year to talk to them about reduce, reuse, recycling, waste reduction, proper waste management practices. Then we see them again when they're in second grade, and then fourth grade we host our annual show fair where we reinforce those messages. Then, as a nonprofit, we work with other nonprofit agencies that work with middle school students and high school students. We see the success in those youth programs as these students age and become adults.

Then we want them to participate in those behaviors that you're trying to illicit and get the message across. That's very important to me. I just wanted to say yes to your recommendation regarding public education and especially education of youth. Learn early and build on it. That's definitely what I see, and I appreciate that you said that today. I don't know if you have any other comments on what you saw when you said expand public education. I think that you do an outreach program.

Speaker 2: For what we were looking at as far as NDEQ's outreach program is actually we see NDEQ as supporting the efforts that are ongoing in the state. One thing that's true pretty much in every state in the union is that recycling and waste reduction began at the grassroots level. It did not, for the most part, begin at NDEQ or any other state agency. Somebody went out and wanted to recycle. Somebody went out and wanted to reduce waste. Bam! The system that you saw on those maps, where all those grants were, that's an indication of how each of you, individually, went out and did something. Because you did something, a system was in place that NDEQ could work, but it's an idea of working with it. It's not an idea of supplementing. It is not an idea that says, "Okay, you did a great job. We'll take it from here." That never works.

I think what you need to recognize whether it's Keep Nebraska Beautiful, its recycling organizations in the state, or any group, the key is you guys did it. You guys are the ones that are going to continue to build it. The whole discussion about public education, the whole discussion about everything is how can NDEQ and the state as a whole, by working with all these different departments, ensure that it continues to grow and is even more successful? I think that's, to us, that's the bottom line. You built a great thing, like many states have, and you did it from the ground up. I think that's where it needs to continue. We need to push to make that happen.

Speaker 10: I'm Bradley Burns, Mayor of Louisville and also am on the board of education. Education is the key. My suggestion would be maybe take some of those comments and just made and get them in print. It wasn't clear to me when I read that, what we were talking about on education. I think you could probably assist some more and maybe some resources. Those grants for education have been critical. Keep Nebraska Beautiful has been very helpful. I'm still helping out as a volunteer. Education of these kids has been important to see. The executive director that we've got right now, I'm rather close to her and assist her on a variety of things. The eco fair that we had this fall touched every fifth grader in Cass County, 280 kids came through. I was assisting with one part of that. I must say it's wonderful to see those kids get excited about things that are green.

The partnerships, bringing that in, we had people there from Forest Service, the NRV, from the power company, and County Health Department, the County Emergency Management, and a number of other, Game and Parks, a number of other state and local agencies that really made a difference. Those kids were really excited. That education, we don't want to lose that, as you said. That's a wonderful thing. Going back to as Jane mentioned about the grants and the splits and all that, we don't want to, in the name of efficiency, lose what we have now. It's real important. Education of adults

is challenging. Changing that ... Your comments are spot on. They are more so, you just made a change this last year, increased recycling from our recycling study that was done several years ago, and how much we had was part of it. I think maybe you got involved with the checking of that.

We help on that, and we went to utilize covered totes instead of baskets for curbside recycling, 40% increase since last November. Participation is still too low, but education was a key component of that. We're going to be ramping up more push to do that. I think it's something that's real important. I do want to just make it a comment. Thanks for your work on this. Thanks.

Speaker 2: Thank you.

Speaker 11: Name is Vanessa, and I'm with Keep Columbus Beautiful. I just had some concerns with the very first recommendation of combining litter reduction and the waste reduction grant. Mainly because I don't know how that's going to look in comparison to the percentages as well. The Department of Environmental Quality has somewhat broken it down and justified what will get how much. It's usually more towards recyclables, I believe, because that is a much costlier program. Just considering most people are asking for a grant for buildings, different kinds of requests for equipment and other items just like that, that could cost whatever amount. That could fund the public education grants for an entire year versus buying one piece of equipment. Just to see how that would be broken apart, whether it's percentage wise or however they want to do it. I guess I would like to see it arranged so that no matter what the request is, just so that way everyone's getting a fair shot.

I don't know how that would look or if you have any input as to what that would look like. Do you have any idea at this point?

Speaker 2: Not a lot. I think as I mentioned in the presentation there are certain restrictions on the programs and with both of those programs is how the legislature put in certain restrictions that create some of the flaws within the programs now. Our thinking was that we combine them, get rid of those certain restrictions and give more flexibility both to the department, but also to everybody that's receiving grants that says, "These are the things we need. These are the things to focus on." All of this is going to take some action by the Department, the legislature, and possibly the governor. When we start working through the final report, we will look at how we can structure certain things and how things could be established to try and get more efficiencies, to try and focus on the really important things. Particularly that last part, the important things is going to be tricky because there are hundreds of you in this room, maybe more realistically twenties of you in this room, and every one of you has a different input.

Time, that's going to be the challenge. I think that challenge can be addressed by being more out-front with NDEQ, out-front with their staff, and to really express the true value of what you want by doing exactly what you said, by having an organized system. I'm only speaking for myself. I'm not speaking for NDEQ. If I were to look at it, you said, "We got the opportunity to talk to every secretary there, every fifth grader, and every tenth grader that they'll talk to." We are going to do that. If you have that mission in mind, then it says that you start by educating them, and then you reinforce it. By reinforcing them, you are more successful at making something happen. That kind of an approach, if I was in NDEQ and I got a submittal like that, that to me says you really thought this through. You see how it's going to work. Then, most importantly, you saw it through for your specific situation, what's going on in your community, what's going in those schools. You've identified something that's going to fit specifically for that.

If those pieces come together, I think I would be much more open to giving you funding for that. Unfortunately, I'm not a local and have limited sway with the powers that be.

Speaker 12: One of the things that I was just going to share is kind of a lesson learned for our community. We ended up submitting a grant, unfortunately, under the wrong category, which we're a public education. We applied for a waste reduction and recycling. We were not funded that year. Let's just say the percentages of that happening are greater than you might imagine, and the need is great for litter reduction, cleanup, and waste reduction. Just picture it as a learning experience.

Speaker 2: What kind of grant were you submitting and what was it for?

Speaker 12: Care. We did not receive funding that year. It was very, very hard on us as an affiliate. To show ... I understand how you were explaining the level of importance and how you will need to justify that. I completely agree. You need to be able to show that your program has results and what your plan is and all of that good stuff. We did show all of that; unfortunately, just in the wrong category. We spent most of our year trying to raise funds just to keep our doors open. We weren't able to go out and educate as much as we should have. We still did what we could with what we had because that's just what we do. It was just an eye-opening experience of what would happen to other affiliates who are much larger than ourselves. I'm just one part-time person. Some people have full-time employees, assistants, teachers on the work, all kinds of different affiliates across the state. We were just one. We were fortunate enough to make it through level partnerships.

However, if we were to have to go out and try to solicit more funding from our city and our county, it would just make the educational portion of it, which we should be doing, impossible. We would be spending most of our time trying to fundraise and raise these funds for programs that we're not able to teach because of spending so much fundraising. I think if we could just explain the recommendation number one or have a broader idea of how it's going to look because right now, to me, it looks scary because

I know how big that recycling portion is, and I know that they asked for a lot more money in funding than some of the programs do in the state. I just want to make sure that when this goes for review that that is taken into consideration for some of the smaller affiliates like me who don't ask for much. Then there's somebody working to obtain what is best and most useful for the City of Columbus.

I want to make sure that we get the best opportunity possible to make a difference as well. If that can be taken into consideration when recommendation number one is considered that would be fantastic. Thank you.

Speaker 2: I'd say east and west in Nebraska.

Speaker 13: No, I'm actually on the board with someone who also with Garbage and Recycling too. I got a couple of comments. First off is a grant was brought to my attention and I believe the grant program as presently arranged is best. It was brought to my attention except for the board and everything that ... I think that our grant money is critical on the litter reduction because, from your comment of going across the state that Nebraska is relatively clean. I've been to other places and I'm thinking that ... I think there is an issue with becoming too complacent and that the department of transportation needs to be aware ... I remember being in Arizona and going around the interstate round about. It was covered with trash all the way around us. I think that's an example of what could happen if there is not grant money. I'm kind of afraid of where it's going to go because I've seen some good things for being on the board, but t's the linkage of really get it going and focusing on getting everything cleaned up.

I preach that to my health class too. We had and issue this week. Somebody ran over the trash and scattered it down the street. Well, my class were good enough to pick it for 10 or 15 minutes rather than leave it out on the city street. I think it's such a critical thing. The education like everybody has mentioned is so critical, starting from the little kids and on up. Also, I know the Public and Health Department has been very good about getting grant money for the hazardous waste. That's critical for proper disposal what with especially houses selling and everything. We want to make it so that waste can be contained, and you hate to see them get out in the environment if you could help it. I thought there was a lot of things in your plan that was mostly on recycling. I'm for recycling. I have four grandkids, and I think it's very important.

Our company has been doing it for several years. I got a feeling in the next year we'll double or maybe triple because of the amount of material out there and the perceived lack of places to take things. I do see things going in the right direction there. I don't want it to get so that it has to lean all the one way because it's critical to have everything. I really think litter reduction ... I see it, as a sportsman, I think to see it. I go to the waste and I see too much litter. I do know there's grant money that does go to different organizations that go out and pick that up. When I get a chance, I pick it up. I can't believe people leave it. One of the things on the recycling side that a lot people don't understand we're paying about the same as a landfill cost. There was a lot of input too. There was a lot of recovery cost in the materials we have been recycling. There is some, but there is cost to picking it up.

We had to have material moved and they wanted price. I gave them an approximate price of $30. If he has a ton of materials or plus, I will be paid probably $35. There's the equipment with having the simplest place or if I had to run. That's hard to make a living at doing it that way too. We're doing it for the environment. We want to do it, and it will increase. I know that was one of the things that's in there. I know just from the Lincoln communities, that I know it's increasing. It has increased over the last couple of years. I thank you.

Speaker 14: It's inefficiencies? Did we see them somewhere that I didn't read? That the legislature said that it's whole operation was based on inefficiently or is it ... Don't want to be disrespectful. Is it somebody who just had too much time on their hand and thought we needed a new study to pass that excitement or something? Anybody know anything about that?

Joe Francis: I don't know if you really want me to go to the mic with my voice. I think it's important to remember that the reason for this study was done was for the department programs to be examined. It had been since 1992-1995 that we had a real thorough examination of the solid waste programs in Nebraska. The legislation specifically said to look at the DEQ programs to see how they needed or could be modernized and revised. That's exactly what [inaudible] say. The legislature recognized that it's been awhile since the company [inaudible] was made, and that's what this is doing.

Speaker 14: What really did the legislature want and what were the inefficiency?

Joe Francis: You have to talk to the four senators that introduced it.

Speaker 14: What committee is this, please?

Joe Francis: I'm sure it comes through the national resources committee, but of the four senators that introduced the legislation, I believe there's only one that is still there today.

Joe Francis: Thank you.

Joe Francis: Okay.

Speaker 2: Anybody else?

Speaker 15: My name is Chris. I'm a biologist and consultant. I'm not with NDEQ. I have a broader question about the grant programs and then when you're talking expanding education what are the questions and concerns. I guess that's really going to impact the potential growth of waste recovery. Basically, are you recommending that the Nebraska Department of Environmental Quality is really open to the numbered initiatives and partnerships through this? It's just a little bit much to expect.

Joe Francis: As the other people had voiced or are you more focused on expanding the existing relationships that they already have?

Speaker 2: Actually, what we were targeting and then what was as Adele pointed out was the legislature wanted specific things. When you get into it and start to see all the interactions and everything that's being done, not only within NDEQ but in the state itself, and then how things work, it's more a case of what's going to be the most efficient way to go forward to make the programs work. It's not a case of saying, "Okay. We're going to say that recycling is the only thing or litter or zero waste or anything else." It's a composite of things that need to work together. It's a matter of where are the inefficiencies, where are the modernizations, where are the improvements to NDEQ to be a more effective and efficient partner? I think that's what it is.

One thing I will say, in the interviews that we did throughout the state and we talked about different recycling organizations, like Keep Nebraska Beautiful organizations, and one of the things I think we found was that the organizations have overall a positive attitude for NDEQ. I think that's really good. I think that as with any agency that regulates ... I've been with many agencies in the past who implement the laws that are given to them, even though that it somewhat has confusing guidance and inconsistent results It still is their effort to do it, and it's their effort to do it in the most effective, I believe, positive way also. I think that's probably the only way around to your question.

Speaker 15: I guess what caused my question is that we are just interested in general. We focus on solid waste, street management techniques and stuff like that. I don't think I mean specific issues.

Speaker 2: That's starting out, but ... That's what got to expand into developing as you establish it, as your point where you want to or anybody else. It's a matter of ... I think what hopefully everybody in this room sees is that NDEQ is, I don't believe has been, it feels they want to keep anybody from trying. It's always easy to make a mess. To make a mess, you might get a little too comfortable. You want to try it. As I said before, I think it's obvious from how recycling has evolved in the state. It evolved because people wanted to do it. I think you should give maybe consideration for the idea that they didn't just run out and say, "No, no, no. This is the way you recycle. This is the way you do this." Who's next?

Speaker 16: I'm one of the coordinators for Keep Nebraska Beautiful. I have two concerns with your recommendations and results. First of all, the talk about the combining of grants is an issue just because they're used so differently. My company is also focused on education, but as an outreach effort, is to educate community leaders about other countries may be able to implement for their communities, other affiliates, use the recycling programs development of those programs, and when they get combined, what happens to education when it's not maintained or something that's equally as important, but it could be different service. I'm always a big proponent for collaboration. We need to talk about what makes the most sense about programs and how to handle them.

My issue is where that collaboration goes when decisions are made on especially if there's discussion about these funds not going to the purposes are intended and designed for specifically. The DOT collaboration is a concern if there's a voice vote on how that money is allocated outside of the programs that are using them to discuss waste reduction, education, and such just because I know there's a great push for efficiency from everyone. I'd rather see a bunch of people than have the directors be highlighted. The efficiency is highlighted for the purpose remaining funds that maybe once requested because we don't want to openly admit something that can't be long term or have a risk of something not being used. We're just good at what we're trying to do the equivalent of everybody that's going to go to the roads, and it never starts off as being the intention. Then plenty for things can change.

For the west part of my eleven-county area, just giving collaboration for roadside cleanups that are not restricted areas is an issue with our local organizations. Most of time the relationship is really good and there's plenty of support. For me, it's touchy about how things are going to happen. I'm just a little worried about over-involvement. It's a different thing for another department to tell me how to operate. Those are my primary concerns. Thank you.

Speaker 2: Your welcome.

Speaker 16: Hello. I'm also a representative for Keep Nebraska Beautiful affiliates. I'm the executive director of Keep Omaha Beautiful. I've been in that position for two years. My name is Chris Stratton. Before I begin I have some of the comments, I just want to provide a structural suggestion. Having done many strategic plans for large organizations focused on sustainability that addresses waste reduction, recycling-type issues, I would like to see some kind of methodology explaining ... I will say this, I showed up because I was concerned about some traffic. I saw one of your slides about various, etc. Reading through the report in detail, I didn't make sense of exactly what you can do. So I would appreciate that visibility.

I think another thing I wanted to mention is just literally having some kind of executive summary. I think we're going to give, ultimately, this report to the legislature. It's be nice to have something that's more digestible for them. I know myself, I'm probably going to read the first two pages, and then they're going to move on. We really want to try and impart this information to them structurally with the report itself. Having said those things, I also would like to mention to NDEQ, thank you for allowing us to actually have this input. I know a lot of the Keep Nebraska Beautiful affiliates here, but we do appreciate that opportunity to share some of our thoughts regarding the report.

One other thing, I did want to tap on something that Jane Paulsen said, that was we feel as though that there wasn't enough focus on the source reduction waste prevention use of this. I'm a huge fan, big proponent of recycling, but again, I feel like it was ... almost re-titled in this report. I feel like recycling is over emphasized. It's that kind of ... It seems to me a very pervasive piece. I feel like we're missing out in terms of the rest of the waste hierarchy. I'd also like to see personally, and I don't know if this is possible on behalf of all the others, but I think something that will be really beneficial is to see, for example, for the grant programs that when applicants apply for these grants, that there's more points for prioritization based on that solid waste hierarchy.

If you're having programs that are going to source reduction and prevention, those things should be considered more so than other programs that are maybe focusing on recycling or even thinking about other solid waste management practices. One thing I was kind of disappointed too that I would like to see folks more involved. Maybe the answer is ... I don't know if there's some political aspects to it. You actually mentioned that in the report. I'm referring to the guidelines for landfills and has been interested in increasing the need for additional grant funding is everywhere. Fantastic. I glad that you mentioned that. I think we, most of us, know that we have in the state of Nebraska some of the lowest fees for that throughout the entire country. When we talk about incentives to really spur a push towards waste reduction and things like that, there's not that economic kind of an element. That's going to be very hard to seek any kind of movement or moving of that line towards some of those better practices.

I'm glad to also see more emphasis about education, so thank you very much about that. I do feel though just I know a lot of this is constructive feedback, but I think part of this is ... I felt like there's some distorted information about education in it. In certain sections, and I'm not going to go and read all the elements that, at times, there were things that were almost kind of a lack of support for education. Other times, like for example, some of the recommendations that clearly articulate the support of education. For example, there was a quote showing that it was not. I'm quoting, "Public education regarding recycling and waste reduction is well established and the need for extended public education is not warranted or is as beneficial as other efforts." Yes, there is a lot of talk quite glowingly about the support of education. I feel like somewhere in there, just clear that up a little bit as to what's your stance and what your findings are. It sounds like it's more obviously in support of education. I think that would be nice to make sure that those things are clear.

Another thing, it sounds the NDEQ specifically asks for the comparison of the local states, which is great. Obviously, we're going to be compared to the state of Iowa, Kansas, etc. When we talk about waste management practices, it's hard for me to envision that we just keep the net from that far. Why are we not looking at the rest of the state? We can look at Canada for that matter. I guess when I can see some of the BMPs that are presented it's only based on local states. I feel like we can go further than that. I don't know exactly which states. I think you mentioned ... Maybe that's when I caught it, when I first came in, that NDEQ specifically asked from a scope perspective. It's still, if we're going to talk about moving in a better direction with the state regarding sustainable management, I would hope that we're looking at all of the states.

I do think it will be, as we talk about the split, 50-50 split, clearly she does some wonderful things. I'm very supportive of their efforts. I know they're working with the grant program SAP and Fantastic. I'm very pleased to see a resident of the state giving these efforts. However, I do think we're getting slick. How do I know what this is about? I don't think we can underestimate the benefit of working with local nonprofits. I will say this, when I take off my hat, in terms of being a Keep Nebraska Beautiful affiliate, this is just for the nonprofit sector in general, is leveraging the resources and the efficiency of local organizations. You can get so much out of your money for something like that. Not obviously every time in every situation, but for the most part, I feel like empowering the two grant programs. It's like powerful, so not losing sight of that.

Another piece listing in, Section 2.5. I'd like to see more than that and the fact that this was a case study to do this. Some of the incentives, and again, just focusing on the recycling section, the recycling element, which is clearly a very big focus of the report, there's no mention of other options. There's no mention in looking into carts. There's no talking in it about these landfill fees. I fact, a lot of the land with content that are in that same section, I feel is very much just more about the message framing, which is important, but from an incentive mechanism, I think there's a lot more we could have in there. I hope the study will demonstrate that. I also think food waste is under-reported in this. The national trend is showing how there's a bigger focus on food waste and addressing those types of issues. I am very pleased to see that you mentioned on the data and the needs to have comprehensive data and having some universal approaches to that. If we're going to move things, we have to do a better job of mentoring.

I think we all know that that's, unfortunately, not where we want to be at this point. I think too just putting that waste hierarchy closer towards the beginning, I feel like we don't really start to ... When you read the report, I don't feel like we're really talking about waste hierarchy until we get further into it, almost half-way through the report. It seems to be a important issue so I'd like to see it up towards the front. Finally, even though I'm the representative of Keep Omaha Beautiful, it's a little bit more with my sustainability hat on. I'm really about pushing out waste reduction and about waste prevention. On the litter side of things, which is one piece of what we do, just give it some perspective because I know we're the first things when you read it. It's like the body of the report, one of the first things it says is that "We would recommend reducing the amount of funding that's allocated to litter reduction specifically."

Just to give you some perspective on that, when doing the numbers, I kind of crunched this stuff. It looks like based on 2016 numbers, 2% of NDEQ's overall grant funding that was allocated out, which is roughly 36.9 million, 717,000 was spent on cleanups and public education, non-recycling. When you look at that, that's actually 2% of the overall grant allocations that go out. There's a lot too. This is all grant programs throughout NDEQ. When you think about that and all of the bang for your buck, having that 2% funding is pretty impressive. I just used the perspective and not just in our organization specifically, but just an example. We worked with almost 4000 volunteers in 2016. We equated close to 10,000 hours of service, 431 days, 24-hours of service. We planted to 238 cleanups; cleaned 180 miles and trails which is equivalent of Omaha and Kansas

City in terms of miles. About 5000 bags of trash and recycling that we collected. We worked with 10,000 individuals from an education perspective, 3000 being used and about 6500-7000 being stored.

That candidly, the majority of our efforts are based in funding from NDEQ. Again, speaking on behalf of affiliates, having that funding is quite valuable. Not just for our local survivability, but important for having impacted the state. I do want to say thanks to NDEQ for allowing us to speak in support of this. Beyond that, those are the rest of my comments.

Speaker 17: I've been through several iterations and reviews of the study and past studies and legislation. I was here when the original bills came through the legislature or at least the waste reduction recycling legislation. I think one thing I really see missing in the conversation, not to put you on the spot, is how Nebraska legislature made some very specific decisions about reduction and recycling. They were made on the basis of what was going on at the time. Maybe it's pretty old. It's easy to argue that maybe re-look at that. There's no doubt as to the testimony that litter reduction still needs to be a major focus. I think it's in the wrong conclusion in the report about the fact that we don't need to focus on that as much anymore. I don't believe that that's true, and I don't feel that reducing the emphasis is true.

I think also just the tenor of the report from my perspective, I think the issue is sort of the need to make changes and are we trying to change how Nebraska functions? What I mean by that is Nebraska is very decentralized based on the power that's put into the hands of the cities. That's the structure, the same structure as many other states. It's not a centralized power focus. Like when I read, and maybe I'm reading too much into it, but what I'm reading is that our model is different. It seems as though that's more effective. I don't believe that is true. I think in this state, putting more of our eggs in one basket means more money into a single organization does not read the outcomes correctly. That's because the leveraging is too narrowly focused but you're leveraging from other dollars to our own pockets as to you're not leveraging to other programs. I've seen this at a federal level. I've seen it in other organizations because they were misguided.

I agree with others that there's definitely need for education. I didn't see much in the report about what's already going on. Every group in here can say the same things. We all want what Lincoln, Nebraska has, and we want the latest education that has been in the public schools for years. There's no doubt that support for these types of efforts must be continuous. It's going on. I feel like there's a little gap there of what's missing. Those are the key things. I think the concept of combining the two funds, I think that was really an issue of legislature. What you're arguing for is efficiency. Efficiency does not always equal effectiveness. The two grants together will reduce effectiveness and focus. The way the staggering is happening in the house of the grants may reduce their viability. It's staggered so that there's been a timeframe for that review. The grants have very specific criteria because the way in which the grants were established. That's how it's structured.

If the legislature wants to restructure that, then that would be their choice, but just arguing efficiency is the wrong approach. I guess another aspect is the 50-50 split on ... I've yet to see any time that there's a where you've taken off something that the advantage to the agencies or the programs is successful. There's no doubt what I understand what pressure NDEQ is under for fiscal issues that would really matter. You'll have very much less to work with. Another thing I would say is the way that the concept of the change in the grants unless there is a change that results in clarity from the legislature and what they want to do, NDEQ's hands are tied.

I don't quite know who balances that because they also can't really advocate for the legislature for the change in the legislature.

Speaker 2: Thank you.

Speaker 18: Hello. My name is Justin King. I'm from Columbus, and a lifelong Nebraskan citizen. I'm the president of Keep Columbus Beautiful. I'm on the board of Keep Nebraska Beautiful. As a member of these boards, I donate time and effort to these organizations because of the great work that they do. I just want to make a few comments. The first and last point that I make is, without adequate funding, affiliates of Keep Nebraska Beautiful and Keep America Beautiful will cease to exist. I concerned that in the report that perhaps the writers didn't get a clear view of what the KNB affiliates do. These affiliates reduce the generation of litter through public education. They conduct litter cleanups throughout their communities. They work with the public, local officials, and businesses to implement the programs to reduce waste for generation and cleanup litter. Not every affiliate applies for every type of grant annually. That doesn't mean there isn't a need for education and cleanup grants. These grants are necessarily needed. Most often there are volunteers involved or money contributed as a match to the grant.

This was alluded to before, but there is a sentence in the report that states something about the need for expanded public education is not warranted or as beneficial as other efforts. To me, this is a real head-scratcher as to why this sentence is in this report. Public education needs to be constant and continuous. There's an old saying that people have to read, see, and hear an idea seven times before they remember it. There's a need to keep the two NDEQ grant programs separate, the litter reduction and the waste reduction. These grants address different aspects, separate needs by the grant applicants, combining these two grant programs would be detrimental to minimize the waste generation from litter reduction.

The study recommends NDEQ to expand its public education and outreach programs by instituting new training programs for the public, businesses, and industries. That sounds good on the surface, but it does concern me that money can be diverted away from the KNB affiliates for public education, public awareness at the community level. KNB local affiliates work with schools and children and local community from the bottom up with a grassroots education is the most effective. If we could quit educating our youth, then we have lost the battle. Our youth are the future to protect the earth by reducing these

opportunities. Again, first and last point I make is that affiliates such as Keep Columbus Beautiful must have adequate NDEQ grant funding to exist. Any further cuts from the grant funding will jeopardize our affiliates' continued existence. From personal experience and observation, most affiliates do not have a full-time director, and yet these people do amazing work.

If adequate grant funds are no longer available, these affiliates will close, which will be to increase littering, recycling would decline, and more of our earth's resources will go into landfills. I want to thank you for the opportunity to provide comment at this public meeting.

Speaker 2: Thank you. Is there anybody else? Thank you very much for attending. We will provide the information to NDEQ and continue the process. At any time, please provide any written comments you have regarding this project on the NDEQ website. I really do appreciate you all coming out. I appreciate you tolerating my very conflicted sense of humor. When it's all said and done, in the end, I'm also left-handed. What else can I do? Thank you very much!

Dave Haldeman adjourned the meeting at 7:55 pm.

APPENDIX I

City of Imperial
Solid Waste Program

Imperial is a city of the second class in the far southwest corner of Nebraska. Our population is just over 2,000 residents in the City and approximately 4,000 in Chase County. Our nearest population center is 50 miles away.

In the early 1990's, Imperial was looking for a way to increase recycling participation, and reduce our solid waste disposal footprint. The City of Imperial has its own trash pickup system within the corporate limits and operated a recycling drop-off center in the downtown. City staff devised an idea to use a sticker and bag system for trash pickup, so that residents would pay based on the amount they contribute to the landfill. In order for residents to have an option to throwing materials in the bin bound for landfill, the recycling program was enhanced to take more materials and expanded to a larger building with more space and areas for baling and handling equipment.

The system for trash is simple. Each residence or business is provided with one of two sizes of container. Either a 90 gallon toter or a 2.5 yd. dumpster can be located on site. Each site pays a flat rate on their utility bill monthly. Those who have a 90 gallon toter pay $7.00 per month and those who have the large dumpsters pay $11.00 per month. Those fees do not include any trash pickup. The fees cover the cost of running the entire system – labor and fuel for the truck, maintenance and processing at the recycling center, compost and tree piles, and other fees associated with the solid waste system.

In order to have trash picked up a sticker must be purchased and placed on the lid of the container to notify the collection staff that the container is full and ready to be picked up. The stickers for the 90 gallon toters are priced at $7.00 each and the dumpster stickers are $28.00 each. When the trash is collected, crews remove the sticker. If the household or business produces such a low volume of trash that they do not wish to wait the length of time it would take to fill an entire 90 gallon toter, the city also offers a 30 gallon marked plastic bag for $2.50. The bag can be filled and set out at the collection site and it will be picked up by the staff. No stickers are used in this situation, just the cost of the bag covers the pickup.

The bags can also be used by large families or business that have more trash due to a large event or cleanup. In this situation, the toter may be filled and a $7.00 sticker affixed to the container, as well as additional trash put into a $2.50 bag for the week. Some sites may dump their toters only once a month for a total cost of $14.00 ($7.00 flat fee on their bills and $7.00 sticker for their monthly pickup) and some may pay $35.00 or more per month if trash is collected weekly. We have a number of single, elderly residents who may never use the toter, preferring only to put out the $2.50 bag once a month. Their cost for the month would be only $9.50.

Our recycling center is a 24/7 drop-off location set up with bins for participants to separate their recycled materials. We have done some research into curbside pickup, but it has been determined that going to a single stream system would be much more expensive and most of our residents are "trained" in a source separation system right now. There are some residents who do not recycle because of inconvenience, storage space, or a variety of other reasons, but they make the decision to pay more for trash in that case. Because the site is a drop-off, we have participation not only from local residents, but also from county residents and even across the state line into Colorado and Kansas because of our close proximity.

Lessons Learned

The initial response of the community was very negative. During that time period, and in many cases up to today, residents did not want to have to be responsible for managing their own solid waste. The community was educated on why the new system was important, as well as what material could be recycled and how to recycle items properly. After a time, recycling became second nature to most in the community, and people realize their cost savings by taking the time to separate and recycle.

The system is difficult for new residents to grasp right away because it is very different from the normal systems they are accustomed to. City staff explain the system to those who come in to sign up for new utility services, and give them printed information to take with them to help understand what they are expected to do.

Automatic Charges – Probably our biggest mistake was giving residents the option of being billed on a rate of either weekly, biweekly or monthly pickups that would be included as a charge on their bills. In the beginning, it was a small number of people who took advantage of that system, but it grew to a rate that was completely out of control. The crews set up a system of dates that biweekly and monthly pickups would be made. Residents who were not on a weekly system frequently forgot which week they needed to have their trash out for pickup, so they would invariably be missed. As residents moved from one location to another, crews had to change their records, and there were mistakes, both from the billing and pickup operations. Residents frequently changed their option from weekly to biweekly or another option, so it was difficult keeping everyone informed. We notified residents that we would no longer be allowing that option and are phasing it out over a period of time. We will not add any new accounts, make a change to any account, or if a resident moves within the community, they will no longer be put on a regular pickup system. We do make arrangements with certain facilities such as the hospitals and nursing home, school, restaurants, large businesses, etc. Otherwise, we hope to completely phase out automatic pickup and billing.

APPENDIX J

City of Kearney
Solid Waste Program

Sanitation Division
City of Kearney
3007 East 39th Street
P. O. Box 1180
Kearney, NE 68848-1180

TELEPHONE · (308) 233-3206
FAX · (308) 233-3288
E-MAIL · shart@kearneygov.org
WEBSITE · www.cityofkearney.org

CITY OF KEARNEY

The City of Kearney Utilities Department manages both the Sanitation Division and the Kearney Area Solid Waste Agency Landfill. The Sanitation Division is responsible for solid waste needs for all residential and commercial customers inside the city limits, while the landfill provides service primarily for the City of Kearney and Buffalo County. Both agencies are enterprise funds, using zero tax dollars and each with separate budgets. The landfill charges all customers including the Sanitation Division normal disposal fees. The landfill does divert a significant amount of waste by recycling appliances, tires, concrete, asphalt and wood pallets. Yard waste is turned into compost and tree waste is ground into wood chips. Both of the products are available to the public. The landfill expands its composting/tree disposal hours from April through October to provide better accessibility and compliance. The landfill does not charge for yard waste such as grass, leaves, garden material or tree waste 1" in diameter or less.

The Sanitation Division functions similar to a private "for-profit" business except it offers additional services such as neighborhood cleanups, free collection service for special events and litter pickup. It also offers public education via tours and has established a Household Hazardous Waste facility. The division provides weekly collection of refuse using fully automated collection trucks with a monthly fee of $13.26 which includes free bi-monthly curbside collection of recyclables. Currently 6,500 homes participate in the curbside recycling service with approximately 30 homes requesting the service each month. The division also provides weekly yard waste collection for an additional fee of $13.26 per month with 4,000 participants. The city first promotes a "Don't Bag it Program" regarding grass clippings.

The division serves all businesses with refuse and cardboard collection. The division utilizes front load, rear load, and roll-off trucks depending on each customer's needs. Cardboard is placed in specified containers and emptied up to five times per week. Businesses are billed according to frequency and quantity. The division also provides commercial customers with free curbside collection of recyclables weekly using fully automated collection trucks.

The division has recycling drop-off-collection sites strategically placed throughout the city limits and has helped other communities in Buffalo County establish sites of their own. The communities in Buffalo County deliver their recyclables to the City of Kearney's recycling center.

The division operates a recycling center which is used to receive and process the collected recyclables from the City of Kearney and communities in Buffalo County. The recycling center is able to handle the volumes of materials generated, but does not accept materials from communities outside of Buffalo County. The recyclables received are co-mingled except for the commercially collected cardboard.

The City of Kearney began its recycling efforts about 25 years ago knowing it would take time to develop and expand its recycling program. The City of Kearney has been able to establish its recycling program with the assistance of grants from the NDEQ and the Nebraska Environmental Trust. Without grant availability, much of the City of Kearney's recycling program may not have been implemented.

APPENDIX K

Online Grant Application, Review and Award Process & Priority Scoring Systems for Grants

ONLINE GRANT APPLICATION, REVIEW, AND AWARD PROCESS

The Nebraska Department of Environmental Quality (department) now uses a paperless process for both the Waste Reduction and Recycling Incentive Grants program and the Litter Reduction and Recycling program by creating an online grant application, review, and award process. The new process consists of the following:

1. An application period is opened on the department's website and advertised. The department, in establishing the application period, usually allows for a 4- to 5-week period. Sometimes there is a week or more delay when the deadline closes because applications must be processed by a separate electronic process before the applications become ready for the next step during the review and award period.

2. When the grant application period closes, the initial reviews of the applications are performed by department grant program staff to determine application eligibility. Partially eligible applications may need to be adjusted. For example, the application amount may need to be reduced to the lowest bid submitted before the application can be moved forward in the process. If completely ineligible (not enough bids or other reasons), the application is rejected.

3. Once the initial reviews are completed, scoring is done by three independent department employees not associated with the grant program. This review process takes approximately 3 weeks. Grant applications are scored utilizing a priority system, which was established by the department with stakeholder input. For the Waste Reduction and Recycling Incentive Grants program, the priority system receives final approval from the Environmental Quality Council before it can be used.

4. After the application scoring is completed, program staff develop review comments that are added to the review scoring process and describe the application project.

5. A meeting with the department's director is then scheduled to make funding decisions. This meeting includes participation by the agency director, deputy directors including the Deputy of Administration which manages department funding, other department administrators, and the Land Management Division Administrator and grants program management. A list of potential applicants is also distributed to other department programs to determine if there are regulatory concerns that should be considered in grant program decisions. Coordination with other state agencies, including the Nebraska Environmental Trust is also undertaken.

6. Award amounts and any summary information is added to the electronic process to assist in the award decision process.

7. Award notification emails are then generated by the electronic system. If a partial award is determined, the grantee is notified what it must do to modify its budget. Modified budgets must then be returned to the department for approval. Grant agreements are then generated for all award recipients. Rejection emails are generated for those not awarded funding (either ineligible or eligible, but not-funded applications.) Grant agreements are then signed by grantees using the electronic system, and returned to the department.

The grant reporting period then begins. Grants are normally for one-year terms and project status and expenditure requests are submitted on a quarterly basis. In some cases, grant projects may be extended for up to 4 more quarters in order to complete the funded projects. At the end of the grant term, unused grant funds are reported to department's fiscal section for credit to the grant fund. The grant reporting and reimbursement process includes:

1. A quarterly report is created by the grantee using the system and submitted to the department on or before 30 days after the first 3-month quarter to report on grant project progress as well as expenditures for requesting reimbursement.

2. Program staff then perform two reviews of the quarterly report for accuracy and accounting purposes.

3. The report is either:

   a. Approved, and sent to department's fiscal section for reimbursement payment; or

   b. Rejected, with instructions to correct inaccuracies and sent back to the grantee to correct.

4. A rejected report received by the department with corrections it is reviewed, and either approved and payment processed, or rejected again if the grantee did not complete all the required steps.

5. If equipment was purchased with grant funds, an Expected Service Life (ESL) is established for the equipment for the purpose of assigning the term that the department will maintain a percentage of ownership in the equipment purchased. The department tracks the use and status of the equipment during the term it maintains some ownership (a period of 3, 5, or 7 years). Throughout this period, ESL inspections of the equipment are performed, and if necessary, unused equipment is redistributed to other grantees.

NEBRASKA

DEPT. OF ENVIRONMENTAL QUALITY

16-004 December, 2016

Revised Program Priority System for Waste Reduction and Recycling Incentive Grants Program

A revised version of the Program Priority System for Title 199 – Waste Reduction and Recycling Incentive Grants Program, was developed by the Nebraska Department of Environmental Quality in 2015, after extensive discussions with stakeholders. The revisions were approved by the Environmental Quality Council on November 12, 2015, and will be used for evaluation and ranking of the 2016 grant applications. Below is the revised Program Priority System.

'Program Priority System' for the Title 199 – *Waste Reduction and Recycling Incentive Grants Program*

Function of the Program Priority System: To enable grant reviewers to objectively and quantitatively score applications commensurate with the impact of the project proposal on: the reduction of waste, increased recycling, composting, market development for recyclables, public education and planning, increased technical assistance, implementation of household hazardous management programs, and removal of barriers to waste reduction in the service area.

Section 1: Proposal Elements. These questions evaluate standard elements which should be present in any grant application.	**None**	**Low**	**Med**	**High**
1. Describe the project and what the project will accomplish.	0	1	2	3
2. Provide a timeline with specific tasks to be accomplished at each milestone date during the 1 year grant term.	0	1	2	3
3. What is your service area? You may include a map or other materials.	0	1	2	3
4. Explain how your project will benefit the area defined for your project.	0	1	2	3
5. How was the need for this project determined?	0	1	2	3
6. What mechanism will be used to measure / analyze program effectiveness?	0	1	2	3
7. Explain how your program will achieve demonstrable direct results.	0	1	2	3

8. Are there other providers or entities that provide similar services as this project? If so, please explain how this project is different.	0	1	2	3
9. Are there other entities that would partner with this project? Who are they?	0	1	2	3
10. Will this project be on-going after the funding has ended?	0	1	2	3
MAXIMUM POINTS for Section 1: Proposal Elements				**30**
Section 2: Project Furtherance of State Waste Reduction and Recycling Goals. This question is your opportunity to "sell us your project" in terms of its effectiveness at reducing waste.				
11. Describe how your project reduces the amount or toxicity of solid waste generated or landfilled in Nebraska. If applicable, you may relate your answer to any of the project purposes listed below and explain how your project achieves the purpose(s). Eligible projects include, **but are not limited to**: (a) Technical and financial assistance to political subdivisions for creation of recycling systems and for modification of present recycling systems; (b) Recycling, waste reduction, and diversion projects, including public education, planning, and technical assistance; (c) Market development for recyclable materials separated by generators, including public education, planning, and technical assistance; (d) Capital assistance for establishing private and public intermediate processing facilities for recyclable materials and facilities using recyclable materials in new products; (e) Programs which develop and implement composting of yard waste, food waste, sewage sludge, or other organics; (f) Technical assistance for waste reduction and waste exchange for waste generators; (g) Programs to assist communities and counties to develop and implement household hazardous waste management programs; (h) Capital assistance for establishing private and public facilities to manufacture combustible waste products and to incinerate combustible waste to generate and recover energy resources; (i) Reimbursement of costs to cities of the second class, villages, and counties of five thousand or fewer population	0	10	20	30

for the deconstruction of abandoned buildings. Eligible deconstruction costs will be related to the recovery and processing of recyclable or reusable material from the abandoned buildings. (j) Other projects to remove barriers to waste reduction, such as: - Technical barriers (filling technology gaps, providing technical assistance, planning and program development); - Financial barriers (access to capital); - Infrastructure/system barriers (material management information/reports, material markets, facilities); - Knowledge/skills/abilities (KSA) barriers (baseline measurement, improvement through education, training, skill building); or - Motivational barriers (incentives and disincentives to waste reduction, engagement of uninvolved market segments)				
MAXIMUM POINTS for Section 2: Furtherance of State Waste Reduction Goals				**30**
12. Does the eligible project employ disabled or handicapped persons?		**5 points**		
Section 3: The remaining portion of the Program Priority System is for use by the NDEQ Planning & Aid staff. The points assigned in the following sections are derived from mathematical calculations and not based on the subjective opinion of reviewers.				
TYPE OF PROGRAM: The following table indicates how each program will be rated on the basis of the type of program submitted for funding. The rating is commensurate with Nebraska's Waste Management Hierarchy from the most preferred to the least preferred method of managing waste.		**Points Assigned**		
Volume Reduction at the Source, and/or Toxicity Reduction		20 points		
Reuse, Recycling and Vegetative Waste Composting		15 points		
Land Disposal and Incineration with Energy Recovery		10 points		
Incineration for Volume Reduction without Energy Recovery		5 points		
UTILIZATION OF RESOURCES: Grantees are highly encouraged to utilize all available resources including cash match and in-kind donations.		**Points Assigned**		
At or above 50% cash and in-kind donation match		10 points		
Between 25% and 49% cash and in-kind donation match		5 points		
Below 25% cash and in-kind donation match		0 points		

MAXIMUM POINTS for Section 3: Solid Waste Hierarchy and Utilization of Project Resources	**30**
TOTAL POINTS POSSIBLE per application	**95**

Litter Reduction and Recycling
Program Priority System
2017

Public Education (pg 1), Cleanup (pg 4) and Recycling (pg 6)

Public Education

1) How well are the project and accomplishments described?	Points
a) Described well, no clarification needed	5
b) Described fairly well, some clarification needed	3
c) Mentioned but not defined	1
d) No description of project and/or accomplishments given	0

2) Does the timeline list specific tasks, milestone dates and accomplishments during the year?	Points
a) No clarification needed	5
b) Some clarification needed	3
c) Missing some milestone dates; few tasks listed, accomplishments not mentioned	1
d) No timeline, no tasks listed, no accomplishments listed	0

3) Is the service area defined?	Points
a) Very well defined, no clarification needed	5
b) Defined, some clarification needed	3
c) Mentioned but not defined	1
d) No service area given	0

4) Are the project's benefits for service area and/or targeted group defined?	Points
a) Very well defined, no clarification needed	5
b) Defined, some clarification needed	3
c) Mentioned but not defined	1
d) Project's benefits for service area and/or targeted group are not defined	0

5) Is the need for this project described?	Points
a) Very well defined, no clarification needed	5
b) Defined, some clarification needed	3
c) Mentioned but not defined	1
d) Project need was not determined	0

Public Education (cont.)

6) Does the applicant provide a mechanism to measure/analyze project effectiveness?	Points
a) Mechanism gives measured quality results, no clarification needed	5
b) Mechanism does not accurately measure/analyze program effectiveness; revision/clarification needed but data gathered	3
c) Mechanism to measure/analyze project effectiveness does not measure and/or analyze project effectiveness	1
d) No mechanism to measure/analyze project effectiveness used	0

7) Explain how your project/program will achieve demonstrable direct results	Points
a) Easily understood and relatable, no clarification needed	5
b) Understood and relatable, some clarification needed	3
c) Mentioned but no explanation given	1
d) No explanation for achieving demonstrable results given	0

8) Are there other providers or entities that provide similar services as this project? If so, please explain how this project is different.	Points
a) Explanation is easily understood and relatable, no clarification needed	5
b) Explanation is understandable and relatable, some clarification needed	3
c) Other providers mentioned, but no explanation for the project difference	1
d) No explanation about providers of same service or project differences	0

9) Possibility of project partners/potential for partnership(s)	Points
a) Very well explained, no clarification needed	5
b) Brief explanation, some clarification needed	3
c) Mentioned, not explained	1
d) No explanation for potential partnerships is given	0

10) Project continuation after funding has ended	Points
a) Very well explained, no clarification needed	5
b) Brief explanation, some clarification needed	3
c) Mentioned but not explained	1
d) No explanation for project continuation after funding has ended	0

11) Program promotion of litter reduction	Points
a) Very well explained, no clarification needed	5
b) Brief explanation, some clarification needed	3

c) Mentioned but not explained	1
d) No explanation of a litter reduction program	0

Cash Match / In-Kind Match

A **Cash Match** is when goods or services are paid by your organization with funds other than grant funds.

An **In-Kind Match** (Non-cash Match) is when goods or services are paid by a 3rd party such as a person / city / organization outside of your organization – usually includes volunteers.

Ranking Points:

100% cash and/or in-kind donation match	10 points
90-99% cash and/or in-kind donation match	9 points
80-89% cash and/or in-kind donation match	8 points
70-79% cash and/or in-kind donation match	7 points
60-69% cash and/or in-kind donation match	6 points
50-59% cash and/or in-kind donation match	5 points
40-49% cash and/or in-kind donation match	4 points
30-39% cash and/or in-kind donation match	3 points
20-29% cash and/or in-kind donation match	2 points
10-19% cash and/or in-kind donation match	1 point
Less than 10% cash and/or in-kind donation match	0 points

Cleanup

1) How well is the service area defined?	Points
a) Very well defined, no clarification needed	5
b) Defined, some clarification needed	3
c) Mentioned but not defined	1
d) No service area given	0

2) How many different types of items from the litter cleanup will be recycled (e.g. aluminum, paper, glass, metal and/or plastic)?	Points
a) At least 5 types	5
b) At least 4 types	4
c) At least 3 types	3
d) At least 2 types	2
e) At least 1 type	1
f) Nothing from the litter cleanup will be recycled	0

3) Does the applicant provide a mechanism to measure/analyze project effectiveness?	Points
a) Mechanism gives measured quality results, no clarification needed	5
b) Mechanism does not accurately measure/analyze program effectiveness; revision/clarification needed but data gathered	3
c) Mechanism to measure/analyze project effectiveness does not measure and/or analyze project effectiveness	1
d) No mechanism to measure/analyze project effectiveness used	0

4) Extent to which program builds on an existing program	Points
a) Directly builds on existing program	5
b) Mostly compliments existing program	3
c) Slightly compliments existing program	1
d) No connection to any existing program	0

5) Amount of staff experience with this type of program	Points
a) All staff members have extensive experience	5
b) Some staff members have experience	3
c) At least one staff members has experience	1
d) None of the staff members have experience	0

Cleanup (cont.)

6) Program promotion of litter reduction and/or recycling	**Points**
a) Very well explained, no clarification needed	5
b) Brief explanation, some clarification needed	3
c) Mentioned but not explained	1
d) No explanation of a litter reduction program	0

Recycling

1) How well are the project and accomplishments described?	Points
a) Describe well, no clarification needed	5
b) Described fairly well, some clarification needed	3
c) Mentioned but not defined	1
d) No description of project and/or accomplishments given	0

2) Does the timeline list specific tasks, milestone dates and accomplishments during the year?	Points
a) No clarification needed	5
b) Some clarification needed	3
c) Missing some milestone dates, few tasks listed, accomplishments not mentioned	1
d) No timelines, no tasks listed, no accomplishments listed	0

3) Is the service area defined?	Points
a) Very well defined, no clarification needed	5
b) Defined, some clarification needed	3
c) Mentioned but not defined	1
d) No service area given	0

4) Are the project's benefits for service area and/or targeted group defined?	Points
a) Very well defined, no clarification needed	5
b) Defined, some clarification needed	3
c) Mentioned but not defined	1
d) Project's benefits for service area and/or targeted group are not defined	0

5) Is the need for this project described?	Points
a) Very well defined, no clarification needed	5
b) Defined, some clarification needed	3
c) Mentioned but not defined	1
d) Project need was not determined	0

6) Does the applicant provide a mechanism to measure/analyze project effectiveness?	Points
a) Mechanism gives measured quality results, no clarification needed	5
b) Mechanism does not accurately measure/analyze program effectiveness; revision/clarification needed but data gathered	3
c) Mechanism to measure/analyze project effectiveness does not measure and/or analyze project effectiveness	1
d) No mechanism to measure/analyze project effectiveness used	0

Recycling (cont.)

7) Explain how your project/program will achieve demonstrable direct results	**Points**
a) Easily understood and relatable, no clarification needed	5
b) Understood and relatable, some clarification needed	3
c) Mentioned but no explanation given	1
d) No explanation for achieving demonstrable results given	0

8) Are there other providers or entities that provide similar services as this project? If so, please explain how this project is different.	**Points**
a) Explanation is easily understood and relatable, no clarification needed	5
b) Explanation is understandable and relatable, some clarification needed	3
c) Other providers mentioned, but no explanation for the project difference	1
d) No explanation about providers of same service or project differences	0

9) Possibility of project partners/potential for partnership(s)	**Points**
a) Very well explained, no clarification needed	5
b) Brief explanation, some clarification needed	3
c) Mentioned, not explained	1
d) No explanation for potential partnerships is given	0

10) Project continuation after funding has ended	**Points**
a) Very well explained, no clarification needed	5
b) Brief explanation, some clarification needed	3
c) Mentioned but not explained	1
d) No explanation for project continuation after funding has ended	0

11) Does the program promote end-markets for recycled materials and/or purchase of products made of recycled materials?	**Points**
a) Very well explained, no clarification needed	5
b) Brief explanation, some clarification needed	3
c) Mentioned but not explained	1
d) No explanation	0

12) Does the program create end-use markets for recyclables in Nebraska?	**Points**
a) Very well explained, no clarification needed	5
b) Brief explanation, some clarification needed	3
c) Mentioned but not explained	1
d) No explanation	0

Recycling (cont.)

13) Does the program increase the value or marketability of the recycled materials?	Points
a) Very well explained, no clarification needed	5
b) Brief explanation, some clarification needed	3
c) Mentioned but not explained	1
d) No explanation	0

14) Is the market for recyclables collected or processed identified?	Points
a) Very well explained, no clarification needed	5
b) Brief explanation, some clarification needed	3
c) Mentioned but not explained	1
d) No explanation	0

Cash Match / In-Kind Match

A **Cash Match** is when goods or services are paid by your organization with funds other than grant funds.

An **In-Kind Match** (Non-cash Match) is when goods or services are paid by a 3rd party such as a person / city / organization outside of your organization – usually includes volunteers.

Ranking Points:

100% cash and/or in-kind donation match	10 points
90-99% cash and/or in-kind donation match	9 points
80-89% cash and/or in-kind donation match	8 points
70-79% cash and/or in-kind donation match	7 points
60-69% cash and/or in-kind donation match	6 points
50-59% cash and/or in-kind donation match	5 points
40-49% cash and/or in-kind donation match	4 points
30-39% cash and/or in-kind donation match	3 points
20-29% cash and/or in-kind donation match	2 points
10-19% cash and/or in-kind donation match	1 point
Less than 10% cash and/or in-kind donation match	0 points

NEBRASKA DEPARTMENT OF ENVIRONMENTAL QUALITY

PROGRAM PRIORITY SYSTEM

FOR

BUILDING DECONSTRUCTION PROJECTS

WITHIN THE
WASTE REDUCTION AND RECYCLING
INCENTIVE GRANTS PROGRAM

The Program Priority factors and maximum number of points for the factors are shown in the following table:

Program Priority Factor	Priority points
Community Need (as determined by census data used to determine the applicants median household income compared to Nebraska median household income)	
50%+ below the Nebraska median household income	5
40% - 49.9% below the NE median household income	4
30% - 39.9% below the NE median household income	3
20% - 29.9% below the NE median household income	2
10% - 19.9% below the NE median household income	1
Less than 10% below the NE median household income	0
Percentage Reused in its present form (not reprocessed) (as compared to the total material in the building being deconstructed)	
80% - 100% reused	20
60% - 79.9% reused	15
40% - 59.9% reused	10
20% - 39.9% reused	5
Less than 20%	0
Percentage Recycled (reprocessed into a different form) (as compared to the total material in the building being deconstructed)	
80% - 100% recycled	5
60% - 79.9% recycled	4
40% - 59.9% recycled	3
20% - 39.9% recycled	2
1% - 20% recycled	1
None recycled	0

Type of Building

Multi-material with components (Building is constructed of some combination of wood, brick or stone, and steel with significant reusable architectural components such as doors, windows, hardwood floors, appliances, fixtures, dimensional lumber, etc.)	15
Single material with components (Building is constructed mainly of wood, brick or stone, or steel, and containing significant reusable architectural components.)	10
Single material without components (Building is constructed mainly of wood, brick or stone, or steel, and has very few reusable architectural components.)	5
Concrete (Building consists mainly of concrete or concrete block with limited or no architectural components.)	0

Cost per square foot

$1.00 - $4.99 per sq. ft.	10
$5.00 - $9.99 per sq. ft.	5
$10.00 – 19.99 per sq. ft.	1
$20.00 and over per sq. ft.	0

End Use Markets

Strong, established and viable end-use market for reusable and recycled materials clearly identified. Memorandum of understanding or other evidence that materials will be accepted is included.	10
Same as above but no evidence that materials will be accepted.	5
End use markets are weak, not well established or not clearly identified.	1

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