Executive Summary

State law [K.S.A. 65-3406(a)(5)] directs the secretary of the Kansas Department of Health and Environment (KDHE) to develop a statewide solid waste management plan. In accordance with this directive, the first state plan was adopted in 1996 and has been updated every five years since then. This 2021-2025 plan is the sixth version of the state plan. The plan provides an overview of the current condition of solid waste management in Kansas and establishes state program goals to be implemented by KDHE for the next five years.

The plan retains the fundamental philosophy of all earlier plans and applicable state law: that local governments working together with appointed local stakeholders are responsible for local planning and decisions related to local solid waste management practices that best serve their communities. The KDHE solid waste program supports local solid waste systems by permitting solid waste disposal areas and processing facilities; ensuring compliance of permitted facilities with applicable laws, and; providing technical and financial assistance to support local programs. The combined efforts of local planning and state solid waste program implementation serve to protect the public health and environment of all Kansans.

Stakeholder feedback was solicited during the plan development process through a stakeholder survey conducted in July of 2020 and virtual stakeholder feedback sessions held on September 15, 16 and 17. The survey was distributed to nearly 740 solid waste industry stakeholders and 119 responded. Bureau of Waste Management staff developed state solid waste program goals that were informed by the survey responses. During the virtual feedback sessions the goals were presented and additional input was received from 72 participants. After making final revisions to the goal statements, the proposed plan was sent to industry stakeholders in November prior to publication of the plan in the Kansas Register on November 19. Although not required, a public comment period was held until December 9. No comments were received.

I want to thank the industry stakeholders who took time to provide meaningful and constructive input during the survey and feedback sessions. This plan reflects your guidance. I also would like to acknowledge the work of the Bureau of Waste Management team who worked diligently to complete this plan during the year despite setbacks due to the COVID-19 pandemic, including Mindy Bowman, Julie Coleman, Christine Mennicke, Ken Powell, Gilbert Tabares and Jeff Walker.

Leo Henning, Deputy Secretary and Director of Environment
Kansas Department of Health and Environment
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History

The Mission of the Kansas Department of Health and Environment, Bureau of Waste Management is:

“To minimize the health and environmental impacts associated with the generation, storage, transportation, treatment, and disposal of all solid and hazardous wastes in Kansas.”

The first “Kansas Solid Waste Management Plan” was completed in February 1981. That plan was prepared to address certain new federal regulations mostly related to open dumps, as well the projected trend toward the concept of “resource recovery.”

In 1992, the Kansas Legislature adopted comprehensive new laws to address solid waste management practices including provisions regarding state and local planning, permitting, enforcement, waste reduction, solid waste clean-ups, grants, and adoption of regulations by the Kansas Department of Health and Environment (KDHE) to carry out the provisions of the act. These laws directed KDHE to adopt a state solid waste management plan but provided no specific requirements.

In accordance with these new laws, in December of 1996 the Kansas Department of Health and Environment adopted a Kansas Solid Waste Management Plan (Plan) which was entitled “A Decision-Makers Tool for Kansas Officials and Private Service Providers.” The 1996 plan was based upon the concept that major decisions related to solid waste management in Kansas should be made at the local level. Information was provided that would be useful to local planners in each county who, according to new state law, were required to prepare their own solid waste management plan that addressed the disposal, transfer, processing, and recycling of all generated waste. Statewide mandates were avoided in the state plan because solid waste management needs, conditions, and resources varied widely across Kansas.
Background and Purpose

Four subsequent five-year updates were completed in 2000, 2005, 2010 and 2016. The 2016 plan included the following assessment of the previous plans and planning efforts:

“Despite the good intentions behind the development of each version of the state plan and the fact that much potentially useful information was included in each plan, the practical benefits and outcomes over a 20-year period have been limited. The reasons for this result fall into three primary areas: (1) KDHE must operate within constraints established by state law, available financial and staff resources, and changing administrations; (2) local governments are required to develop their own solid waste plans (The state plan may be of little interest to local planners or service providers except with respect to its potential influence of KDHE’s development of new regulations or policies that affect operating facilities.); (3) state plans have generally been comprehensive and voluminous limiting practical use due to their lack of focus on a fewer number of feasible initiatives that address areas of greatest need.”

Consequently, the 2016 Plan focused on solid waste management program activities conducted within the Bureau of Waste Management (BWM) and was brief and practical compared to previous plans. It included the following sections:

- Section 1, Background and Purpose.
- Section 2, Current Conditions in 2016, which presented select information on waste management practices as of 2016.
- Section 3, State Role in 2016-2020, which established a limited number of feasible and practical KDHE goals based upon identified needs and available resources.
- Section 4, Re-evaluation of Local Solid Waste Management Decisions, which discussed local government planning requirements and encouraged local planners to evaluate changing conditions that could warrant changes to previously selected management methods.
- Section 5, National Trends and Issues provided limited information on national issues and trends.

Overview of the 2021-2025 Kansas Solid Waste Management Plan

This 2021-2025 Plan generally follows the structure of the 2016 plan with some changes, summarized below.

- Section 2 updates graphs and tables that were presented in the 2016 plan and presents some additional information.
- Section 3 is dedicated to an overview of state solid waste program revenue and expenditures. This information was combined with the state program goals in Section 3 of the 2016 plan.
- Section 4 discusses local planning but has been renamed.
- Section 5 is dedicated to establishing state program goals for 2021-2025. Goals are presented either as maintenance goals or enhancement goals.
- The National Trends and Issues section has been eliminated, recognizing that national goals evolve and our state solid waste program goals will be adapted from time to time in response to national initiatives.
2021-2025 Plan Development Process

The 2021-2025 Plan was developed by a Bureau of Waste Management team that included Julie Coleman, Bureau Director; Mindy Bowman, Solid Waste Section Chief; Ken Powell, Compliance & Enforcement, Waste Reduction and Assistance Section Chief; Christine Mennicke, Regulations and Data Unit Chief; Gilbert Tabares, Trainer and 6-Sigma Green Belt; and Jeff Walker, who oversees the local solid waste planning process. The team started holding regular meetings in October of 2019 to begin working on the 2021-2025 Plan. Each team member made important contributions and worked with other program staff to update the current conditions data and develop program goals. Stakeholders also played an important role in the development of our state program goals.

It was the original intention of the team to attend meetings where various stakeholder groups would be represented to solicit their input. This included roundtable meetings hosted by the Kansas Chapter of the Solid Waste Association of North America; the Kansas Works! Conference attended by recycling professionals; the Kansas Landfill Association annual meeting; the Small Arid Landfill bi-annual conference, and others. However, due to the COVID-19 pandemic, all of these meetings were cancelled. During much of March, April and May state agencies, including KDHE, dedicated a substantial amount time and resources responding to the pandemic and developing plans to adapt to a new teleworking environment. As a result, the team needed to quickly re-assess how best to solicit stakeholder feedback.

In June the team focused on developing a stakeholder survey. A survey that had been conducted in conjunction with the development of the 2010 state solid waste management plan served as a starting point. The 2010 survey asked stakeholders only to rank the importance of various solid waste program functions and services. In contrast, the 2020 survey asked stakeholders to rate BWM’s performance on 24 program activities. The survey was sent to about 750 stakeholders and 119 responses were received. The responses are summarized in Appendix D.

In addition to the survey, on September 15, 16 and 17, 2020 the BWM conducted virtual meetings to solicit stakeholder feedback on the draft Plan. Stakeholders were provided access to an early working draft of the Plan prior to the virtual meetings. There were 72 stakeholders who participated in these stakeholder feedback meetings, which were also recorded. Stakeholders provided positive and constructive feedback which was used to refine and improve the program goal statements presented in the draft Plan.

The revised draft Plan was placed on public notice in the Kansas Register for a 20-day public comment period from 11/19/2020 to 12/09/2020. No comments were received.

The BWM is pleased to present this 2021-2025 Kansas Solid Waste Management Plan. We believe it will serve as a valuable tool in directing program activities over the next five years to ensure that the solid waste management program meets the needs of stakeholders and fulfills the mission of the BWM.
A ll versions of the Kansas Solid Waste Management Plan have included information on the status of waste management in Kansas at the time each plan was prepared. This 2021-2025 Plan updates tables and graphs that were presented in the 2016 Plan. This information provides a general overview of how solid waste is managed in Kansas and serves as a basis for some of the program goals presented in Section 5.

Waste Disposal in Kansas

Table 2-1 shows the amounts of different categories of solid waste landfilled in Kansas over the past ten years. This information was compiled from tonnage reports submitted by Kansas landfills. During this ten-year period the total amount of all solid waste disposed in Kansas landfills declined by 1,312,770 tons, a 20% reduction in disposal. However, 92% of this reduction in disposal, or 1,201,478 tons, is attributed to the declining disposal of coal combustion residual (CCR) industrial waste by power plants. Industrial waste is the only waste type that showed a consistent downward trend in the amount of waste disposed. Special waste disposal also trended downward during the ten-year period, but in 2019 showed a marked increase. Municipal solid waste trended downward slightly, with tons disposed in 2019 about 4% less than in 2010. Disposal of construction/demolition waste and tires fluctuated from year to year.

Per Capita Disposal Rates

Figure 2-1 shows that the per capita disposal of municipal solid waste (MSW) decreased dramatically from 2004 to 2011. The decrease in disposal can be attributed in part to the success of recycling, but we have not had a reliable means of measuring recycling. Instead, the rate is calculated from tonnage reports submitted by Kansas landfills and US Census Bureau population estimates. The amount of waste disposed is influenced not only by recycling, but also by waste reduction and reuse, the economy and weather events, like floods and tornadoes, that generate large quantities of debris that must be disposed. Since 2011, the per capita disposal rate has remained relatively stable as shown in Table 2-1. It is not anticipated that disposal rates will decline any further without state mandates for recycling and/or landfill bans. Additionally, international policies that restrict the amount of recyclable material that can be exported to other countries, such as China Sword and the Basel Convention, are predicted to result in more recyclable material being landfilled until domestic markets for recyclable material can be developed.
Permitted Solid Waste Facilities

Figure 2-2 shows the number of each type of Solid Waste Permitted facilities in Kansas. There are 328 landfills, 198 of which are active; 130 are closed. The active landfills include 50 MSW, 98 C&D, 31 industrial, and 19 tire monofills (a subset of the tire portion in the figure). The remaining types of facilities regulated by the KDHE BWM include transfer stations (67), household hazardous waste facilities (45), composting (82),
Current Conditions in 2020

MSW Landfill Permitted Capacities and Regional Disposal Practices

Waste reduction and recycling conserves valuable landfill space. Given the difficulty in siting new MSW landfills, general public opposition, impacts to the environment and nearby property values, and some unavoidable general nuisance conditions that may result from normal landfill operations (traffic, dust, noise, and odor), it is in the interest of all Kansans to conserve landfill space.

Kansas has 50 MSW landfills: 18 RCRA Subtitle D lined landfills, and 32 small arid landfills, which are generally unlined. All small arid landfills (SALs) are located in rural western Kansas counties. Table 2-2 lists all 50 MSW landfills and provides information for each on total permitted capacity, remaining capacity, and the projected number of years of remaining capacity based upon the current disposal rate.

Landfill capacity is not an immediate or near-term concern for most MSW landfills in Kansas. However, there are eight landfills with 20 or fewer years of remaining capacity. Most notable of these is the Johnson County landfill, which is the largest landfill in Kansas serving the Kansas City area and several other counties that transfer their waste to this landfill. For these landfills, it is important for local public officials, planners and their consultants to begin considering transfer and/or disposal options for when the current landfill is no longer available. Communication with the BWM early in the process to answer questions about location and design requirements, as well as the permit application process for new or expanded facilities, is important. Adequate time must be allowed for all planning, local government deliberation, land use decisions, design, permitting (and potential land-owner challenges), and construction to be completed before the remaining capacity in existing facilities is depleted. The process can take many years. Larger landfills, or landfills in more populated areas, may require more time to accomplish all of the steps necessary for the siting and construction of new solid waste management facilities.
### Table 2-2

**MSW Landfills - Permitted and Remaining Capacities**

<table>
<thead>
<tr>
<th>County</th>
<th>Facility Name</th>
<th>LF Type</th>
<th>Total Reported Permitted Capacity in Cu. Yds.</th>
<th>Total Reported Remaining Capacity in Cu. Yds.</th>
<th>Total Reported Remaining Capacity in Years</th>
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<td>AL</td>
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<td>Subtitle D</td>
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**Current Conditions in 2020**

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<th>Total Reported Remaining Capacity in Cu. Yds.</th>
<th>Total Reported Remaining Capacity in Years</th>
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<td>SAL</td>
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<td>668,488</td>
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</table>

* All data was reported by facilities for the 2019-2020 permit renewal period

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### Regional Flow of Solid Waste

Figure 2-3 shows the location of all MSW landfills in Kansas and the counties using those landfills. This map shows that about half of the counties transfer their MSW to a Subtitle D landfill located in another county. Arrows are used to indicate the path the MSW follows from the county where the MSW originates to the destination. For example, Ellsworth, Lincoln, and Ottawa counties all send MSW to the Salina publicly-owned landfill in Saline County, as indicated by arrows from those counties to the Saline County Landfill. Kansas has 13 Subtitle D landfills providing regional disposal service to other counties. The longest waste transfers are 150 to 200 miles. Nearly all transfers are in standard semi-tractor trailers. Some minor amounts of waste are directly hauled in collection trucks to landfills in adjacent counties. The greatest amount of waste transferred would be the Sedgwick County/Wichita waste which can exceed 2,000 tons per day. It is sent to the Waste Connections, Inc. Plumb Thicket Landfill in Harper County.

Other waste types (C&D, industrial, and special waste) are not transferred through standard transfer stations. Some C&D waste generated in Missouri is directly hauled to multiple C&D landfills in Kansas because Missouri does not permit these types of facilities. Disposal costs in Kansas are significantly lower than disposal cost at a landfills designed to the Subtitle D standards in Missouri.

Projected waste flow patterns are likely to remain fairly constant. However, some small counties may reevaluate past decisions and changes could take place.

### Recycling

International policies, especially China Sword and the Basel Convention, have substantially limited the amount of recyclable material that can be exported from the United States. These policies reflect concern from receiving countries regarding contaminants that are mixed with the recyclable materials they received. These policies have dramatically changed the landscape of recycling and the management of the materials collected in this...
country and resulted in the closure of many recycling programs in Kansas. The markets for many of recyclable materials have collapsed, and it is expected to take years to develop domestic markets for these materials and methods to reduce contamination in collected materials. To help us better understand the new dynamics of recycling, the BWM is partnering with Wichita State University to survey recycling programs and material recovery facilities (MRFs). This work will be supported by a grant from the Environmental Protection Agency. The goal is to develop a plan for public education in partnership with these facilities to promote recycling in Kansas.

**Waste Reduction Facilities**

Waste reduction facilities include permitted or registered composting and household hazardous waste (HHW) facilities. Figure 2-4 shows the location of all permitted composting and HHW facilities. All of the HHW facilities and most of the composting facilities are owned and operated by cities and counties.

**Material Recovery Facilities**

Material recovery facilities receive source-separated recyclables from public and private pickup and drop off locations. Figure 2-5 shows the location of the state’s five large MRFs. Four of the MRFs are owned and operated by private waste management companies and the fifth one is on the Ft. Riley military base and operated by the US Army. These MRFs, and recycling facilities in general, are not permitted by the BWM. There are too many non-permitted recycling operations in Kansas to include on this figure. The BWM contracts with the Kansas Organization of Recyclers to maintain a database of local recycling programs.
Section 2  Current Conditions in 2020

Figure 2-4  Permitted Composting and Household Hazardous Waste Facilities in Kansas

- Satellite Household Hazardous Waste Facilities
- Permitted Household Hazardous Waste Facilities
- Composting Facilities

Chart is created by KDHE’s Solid Waste Section with 2020 data from KDHE’s nForce Database

Figure 2-5  Material Recovery Facilities (MRFs)

2020 data provided by Kansas Organization of Recyclers
State laws and regulations do not require cities or counties to ensure that MRFs are available to manage part of the MSW stream. These operations are voluntarily developed and operated to satisfy the provisions of locally adopted solid waste management plans. In some cases, facilities are established by private companies as part of business development plans. Local governments may work cooperatively with private companies to provide needed services or they may provide such services to their citizens themselves.

Even though state laws and regulations do not require these waste reduction facilities, when a public or private entity implements such operations, standards of design and operation apply to ensure that public health and the environment are protected. Even the non-permitted MRFs must operate within certain parameters to maintain the permitting exemption and they must ensure that their operations adequately control all received material.

For example, a MRF must not receive mixed MSW (that would be a “dirty” MRF subject to solid waste processing facility permits and operating requirements); all MRFs must control windblown litter; and MRFs must ensure that received material does not impact stormwater quality (Clean Water Act rules).

**Landfill Gas Collection and Control**

Landfill gas is generated when organics in MSW, such as household food waste, decompose under anaerobic (without oxygen) conditions. Landfill gas consists of methane, carbon dioxide, and trace amounts of other gases. If not properly managed, landfill gas can pose threats to public safety and the environment, ranging from greenhouse gas emissions and odor nuisances to explosion hazards. However, when properly managed, these risks can be mitigated and this gas can even be harnessed to create a valuable energy resource.

**Table 2-3 MSW Landfill Gas Recovery and Use**

<table>
<thead>
<tr>
<th>SubD Landfill</th>
<th>Gas Control &amp; Treatment</th>
<th>cfm of LFG</th>
<th>cf/day</th>
<th>% CH4</th>
<th>MmBtu/day</th>
<th>MmBtu/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allen County</td>
<td>Infrared heat</td>
<td>153</td>
<td>221,000</td>
<td>29.4</td>
<td>67</td>
<td>24,373</td>
</tr>
<tr>
<td>Butler County</td>
<td>Flare</td>
<td>144</td>
<td>207,000</td>
<td>38.1</td>
<td>81</td>
<td>29,584</td>
</tr>
<tr>
<td>Finney County Landfill / Western Plains Regional</td>
<td>Flare</td>
<td>182</td>
<td>262,000</td>
<td>53.0</td>
<td>143</td>
<td>52,088</td>
</tr>
<tr>
<td>Hamm</td>
<td>Gas processing plant</td>
<td>1,360</td>
<td>1,958,000</td>
<td>54.7</td>
<td>1,100</td>
<td>401,754</td>
</tr>
<tr>
<td>Johnson County</td>
<td>Gas processing plant &amp; flares</td>
<td>6,184</td>
<td>8,905,000</td>
<td>55.2</td>
<td>5,048</td>
<td>1,843,884</td>
</tr>
<tr>
<td>Oak Grove</td>
<td>LFG to energy</td>
<td>1,099</td>
<td>1,583,000</td>
<td>48.8</td>
<td>793</td>
<td>289,775</td>
</tr>
<tr>
<td>Plumb Thicket</td>
<td>Flare (gas processing plant under construction)</td>
<td>708</td>
<td>1,020,000</td>
<td>51.1</td>
<td>535</td>
<td>195,516</td>
</tr>
<tr>
<td>Reno County MSW</td>
<td>Flare</td>
<td>765</td>
<td>1,101,000</td>
<td>47.5</td>
<td>537</td>
<td>196,174</td>
</tr>
<tr>
<td>Resource Recovery</td>
<td>Flare</td>
<td>339</td>
<td>488,000</td>
<td>49.5</td>
<td>248</td>
<td>90,612</td>
</tr>
<tr>
<td>Rolling Meadows</td>
<td>LFG to energy</td>
<td>1,989</td>
<td>2,864,000</td>
<td>54.5</td>
<td>1,603</td>
<td>585,504</td>
</tr>
<tr>
<td>Seward County</td>
<td>Direct use - National Beef</td>
<td>69</td>
<td>100,000</td>
<td>43.1</td>
<td>44</td>
<td>16,167</td>
</tr>
</tbody>
</table>

Data Source: The landfill gas volume and percent methane data was gathered from the United States Environmental Protection Agency’s Landfill Methane Outreach Program (https://www.epa.gov/lmop) and was last updated in March 2020.

mmBtu - 1,000,000 British Thermal Units

1 cubic foot of methane (cfm) = 1027 Btu
Landfills are required by federal air quality regulations to reduce emissions of methane and other pollutants by installing landfill gas collection and control systems if emissions exceed certain thresholds. Landfill gas management systems consist of a network of collection wells and piping that can direct the gas to a flare, vent, or to a system that processes the gas for beneficial use. Any MSW landfill in Kansas that installs a gas management system is required to evaluate the feasibility of processing the collected gas for beneficial use.

In Kansas, several closed and active MSW landfills have management systems that simply flare or vent gas into the atmosphere, and five landfills currently beneficially use their gas. These beneficial uses include burning gas on-site to generate electricity, piping gas to nearby industries for conversion to energy, and processing gas on-site to a purified form which may be sold and transported on a natural gas pipeline. Table 2-3 summarizes the end use, quantity, and energy generation potential of the eleven active Subtitle D MSW landfills in Kansas that have gas management systems.

![Solid Waste Planning Regions in Kansas](image)

**Solid Waste Planning Regions**

State law requires every county to develop and maintain an up-to-date solid waste management plan. Counties may plan regionally and cooperatively work with other counties to implement various aspects of solid waste management including disposal, recycling, HHW collection, or other selected practices. After adoption of new state laws in 1992, many counties planned regionally because state law provided more grant funding to develop regional plans as compared to individual county plans. However, most of the counties that planned regionally implemented solid waste practices individually. Those counties cooperated with respect to certain solid waste programs such HHW collection and the marketing of recyclables, but they typically operated their own landfills and/or transfer stations, composting facilities, and recycling operations.

Most Kansas planning regions have since disbanded. Individual counties have elected to independently complete the paperwork and take on costs associated with preparing the required solid waste plan. It remains true that counties which are part of regional plans operate almost totally independent of the other counties in their region. Figure 2-6 shows the current location of planning regions. KDHE will continue to facilitate any requests by counties to modify regional makeup.
Overview

The state solid waste program is funded entirely by the Solid Waste Management Fund (SWMF) established by K. S. A. 65-3415a. Money deposited in the SWMF comes from the following sources:

1. solid waste tonnage fees;
2. permit application and annual permit renewal fees;
3. interest earned on the balance in the SWMF;
4. other sources, such as unexpended grant funds that are returned by the grant recipient.

There are no state general funds or federal funds allocated for solid waste program administration, development or implementation.

The SWMF is considered both a “dedicated” and a “no-limit” fund from an annual budget perspective. “No-limit” funds are established by the legislature for agency programs that have potential emergency expenses or difficult to forecast expenses. This means KDHE may exceed projected budget amounts if necessary, to carry out the goals of the program.

Both of these conditions apply to the solid waste program because funds are used for certain unpredictable purposes as directed by statute, such as cleanup of environmental releases caused by old disposal areas or of illegal dumps when the responsible party is unknown, or unable or unwilling to perform necessary work.

The number of full time and part time positions equated to full time that KDHE can employ for the implementation of solid waste programs and functions is limited to 44 per K. S. A. 65-3427.

K.S.A. 65-3415a(c) specifies how the SWMF fund may be used to support the state solid waste program (see Appendix A). In general, this includes: permitting; inspection, compliance and enforcement; oversight of groundwater monitoring; development and adoption of regulations, policies and technical guidance.
documents; participation in state and national solid waste associations; training, education and outreach; solid waste reduction grants and other aid to local governments for closed landfill repairs and illegal dump cleanups; and disaster response.

Waste tire management can also be considered a part of the state solid waste management plan, although the authority for these program activities and the funding is established under a separate statute from the solid waste management program authorities. The waste tire management program is also discussed briefly in this section.

**Solid Waste Tonnage Fee (K.S.A. 65-3415b)**

The solid waste tonnage fee went into effect in 1993 and was originally set by statute at $1.50 for each ton of solid waste disposed of at any landfill in Kansas. In 1995 the statute was revised to reduce the tonnage fee to $1.00 per ton; in 2000, the fee was made applicable to solid waste transferred out of state. No adjustments to the $1.00 tonnage fee have been made since then to compensate for inflation, added solid waste program responsibilities or the costs of technology.

The statute provides the following exemptions from the $1.00 tonnage fee:

- Solid waste disposal activities that are exempt from the requirement for a permit, also referred to as Disposal Without a Permit, or DWOP. These exempt activities are established under K. S. A. 65-3407c.
- The disposal of waste tires in or at a permitted solid waste disposal area.
- Public drinking water treatment sludges disposed at a permitted monofil.
- Clean rubble as defined by K.S.A. 65-3402(w).
- Solid waste solely consisting of vegetation from land clearing and grubbing, utility maintenance, and seasonal or storm related cleanup. This exemption does not apply to yard waste.
- Construction or demolition waste disposed of by the federal government, the state of Kansas, or by any city, county or other unit of local government in the state of Kansas or by any person on their behalf.
- Industrial waste disposed at a permitted solid waste disposal area that is owned or operated by or for the industrial facility generating the waste and used only for industrial waste generated by that facility.

**Permit Application and Annual Renewal Fees (K.S.A. 65-3407(e)(1) and (2))**

The statute authorizes KDHE to adopt regulations establishing permit application and permit annual renewal fees. The statute also establishes limits on application and annual renewal fees as follows:

- Solid waste processing and solid waste disposal permit application fees cannot exceed $5,000 and annual permit renewal fees cannot exceed $2,000.
- For construction and demolition landfills, the statute requires KDHE to establish a differential fee schedule based on the amount of waste to be disposed at the landfill.
- For industrial solid waste disposal areas, the annual renewal fee cannot be less than $1,000 or greater than $4,000.

Finally, the statute exempts cities, counties, other political subdivisions and state agencies from application and annual renewal fees. Of the 305 active, permitted solid waste landfills in Kansas, 213 landfills are owned by government entities that are exempt from permit application and annual renewal fees.

The regulations establishing the application fees for various types of facilities (K. A. R. 28-29-84) became effective in 1993 and were last amended in 1995. Application fees range from $250 for solid waste compost facilities and construction and demolition landfills that receive less than 1,000 tons annually, to $5,000 for incinerators. Annual permit renewal fees range from $125 for construction and demolition landfills that receive less than 1,000 tons annually to $2,000 for municipal solid waste disposal areas. A table showing permit
application fees and annual permit renewal fees is provided in Appendix B.

**Waste Tire Management Fund (K.S.A. 65-3424g)**

The program authority for the management of waste tires is established by K. S. A. 65-3424g. The waste tire program is funded separately from other solid waste programs through the Waste Tire Management Fund (WTMF). The WTMF is generated from a $0.25 excise fee that is collected from the initial sale of vehicle tires, and permit application and annual renewal fees.

Waste tire facilities include mobile waste tire processors, waste tire processing facilities, waste tire transporters and waste tire collection centers. All facilities must apply for a permit and permits must be renewed annually. The statute limits application and annual renewal fees to $250. Application and renewal fees are established by K. A. R. 28-29-2011 and presented in Appendix C. There are 54 permitted waste tire facilities in Kansas.

The statute establishes a $250,000 annual limit on salaries and operational expenses for program implementation. The remainder of the fund may be used for the following purposes authorized by K.S.A. 65-3424g(c):

- implementation of measures to minimize public health and environmental risks created by waste tire accumulations until the responsible party or, if necessary, KDHE can complete a site clean-up;
- to pay for the removal and disposal, or on-site stabilization, of illegally accumulated waste tires when the responsible party is unwilling or unable to take corrective action;
- to pay contractors to provide public education regarding the proper management of waste tires, technical training on the waste tire statutes and regulations, and abatement of illegal waste tire accumulations;
- for grants to public or private entities to pay up to 50% of the costs to purchase tire derived products for eligible projects.

**Solid Waste Management Program Workforce**

K.S.A. 65-3427 states that “the number of full-time and regular part-time positions equated to full-time” retained by KDHE to implement solid waste management programs and functions shall not exceed 44.

There are a total of 69 staff within KDHE who have a percentage of their time allocated to duties associated with solid waste management program implementation. When converted to full time equivalent (FTE) positions, their time equates to 40.21 positions, just below the statutory limit of 44. Maintaining the total FTE count below 44 has kept expenditures in line with program revenue. Forty-two of these positions, or 29.73 FTEs, are in the Bureau of Waste Management (BWM). There are an additional 21 positions, or 9.52 FTEs, in the Bureau of Environmental Field Services (BEFS) and six positions, or 0.96 FTEs, in other support roles throughout KDHE.

The BWM has primary responsibility for all aspects of solid waste program development and administration. There are four main program sections within BWM that carry out solid waste program functions: Administration (Admin), Solid Waste Permitting (SWP), Compliance, Enforcement, Waste Reduction and Assistance (C, E, WR & A), and Regulations and Data (R & D). The BEFS, through six district offices across the state, has primary responsibility for conducting compliance inspections and complaint investigations. Other support for the solid waste program is provided by the Division of Environment, Office of Legal Services, Office of Management and Budget and Bureau of Environmental Health. Figure 3-1 summarizes how FTEs are distributed.

Most staff who have roles in solid waste program implementation also have hazardous waste program and/or waste tire management program roles. Staff must be trained in each of these broad program areas. Training
Section 3

Revenue and Expenses

is an on-going and significant resource commitment for both the BWM and BEFS. All new employees receive on-the-job training from other experienced employees to develop the knowledge and competence needed to perform their job duties independently. This is an intensive and lengthy process for most positions. On-going professional development is also supported through attendance at industry workshops and conferences and professional webinars.

Although the BWM employs some engineers, engineering associates and geologists, most solid waste program staff hold environmental specialist or administrative positions. Figure 3-2 shows the number of BWM staff in each of these general position types. It can be difficult for the BWM to recruit and retain engineers and geologists because state government cannot compete with the compensation and benefits offered by other employers outside. However, we continue to focus on efforts to adjust compensation and highlight the “quality of life” benefits of working for KDHE.

Summary of Revenue and Expenditures

The graphs and figures below provide a general overview of the total annual revenue and total annual expenditures from the SWMF and the WTMF.

Figure 3-3 shows the historic trend in SWMF revenue and expenditures since the fund was created in 1993.
Annual fund revenue slightly exceeds annual program expenditures. However, there is a balance carry over from year to year that is sufficient to pay for about six months of program expenditures as well as to cover any unforeseen program expenditures related to cleanups and abatements necessary to mitigate nuisances or public health and environmental risks.

**Figure 3-3**

![Chart showing Historic Solid Waste Management Fund](image)

**Figure 3-4**

![Chart showing SWMF Revenue, SFY 2016-2020](image)

Figure 3-4 breaks down annual program revenue according to revenue source. Tonnage fees and permit fees are described above. Other includes primarily refunded grants and refunds recovered through enforcement actions. Interest includes the interest that accrues annually on tonnage fee deposits to the SWMF. This graph clearly shows that most of the solid waste program revenue, typically between 95-97%, is derived from the tonnage fee.
Figure 3-5 breaks down the annual expenditures from the SWMF by major categories. Salaries account for most of the expenditures, followed by indirect costs and operations. Indirect costs are a proportion of program funds that are used to support the expenses necessary to maintain overall agency functions such as rent, utilities, technology infrastructure, and support services provided through upper management, public information, human resources, legal services, information technology, and the health and environmental laboratory.

Figure 3-6 provides an overview of revenue and expenditures from the WTMF.
Section 4

Local Solid Waste Management Plans

K.S.A. 65-3405 requires every county to develop and maintain an up-to-date solid waste management plan. Counties have the option of planning individually or working regionally with other counties to implement programs such as waste disposal, household hazardous waste, recycling, and other practices. In the last two years county members of the two largest solid waste regions chose to dissolve. These two regions contained a total of 14 landfills which enabled most of the counties to manage their solid waste independently. The remaining 10 regions work closely together by utilizing regional landfills and household hazardous waste management. Prior to the last two regions dissolving there were 46 counties that planned as individuals. Currently there are 69 counties that annually submit either an Annual Review or 5-year Solid Waste Plan Update.

K.S.A. 65-3410 provides authority to cities and counties or combinations thereof to provide for the storage, collection, transporting, processing, and disposal of solid waste and recyclables within their boundaries. These jurisdictions have the ability to implement their solid waste management plan that provides the means to efficiently manage their individual solid waste programs.

Solid Waste Management Plans allow individual counties and regions the opportunity every five years to analyze their programs effectiveness with the ability to make changes to their plan in their annual reviews. Most plans entail few changes from year to year, however an area that should be monitored closely on an annual basis by each county is landfill capacity. The process of planning, permitting, and constructing a new landfill can take 10 to 20 years to complete. KDHE-BWM planners frequently work with counties throughout the process of constructing new landfills or expanding capacities of existing landfills.

KDHE-BWM solid waste planners are available to the counties to assist in future planning of new landfills or landfill expansion. County Solid Waste Management Committees consisting of local solid waste professionals and county commissioners must be closely involved with KDHE planning and permitting staff throughout the planning process.
Section 5 presents key solid waste management program goals the BWM will strive to achieve during the SFY 2021-2025 Plan period. These goals were developed using information obtained from internal performance metrics, our continuous quality improvement efforts (for example, process mapping events), and stakeholder feedback gathered through the stakeholder survey conducted in July 2020 and stakeholder feedback sessions held in September 2020.

Not all program activities that are conducted within the BWM are captured in these program goals. Rather, these goals address the program activities we believe have the most impact on our external stakeholders and the success of the solid waste management program in general. It is our intent to modify our internal performance metrics in order to better track our progress implementing these goals. These metrics will allow us to identify and address program areas needing improvement. Finally, it is our intention to provide interim reports to our stakeholders on our progress attaining these program goals, and to continue to solicit stakeholder feedback along the way.

Permitting

Maintenance Goals

1. Renew 360 solid waste permits annually by permit issuance anniversary date, or within 30 days of receipt of all required permit documents if they are not submitted by permit renewal due date.

2. Streamline and improve technical review process such that the technical review of new or modified permit documents submitted by permitted or proposed facilities are completed within 180 days of receiving a complete submittal, excluding time for facility permit document revisions.

3. Streamline and improve technical review process such that the technical review of new or modified permit applications submitted by permitted or proposed facilities are completed within 180 days of receiving a complete
application, excluding time for facility permit application and associated document revisions.

4. Monitor annual groundwater monitoring requirements for all facilities to ensure events occur according to the applicable monitoring schedule, and review groundwater monitoring reports within 180 days after the report is received.

5. Review beneficial use, compost registration, and satellite HHWs requests for approval within 180 days of receiving a complete submittal.

6. Review disposal without a permit and landfarm requests for approval within 60 days of receiving a complete submittal.

7. Provide training and outreach to Small Arid Landfills. KDHE plans to host Small Arid Landfill Workshops every two years with 75% of the Small Arid Landfills in Kansas represented in attendance.

New Initiatives and Goals

1. In response to feedback received on the July 2020 stakeholder survey, a solid waste stakeholder group will be formed to advise the Solid Waste Permit Section and the Bureau of Waste Management on issues that impact stakeholders. The first advisory group meeting will be conducted by the end of 2021 after input is solicited on when and how best to hold advisory group meetings.

Inspections, Compliance and Enforcement

Maintenance Goals

1. Coordinate with the Bureau of Environmental Field Services/District Offices to schedule and conduct routine compliance inspections of active solid waste management facilities at least annually.

2. Review inspection reports and evaluate for enforcement. For facilities that meet enforcement criteria, develop the case for enforcement.

New Initiatives and Goals

1. Develop at least five new training resources for facility operators, which may include videos, written materials or in-person presentations. The training topics and content will be based on training needs expressed by operators.

2. To help promote consistency and quality of inspections, by January 2022 create an internal guidance document for new inspectors that is titled “Tips for Field Work” with information provided by experienced inspectors.
Local Solid Waste Management Plans

Maintenance Goals

1. Continue to update and simplify guidelines and technical guidance documents for the annual plan review process. Work with counties to ensure that all updates and changes to the local solid waste management system program are addressed in the annual plan review.

2. During the comprehensive five-year plan review and public hearing process, provide technical assistance to the local solid waste planning committee to evaluate the existing solid waste management system and options to meet future needs.

New Initiatives and Goals

1. Identify counties where the municipal solid waste landfill has less than 10-15 years of remaining capacity and initiate outreach to the local solid waste planning committee to begin evaluating options to meet future solid waste disposal needs, which may include initiating the permit application process for new construction or existing landfill permit modifications.

2. Develop training material specific to the needs of county commissioners and local solid waste management planning committee members. This will include information on statutes, regulations and other information they need to understand in order to develop effective local solid waste management plans for managing the solid waste and recyclables generated and disposed within their county.

Education and Outreach

Maintenance Goals

1. Work with a contractor to plan and conduct the Works! conference annually for training on recycling, composting and household hazardous waste (HHW) management.

2. Continue to offer health and safety training to HHW facility by: (a) providing 24 hour health and safety training for new operators conducted by a contractor at an on-site venue; (b) offering the 8 hour health and safety refresher class for HHW facility personnel at Works; and (c) offering an 8 hour refresher course online with content that is updated each July.

3. Continue to collaborate with the Solid Waste Association of North America (SWANA) Sunflower Chapter to provide training on the operation of municipal solid waste, construction and demolition, and industrial landfills and solid waste transfer stations, including operator safety.
4. Continue to sponsor the annual Keep It Clean Kansas (KICK) calendar art contest for K-12 students across Kansas. In an effort to create an opening for conversation and education in environmental topics for students, establish an annual calendar “theme” focused on reducing waste, recycling, and/or composting.

5. Continue to coordinate with the Kansas Department of Wildlife, Parks and Tourism to host an annual Earth Day park cleanup at five parks each year to provide outreach and education on recycling.

New Initiatives and Goals


1. Develop and expand the KICK social media campaign by increasing the number of followers on Facebook and Instagram by about 60% annually. Focus on developing interactive, fun and educational content to increase audience size.

2. Increase the frequency of follower engagement with Facebook and Instagram by 400% by posting interactive messaging, answering questions, and promoting other KICK events.

3. Develop new activities to educate the public on waste reduction practices and coordinate with partners to conduct activities at events like school functions, fairs, National Recycling Day, and National Waste Workers Week.

4. Create a web page under the KICK “umbrella” to host a resource center for teachers, K-12 students, and interested Kansans where accurate and easily digestible information on recycling, composting, food waste, and waste reduction is accessible to all.

Grants and Aid to Local Governments

Maintenance Goals

1. Solicit applications for solid waste reduction grants once each state fiscal year.

2. Solicit applications for waste tire product grants once each fiscal year.

3. Administer the illegal dump clean-up program in cooperation with local governments by investigating all illegal dump complaints and offering technical and financial assistance to complete cleanups, including enforcement if necessary.
4. Inspect all old city dumps once every five years and work with cities to develop and implement plans to complete needed repairs.

**Regulations, Policies and Technical Guidance Documents**

**Maintenance Goals**

1. Maintain the solid waste program regulations by conducting reviews, updates and revisions to existing regulations as needed to support program activities. Update regulations based on program and stakeholder input.

During the 2021-2025 planning period focus will be on the following:

a. Evaluate whether or not the state should adopt federal coal combustion residuals regulations and obtain state program authorization. If the regulations will be adopted, maintain communication with the regulated community during the coal combustion residuals regulatory development process;

b. Update and expand medical waste regulations;

c. Develop and adopt landfill post-closure care regulations.

2. Annually evaluate the list of all Bureau of Waste Management Technical Guidance Documents (TGDs) and Policies to identify and prioritize those that need to be reviewed for revisions and updates in the upcoming year.

**New Initiatives and Goals**

1. By July 2021, identify and implement a more effective method of informing the regulated community when there are new or updated TGDs or policies available on the BWM website.

2. By July 2022, improve the organization and presentation of polices and TGDs on the BWM website.

**Database Development and Maintenance**

**New Initiatives and Goals**

1. By December 2022, migrate management of solid waste data into the Kansas Environmental Information Management System (KEIMS). KEIMS development by BWM will support the goal of providing a one-stop shop for facilities that deal with multiple environmental bureaus and programs in KDHE. KEIMS will also support on-line reporting and payment and allow facilities to view and update their data on-line.

2. Before BWM moves to on-line reporting and payment, notify external users of the technical requirements for using the system.
Disaster Response Maintenance Goals

1. Maintain a current disaster response toolkit for debris management on the BWM website that can be used by local disaster response personnel to facilitate disaster clean ups.
Appendix A

According to K.S.A. 653415a(c), moneys in the solid waste management fund shall be expended for the following purposes:

(1) Grants to counties or groups of counties or designated city or cities pursuant to K.S.A. 65-3415, and amendments thereto;

(2) monitoring and investigating solid waste management plans of counties and groups of counties;

(3) payment of extraordinary costs related to monitoring permitted solid waste processing facilities and disposal areas, both during operation and after closure;

(4) payment of costs of postclosure cleanup of permitted solid waste disposal areas which, as a result of a postclosure occurrence, pose a substantial hazard to public health or safety or to the environment;

(5) emergency payment for costs of cleanup of solid waste disposal areas which were closed before the effective date of this act and which pose a substantial risk to the public health or safety or to the environment, but the total amount of such emergency payments during a fiscal year shall not exceed an amount equal to 50% of all amounts credited to the fund during the preceding fiscal year;

(6) payment for emergency action by the secretary as necessary or appropriate to assure that the public health or safety is not threatened whenever there is a release from a solid waste processing facility or a solid waste disposal area;

(7) payment for corrective action by the secretary at an active or closed solid waste processing facility or a solid waste disposal area where solid waste management activity has resulted in an actual or potential threat to human health or the environment, if the owner or operator has not been identified or is unable or unwilling to perform corrective action;

(8) payment of the administrative, technical and legal costs incurred by the secretary in carrying out the provisions of K.S.A. 65-3401 through 65-3423, and amendments thereto, including the cost of any additional employees or increased general operating costs of the department attributable therefor;

(9) development of educational materials and programs for informing the public about solid waste issues;

(10) direct payments to reimburse counties or cities for household, farmer or exempt small quantity generator hazardous wastes generated from persons not served by existing household hazardous waste programs or direct payment of contractors for the disposal costs of such wastes;

(11) payment of costs associated with the solid waste grants advisory board pursuant to K.S.A. 65-3426, and amendments thereto;

(12) with the consent of the city or county, payment for the removal and disposal or on-site stabilization of solid waste which has been illegally dumped when the responsible party is unknown, unwilling or unable to perform the necessary corrective action, provided that: (A) Moneys in the fund shall be used to pay only 75% of the costs of such corrective action and the city or county shall pay the remaining 25% of such costs; and (B) not more than $10,000 per site shall be expended from the fund for such corrective action;

(13) payment of the costs to administer regional or statewide waste collection programs designed to remove hazardous materials and wastes from homes, farms, ranches, institutions and small businesses not generally covered by state or federal hazardous waste laws and rules and regulations; and

(14) payment for the disposal of household hazardous waste generated as a result of community clean-up activities following natural disasters such as floods and tornados.
### Appendix B

**Permit Application Fees and Annual Permit Renewal Fees**  
Solid Waste Permit Fees\(^1\): K.S.A. 65-3407(e) and K.A.R. 28-29-84

<table>
<thead>
<tr>
<th>Facility Type</th>
<th>Application Fee(^3)</th>
<th>Annual Permit Renewal Fee(^4)</th>
<th># of Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compost Facility (&gt;½ acre)</td>
<td>$250</td>
<td>$250</td>
<td></td>
</tr>
<tr>
<td>Construction/Demolition</td>
<td>$250 - $1,000(^5)</td>
<td>$125 - $500(^6)</td>
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<tr>
<td>Incinerator</td>
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<td>$1,000</td>
<td></td>
</tr>
<tr>
<td>Industrial Landfill</td>
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<tr>
<td>Municipal Solid Waste Landfill</td>
<td>$5,000</td>
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<tr>
<td>Processing Facility</td>
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<td></td>
</tr>
<tr>
<td>Reclamation Facility</td>
<td>$2,000</td>
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</tr>
<tr>
<td>Transfer Station</td>
<td>$1,000</td>
<td>$500</td>
<td></td>
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</tbody>
</table>

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2 Application fees are for new facilities (i.e. where no permit has been issued previously) or reapplication after loss of a permit only. There is no fee for permit modifications.

3 All application and renewal fees are subject to upper limits established by statute (K.S.A. 65-3407(e)).

4 Where multiple activities are conducted at a single location the facility pays only one renewal fee equal to the amount due for the activity with the highest fee.

5 $250 for facilities receiving < 1,000 tons per year (tpy); $500 for 1,000 to 9,999 tpy; $1,000 for ≥ 10,000 tpy.

6 $125 for facilities receiving < 1,000 tpy; $250 for 1,000 to 9,999 tpy; $500 for ≥ 10,000 tpy.
## Appendix C

### Waste Tire Facility Permit Fees (K.A.R. 28-29-2011)

<table>
<thead>
<tr>
<th>Facility Type</th>
<th>Application Fee</th>
<th>Annual Renewal Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Processor</td>
<td>$250</td>
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<tr>
<td>Collection Center</td>
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<td>$50</td>
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<tr>
<td>Transporter</td>
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<td>$50</td>
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Appendix D

Summary of the Stakeholder Survey

In July of 2020, a survey was e-mailed to about 750 solid waste industry professionals which included solid waste facility operators, recycling coordinators, local officials, planners and consultants. In addition to collecting basic information about the respondent’s role and length of service in the solid waste industry, the stakeholder survey asked respondents one important question:

Please score the effectiveness of each activity with which you have experience as follows:

1 = BWM is very effective at performing this activity.
2 = BWM is effective at performing this activity but you have some suggestions for improvement.
3 = BWM has not been effective at performing this activity and you recommend that a comprehensive review of the process be completed with stakeholder involvement.
NA = You do not have any experience with this activity and therefore cannot score BWM performance.

119 stakeholders responded. A summary of who responded is presented in the figures below.

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Image of pie chart showing total respondents by organizations.

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Image of bar chart showing respondents by roles.

---
24 program activities were listed (see following page). Overall, the responses were generally positive with a majority of respondents assigning a rating of 1 for BWM’s performance in each program area as shown in the table below. The BWM team who coordinated the Plan development reviewed each comment submitted regarding each program area and used that feedback to construct program goals that reflected the recommendations of stakeholders. For program activities that were assigned relatively more ratings of 3, indicating that BWM had not performed effectively in this program area, no comments were submitted recommending ways to improve program performance. However, team members generally were not surprised by the lower ratings in these program areas and were prepared to propose goals intended to improve performance.

Survey respondents were asked to rate BWM’s program performance in these 24 key program areas:

<table>
<thead>
<tr>
<th>Question</th>
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<td>3</td>
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<tr>
<td>24</td>
<td>53</td>
<td>15</td>
<td>2</td>
<td>49</td>
</tr>
</tbody>
</table>
17. Develop appropriate regulations to maintain and improve waste management practices.
18. Administer grant programs to improve statewide solid waste reduction practices (solid waste, HHW, waste tires).
19. Administer the landfill tonnage fee payment program including performance of audits to ensure proper fee payments.
20. Administer the illegal dump cleanup program.
21. Administer the waste tire program including permitting and inspections.
22. Administer the city dump repair program.
23. Inspect permitted facilities to assess compliance and require corrective action as necessary.
24. Investigate solid waste complaints and require corrective actions as necessary.