

Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Bobby Janecka, *Commissioner*
Kelly Keel, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

February 5, 2024

Ms. Virginia Belew, Executive Director
Permian Basin Regional Planning Commission
P.O. Box 60660
Midland, Texas 79711-0660

Subject: Adoption and Approval of PBRPC Regional Solid Waste Management Plan

Dear Ms. Belew:

On July 19, 2023, the Texas Commission on Environmental Quality (TCEQ) commissioners adopted the Permian Basin Regional Planning Commission (PBRPC) Regional Solid Waste Management Plan Volume I. This letter serves as approval of the Regional Solid Waste Management Plan Volume II by the TCEQ executive director. The plans are effective through 2042. Both volumes supersede all regional solid waste management plans previously approved by TCEQ or its predecessor agencies. Attached is the commission order adopting amended rules, which added the regional plans to 30 Texas Administrative Code (TAC) Section (§) 330.647, and the final adopted versions of your organization's plans.

Pursuant to 30 Texas Administrative Code (TAC) Section (§) 330.641(i), upon approval of the regional plan, PBRPC shall provide a copy of the adopted plan and of the Closed Landfill Inventory (CLI) to the chief planning official of each municipality and county within your planning region. This notice should include an advisory that all enclosed structures over a closed landfill must comply with Subchapter T of 30 TAC Chapter 330, Municipal Solid Waste.

Additionally, in accordance with THSC §363.064(b), when a landfill is added to the CLI, PBRPC shall notify landowners whose property overlays closed landfill property to let them know the former use of the land. PBRPC shall send a notice to the county clerks governing the site of the former landfill. The notice must include a description of the landfill boundaries, a legal description of the land parcel(s), notice of the landfill's former use, and notice of land use restrictions.

As the CLI is updated please provide this information to your TCEQ Solid Waste Grant Manager. If you have any questions, please contact your TCEQ Solid Waste Grant Manager.

Sincerely,

A handwritten signature in black ink that reads "Charly Fritz".

Charly Fritz, Deputy Director
Waste Permits Division

cc: Miranda Boler, Permian Basin Regional Planning Commission, Solid Waste Coordinator

Attachments: 30 TAC §330.647 Order Adopting Amended Rules
Final Regional Solid Waste Management Plan Volumes I & II

Texas Commission on Environmental Quality



ORDER ADOPTING AMENDED RULES

Docket No. 2022-1526-RUL

Rule Project No. 2022-035-330-WS

On July 19, 2023, the Texas Commission on Environmental Quality (Commission) adopted amended rules in 30 Texas Administrative Code Chapter 330, concerning Municipal Solid Waste. The proposed rules were published for comment in the February 24, 2023, issue of the *Texas Register* (48 TexReg 1020).

IT IS THEREFORE ORDERED BY THE COMMISSION that the amended rules are hereby adopted. The Commission further authorizes staff to make any non-substantive revisions to the rules necessary to comply with *Texas Register* requirements. The adopted rules and the preamble to the adopted rules are incorporated by reference in this Order as if set forth at length verbatim in this Order.

This Order constitutes the Order of the Commission required by the Administrative Procedure Act, Tex. Gov't Code Ann., Chapter 2001.

If any portion of this Order is for any reason held to be invalid by a court of competent jurisdiction, the invalidity of any portion shall not affect the validity of the remaining portions.

TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY



Jon Niermann, Chairman

7/27/23

Date Signed



Permian Basin Regional Planning Commission

REGIONAL SOLID WASTE MANAGEMENT PLAN 2022-2042

PREPARED BY:



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Regional Solid Waste Management Plan Volume I

Regional Solid Waste Management Plans are required by Texas Health and Safety Code (THSC), §363.062, relating to Regional Solid Waste Management Plan (RSWMP). Contents of the RSWMP are described in THSC §363.064 and in 30 Texas Administrative Code (TAC), Chapter 330, Subchapter O.

Regional Solid Waste Management Plan Volume I

Regional Organization Information

Table 1. Organization Information

Name of Council of Government	Permian Basin Regional Planning Commission
Mailing Address	2910 La Force Blvd, Midland, TX 79706
Website	PBRPC.org
Phone Number	(432) 563-1061
Email Address	pbrpc@pbrpc.org

Section I. Geographic Scope

Table I.I. Geographic Scope

Names of Member Counties in the Entire Planning Region	Andrews, Borden, Crane, Dawson, Ector, Gaines, Glasscock, Howard, Loving, Martin, Midland, Pecos, Reeves, Terrell, Upton, Ward, Winkler
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Section II. Plan Content

II.A. Regional Goals and Objectives

Table II.A. Regional Goals and Objectives

Goal #1 Reduce the rate of annual landfill airspace consumption	Objective 1.A. Encourage landfill operator to increase the compaction rates using education and training, thereby increasing available life and airspace.
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	<p>Objective 1.B. Provide education for the benefits of using one inch of Alternative Daily cover (ADC) vs six inches of normal daily cover.</p> <p>Objective 1.C. Provide education, training, and programs to encourage individuals and landfills to divert/recycle waste products.</p>
<p>Goal #2 Increase Recycling</p>	<p>Objective 2.A. Encourage communities to provide additional, conveniently located collection sites.</p> <p>Objective 2.B. Increase education by working with community partners and businesses with training opportunities to encourage additional recycling.</p> <p>Objective 2.C. Encourage community partners and businesses to increase acceptance of additional commodities through training programs.</p>
<p>Goal #3 Ensure adequate landfills for future</p>	<p>Objective 3.A. Plan and develop additional landfills by coordinating meetings with community leaders on the need for being current and aware of needs in each community. Encourage these leaders and operators to collect and provide current and future landfill needs by monitoring TCEQ annual reports.</p> <p>Objective 3.B. Encourage County Judges to promote legislation for State financial assistance to help develop landfills in the region.</p> <p>Objective 3.C. Coordinate meetings with the oil industry for possible future landfill sites. As it has become part of the industry standard of purchasing large tracts of land, instead of leasing them for oil development, there may be available locations for companies to provide for future landfills.</p> <p>Objective 3.D. Local leadership will work with TCEQ and staff to understand the permitting process.</p> <p>Objective 3.E. Communicate effectively to the State Legislature on how tons per day limits at AE Landfills contribute to illegal dumping. Additional solutions</p>

	<p>include partnering with law enforcement, public, and private entities to combat illegal dumping.</p>
<p>Goal #4 Increase collection of household hazardous waste (HHW)</p>	<p>Objective 4.A. Educate public on the hazards to humans and environmental concerns associated with the illegal disposal of HHW.</p> <p>Objective 4.B. Help coordinate partnerships to create additional regional and local collection events for HHW.</p> <p>Objective 4.C. Monitor data from events to determine progress of community activities.</p>
<p>Goal #5 Encourage enforcement of illegal dumping activities</p>	<p>Objective 5.A. Continue to provide enforcement training to combat illegal dumping.</p> <p>Objective 5.B. Collect data from region on the cost of illegal dumping, as well as the environmental and social impact of illegal dumping.</p> <p>Objective 5.C. Educate citizens on what illegal dumping consists of and how they can combat it.</p>
<p>Goal #6 Support regional clean up events</p>	<p>Objective 6.A. Encourage, coordinate and when applicable, help facilitate local and regional clean ups.</p> <p>Objective 6.B. Provide education on the financial, and social, and environmental impact of cleaning up litter and debris.</p> <p>Objective 6.C. Collect data from clean up events held in the region. Use the Keep Texas Beautiful matrix to determine the economic benefits of the clean ups for future reference to communities.</p>
<p>Goal #7 Educate communities with information and data collected concerning solid waste activities</p>	<p>Objective 7.A. Continue to provide assorted educational opportunities to the communities and leaders of the region.</p> <p>Objective 7.B. Collect data for future reference to show progress of programs and participation.</p> <p>Objective 7.C. Coordinate partnerships with Counties, Cities, communities, businesses, and non-profits to readily share information collected with each other and PBRPC.</p>

II.B. Efforts to Minimize, Reuse, and Recycle Waste

Table II.B. Waste Minimization, Reuse, and Recycling

Subject	Description
Current Efforts to Minimize Municipal Solid Waste and to Reuse or Recycle Waste	Currently there are limited efforts to minimize municipal solid waste in the region. Landfills attempt to recycle metals and yard waste when it enters the landfills. There are limited recycling opportunities as well, although there are a few recycling centers in the region as documented in Volume II. As of the end of fiscal year 2021, sludge makes up 3.7% of the waste stream, and it is not an issue at this time.
Recycling Rate Goal for the Region	In 2019, landfills and processing centers in the State of Texas diverted 4.6% of recyclables at the facilities, according to the 2019 Data Summary and Analysis for TCEQ. The regional rate in the PBRPC is approximately 0.5%. With the help education and outreach, the regional rate can increase to 1 lbs./per person/per day from the current 0.01 lbs./per person/per day. An increase of 2% per year for recycling is option.
Recommendations for Encouraging and Achieving a Greater Degree of Waste Minimization and Waste Reuse or Recycling	Provide Additional Recycling Collection Stations. Donate goods to reuse stores. Increase education of citizens and businesses. Recruit additional recycling companies to the Region.
Existing or Proposed Community Programs for the Collection of Household Hazardous Waste	Odessa Recycle Center is the only collection program for Household Hazardous Waste (HHW) operating in Odessa, TX. PBRBC provides training for citizens and solid waste personnel on the proper handling of HHW.
Composting Programs for Yard Waste	The recommended composting programs for yard waste and related organic wastes may include: <input checked="" type="checkbox"/> (l) creation and use of community composting centers; This can be done at the local schools and colleges in the area.

Subject	Description
	<p><input checked="" type="checkbox"/> (II) adoption of the "Don't Bag It" program for lawn clippings developed by the Texas Agricultural Extension Service.</p> <p><input checked="" type="checkbox"/> (III) It is vital that PBRPC provide resources to agencies and organizations involved in solid waste and recycling efforts to develop, promote and implement training and education programs in the areas of home composting, community composting, and yard waste separation for use as mulch. When applicable, notice should be provided of locations that accept leaves for reuse as compost and mulch. Mulching minimizes evaporation, reduces the amount of water needed for green spaces, and helps lower household water bills.</p>
Public Education/Outreach	<p>Public education is critical to successful minimization, reuse, and recycling programs. Currently, Keep Texas Beautiful affiliates and local organizations seek out opportunities to provide educational programs to schools, businesses and the general public. PBRPC has been a major resource to provide funding through TCEQ and USDA grants, among others. Availability of grants are not always consistent and PBRPC continues to take the lead in seeking and obtaining additional funding sources.</p>

II.C. Commitment Regarding the Management of MSW Facilities

By checking the boxes below, the Council of Government makes a commitment to the following, regarding the management of MSW facilities:

- (i) encouraging cooperative efforts between local governments in the siting of landfills for the disposal of solid waste;
- (ii) assessing the need for new waste disposal capacity;
- (iii) considering the need to transport waste between municipalities, from a municipality to an area in the jurisdiction of a county, or between counties, particularly if a technically suitable site for a landfill does not exist in a particular area;
- (iv) allowing a local government to justify the need for a landfill in its jurisdiction to dispose of the solid waste generated in the jurisdiction of another local government that does not have a technically suitable site for a landfill in its jurisdiction;
- (v) completing and maintaining an inventory of MSW landfill units in accordance with Texas Health and Safety Code, §363.064. One copy of the inventory shall be provided to the commission and to the chief planning official of each municipality and county in which a unit is located; and
- (vi) developing a guidance document to review MSW registration and permit applications to determine conformance with the goals and objectives outlined in *Volume II: Regional Solid Waste Management Plan Implementation Guidelines* as referenced in 30 TAC §330.643.

Section III. Required Approvals

Table III.I. Required Approvals

Solid Waste Advisory Committee	November 12, 2021
Public Meeting Dates	November 12, 2021
Executive Committee	December 8, 2021

Regional Solid Waste Management Implementation Plan Volume II

Regional Organization Information

Table 1. Organization Information

Name of Council of Government	Permian Basin Regional Planning Commission
Mailing Address	2910 La Force Blvd, Midland, TX 79706
Website	PBRPC.org
Phone Number	(432) 563-1061
Email Address	pbrpc@pbrpc.org

Section I. Geographic Scope

Table I.I. Geographic Scope

<p>I.A. Names of Member Counties in the Entire Planning Region [Ref. 30 TAC §330.643(a)(1)]</p>	<p>Andrews, Borden, Crane, Dawson, Ector, Gaines, Glasscock, Howard, Loving, Martin, Midland, Pecos, Reeves, Terrell, Upton, Ward, Winkler</p>
<p>I.B. Geographic Planning Units Used in the Regional Implementation Plan [Ref. 30 TAC §330.643(a)(1)]</p>	<p><input type="checkbox"/> Small geographic areas such as census tracts or city boundaries for the most detailed data collection and manipulation;</p> <p><input type="checkbox"/> Planning areas to be used for the assessment of concerns and the evaluation of alternatives. These planning areas shall be aggregations of small geographic areas;</p> <p><input type="checkbox"/> County boundaries for the summarization and presentation of key information; or</p> <p><input checked="" type="checkbox"/> The entire planning region</p>

Section II. Planning Periods

Table II.I. Planning Periods

<p>II.A.1. Current and Historical Information</p>	<p>Region 9 consists of 17 counties that cover 23,483 square miles. The 2020 regional population is 562,111 people. This was an increase of 15.5% from five years prior. The regional unemployment rate in 2021 was 6.4%. Prior to the COVID-19 pandemic and ensuing drop in the energy sector, the unemployment rate in the Permian Basin Workforce Development Area (WDA) was 2.8%. In May 2020, the unemployment rate peaked at 13.2%. During the COVID pandemic, residents in the region were affected by a shortage of commonly found items at grocery stores and elsewhere; the consumption of fuel dropped since people were not traveling to work; and disposable income was reduced. These factors resulted in fewer collected tons of solid waste materials. In 2020, 884,648 tons of solid waste materials were disposed of in the fifteen certified landfills in Region 9 of the Permian Basin Regional Planning Commission area. By comparison, in 2019 approximately 1,003,304 tons were disposed of. This represents a decrease of 11.8%.</p> <p>Of the fifteen landfills, there are four Type 1, two Type 1AE, six Type 1AE & 4AE, and three 4AE. (See Attachment II.A.1) Of that total collected waste material, 442,894 (50%) tons were classified as municipal and 322,247 (36%) were construction and demolition (C&D). The year 2020 saw a 22.6% increase in the disposal rate when compared to 16.73% in 2016. The increase in the disposal rate over the five-year average is 7.39% and a 16.73% increase over the ten-year average. Of the 2020 disposal volume, on average 0.7% of debris taken to the landfill was diverted. Butts Recycling has helped cities remove an average of 1,454 tons annually of cardboard and paper in 2020. The average compaction rate among the fifteen landfills increased by 7% over the five previous years (2015-2020). The Type I landfills only have increased their compaction rate by 27% to 966 pounds per cubic yard. There are three landfills with 50 or more years left of space. There are seven with 25 to 49 years of life. Only one landfill facility has a capacity range of five to 24 years. There are four landfills with less than five years of life. In 2021, a new 100-year</p>
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	<p>landfill will become active in the Howard County. A 101-year landfill has been approved and will be open to replace Ft. Stockton’s existing landfill when it is full. Glasscock County will permit a new landfill to replace their existing landfill. The Type IV-AE will not be replaced in McCamey when it runs out of space. The City of Monahans has begun changing its permit to include more acreage to their current landfill, extending its life by 20 years. There is a 52-year landfill currently in the 2nd year of the permitting process in west Ector County.</p> <p>REGIONAL STRATEGIES:</p> <ul style="list-style-type: none"> • Decrease the current disposal rate of 8.62 lbs./per person/per day to the state average of 6.96 lbs./per person/per day. • Increase current recycling rate of 0.01 lbs./per person/per day to 1 lbs./per person/per day. • Increase the diversion of C&D, brush, and metal from 0.07 lbs./per person/day to 1 lbs./per person/per day. • Develop strategies with communities and business leaders to increase the recycling by 2% a year during this planning period: • Increase the number of landfills using Alternative Daily Cover (ADC). Currently, only six of the 15 area landfills are using some type of ADC. • Increase the compaction rate in daily operations. In 2021, there was one landfill with a compaction rate of 1,628 pounds per cubic yard. • Plan for financial revenues for future landfill expansion and equipment.
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<p>II.A.2. Short-range Planning Period</p>	<p>The five-year Short-range plan includes the years 2022 through 2026. The 2020 regional population is projected to grow from 562,111 to 673,595 during this time; the growth is projected to occur at a rate of almost 4% per year in the Permian Basin region; this figure is higher than the projected annual growth for the remainder of Texas. Solid Waste disposal is expected to increase from 1,020,230 tons to 1,251,006 tons (22.6% increase). The annual growth in the rate of disposal is higher than the population growth rate; thereby pointing to the benefits of encouraging and requiring solid waste recycling efforts. At the rates indicated, a rapid decrease in the life of the current landfills will result. There are four landfills that will run out of available airspace during this timeframe. The following goals are opportunities to help relieve the burden on the landfills.</p> <ul style="list-style-type: none"> • Monitor current remaining airspace in current landfills. • Site, engineer, and build new landfill(s) where landfills are running out of airspace. • Implement financial strategies to build the new landfills. • Conserve airspace in the current landfills by continuing to increase compaction rates. • Work with communities to develop ways to divert more materials from landfill disposal. This may include paper, cardboard, metals, C&D, brush, and other commodities. • Research new technologies for ways to improve use of landfill airspace. • Plan for future financial obligations that will be incurred with the implementation of improvements, such as technology, equipment and recycling. • Decrease the projected disposal rate, in 2027, of 10.18 lbs./per person/per day to the current state average. • Illegal dumping is a well-documented problem throughout the region and PBRPC provides training to communities, counties, and enforcement officials to deal with this issue. Some of the PBRPC’s member agencies have budgeted for and established environmental enforcement divisions to tackle this problem.
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<p>II.A.3. Intermediate Planning Period</p>	<p>The Intermediate Planning Period will include a five-year period beginning in 2027 and ending in 2031. During this period, the population is projected to increase from 673,595 to 789,014 in 2032. Disposal of solid waste is projected to increase from 1,251,006 to 1,533,984 (22.6% increase) by 2032. Evaluation of the success or failure of the previous goals that were set during the Short-Range Planning Period should be a priority for all landfill operators, cities, and counties. Additional considerations for population growth, materials disposed, and technology advancements should be incorporated into current and future plans. Communities with landfills running out of available space should plan for the funding, siting, and permitting of new landfills to replace them. Landfill operators should strive to achieve the following goals:</p> <ul style="list-style-type: none"> • Continue to seek and build partnerships to help recycle more paper, cardboard, and other commodities from the landfills. • Continue to decrease the collected lbs./per person/per day to state averages. • Evaluate financial strategies developed in the previous planning period to ensure they will meet current and future needs. • Site, engineer, permit, and build new landfills. • Incorporate available options for increasing the life of present landfills; this may include increasing the aerial height of the current landfill by amending current permit(s). • Continue to utilize PBRPC’s recycling educational program which includes the use of “Curby”, the Recycling Robot, to promote awareness at regional events.
<p>II.A.4. Long-range Planning Period</p>	<p>The long-range planning period will encompass the years 2032 through 2042. The regional population is projected to increase from 789,014 to 1,097,063 during this time period. Disposal of solid waste is projected to increase from 1,533,984 to 2,306,446 (50.3% over ten years) by 2042. Recommendations can be extrapolated from a comparison of the previous ten-year projections contained in this report. A re-evaluation of the active landfills available space is an initial step toward determining landfill needs during this time-period.</p> <ul style="list-style-type: none"> • Continue to seek partners to help recycle more paper, cardboard, and other commodities to keep these materials out of landfills. • Implement new technologies to conserve landfill space.
<p><input checked="" type="checkbox"/> Check box if additional details provided in <i>Attachment II.A.</i></p>	

(Texas Demographic Center and TCEQ Annual Reports)

Section III. Plan Content

III.A. Demographic Information

Table III.A.I. Residential Waste Generation

Year	Growth Rate per Year	Current Population/Population Projection	Landfill Disposal (Tons)	Disposal Rate (lbs./Person/Day)	Recycling (Tons)	Recycling Rate (lbs./Person/Day)	Residential Waste Generation (Tons)
Current	N/A	562,111	884,648	8.62	7,626	0.07	442,894
2022	2.99%	578,922	1,020,260	9.66	7,855	0.07	522,731
2027	3.27%	673,595	1,251,006	10.18	9,034	0.04	611,595
2032	3.42%	789,014	1,533,984	10.65	10,389	0.07	715,566
2037	3.54%	928,851	1,880,971	11.10	11,947	0.03	837,213
2042	3.62%	1,097,063	2,306,446	11.52	13,739	0.07	979,538

(TCEQ Annual Reports and Texas Demographic Center)

Table III.A.II. Commercial Waste Generation

Year	Description of significant commercial activities affecting waste generation and disposal in the area.	Expected increase or decrease to Commercial Waste Generation
2022	Retail stores make up a large portion of commercial businesses in the Region. Most receive shipment of goods that are packaged in cardboard boxes. Industrial businesses receive goods in cardboard boxes and wooden pallets due to their bulkier and heavier shipments. Restaurants receive most of their goods packaged in cardboard boxes and plastic containers. Local, State, and Federal legislation is having an impact on how products are shipped, leading to more sustainable processes.	An increasing trend towards disposable products is resulting in an increase of waste being disposed of in landfills. Economic and environmental factors are encouraging manufacturers to utilize recyclable materials. A tremendous opportunity exists to reduce waste by recycling shipping containers. Currently, some “Big Box” stores recycle in-house, and ship recycled materials back to the hub company or the original manufacturer for reuse.

<p>2027</p>	<p>Consumer demands for commercial goods will continue to grow as the population continues to increase in the region. The oil and gas industry is cyclical, and has a direct and discernible effect on the nation and the PBRPC region especially during economic downturn cycles. In 2015, President Obama lifted the prohibition of the sale of US generated oil, gas, and associated by-products to foreign markets. This act opened previously unavailable trading partners for US energy products. Concurrently, the energy sector and specifically oil and gas exploration and production have seen significant technology advances such that producers can remain active at an approximate oil price of \$40 per barrel. This allows for an economic return in the region’s economy. Many energy sector jobs are high paying. This includes executives, operators, trucking and transportation companies, manufacturing of pipe, and chemical production. More high paying jobs result in additional disposable income and increased demand for products whether they be produced locally or outside of the region. With additional purchasing power, this region experiences a higher rate of consumption and therefore disposal as well. The energy sector is not the only economic driver, but it is the predominant one. Jobs, people, and energy sector related businesses come and go based on the price of oil. This is not a new trend in the industry. Federal, State, and local legislation can have an effect on what is kept out of typical landfills through the use of recycling and re-use. The Texas Railroad Commission regulates mining waste associated with the oil and gas industry. The general waste is regulated by the landfills by use of Texas Commission on Environmental Quality (TCEQ) rules and regulations. The PBRPC region contains hundreds of permitted waste and produced water collection sites known as Salt Water Disposal (SWD) wells. Although these facilities generate a lot of truck traffic and associated industrial waste material, the SWDs are not part of this solid waste plan.</p>	<p>Commercial waste generation is expected to increase during this time-period as the oil and gas industry and other energy sources return to more normal conditions following the impact of COVID-19.</p>
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2032	As the population increases, so will consumer demand for products. A controlled reduction of disposable materials will have a direct effect on the life of the landfills.	Companies and end-users, along with government and privately operated landfills, will need to continue to identify more strategies to recycle used product.
2037	During this five-year window of time from 2032-2037 the regional population is expected to grow at a rate of 3.54% per year; this rate is much faster than the projected state average of 1.6%	A population growth rate of 3.54% will require construction of homes, businesses, public buildings, and more. This will generate tons of construction related waste materials including demolition materials from existing buildings. Wind and solar generation equipment may have outlived their useful life and will also need to be considered for recycling or delivery to landfill sites.
2042	Commercial waste during this time period of 2037-2042 will continue to rise due to the anticipated population increase. A population growth rate of 1.56% per year is anticipated statewide; however, the PBRPC region is expected to grow at a much faster rate of 3.62%. The region’s population growth rate will reach its peak during this five-year time frame. The last year of the planning period for this study is 2042; faster rates of population growth may continue beyond the planning period.	During this period, it is anticipated that commercial waste generation will increase. As pointed out in previous five- year incremental periods, a reduction in the volume of materials sent to the region’s landfills will need to occur through education, recycling, and governmental involvement.

(Texas Demographic Center)

Table III.A.III. Industrial Waste Generation

Year	Description of significant industrial waste activities affecting waste generation and disposal in the area.	Expected increase or decrease to Industrial Waste Generation
2022	Class 1, 2, and 3 Hazardous Industrial Waste can only be disposed of in one landfill in the region. There were approximately 41,874 tons disposed in 2020.	More landfills /processing centers are being constructed in the region to deal specifically with the residuals (not including sludge and produced water) from the mining of oil.
2027	No new industrial activities are foreseen that will affect Industrial Waste Generation in the region.	The amount of industrial waste may decrease when additional landfill /processing centers are opened.

<p>2032</p>	<p>According to the US Energy Information Administrative (EIA) <i>Annual Energy Outlook 2021</i> report “As coal and nuclear generating capacity retires, new capacity additions come largely from natural gas and renewable technologies.” In addition, the agency states in its report containing projections through the year 2050 that “renewable electricity generation increases more rapidly than overall electricity demand.” These trendlines result in more jobs and economic stability within the Permian Basin Region. Currently, many counties within the region have energy creating facilities through wind power generation. Additionally, solar power generation is becoming more widespread for businesses, individuals, and governmental entities. As an example, a portion of the total energy requirements for the Andrews County ISD is derived from solar power generation. The US Energy Information Administration (EIA) also reports that “Demand for energy delivered to the four U.S. end-use sectors (residential, commercial, transportation, and industrial) decreased to 90% of its 2019 level in 2020...” The agency predicts that U.S. energy demand takes until 2029 to return to 2019 levels.” With oil prices hovering over \$70-80 per barrel in the fall of 2021, exploration is expected to continue. A Reuters news service article on July 16, 2021, indicated that the “market is currently tight but likely to see significantly more output in the near future.” In this long-term window of time, it is difficult to predict how the domestic and world energy consumption markets will manage growth. Electricity demand in the region and the required generation will become a larger component of the region’s economic strength. This trend will likely result in additional jobs in the region; however, with an anticipated increase in the number of electric vehicles and “work from home” opportunities, a reduction in domestic oil and gas consumption may be expected.</p>	<p>Industrial waste generation is likely to increase during this time period, largely due to the increased demand for energy for local and regional supply and for distribution outside of the region.</p>
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2037	<p>It is anticipated that energy sector and agricultural sector technology advances will continue in the region. World demand for food and energy will continue as populations grow. The Permian Basin region is a major producer of both energy and agricultural products. According to the EIA, “for industrial uses, petroleum remains the primary fuel for refining processes and for agriculture” Additionally, “the industrial sector becomes the largest consumer of natural gas starting in the early 2020s...” and lasting through 2050.</p>	<p>Energy consumption is predicted to continue to decline according to the EIA in its report published in 2021. “The U.S. economy becomes steadily less energy-intensive, although the rate of decrease is slower...” A diversification of energy generation and related technology in the region will result in additional industrial waste generation.</p>
2042	<p>During this last five years of the planning period, it is anticipated that the Permian Basin region will continue to experience an increase in population at a steady pace as it continues to supply agricultural and energy related products to the U.S. and the rest of the world. As previously stated, energy consumption will likely decrease due to greater efficiencies and reduced demand given that lifestyle trends and workplace requirements may change. Workers may experience a reduction of hours in the workplace and more opportunities to work remotely.</p>	<p>Industrial waste is anticipated to increase during this time period as the region’s agricultural, energy, and industrial sectors continue to grow to meet worldwide demand for food and energy products.</p>

(U.S. Energy Information Administration)

III.B. Estimates of Current and Future Solid Waste Amounts by Type

Table III.B.1. Current and Future Solid Waste Amounts by Type

Waste Type	Number of Landfills Accepting Waste Type	Percent of Total Tons Disposed	Current Year (tons)	5-year Projection (tons)	10-year Projection (tons)	15-year Projection (tons)	20-year Projection (tons)
Municipal	12	50.06%	442,894	611,595	715,566	837,213	979,538
Brush	7	0.13%	1,171	1,656	2,031	2,490	3,054
Construction or Demolition	13	36.43%	322,247	455,699	558,778	685,173	840,160
Litter	0	0.0%	0	0	0	0	0
Class 1 Non-hazardous	1	0.70%	6,230	8,810	10,803	13,246	16,243
Classes 2 and 3 Non-hazardous	1	4.03%	35,644	50,405	61,807	75,788	92,931
Incinerator Ash	0	0.0%	0	0	0	0	0
Treated Medical Waste	0	0.0%	0	0	0	0	0
Municipal Hazardous Waste from CESQGs	0	0.0%	0	0	0	0	0
Regulated Asbestos-containing Material (RACM)	1	0.06%	505	714	876	1,074	1,317
Non-RACM	2	0.06%	552	780	957	1,173	1,439
Dead Animals	7	0.06%	561	794	974	1,194	1,464
Sludge	6	3.70%	32,716	46,264	56,729	69,561	85,296

Waste Type	Number of Landfills Accepting Waste Type	Percent of Total Tons Disposed	Current Year (tons)	5-year Projection (tons)	10-year Projection (tons)	15-year Projection (tons)	20-year Projection (tons)
Grease Trap Waste	2	0.01%	98	138	169	208	255
Septage	0	0.0%	0	0	0	0	0
Contaminated soil	1	2.53%	22,346	31,600	38,748	47,513	58,260
Tires (split, quartered, shredded)	1	0.09%	754	1,066	1,307	1,603	1,966
Pesticides	0	0.0%	0	0	0	0	0
Used Oil Filter	0	0.0%	0	0	0	0	0
Other (identify other types reported as Attachment III.B.)	3	2.14%	18,931	26,770	32,826	40,251	49,356
Total		100%	884,648	1,236,293	1,481,570	1,776,487	2,131,276
<input type="checkbox"/> Check box if additional details provided in Attachment III.B.							

(TCEQ Annual Reports)

III.C. Description of Current and Planned Solid Waste Management Activities

Table III.C.I. Current Solid Waste Management Activities in the Region

Activity	Description
Generation	<p>The Texas Demographic Center projects a regional population increase of more than 95% over the life of the planning time period. This will require additional resources to manage solid waste. This increase in population is projected to result in an increase of disposed solid waste by over 160 % increase over the planning period. This increase in population included not only permanent residents, but transient workers who were following the oil field jobs.</p> <p>Of the responses received from the government survey, 72.7% stated that litter and illegal dumping were major issues in their area. Surveys were available in English as well as Spanish. As previously noted, cities and counties are finding it necessary to create and fund staff positions and manage any related grants to tackle the issue. Clean-up requires labor and funds to pay for disposal. Additionally, illegal dumping clean-up efforts may well be remedying a portion of the problem, but the funds needed for this function are not typically calculated into an agency’s rate of fill calculations or budgets.</p>
Source Separation	<p>Source separation is performed by the residents and businesses that recycle. There is minimum separation performed at local recycling centers and landfills.</p>
Collection	<p>The collection of solid waste is performed by either city staff or commercial haulers. Most of the cities use 1½ to 3 cubic yard metal sideload containers for residential pick-up. There are some cities that have parts of their residential garbage collected in 92-gallon carts by retro-fitted side loader trucks and automated trucks. The use of metal containers versus carts is constantly changing due to fluctuating plastic/material cost. Nine cities have their own collection services, although residents in the county utilize private haulers. Eleven cities and their respective counties utilize private hauler services exclusively. Approximately five private hauler service companies have been identified in the region and both sideload and frontload vehicles are utilized. Some companies utilize high compaction vehicles, allowing for maximum solid waste collection capacity.</p>

Activity	Description
Handling	Collection vehicles collect all solid waste with the exception of large items which are collected for citizens on a periodic basis. These large items typically include appliances, furniture and other items that may not fit into a residential dumpster. A large item collection program is offered at various times during the year by many cities.
Storage	There are no storage facilities in this region.
Transportation	All solid waste is transported to a landfill the day it is collected.
Processing	N/A
Treatment	N/A
Resource Recovery	Recycling in the region is on a voluntary basis and participants must take their recyclables to a drop off location. The main household recycled products are cardboard, assorted papers, and plastic. In some areas, local metal recyclers offer market rates for recyclable metals. Commercial businesses recycle cardboard, paper, and shredded paper. Currently, the market for recycled glass is limited.
Disposal of Solid Waste	Collected waste is disposed of in one of twelve landfills in the region currently accepting municipal solid waste. Once unloaded, it is spread and compacted at a rate of 966 pounds per cubic yard by landfill equipment operators. Six landfills utilize alternative daily cover, while the remaining six cover with the required six inches of dirt per day (Type I).

Table III.C.II. Planned Solid Waste Management Activities in the Region

Activity	Description
Generation	Increase citizen educational programs to promote the economic and environmental benefits of buying in bulk and buying items that can be recycled or reused.
Source Separation	Provide opportunities and resources for citizens and businesses to separate recyclables allowing for source separation.
Collection	Some cities are utilizing 92-gallon carts for service in favor of 3 cubic yard metal containers, however this constantly changes due to fluctuating container production costs.
Handling	N/A
Storage	N/A
Transportation	Currently there are no plans for significant changes in solid waste transportation.
Processing	N/A
Treatment	N/A
Resource Recovery	Increase the tonnage of diverted material at the landfill.
Disposal of Solid Waste	Increase in the compaction rate and use of alternative daily cover.
<input type="checkbox"/> Check box if additional information of solid waste management activities is provided as <i>Attachment III.C.</i>	

III.D. Description and Assessment of the Adequacy of Existing Solid Waste Management Facilities & Practices, and Household Hazardous Waste Programs

Table III.D.I. Adequacy of Existing Facilities and Practices

Program	Facility Adequacy	Practices Adequacy
Resource Recovery	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Attachment III. D.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Attachment III. D.
Storage	<input checked="" type="checkbox"/> N/A	<input checked="" type="checkbox"/> N/A
Transportation	<input checked="" type="checkbox"/> Yes, the cities and private collection companies have adequate equipment to move the solid waste.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Attachment III. D.
Treatment	<input checked="" type="checkbox"/> N/A	<input checked="" type="checkbox"/> N/A
Disposal	<input checked="" type="checkbox"/> Yes. There are twelve Type I and Type IAE landfills in the region. There are also three Type IVAE landfills. There are four landfills with less than five years of life. Of these four, one is a Type IVAE and two Type IVAE and one Type I. The Type I landfill has built a new 100-year landfill for when the current one runs out.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Attachment III. D.
Household Hazardous Waste Collection	<input checked="" type="checkbox"/> No Attachment III. D.	<input checked="" type="checkbox"/> No Attachment III. D.
Household Hazardous Waste Disposal	<input type="checkbox"/> Yes. <input checked="" type="checkbox"/> No, description of facility inadequacy provided in Attachment III. D.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No, description of practice inadequacy provided in Attachment III. D.

III.E. Assessment of Current Source Reduction and Waste Minimization Efforts, Including Sludge, and Efforts to Reuse or Recycle Waste

- Assessment of current source reduction and minimization efforts, including activities to reduce sludge, and efforts to reuse or recycle waste is provided as *Attachment III.E.*

III.F. Identification of Additional Opportunities for Source Reduction and Waste Minimization, and Reuse or Recycling of Waste

Table III.F.I Additional Opportunities for Source Reduction and Waste Minimization, Reuse and Recycling of Waste

Category of Activity (Source Reduction and Waste Minimization, Reuse or Recycling of Waste)	Opportunity Name	Brief Description
Recycling	Electronics Recycling	A growing number of communities are holding annual events to dispose of electronics while others are opting to hold an event every two or three years, contingent upon funding.
Recycling	Tires	Some communities collect and recycle tires year-round, while others hold events to collect when funding is available.
Minimization	Reusable Bags	Most of the region has utilized educational programs to encourage the use of reusable shopping bags, in lieu of store-provided plastic bags.
Reuse	Composting	Non-profit agencies have engaged schools to develop competitive composting programs to augment school gardens and flower beds.
<input type="checkbox"/> Check box if additional information of opportunities and source reduction and waste minimization, reuse and recycling of waste is provided in <i>Attachment III. F.</i>		

III.G. Recommendations for Encouraging and Achieving a Greater Degree of Source Reduction and Waste Minimization, and Reuse or Recycling of Waste

Table III.G.I. Recommendations for Greater Source Reduction and Waste Minimization, and Reuse or Recycling of Waste

1. Communities will benefit from the addition of more recycling collection stations.
2. The donation of reusables should be highly encouraged.
3. The expansion of recycling awareness and educational programs is highly recommended.
4. Increase opportunities and resources for the separation and collection of recyclables.
5. Recruit recyclers into the region to reduce waste and increase landfill longevity.
6. Research the recyclables market to identify and encourage the use of environmentally friendly manufacturing materials.
7. Provide additional locations and resources for proper disposal of waste materials i.e., strategically located trash containers in high traffic locations.
8. Increase awareness of proper disposal of Household Hazardous Waste.
<input type="checkbox"/> Check box if additional details are provided in <i>Attachment III.G.</i>

III.H. Identification of Public and Private Management Agencies and Responsibilities

- A list of public and private solid waste management agencies and their responsibilities that affect and impact solid waste management in the planning region is provided as ***Attachment III.H.***

III.I. Identification of Solid Waste Management Concerns and Establishment of Priorities for Addressing Those Concerns

Table III.I.I Solid Waste Management Concerns and Priorities

Solid Waste Management Concern	Priorities to Address the Concern
Population Growth	Plan and fund future landfill sites
Compaction rate at landfills	Increase compaction rates at landfills. PBRPC Solid Waste Committee needs to communicate to regional stakeholders about the amount of airspace that can be saved by increasing compaction rates, thus providing landfills additional life.
Disposal rates per person	Educate citizens, businesses on how to reduce disposal rates
Recycling	Increase opportunities and resources for recycling
Employee hiring, retention, and training.	Develop and implement incentives to hire and retain employees
Regional strength and weakness of the oil and gas industry	Seek Legislative review of certain AE rules. Meetings should be held with local leaders and Legislative representatives to communicate the concerns of both parties relating to the requirements and processes for AE landfills.
Address the regional amount of illegal dumping	Continue and expand education and enforcement programs to reduce illegal dumping
<input type="checkbox"/> Check box if additional details are provided in <i>Attachment III.I</i>	

III.J. Planning Areas and Agencies with Common Solid Waste Management Concerns that Could be Addressed Through Joint Action

Table III.J.I Planning Areas and Agencies with Common Solid Waste Management Concerns

Solid Waste Management Concern	Names of Planning Areas and Agencies that Could Address the Concern via Joint Action(s)
Population Growth	Permian Basin Regional Planning Commission
Compaction rates	Landfill owners
Disposal rates per person	Cities, communities, counties, and non-profits
Recycling	All citizens, cities, businesses, organizations, and recyclers in the region
Illegal dumping	All citizens, cities, businesses, counties, and organizations in the region

III.K. Identification of Incentives and Barriers for Source Reduction and Waste Minimization, and Resource Recovery, Including Identification of Potential Markets

Table III.K.I Incentives and Barriers for Source Reduction and Waste Minimization, and Resource Recovery

Source Reduction and Waste Minimization	
Citizen drop-off centers	<p>Incentive: Allow citizens and businesses to separate yard waste, metals, large items, and recycling.</p> <p>Barrier: Costs, labor, and budgetary constraints are frequently cited as the reason for not operating drop-off centers.</p>
Reuse	<p>Incentive: Reuse allows for products to have a longer life, resulting in a reduced need for new replacement products. – an example is reused cardboard and paper products for consumer packaging and reused pallets for shipping. This practice will save natural resources and landfill space.</p> <p>Barrier: A general lack of education concerning the use of recyclables exists in the region. The PBRPC Solid Waste Committee should encourage and fund with additional education efforts.</p>
Resource Recovery	
Recycling	<p>Incentive: Reduces waste and prolongs the life of the landfill space.</p> <p>Barrier: Locations to recycle and the associated transportation cost to market are major deterrents affecting recyclables in the PBRPC region.</p>
Potential Markets	
Recyclers	<p>Incentive: Recyclers will be able to return products back to be remanufactured into new products.</p> <p>Barrier: The cost of transporting recyclables for effective alternative use are prohibitive in some cases. Additionally, there are very few recyclers in the marketplace that are seeking expansion of their operations.</p>
Identify end markets	<p>Incentive: Find end users to make local markets more viable.</p> <p>Barrier: Finding companies and or government agencies that are willing to try new ideas for end use could be difficult.</p>

III.L. Regional Goals and Objectives, Including Waste Reduction Goals

Table III.L.I Regional Goals and Objectives

<p>Goal #1 Reduce the rate of annual landfill airspace consumption</p>	<p>Objective 1.A. Encourage landfill operator to increase the compaction rates using education and training, thereby increasing available life and airspace.</p> <p>Objective 1.B. Provide education for the benefits of using one inch of Alternative Daily cover (ADC) vs six inches of normal daily cover.</p> <p>Objective 1.C. Provide education, training, and programs to encourage individuals and landfills to divert/recycle waste products.</p>
<p>Goal #2 Increase Recycling</p>	<p>Objective 2.A. Encourage communities to provide additional, conveniently located collection sites.</p> <p>Objective 2.B. Increase education by working with community partners and businesses with training opportunities to encourage additional recycling.</p> <p>Objective 2.C. Encourage community partners and businesses to increase acceptance of additional commodities through training programs.</p>
<p>Goal #3 Ensure adequate landfills for future</p>	<p>Objective 3.A. Plan and develop additional landfills by coordinating meetings with community leaders on the need for being current and aware of needs in each community. Encourage these leaders and operators to collect and provide current and future landfill needs by monitoring TCEQ annual reports.</p> <p>Objective 3.B. Encourage County Judges to promote legislation for State financial assistance to help develop landfills in the region.</p> <p>Objective 3.C. Coordinate meetings with the oil industry for possible future landfill sites. As it has become part of the industry standard of purchasing large tracts of land, instead of leasing them for oil development, there may be available locations for companies to provide for future landfills.</p> <p>Objective 3.D. Local leadership will work with TCEQ and staff to understand the permitting process.</p>

	<p>Objective 3.E. Communicate effectively to State Legislature on how tons per day limits at AE Landfills contribute to illegal dumping. Additional solutions include partnering with law enforcement, public, and private entities to combat illegal dumping.</p>
<p>Goal #4 Increase collection of household hazardous waste (HHW)</p>	<p>Objective 4.A. Educate public on the hazards to humans and environmental concerns associated with the illegal disposal of HHW.</p> <p>Objective 4.B. Help coordinate partnerships to create additional regional and local collection events for HHW.</p> <p>Objective 4.C. Monitor data from events to determine progress of community activities.</p>
<p>Goal #5 Encourage enforcement of illegal dumping activities</p>	<p>Objective 5.A. Continue to provide enforcement training to combat illegal dumping.</p> <p>Objective 5.B. Collect data from region on the cost of illegal dumping, as well as the environmental and social impact of illegal dumping.</p> <p>Objective 5.C. Educate citizens on what illegal dumping consists of and how they can combat it.</p>
<p>Goal #6 Support regional clean up events</p>	<p>Objective 6.A. Encourage, coordinate and when applicable, help facilitate local and regional clean ups.</p> <p>Objective 6.B. Provide education on the financial, and social, and environmental impact of cleaning up litter and debris.</p> <p>Objective 6.C. Collect data from clean up events held in the region. Use the Keep Texas Beautiful matrix to determine the economic benefits of the clean ups for future reference to communities.</p>
<p>Goal #7 Educate communities with information and data collected concerning solid waste activities</p>	<p>Objective 7.A. Continue to provide assorted educational opportunities to the communities and leaders of the region.</p> <p>Objective 7.B. Collect data for future reference to show progress of programs and participation.</p> <p>Objective 7.C. Coordinate partnerships with Counties, Cities, communities, businesses, and non-profits to readily share information collected with each other and PBRPC.</p>

III.M. Advantages and Disadvantages of Alternative Actions

<p>Are alternative actions being considered in this plan for the regional area?</p>	<p><input type="checkbox"/> Yes. Provide details in <i>Attachment III.M.</i></p> <p><input checked="" type="checkbox"/> No. No further action required.</p>
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III.N. Recommended Plan of Action and Associated Timetable for Achieving Specific Goals and Objectives

Table III.N.I Plan of Action and Timetable for Achieving Specific Goals and Objectives

Goal/Objective	Plan of Action	Milestone Dates
Waste Reduction	Educate all citizens on the importance of reducing the amount of waste they dispose of. This includes increased recycling of current commodities and the addition of additional commodities. Educated landfill operators on the best procedures to maximize landfill airspace.	Continuous action through all Planning Periods
Composting Programs for Yard Wastes and Related Organic Wastes	Create programs to encourage composting of yard and proper organic waste.	Continuous action through all Planning Periods
Household Hazardous Waste Collection and Disposal Programs	Provide annual events to help provide proper disposal of HHW.	Intermediate and Long Term
Public Education Programs	Education programs should be on going for all aspects of the solid waste industry. Collect and maintain solid waste data to monitor progress of the programs.	Continuous action through all Planning Periods
The Need for New or Expanded Facilities and Practices	As the region grows, expansion of new and existing facilities will be required. Researching and adopting best practices is advised.	Continuous action through all Planning Periods

Goal/Objective	Plan of Action	Milestone Dates
Continue education and encouragement of enforcement regarding illegal dumping	Illegal dumping and the costs associated with clean-up have been a serious problem in the region. PBRPC and similar agencies should continue to educate member agencies and enforcement staff on this topic. This can be accomplished with collected data concerning the increase/decrease of illegal dumping collected from the Region.	Continuous action through all Planning Periods
<input type="checkbox"/> Check box if additional details are provided in <i>Attachment III.N.</i>		

III.O. Identification of the Process that Will be Used to Evaluate Whether Proposed Parts I and II of the Municipal Solid Waste Facility Application Will be in Conformance with the Regional Plan

- The process that will be used to evaluate whether proposed Parts I and II municipal solid waste facility application will be in conformance with the regional plan is identified in *Attachment III.O.*

Section IV. Required Approvals

Table IV.I Required Approvals

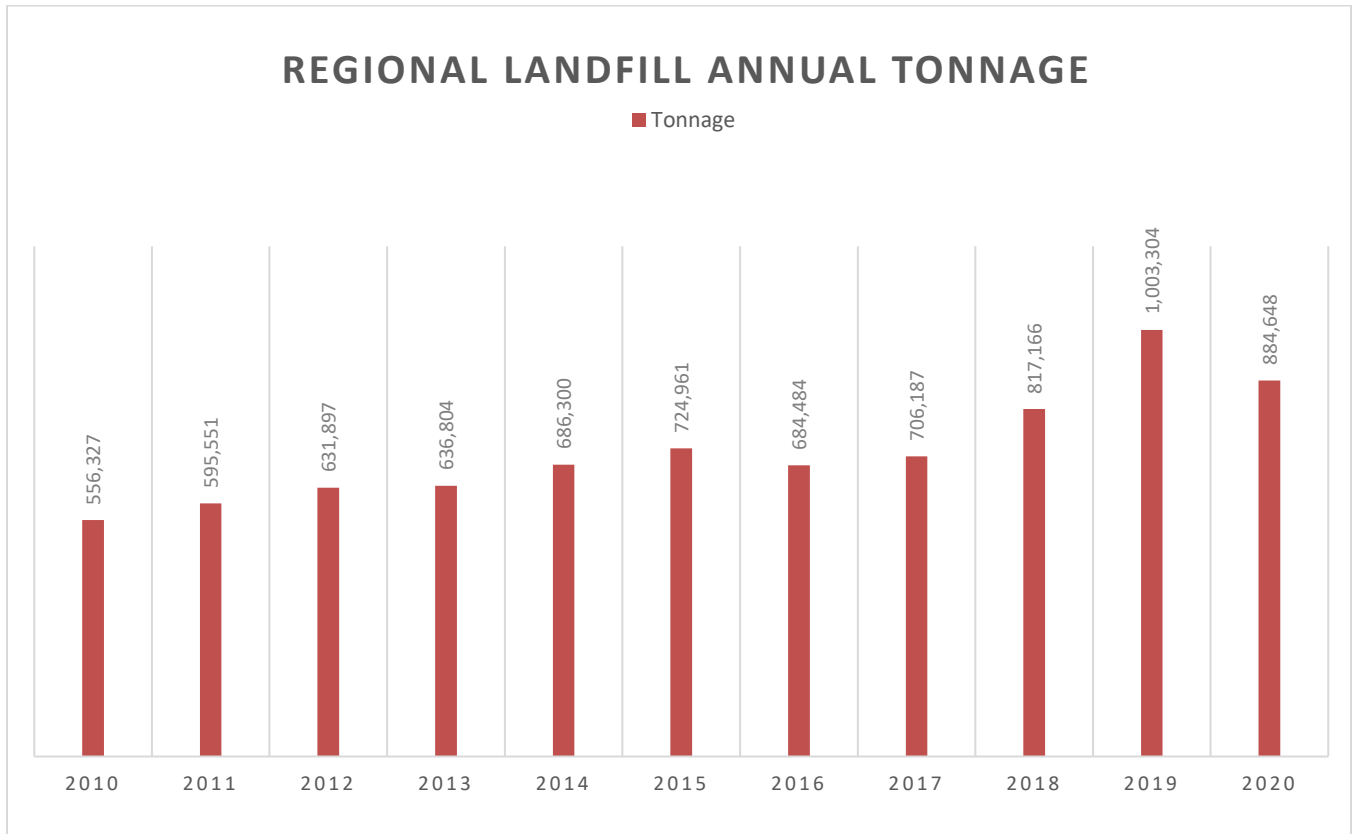
Solid Waste Advisory Committee	November 12, 2021
Public Meeting Dates	November 12, 2021
Executive Committee	December 8, 2021

- Check box if local government and jurisdiction resolutions, and letters of support are included in **Attachment IV.A.**
- Public notice, agenda, public comments, and the transcript of the required public meeting are included as **Attachment IV.B.**

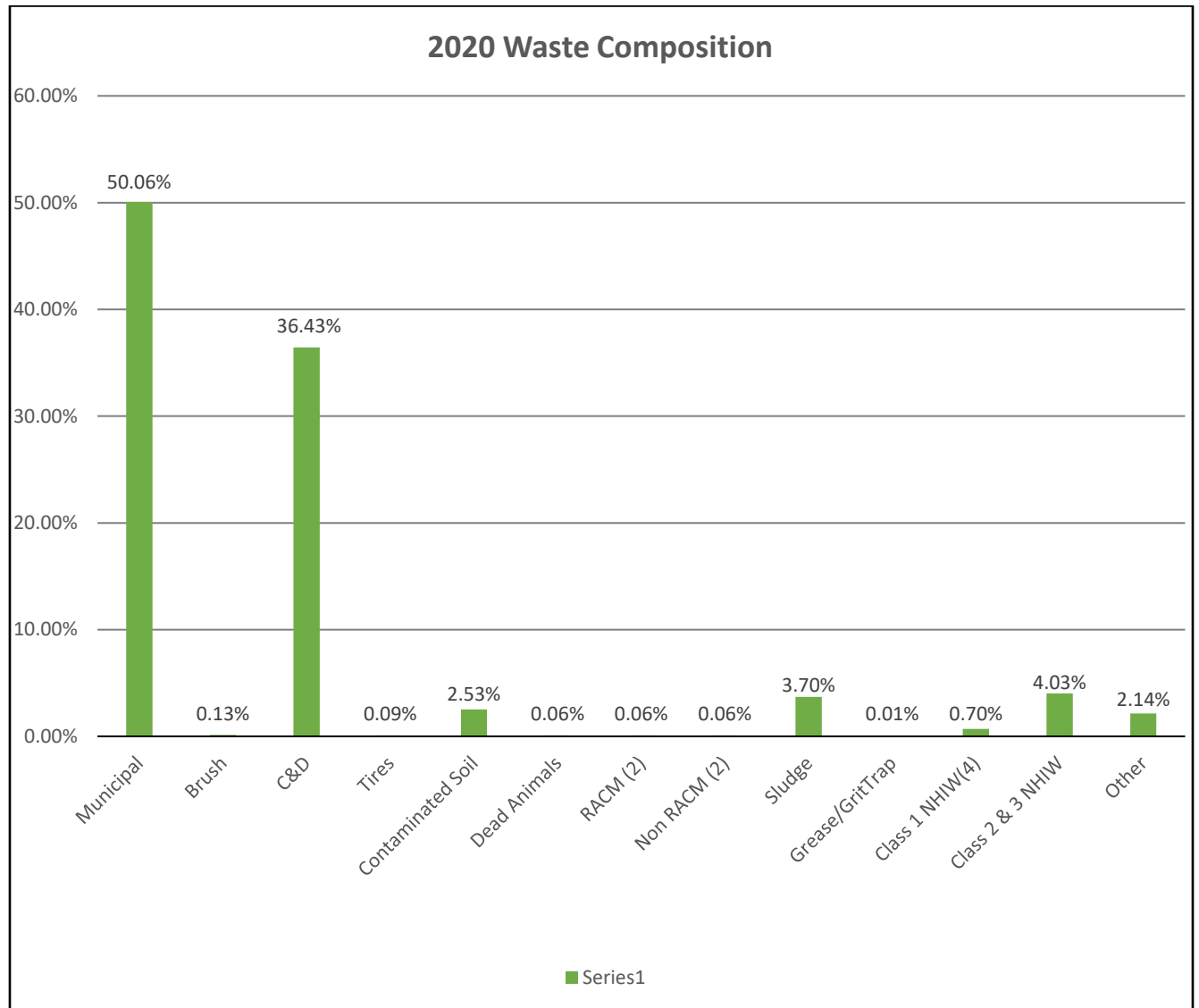
ATTACHMENT II.A.1

County	Landfill Name	Permit	Type	Rem Yr
Andrews	City of Andrews Landfill	171	1AE & 4AE	31.6
Crane	City of Crane Landfill	2345	1AE & 4AE	446
Dawson	City of Lamesa Landfill	517A	1	51.3
Ector	Charter Waste Landfill	2158	1	26
Gaines	City of Seminole Landfill	39	1AE & 4AE	49
Glasscock	Glasscock County Landfill	2154	1AE	3.9
Howard	City of Big Spring Landfill	288A	1	1.7
Howard	City of Big Spring Landfill	2395	1	106
Martin	City of Stanton Landfill	2189	1AE	28
Midland	City of Midland Lanfill	1605B	1	58.9
Pecos	City of Fort Stockton	976	1AE & 4AE	2
Reeves	City of Pecos Landfill	2120A	1AE & 4AE	43
Terrell	Terrell County Landfill	673	4AE	35
Upton	City of McCamey Landfill	566	4AE	4
Upton	Upton County Rankin Landfill	691	4AE	28
Ward	City of Monahans Landfill	772	1AE & 4AE	21.5
Future Landfills				
County	Landfill Name	Permit	Type	Yr
Pecos	City of Fort Stockton	2402	1AE & 4AE	101
Proposed Landfills				
County	Landfill Name	Permit	Type	Yr
Ector	Diamondback	2404	1 & 4	62
Glasscock	Glasscock County Landfill	2392	1AE	130
Reeves	West Sun Tex LLC	2410	1	100
Ward	City of Monahans Landfill	772	1AE & 4AE	20

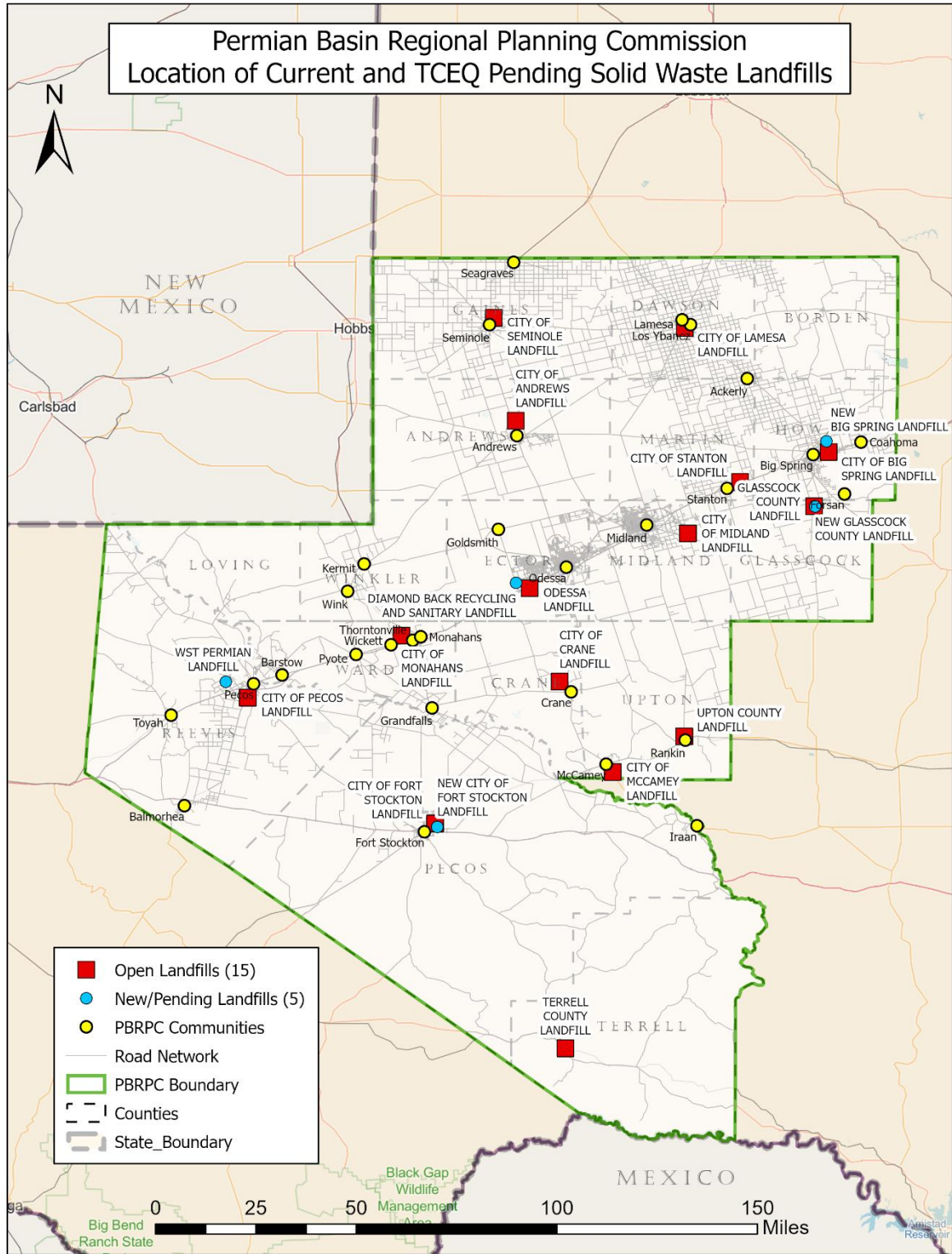
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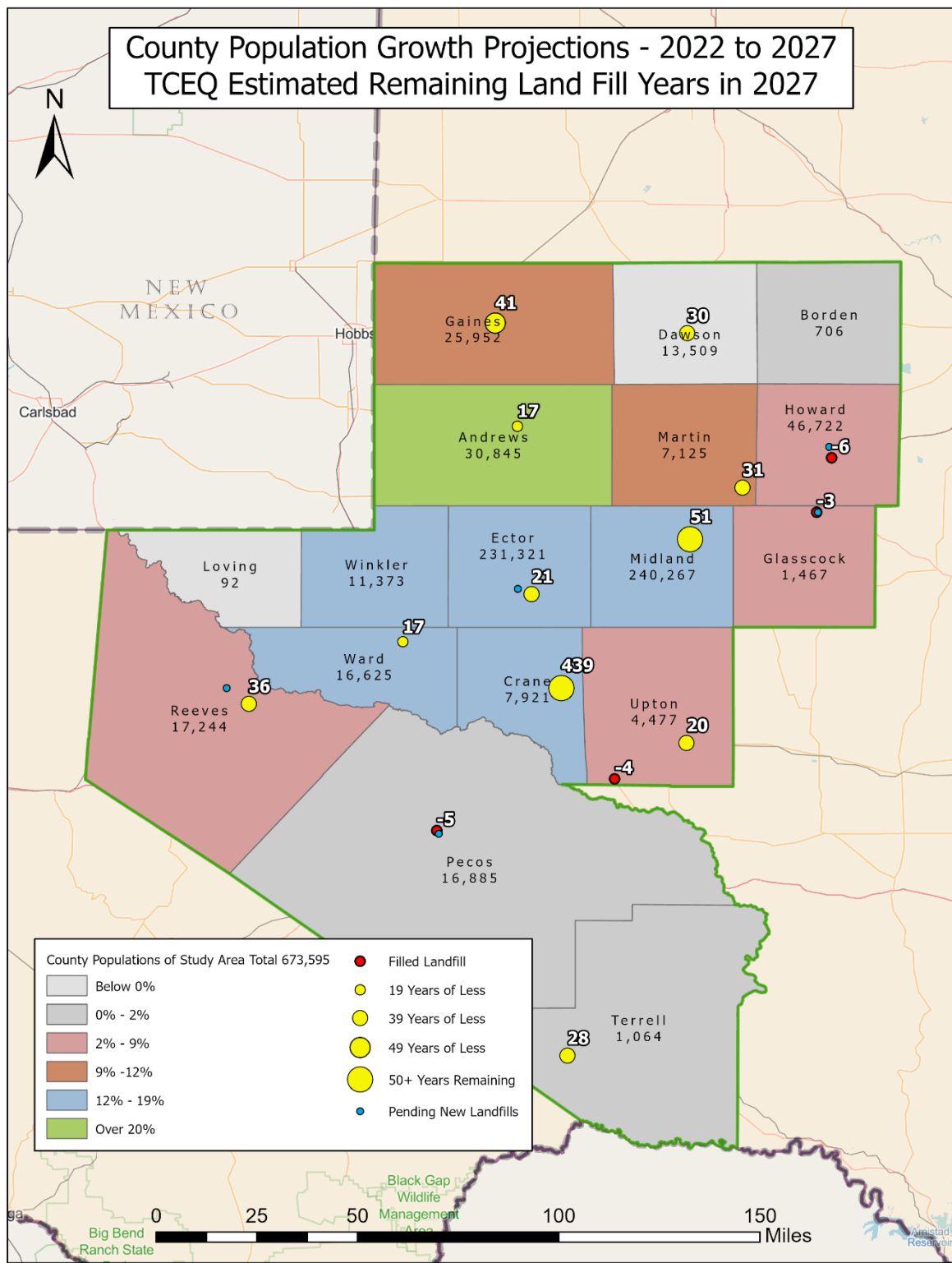
ATTACHMENT II.A.3



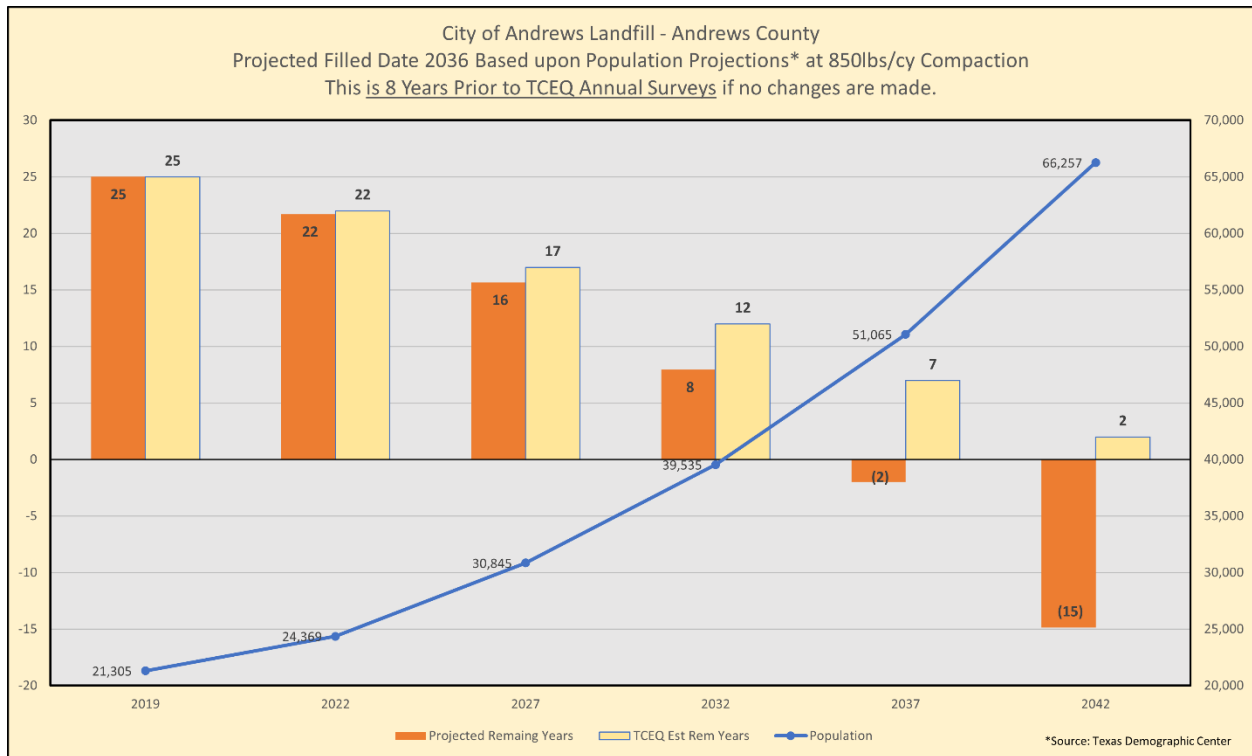
ATTACHMENT II.A.4



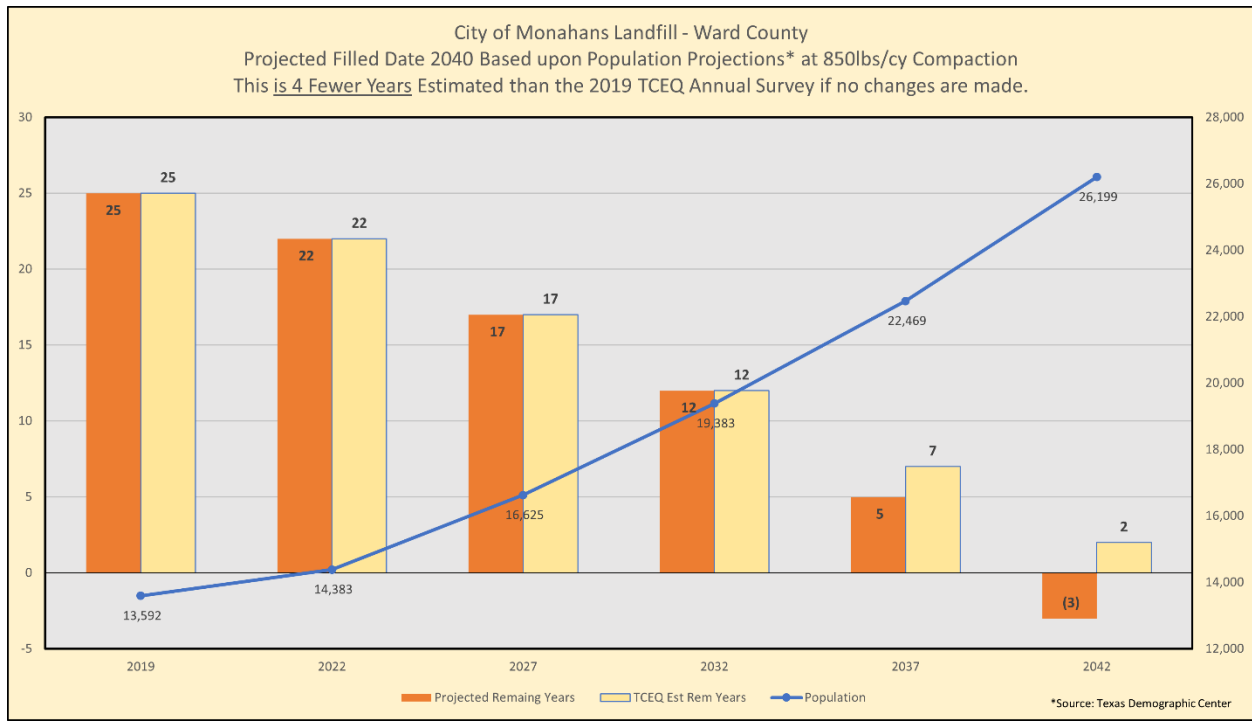
ATTACHMENT II.A.5



ATTACHMENT II.A.6



ATTACHMENT II.A.7



Attachment III.D.

Resource Recovery – The region has multiple metal recycle facilities for the recycling of metal. 8 of the 23 cities responding to the survey said they had some form of recycling. Most of the recycling in the region consist of cardboard, paper, plastic, and some electronics. There is one major commercial recycling business in the Region, Butt’s Recycling. They also operate a commercial paper shredding business, that also recycles the paper. 7 of the landfills currently divert and recycle brush, while 3 other landfills take brush but do not recycle it.

Storage –Storage of solid waste is deemed inadequate due to the lack of any current storage facilities.

Transportation – In the remote parts of the region, solid waste is transported by traditional refuse collection vehicles. Governmental and industry leaders should consider the use of transfer stations and use semi-trailers to haul the debris to landfills.

Treatment - Treatment of solid waste is deemed inadequate due to the lack of any current treatment facilities.

Disposal – Currently there is adequate landfill space, yet as populations continue to grow, the space will be exhausted in less time. Landfills need to increase their compaction rates to 1000 lbs. per cubic yard or to the best industry standard to insure more airspace. Additionally, this method is much cheaper than constructing new landfills.

HHW Collection – Currently Odessa Recycle Center is the only entity that collects Household Hazardous Waste. There needs to be a regional effort to encourage more HHW collection events and additional sites for collection. Funding these operations should be a priority throughout the region.

HHW Disposal – Collected HHW is transported out of the region. Odessa Recycle Center is located in Odessa.

Attachment III.E.**Assessment of Current Source Reduction and Waste Minimization Efforts, Including Sludge, and Efforts to Reuse or Recycle Waste**

There are limited locations to recycle in the region. There are for profit, non-profits and government entities attempting to increase recycling in the area. There are ongoing conversations with recyclers around the state trying to find new and/or better ways to recycle in the region. The recycling effort is limited due to the funding required to hold these events and the transport of commodities to market. The recycling efforts include cardboard, paper, and electronics.

Municipalities and landfills separate tree limbs and yard waste from other collected materials in order to turn them into useable mulch. The end product is then used in residential and commercial and municipal landscaping to control erosion and reduce water evaporation.

There is no mention from any of the entities in the region of any efforts to reduce sludge or to reuse/recycle waste.

Attachment III.H.

Identification of Public and Private Management Agencies and Responsibilities

City of Ackerly	Town of Pecos City	Andrews County
City of Andrews	City of Pyote	Borden County
City of Balmorhea	City of Rankin	Crane County
City of Barstow	City of Seagraves	Dawson County
City of Big Spring	City of Seminole	Ector County
City of Coahoma	City of Stanton	Gaines County
City of Crane	City of Thorntonville	Glasscock County
City of Forsan	City of Toyah	Howard County
City of Fort Stockton	City of Wickett	Loving County
City of Goldsmith	City of Wink	Martin County
City of Grandfalls	Keep Andrews Beautiful	Midland County
City of Iraan	Keep Big Spring Beautiful	Pecos County
City of Kermit	Keep Fort Stockton Beautiful	Reeves County
City of Lamesa	Keep Midland Beautiful	Terrell County
City of Los Ybanez	Keep Odessa Beautiful	Upton County
City of McCamey	Keep McCamey Beautiful	Ward County
City of Midland	Butts Recycling	Winkler County
City of Monahans	Time Machine	
City of Odessa	Permian Basin Regional Planning Commission	

Attachment III.O.

Conformance Guide for Proposed Municipal Solid Waste Facility Application

A questionnaire will be used to review proposed new Municipal Solid Waste Facilities for planning purposes of the Permian Basin Regional Planning Commission (PBRPC), Region 9, 2022 - 2042 Regional Solid Waste Management Plan. The questionnaire is based on the PBRPC Regional Goals and Objectives listed in its 2022 -2042 Regional Solid Waste Management Plan. The information from the questionnaire will be used for planning purposes only. The Conformance Guide Review also includes a review of the owner or operator proposed Parts I and Parts II of the municipal solid waste facility application.

When the owner/operator submits the proposed Part I and II of the municipal solid waste facility application, it will also submit the following questionnaire: completed, signed, and dated. The data may be used to encourage plans and designs of future facilities and will not be used to determine conformance. The PBRPC Solid Waste committee will review both documents and provide any feedback in a timely manner, as required by TCEQ.

Important, this is not a regulatory review of the application, as the regional organization does not have the authority to approve or deny permit applications.

PBRPC Solid Waste Management Questionnaire

Owner/Operator Contact Information

Facility Name	
Contact Name	
Phone Number	
Mailing Address	
Email Address	

Check all applicable lines or boxes that your proposed facility will support.

Goal 1. Reduce the rate of annual landfill airspace consumed, via recycling, diversion, or other means.

Is this a goal of the proposed facility? Yes ___ No ___

Indicate each Objective the proposed solid waste management facility supports.

- Objective 1.A. Encourage landfill operator to increase the compaction rates using education and training, thereby increasing available life and airspace.
- Objective 1.B. Provide education for the benefits of using one inch of Alternative Daily cover (ADC) vs six inches of normal daily cover.

- Objective 1.C. Provide education, training, and programs to encourage individuals and landfills to divert/recycle waste products.

Goal 2. Increase Recycling

Is this a goal of the proposed facility? Yes ___ No ___

Indicate each Objective the proposed solid waste management facility supports.

- Objective 2.A. Encourage communities to provide additional, conveniently located collection sites.
- Objective 2.B. Increase education by working with community partners and businesses with training opportunities to encourage additional recycling.
- Objective 2.C. Encourage community partners and businesses to increase acceptance of additional commodities through training programs.

Goal 3. Ensure adequate facilities for future

Is this a goal of the proposed facility? Yes ___ No ___

Indicate each Objective the proposed solid waste management facility supports.

- Objective 3.A. Plan and develop additional landfills by coordinating meetings with community leaders on the need for being current and aware of needs in each community. Encourage these leaders and operators to collect and provide current and future landfill needs by monitoring TCEQ annual reports.
- Objective 3.B. Encourage legislation for State financial assistance to help develop landfill from County Judges.
- Objective 3.C. Coordinate meetings with the oil industry for possible future landfill sites. As it has become part of the industry standard of purchasing large tracts of land, instead of leasing them for oil development, there may be available locations for companies to provide for future landfills.
- Objective 3.D. Local leadership will work with TCEQ and staff to understand the permitting process. Objective
- 3.E. Communicate effectively to TCEQ leadership how tons per day limits contribute to illegal dumping. Additional solutions include partnering with law enforcement, public, and private entities to combat illegal dumping.

Goal 4. Increase collection of household hazardous waste (HHW)

Is this a goal of the proposed facility? Yes ___ No ___

Indicate each Objective the proposed solid waste management facility supports.

- Objective 4.A. Educate public on the hazards to humans and environmental concerns associated with the illegal disposal of HHW.

- Objective 4.B. Help coordinate partnerships to create additional regional and local collection events for HHW.
- Objective 4.C. Monitor data from events to determine progress of community activities.

Goal 5. Encourage enforcement of illegal dumping activities

Is this a goal of the proposed facility? Yes ___ No___

Indicate each Objective the proposed solid waste management facility supports.

- Objective 5.A. Continue to provide enforcement training to combat illegal dumping.
- Objective 5.B. Collect data from region on the cost of illegal dumping, as well as the environmental and social impact of illegal dumping.
- Objective 5.C. Educate citizens on what illegal dumping consists of and how they can combat it.

Goal 6. Support regional clean up events

Is this a goal of the proposed facility? Yes ___ No___

Indicate each Objective the proposed solid waste management facility supports.

- Objective 6.A. Encourage, coordinate and when applicable, help facilitate local and regional clean ups.
- Objective 6.B. Provide education on the financial, and social, and environmental impact of cleaning up litter and debris.
- Objective 6.C. Collect data from clean up events held in the region. Use the Keep Texas Beautiful matrix to determine the economic benefits of the clean ups for future reference to communities.

Goal 7. Educate communities with information and data collected concerning solid waste activities

Is this a goal of the proposed facility? Yes ___ No___

Indicate each Objective the proposed solid waste management facility supports.

- Objective 7.A. Continue to provide assorted educational opportunities to the communities and leaders of the region.
- Objective 7.B. Collect data for future reference to show progress of programs and participation.
- Objective 7.C. Coordinate partnerships with Counties, Cities, communities, businesses, and non-profits to readily share information collected with each other and PBRPC.

Are there any goals and objectives, that are not listed, that the facility plans to implement?

- I have completed the **PBRPC Solid Waste Management Questionnaire** using current information.

Signature and title

Date

ATTACHMENT IV.B



Permian Basin Regional Planning Commission

P.O. BOX 60660 • 2910 LAFORCE BOULEVARD • MIDLAND, TEXAS 79711-0660 • (432) 563-1061 • FAX (432) 563-1728

Executive Director

RESOLUTION NO. 2022-10

A Resolution of the Board of Directors of the Permian Basin Regional Planning Commission, approving

The PBRPC Regional Solid Waste Plan for 2022-2042.

WHEREAS, the Permian Basin Regional Planning Commission was organized under House Bill 319 of the 59th Legislature, as amended, (Article 1011m V.A.C.S.), for the purpose of orderly planning and development of the Permian Basin region.

PASSED AND APPROVED THIS THE 8th Day of December 2021

Attest:



Bryan Cox, Martin County Judge, Chairman



Virginia Belew, Executive Director

ESTABLISHED TO SERVE THE PERMIAN BASIN
1971

Attachment IV.B

Below is a list of Board Members who were in attendance and those who were absent for the December 8, 2021 PBRPC meeting.

MEMBERS PRESENT WERE:

Steve Eggleston, proxy for Flora Braly, City of Andrews Mayor
Charlie Falcon, Andrews County Judge
Debi Hayes, Ector County Judge
Denise Swanner, City of Odessa Council
Joe Hurt, Sandhills SWCD
Rick Dollahan, City of Seagraves Mayor
Tom Keyes, Gaines County Judge
Billy Reynolds, Glasscock County Judge
Bryan Cox, Martin County Judge
Terry Johnson, Midland County Judge
Joe Shuster, Pecos County Judge
Chris Alexander, City of Fort Stockton Mayor
Leo M. Hung, Reeves County Judge (videoconference)
Greg Holly, Ward County Judge
Charles Wolf, Winkler County Judge

MEMBERS ABSENT WERE:

Ross Sharp, Borden County Judge
Roy Hodges, Crane County Judge
Foy O'Brien, Dawson County Judge
Kathryn Wiseman, Howard County Judge
Skeet Jones, Loving County Judge
Patrick Payton, Midland Mayor
Dale Carruthers, Terrell County Judge
Dusty Kilgore, Upton County Judge
Tom Craddick, District 82, Texas Representative
Kel Seliger, District 31, Senator
Brooks Landgraf, District 81, Texas Representative
Dustin Burrows, District 83, Texas Representative

Attachment IV.B

LEGAL NOTICE
To be published in the Odessa American on Wednesday,
November 10, 2021.

Public notice:

The Permian Basin Regional Planning Commission, Solid Waste Advisory Committee will hold a public meeting on November 12, 2021, at 1 pm to receive public comment regarding the proposed Permian Basin Regional Solid Waste Management Plan, twenty-year plan. The proposed plan is available for public review at PBRPC.org.

#11-29

<input checked="" type="checkbox"/> PROOF O.K. BY: <u>[Signature]</u>	<input type="checkbox"/> O.K. WITH CORRECTIONS BY: _____
PLEASE READ CAREFULLY • SUBMIT CORRECTIONS ONLINE	
TX-40033307 (100%)	
ADVERTISER: PERMIAN BASIN REG PLAN	PROOF CREATED AT: 11/8/2021 10:17:53 AM
SALES PERSON: TX20	NEXT RUN DATE: 11/10/21
SIZE: 2X3	PROOF DUE: 11/10/21 14:59:55
PUBLICATION: ODESSA AMERICAN	

Public notice was published in the Odessa American on November 10, 2021 and the Permian Basin Regional Solid Waste Management Plan was posted on the Permian Basin Regional Planning Commission website on November 30, 2021 and is still available to view on the website.

Minutes**Solid Waste Advisory Committee:
PERMIAN BASIN REGIONAL PLANNING COMMISSION
2910 LaForce Blvd, Midland, TX**

Date: November 12, 2021

Time: 1:00 p.m.

Attendees:**SWAC Committee Members Present**

Rex Thee, Jesse Rodriguez, Jeffery Ahrllett, Doreen Womack, David Harwell, Bill R., (a few individuals were on zoom by phone and did not provide their names when asked).

PBRPC Staff

Virginia Belew, Executive Director
Miranda Rice, Program Specialist
Hriody Haq, Program Manager

Additional Individuals Present

Bo Zertuchi, Johnny Womack

- I. **1:15 pm** Call to Meeting, Welcome
Rex Thee, Chairman, called the meeting to order.
- II. **1:17 pm** Introductions
Mr. Thee welcomed attendees.
- III. **1:20 pm** Approval of Previous Meeting (7/14/2021) Minutes
Mr. Bill H. motioned to approve, Mr. David Harwell seconded, and the motion carried by acclamation.
- IV. **1:21pm** TCEQ FY 2022 and FY 2023, Budget, Plans
Miranda Rice introduced and reviewed the TCEQ budget for fiscal year 2022-2023. She explained that this grant cycle began in September and that all line items are projections based on previous expenditures. All line items are eligible for modification. Miranda reviewed each line item. Miranda reviewed individual line

items listed in the budget. Virginia Belew noted that money is reallocated at the end of each year. Mr. Thee commented motioned to approve the budget. The motion was seconded by a phone number on Zoom and carried by acclamation.

Miranda Rice then began discussion of plans for FY 22-23. She mentioned continuing to use Curby, meeting with communities, assisting with cleanup events across the region, visiting solid waste infrastructures to see what the current needs are, taking Class B, building a resource library, and asked that if anyone has any other ideas or thoughts, to let her know.

- V. 1:24 pm** Enter Public Hearing to Receive Comments: Staff overview and comments regarding the Regional Solid Waste Management Plan Final Draft
- Mr. Thee motioned to enter the public hearing to receive comments regarding the Regional Solid Waste Management Plan. Miranda Rice presented the review of each section of Volume 1 and Volume 2 of the RSWMP, and conveyed comments that had been previously received. Miranda asked that if anyone had additional comments to please make them at this time.

Virginia Belew provided a comment of concern regarding existing or proposed community programs for collection of hazardous waste. Johnny Womack provided a comment stating that there is a new landfill that has been open and suggests an edit to reflect that within the plan as well as including the name and location of that landfill. Mr. Thee mentioned that the City of Monahans has plans for a new landfill and Johnny Womack responded stating that the landfill is in the plan but not specifically named. Johnny Womack provided a comment stating that the name of the landfill mentioned by Mr. Thee to be added into the plan.

- VI. 2:04 pm** Close Public Comment and Discussion Regarding Item V
- Mr. Thee moved to close the public comment period and discussion regarding item V.
- VII. 2:05 pm** Deliberate and Consider SWAC Approval and Recommendation for PBRPC Board of Directors and Final Approval of the RSWMP
- Mr. Thee motioned to approve the Regional Solid Waste Management Plan after there was not any discussion or deliberation. The motion was seconded by Mr. Ahrlett. The motion carried by acclamation.

VIII. 2:07 pm Proposed Regional Projects Calendar – Release of RFP, Close date for RFP, and date for SWAC to Review Applications

Miranda Rice gave a reminder to all attendees that the RFP will be released on December 15th. Miranda stated that the RFP will close on February 25th, 2022. Miranda also provided information on what projects were funded this past year – Ector and Midland County and their purchase of cameras to catch illegal dumpers, Kermit who purchased a chipper, and Monahans and Big Spring which had their wood chipping funded. Miranda then stated that the SWAC committee will meet in March 2022 to review applications.

IX. 2:10 pm Staff Reports, TCEQ and USDA

Miranda Rice reviewed the information she had previously mentioned during item IV as an update for TCEQ and reminded all attendees to reach out to her if they have any questions or ideas.

Virginia Belew discussed the USDA solid waste management grant and explained that PBRPC met objectives and hit their outreach goals and provided service to the target areas. Virginia explained that PBRPC requested an extension for USDA and would like to continue HHW and begin start up initiatives. Virginia informed the attendees that PBRPC did not receive the USDA grant that was applied for and that the PBRPC will apply for the USDA grant again.

X. 2:20 pm Open Discussion – Local updates, Clean-Up Activities

It was reported that Odessa is having a bulk item “drive up” clean up event this Saturday to help with their illegal dumping.

XI. 2:25pm New Business, Recommend as SWAC member – Misael Gomez

Mr. Thee recommended that Misael Gomez be added to SWAC committee. The motion carried with acclamation.

Virginia Belew provided an update on staffing at PBRPC by stating that Todd Mistrot is no longer employed by the PBRPC. Virginia Belew also informed all attendees that Miranda Rice is now responsible for the solid waste program(s).

XII. 2:30 pm Adjourn

Mr. Thee motioned to adjourn the meeting. Motion passed by acclamation.

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