



March 2011  
SFR-99/10

# Texas Computer Equipment Recycling Program





**Bryan W. Shaw, Ph.D.,** *Chairman*

**Buddy Garcia,** *Commissioner*

**Carlos Rubinstein,** *Commissioner*

**Mark R. Vickery, P.G.,** *Executive Director*

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Published and distributed  
by the  
Texas Commission on Environmental Quality  
PO Box 13087  
Austin TX 78711-3087

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# **Texas Computer Equipment Recycling Program**

Prepared by  
Small Business and Environmental Assistance Division

SFR-99/10  
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## Overview

The Texas Commission on Environmental Quality supports general market development for recycling and plays an important role in assisting Texans with establishing recycling programs. The TCEQ has programs that provide public education, online resources, and recognition and assistance for industries interested in increasing recycling at their facilities. Through compliance and technical assistance, the TCEQ provides guidance to the recycling community. Multiple programs support and encourage recycling, including the agency's Take Care of Texas, Clean Texas, pollution prevention technical assistance, and solid waste grants programs. Additional programs support recycling markets directly, such as [Recycle Texas Online](#) and the Resource Exchange Network for Eliminating Waste ([RENEW](#)). Other recycling programs target specific materials, such as recycled newsprint, used oil, and computer equipment.

The Texas Legislature established the Computer Equipment Recycling Program through House Bill 2714 in the 80<sup>th</sup> Legislative Session. Under the program, manufacturers offering to sell new computer equipment in or into Texas are required to provide a free and convenient program for collecting and recycling home business and personal, used computer equipment. As part of the implementation process for this program, the TCEQ has conducted outreach to inform and educate the general public and has developed Web pages to provide compliance and technical assistance to recyclers, consumers, retailers, and manufacturers.

Under the Texas Computer Equipment Recycling program, computer equipment is defined as a desktop or notebook computer, including a computer monitor or other display device that does not contain a tuner (30 TAC [§328.135](#)). The definition also includes the accompanying keyboard and mouse made by the same manufacturer.

The computer equipment recycling program is not the only outlet for computer-equipment recycling in Texas. Many other resources are available for consumers who wish to recycle their used electronics including computer equipment. Municipalities, local nonprofit groups, and community-oriented businesses often coordinate electronic recycling collection events in their areas. Charity groups, such as Goodwill and Salvation Army, may take computer donations for refurbishing and resale or recycling. The Computer Equipment Recycling Program provides one way, among others, that consumers can recycle their computers in Texas.

Although used electronics are a growing source of waste in Texas and across the country, they constitute less than 2 percent of the total municipal solid waste-stream in the U.S. While this equipment contains valuable resources that can be reused or recycled, historically, rates for reusing and recycling used electronics have remained low. Often, concerns about filling up landfill space are cited as a primary reason for recycling. Another issue is the loss of valuable components and resources into a landfill, when they could be reused or recycled, reducing the need to extract and process virgin materials.

# Requirements

The Computer Equipment Recycling Program requires that each of the parties involved be responsible for different aspects of the program. Computer-equipment manufacturers, retailers, recyclers, consumers, and government have requirements under the law.

Each computer-equipment manufacturer is responsible for collecting and recycling its own brand(s) of computer equipment. A manufacturer's program must be convenient for consumers and free at the time of recycling. The program must cover all of the computer brands made by the manufacturer, both in use and no longer in use. The program applies to computer equipment that is purchased primarily for personal or home-business use—regardless of when it was purchased. Additionally, manufacturers are responsible for submitting an annual recycling report to the commission by Jan. 31 of each year, reporting the weight of the computer equipment collected, recycled, and reused during the preceding calendar year. The first year of the program was 2009, and the first reports were due Jan. 31, 2010.

Retailers may not sell or offer to sell new computer equipment in Texas unless the equipment is labeled with the manufacturer's brand(s) and the manufacturer is included on the commission's online list of manufacturers. This list is available at <[www.TexasRecyclesComputers.org](http://www.TexasRecyclesComputers.org)>. This requirement applies to online and in-store sales.

Consumers are responsible for any information, in any form, that is left on the consumer's computer equipment.

Computer equipment recyclers are required to make efforts to reuse or refurbish all computer equipment when it is capable of being reused or refurbished. They must then recycle what is economically feasible to recycle in an environmentally sound manner (30 Texas Administrative Code (TAC) §[328.149](#)). Only after reusing, refurbishing, or recycling what they reasonably can, recyclers may then dispose of any remaining materials.

Texas state agencies must meet certain requirements under the Computer Equipment Recycling Program. State agencies must give a purchasing preference to manufacturers who have a program to recycle other manufacturers' computer equipment. State agencies also must ensure that any contractor for computer equipment leases or purchases is in compliance with the program. The Department of Information Resources adopted [rules](#) to implement this requirement. The TCEQ must conduct consumer outreach and education on collecting, recycling, and reusing computer equipment, maintain a website providing information about computer equipment reuse and recycling and an online list of manufacturers, and issue an annual report to the Texas Legislature no later than March 1, starting in 2011. The TCEQ must also, in cooperation with the attorney general's office, enforce the law for this program.

# Program Implementation and Management

With the passage of HB 2714 in 2007, TCEQ staff began working on developing rules, policies, and procedures for the new program mandated by law. The program began with a focus on ensuring that manufacturers and retailers knew the requirements. Manufacturers were identified through a number of resources. In addition to the Office of the Comptroller's list of electronics manufacturers, other resources included the federal Environmental Protection Agency's list of electronic manufacturers, other state programs' lists, the National Center for Electronics Recycling, and Internet searches to identify manufacturers and retailers selling online. Through these lists and online resources, staff was able to identify computer equipment manufacturers and offer information about program requirements and compliance assistance.

The purpose of TCEQ's initial focus on manufacturer and retailer compliance was to establish a reliable program for consumers, before focusing on outreach to consumers about the program. To achieve this goal, TCEQ staff provided compliance assistance to help manufacturers and retailers understand and meet the requirements necessary to sell computers in or into Texas. A Web-based workshop held in August 2008 provided additional education on manufacturer and retailer requirements and on the then upcoming outreach program. To notify retailers about the program and its requirements, the TCEQ enlisted the help of the Texas Retail Association. By partnering with a familiar, trusted source of information for retailers in Texas, the TCEQ was able to provide program information to retailers in Texas.

TCEQ staff successfully implemented an initial offering of compliance assistance to retailers and manufacturers, leading to 84 compliant manufacturers representing 128 brands. As the program matured, the TCEQ shifted its attention to the first, annual-reporting season. Staff notified all manufacturers of reporting requirements and encouraged compliance. As a result of TCEQ's outreach, all manufacturers required to report submitted an annual report in 2009 and in 2010.

Currently, the program focus is on performing additional public outreach and compliance assistance for recyclers. Activities include directly notifying municipalities and nonprofit environmental groups to introduce and educate them about the program and to ask for their help in promoting the program through links on their websites. Additionally, the Texas Computer Equipment Recycling Program continually offers compliance assistance tools to electronics recyclers. These tools include a [checklist](#) to help certain recyclers, address relevant TCEQ regulations and a [Web page](#) that explains TCEQ regulations for electronics recyclers. Manufacturers also can use these resources to ensure that the recycler they select is in compliance with Texas regulations. Moving forward, the program will continue its central focus on public education and outreach.

## Program Consumer Outreach

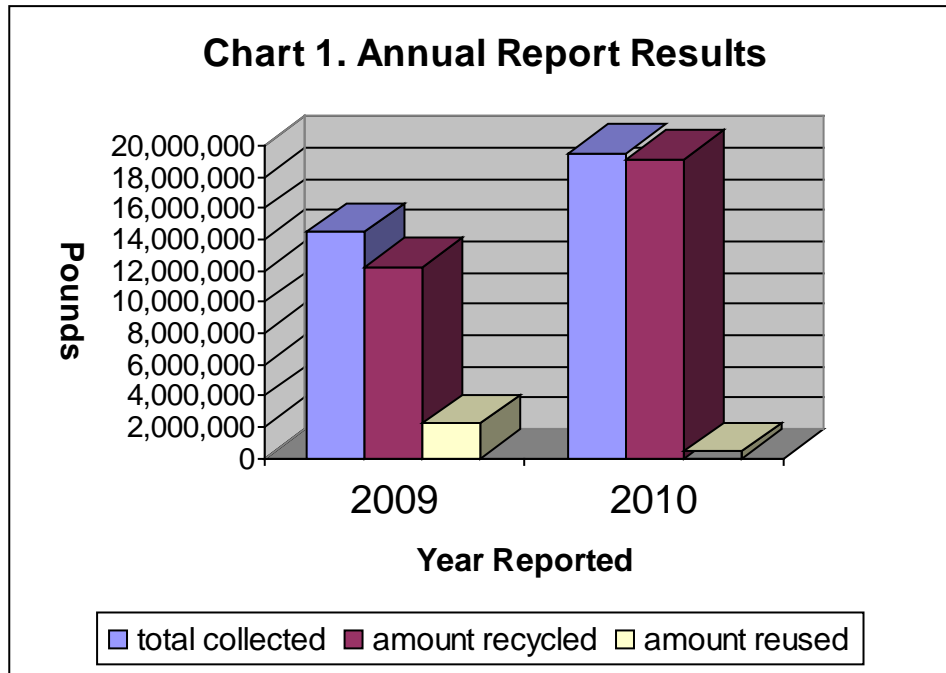
One of the TCEQ's responsibilities outlined in HB 2714 is public education. To that end, the TCEQ took the following steps to increase public awareness of the Texas Computer Equipment Recycling Program in Texas.

- Developed two computer recycling public service announcements through a partnership with the Texas Association of Broadcasters. One is featured on the [Take Care of Texas](#) website and the other aired on radio stations in all major markets reaching audiences in Austin, Abilene, Amarillo, Beaumont-Port Arthur, Bryan-College Station, Corpus Christi, Dallas-Fort Worth, El Paso, Houston, Killeen, the Rio Grande Valley, San Angelo, San Antonio, Temple, Texarkana, and Waco. Radio stations in small, medium, large, and metropolitan market sizes aired the announcements from June 28, 2010, through Aug. 18, 2010. During the seven week period, radio stations aired the announcement more than 4,500 times.
- Developed a flyer about computer recycling that directs the public to <[TexasRecyclesComputers.org](#)> and featured it on the home page of the Take Care of Texas website. (See Appendix 1)
- Delivered 26 presentations to more than 500 representatives of government, industry (manufacturers and recyclers), non-profits, and the public.
- Distributed promotional materials at 10 conferences with attendance totaling more than 18,000 people.
- Obtained feature coverage in 10 newspapers, magazine articles, or agency publications, including the TCEQ's *Natural Outlook* magazine, a quarterly with a circulation of approximately 3,000 subscribers including legislators, city council members, county judges, and county commissioners in Texas.
- Circulated three news releases state-wide on the benefits of computer recycling.
- Featured computer recycling on the TCEQ's website home page as a hot topics link four different times throughout the year. The website receives approximately 294,000 visits per month.
- Directly contacted over 70 city government representatives throughout Texas to make them aware of the program, and provided them with free information on how they can help publicize the program throughout their cities by using items such as Web banners and print ads.
- Sent 19,000 computer recycling flyers to cities throughout Texas, in response to their requests.
- Coordinated a feature article on the computer recycling program and its cost benefit to cities in the August edition of the Texas Municipal League magazine, *Texas Town & City*, with a circulation of 13,000 subscribers including mayors, city council members, and public works directors.

## Results from Manufacturers' 2009 and 2010 Annual Reports

For 2009 and 2010, the TCEQ received reports from all manufacturers that were required to submit annual reports. The total combined weight of computer equipment collected in 2009 by all manufacturers that submitted a report was 14,456,399 lbs. The total amount reused was 2,197,997 lbs. The total amount recycled was 12,258,379 lbs.

For 2010, the total combined weight of computer equipment collected by all manufacturers that submitted a report was 19,524,917 lbs. The total amount reused was 388,125 lbs. The total amount recycled was 19,136,669 lbs.



In both years, some reports listed zero pounds of computer equipment collected, reused, or recycled. A common reason for a manufacturer to report collecting no computer equipment is because the manufacturer is a small business with a clientele limited to surrounding homeowners, who do not often buy new equipment. Additionally, in situations where manufacturers' customers are primarily businesses and personal equipment is rarely sold, little or no personal or home business computer equipment was returned for recycling or reuse.

The weight of computer equipment collected in 2010 is 5 million pounds greater than the reported collections for 2009. The program continued to mature through its second full year, contributing to the increased collection numbers. Increased partnerships between manufacturers and local communities in 2010 to facilitate the collection of residential computer equipment may have contributed to the growth of equipment weight collected. The increase also may be attributed to additional outreach to consumers, recyclers, and manufacturers.

The reported amount of computer equipment that was reused decreased by over 1 million pounds between 2009 and 2010. The development of less expensive, smaller multipurpose equipment such as netbooks and touch-screen notepads may explain the reduction in collected equipment reuse. With new technology more affordable than it has been previously, older machines are less likely to meet the needs of the average consumer, thus the older, heavier equipment is recycled rather than reused.

Table 1 lists amounts reported by each manufacturer for 2009 and 2010. Those manufacturers with 'N/A' instead of values were either not registered in the program in 2009 or are no longer subject to the reporting requirement for 2010 because they no longer manufacture and sell covered computer equipment in or into Texas.

The TCEQ's goal is to increase customer awareness of the <[TexasRecyclesComputers.org](http://TexasRecyclesComputers.org)> website and encourage Texans to participate in this free, convenient, and environmentally sound program.

**Table 1. List of Reporting Manufacturers (amounts shown in lbs)**

Manufacturer	Brands	Collected		Recycled		Reused	
		2009	2010	2009	2010	2009	2010
<a href="#">@Xi Computer Corp.</a>	Xi Computer, @Xi Computer	0	0	0	0	0	0
<a href="#">Acer America Corporation (includes Gateway)</a>	Acer, Acer View, Aspire, eMachines, Gateway	57,690	195,456	57,360	195,287	330	169
<a href="#">Advanced PC Products, Inc.</a>	Advanced PC, Advanced PC Quasar	1,500	2,000	1,500	2,000	0	0
<a href="#">AG Neovo</a>	AG Neovo	0	0	0	0	0	0
<a href="#">Altex Electronics Ltd.</a>	Altex Electronics	91,643	2,679,924	90,812	2,395,722	831	284,202
<a href="#">AMAX Engineering Corporation</a>	AMAX	0	0	0	0	0	0
<a href="#">Apple Inc.</a>	Apple, Next	300,345	749,257	270,333	749,257	30,012	0
<a href="#">ARM Electronics, Inc.</a>	ARM Electronics, Inc.	0	0	0	0	0	0
<a href="#">ASUS Computer International</a>	ASUS	0	2	0	2	0	0
<a href="#">Austin Computing Solutions</a>	Austin Computing Solutions	0	0	0	0	0	0
<a href="#">Axiontech.com</a>	Axiontech.com	100	N/A	0	N/A	100	N/A
<a href="#">Bass Computers, Inc.</a>	Bass Computers, Inc.	0	2,195	0	2,195	0	0
<a href="#">BenQ America Corp.</a>	BenQ	0	0	0	0	0	0
<a href="#">Best Buy</a>	Dynex, Insignia	700,830	616,911	665,400	567,558	35,430	49,353
<a href="#">Bits Technical Corporation</a>	Bits Technical Corporation	186	288	186	288	0	0
<a href="#">Bright Ideas Computing</a>	Bright Ideas Computing	80	150	20	150	60	0
<a href="#">Computer Shak, Inc.</a>	Computer Shak, Inc.	300	300	0	100	300	20
<a href="#">Cypher's Computers</a>	Cypher's Computers	N/A	0	N/A	0	N/A	0

Manufacturer	Brands	Collected		Recycled		Reused	
		2009	2010	2009	2010	2009	2010
<a href="#">David Anderson Consulting</a>	David Anderson Consulting	15	557	0	553	4	4
<a href="#">Dell Inc.</a>	Alienware, Dell	12,923,787	10,148,474	10,855,963	10,148,474	2,067,824	0
<a href="#">Directron.com Inc.</a>	Directron.com, Inc.	2,000	N/A	0	N/A	2,000	N/A
<a href="#">Double Eagle Services, Inc.</a>	Double Eagle Services Inc.	294	0	245	0	49	0
<a href="#">DoubleSight Displays</a>	DoubleSight	0	685	0	685	0	0
<a href="#">DRS Tactical Systems Inc.</a>	ARMOR C12, ARMOR X10, Hammerhead	0	0	0	0	0	0
<a href="#">Envision Peripherals, Inc. (EPI)</a>	AOC, Envision	1,000	0	1,000	0	0	0
<a href="#">Equus Computer Systems</a>	Mirus, Nobilis, Nobleview, VitaMobility	0	0	0	0	0	0
<a href="#">Fourstar Group</a>	Starlogic, Synaps, Touchmark, Vuescape	0	0	0	0	0	0
<a href="#">Fujitsu Computer Systems Corporation</a>	Fujitsu, Fujitsu-Siemens	0	0	0	0	0	0
<a href="#">GammaTech Computer Corp.</a>	Durabook, Slimnote	0	0	0	0	0	0
<a href="#">General Dynamics Itronix (via Anything IT)</a>	General Dynamics, Itronix, Tadpole	0	0	0	0	0	0
<a href="#">Hannspree North America, Inc.</a>	Hanns-G, Hannspree, I-Inc	0	0	0	0	0	0
<a href="#">Hewlett Packard Company</a>	Apollo Computer, Compaq, Digital Equipment (DBC), Hewlett-Packard, VooDoo PC	14,860	45,931	13,205	44,501	1,655	1,430
<a href="#">Hitachi Home Electronics (America) Inc.</a>	Hitachi	0	N/A	0	N/A	0	N/A

Manufacturer	Brands	Collected		Recycled		Reused	
		2009	2010	2009	2010	2009	2010
<a href="#">Howard Technology Solutions</a>	Howard	0	0	0	0	0	0
<a href="#">Hyundai IT</a>	Hyundai, Hyundai Imagequest	0	0	0	0	0	0
<a href="#">International Business Machines</a>	IBM	765	1,159	765	1,159	0	0
<a href="#">IPSG</a>	Powerspec, Winbook	3,850	8,633	3,850	0	0	8,633
<a href="#">Komputer+ Peripherals</a>	Komputer+	2,640	7,500	0	1,500	2,640	6,000
<a href="#">Lenovo (United States) Inc.</a>	Lenovo	458	10	277	10	181	
<a href="#">LG Electronics USA, Inc.</a>	Goldstar, LG, Zenith	8,597	41,833	8,597	41,833	0	0
<a href="#">M&amp;A Technology</a>	M&A Technology, Manda	0	35,000	0	0	0	35,000
<a href="#">Magic Box Solutions</a>	Magic Box Solutions	50	30	50	30		0
<a href="#">Maverick Computer Services</a>	Maverick Computer Services	30	20	0	0	0	20
<a href="#">Medion AG</a>	Medion	N/A	0	N/A	0	N/A	0
<a href="#">MicroAge College Station</a>	MicroAge College Station	9,675	4,299	9,675	4,299	0	0
<a href="#">Motion Computing, Inc.</a>	Motion	0	1,859	0	1,859	0	0
<a href="#">MSI Computer Corp.</a>	MSI	0	0	0	0	0	0
<a href="#">NCR Corporation</a>	NCR	0	0	0	0	0	0
<a href="#">NEC Display Solutions of America, Inc.</a>	Mitsubishi DiamondPoint, Mitsubishi DiamondPro, NEC, NEC AccuSync, NEC MultiSync, NEC Multeos	83	164	83	164	0	0
<a href="#">No Nonsense</a>	No Nonsense Computers	0	N/A	0	N/A	0	N/A
<a href="#">Nokia</a>	Nokia Booklet3G	0	0	0	0	0	0
<a href="#">Office Depot</a>	Ativa	N/A	113,877	N/A	113,877	N/A	0

Manufacturer	Brands	Collected		Recycled		Reused	
		2009	2010	2009	2010	2009	2010
<a href="#">Panasonic</a>	Panasonic	66,667	19,153	66,667	19,153	0	0
<a href="#">Paxson Enterprises, Inc.</a>	Paxson Enterprises, Inc.	0	0	0	0	0	0
<a href="#">PC &amp; Cable</a>	PC & Cable	0	52	0	52	0	0
<a href="#">Planar Systems, Inc.</a>	Planar	0	8	0	8	0	0
<a href="#">Premio, Inc.</a>	Premio	0	0	0	0	0	0
<a href="#">Prime Systems</a>	Prime Systems	40,000	N/A	0	N/A	40,000	N/A
<a href="#">RCS Technologies, Inc.</a>	RCS Technologies	0	306	0	306	0	306
<a href="#">Samsung Electronics Co.</a>	Samsung, Samtron, Syncmaster	117,773	3,230,650	117,773	3,230,650	0	0
<a href="#">Sceptre, Inc.</a>	Sceptre	0	0	0	0	0	0
<a href="#">Seneca Data Distributors</a>	Nexlink	0	0	0	0	0	0
<a href="#">Shuttle Computer Group, Inc.</a>	Shuttle Computer Group, Inc.	0	0	0	0	0	0
<a href="#">Sigma ITPD</a>	Sigma ITPD	0	0	0	0	0	0
<a href="#">Sony Electronics Inc.</a>	Sony	102,540	1,596,041	87,519	1,596,041	15,021	0
<a href="#">Oracle</a>	Sun	0	0	0	0	0	0
<a href="#">Systemax Inc.</a>	Systemax, Ultra	0	0	0	0	0	0
<a href="#">TCL The Computer Link, LLC</a>	Computer Link	1,300	1,500	1,300	1,500	0	0
<a href="#">That Computer Store</a>	That Computer Store	0	200	0	0	0	200
<a href="#">Toshiba America Information Systems, Inc.</a>	Toshiba	810	11,580	810	11,580	0	0
<a href="#">TriGemUSA</a>	Averatec	0	0	0	0	0	0
<a href="#">University Computer Stores</a>	University Computer Store	700	480	100	120	600	360

Manufacturer	Brands	Collected		Recycled		Reused	
		2009	2010	2009	2010	2009	2010
<a href="#">V7</a>	V7	0	0	0	0	0	0
<a href="#">VideoTex</a>	VideoTex Systems	0	0	0	0	0	0
<a href="#">ViewSonic</a>	Cybervision, Nokia (CRT & LCD), Optiquest, Utobia, ViewSonic	1,163	811	1,163	811	0	0
<a href="#">Vizio</a>	Vizio	0	N/A	0	N/A	0	N/A
<a href="#">Wacom Technologies</a>	Wacom	N/A	0	N/A	0	N/A	0
<a href="#">Wakstar, LLC (Ken's Workshop/Southern Star)</a>	Wakstar	1,100	2,301	926	1,855	174	446
<a href="#">Wallingford Computer Services</a>	Wallingford	N/A	3,000	N/A	3,000	N/A	3,000
<a href="#">Westgate Computers</a>	Westgate Computers	368	165	0	0	368	165
<a href="#">Westinghouse Digital Electronics</a>	Westinghouse	0	N/A	0	N/A	0	N/A
<a href="#">Workhorse Computers</a>	Workhorse	250	600	50	0	200	600
<a href="#">Wyse Technology</a>	Wyse Technology	0	0	0	0	0	0
<a href="#">ZT Systems</a>	ZT, ZT Systems	0	0	0	0	0	0
<a href="#">Zydeco Technologies</a>	Zydeco Technologies	2,950	1,556	2,750	1,090	200	466

## Future of the Program

With the start of the third full year of the program, the TCEQ will continue direct contact with local governments and homeowners to emphasize the benefits of the program. The TCEQ will also continue outreach and compliance assistance for consumers, recyclers, manufacturers, and retailers, through presentations, brochure distribution, and resource development. Through these efforts in the coming years of the program, the Texas Computer Equipment Recycling Program expects to increase participation in communities and to offer additional compliance assistance as new program participants are identified. The program seeks continued cooperation with other states' recycling programs and with manufacturers to offer the most up-to-date recycling information and benefits to Texans.

# Appendix 1—Program Brochure



Texans now have a free and easy way to recycle unwanted personal computers. Thanks to a 2008 state law, computer manufacturers are responsible for recycling the following:

- desktop and laptop computers
- monitors (display devices without a tuner)
- the accompanying keyboard and mouse made by the same manufacturer

Note: This program applies to personal and home-business computer equipment only. Manufacturers are responsible for recycling only their own brands.

Please visit [TexasRecyclesComputers.org](http://TexasRecyclesComputers.org) for more details.

Questions? Send an e-mail to [recycle@tceq.state.tx.us](mailto:recycle@tceq.state.tx.us)



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