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Texas Computer Equipment Recycling Program

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Prepared by
Small Business and Environmental Assistance Division

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Overview

The Texas Commission on Environmental Quality supports 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, pollution prevention technical assistance, and solid waste grants programs. Additional programs support recycling markets directly, such as 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 80th 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 Texas 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 collection events for electronics recycling in their areas. Charity groups, such as Goodwill and The Salvation Army, may take computer donations for refurbishing and resale or recycling. The Texas 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 total municipal solid waste 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 TCEQ's online list of manufacturers. This list is available at <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 identified computer-equipment manufacturers and offered 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. 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. 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, for the first three years of the program, all manufacturers required to report submitted an annual report.

For report year 2011, 85 manufacturers covering 130 brands were required to report. The list of manufacturers includes 10 new manufacturers participating in the program. A list of the reporting companies and the amounts they reported is available in Table 1.

Currently, the program focuses 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. 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. Since the program began in 2009, the TCEQ has taken the following steps to increase public awareness of the Texas Computer Equipment Recycling Program in Texas.

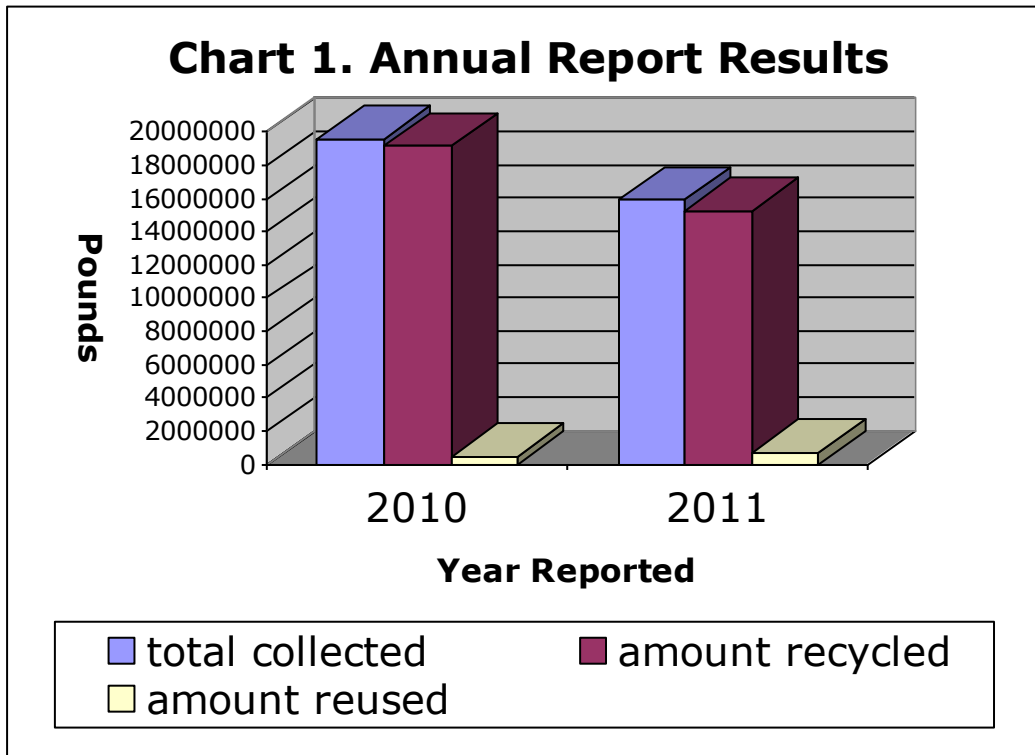
- Developed two public service announcements on computer recycling through a partnership with the Texas Association of Broadcasters. One announcement is featured on the [Take Care of Texas](#) website and the other aired on radio stations in all major markets, reaching audiences in Austin, Abilene, Amarillo, 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 markets 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). Since its publication, more than 75,000 flyers have been distributed to local governments and other community organizations.
- Delivered 42 presentations to more than 1,000 representatives of government, industry (manufacturers and recyclers), nonprofits, and the public.
- Distributed promotional materials at 50 conferences with attendance totaling more than 100,000 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 four news releases statewide 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 more than 110 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 43,000 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' Annual Reports

For the first three years of the program, the TCEQ received reports from all manufacturers that were required to submit annual reports. For 2010, the total combined weight of computer equipment collected by all manufacturers that submitted a report was 19,524,917 pounds. The total amount reused was 388,125 pounds. The total amount recycled was 19,136,669 pounds.

For 2011, computer manufacturers reported 15,894,379 pounds of computer equipment collected, 15,208,366 pounds recycled, and 686,292 pounds reused. This year, computer manufacturers were invited to additionally report those collection weights of electronics that are not covered under the computer-equipment recycling program. During 2011, in addition to the total computer equipment collected, manufacturers voluntarily reported collecting 5,586,454 pounds of noncovered electronics.

The total weight of computer equipment collected in 2011 is lower than amounts reported in 2010. This number may be down, in part, because Texans have many opportunities to recycle their computer equipment and other electronics outside of the computer-equipment recycling program—such as collection events coordinated by municipalities, local nonprofit groups, private recyclers, and community-oriented businesses—and the number of opportunities continues to increase. Additionally, in 2011, the number of electronics recyclers who notified the TCEQ of their operations doubled compared with previous years. Also, as technology advances, electronics are becoming more compact and weighing less.



In all 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.

Table 1 lists amounts reported by each manufacturer for the last two report years. Those manufacturers with 'N/A' instead of values joined the program in 2011 and were not required to report in 2010. Some numbers reported by manufacturers as recycled or reused may have been collected in a previous year.

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

Manufacturer	Brands	Collected		Recycled		Reused	
		2010	2011	2010	2011	2010	2011
@Xi Computer Corp.	Xi Computer, @Xi Computer	0	0	0	0	0	0
Acer America Corporation (includes Gateway)	Acer, Acer View, Aspire, eMachines, Gateway	195,456	204,794	195,287	204,755	169	39
Advanced PC Products, Inc.	Advanced PC, Advanced PC Quasar	2,000	2,000	2,000	2,000	0	0
AG Neovo	AG Neovo	0	0	0	0	0	0
Altex Electronics Ltd.	Altex Electronics	2,679,924	30,353	2,395,722	30,353	284,202	0
AMAX Engineering Corporation	AMAX	0	0	0	0	0	0
Amazon Fulfillment Services	Kindle Fire	N/A	0	N/A	0	N/A	0
Apple Inc.	Apple, Next	749,257	1,382,377	749,257	1,382,377	0	0
ARM Electronics, Inc.	ARM Electronics, Inc.	0	0	0	0	0	0
ASUS Computer International	ASUS	2	3	2	3	0	0
Austin Computing Solutions	Austin Computing Solutions	0	0	0	0	0	0
Barnes & Noble	Barnes & Noble (Nook)	N/A	0	N/A	0	N/A	0
Bass Computers, Inc.	Bass Computers, Inc.	2,195	863	2,195	863	0	0
BenQ America Corp.	BenQ	0	0	0	0	0	0

Manufacturer	Brands	Collected		Recycled		Reused	
		2010	2011	2010	2011	2010	2011
Best Buy	Dynex, Insignia	616,911	749,001	567,558	650,512	49,353	98,489
Bits Technical Corporation	Bits Technical Corporation	288	1,400	288	1,400	0	
Bright Ideas Computing	Bright Ideas Computing	150	125	150	125	0	0
Coby Electronics Corporation	Coby	N/A	0	N/A	0	N/A	0
Computer Shak, Inc.	Computer Shak, Inc.	300	1,500	100	0	20	1,500
Cyberpower PC	Cyberpower	N/A	0	N/A	0	N/A	0
Cypher's Computers	Cypher's Computers	0	0	0	0	0	0
David Anderson Consulting	David Anderson Consulting	557	260	553	250	4	10
Dell Inc.	Alienware, Dell	10,148,474	6,336,236	10,148,474	5,866,005	0	470,230
Double Eagle Services, Inc.	Double Eagle Services Inc.	0	0	0	0	0	0
DoubleSight Displays	DoubleSight	685	912	685	552	0	360
DRS Tactical Systems Inc.	ARMOR C12, ARMOR X10, Hammerhead	0	0	0	0	0	0
Envision Peripherals, Inc. (EPI)	AOC, Envision	0	0	0	0	0	0
Equus Computer Systems	Mirus, Nobilis, Nobleview, VitaMobility	0	0	0	0	0	0
Fourstar Group	Starlogic, Synaps, Touchmark, Vuescape	0	0	0	0	0	0

Manufacturer	Brands	Collected		Recycled		Reused	
		2010	2011	2010	2011	2010	2011
Fujitsu Computer Systems Corporation	Fujitsu, Fujitsu-Siemens	0	0	0	0	0	0
GammaTech Computer Corp.	Durabook, Slimnote	0	0	0	0	0	0
General Dynamics Itronix	General Dynamics, Itronix, Tadpole	0	0	0	0	0	0
Hannspree North America, Inc.	Hanns-G, Hannspree, I-Inc	0	0	0	0	0	0
Hewlett Packard Company	Apollo Computer, Compaq, Digital Equipment (DBC), Hewlett-Packard, VooDoo PC	45,931	2,083,888	44,501	2,074,383	1,430	9,505
Howard Technology Solutions	Howard	0	0	0	0	0	0
Hyundai IT	Hyundai, Hyundai Imagequest	0	12	0	12	0	0
International Business Machines	IBM	1,159	697	1,159	697	0	0
IPSG	Powerspec, Winbook	8,633	20,565	0	0	8,633	20,565
Komputer+ Peripherals	Komputer+	7,500	5,000	1,500	3,850	6,000	1,150
Lenovo (United States) Inc.	Lenovo	10	5	10	5	0	0
LG Electronics USA, Inc.	Goldstar, LG, Zenith	41,833	39,386	41,833	39,386	0	0

Manufacturer	Brands	Collected		Recycled		Reused	
		2010	2011	2010	2011	2010	2011
M&A Technology	M&A Technology, Manda	35,000	288,485	0	206,313	35,000	82,172
Magic Box Solutions	Magic Box Solutions	30	120	30	90	0	30
Maverick Computer Services	Maverick Computer Services	20	0	0	0	20	0
Medion AG	Medion	0	0	0	0	0	0
MicroAge College Station	MicroAge College Station	4,299	3,886	4,299	3,886	0	0
Motion Computing, Inc.	Motion	1,859	12	1,859	12	0	0
Motorola Mobility	Motorola	N/A	0	N/A	0	N/A	0
MSI Computer Corp.	MSI	0	0	0	0	0	0
NCR Corporation	NCR	0	0	0	0	0	0
NEC Display Solutions of America, Inc.	Mitsubishi DiamondPoint, Mitsubishi DiamondPro, NEC, NEC AccuSync, NEC MultiSync, NEC Multeos	164	500	164	500	0	0
Nokia, Inc.	Nokia Booklet3G	0	0	0	0	0	0
NorTex	NorTex	N/A	0	N/A	0	N/A	0
Office Depot	Ativa	113,877	27,000	113,877	27,000	0	0
Oracle	Sun	0	0	0	0	0	0

Manufacturer	Brands	Collected		Recycled		Reused	
		2010	2011	2010	2011	2010	2011
Panasonic	Panasonic	19,153	19,208	19,153	19,208	0	0
Paxson Enterprises, Inc.	Paxson Enterprises, Inc.	0	0	0	0	0	0
PC & Cable	PC & Cable	52	0	52	0	0	0
Phantom Technologies	iBoss	N/A	0	N/A	0	N/A	0
Planar Systems, Inc.	Planar	8	0	8	0	0	0
PLR IP Holdings, LLC	Polaroid	N/A	0	N/A	0	N/A	0
Premio, Inc.	Premio	0	0	0	0	0	0
RCS Technologies, Inc.	RCS Technologies	306	0	306	0	306	0
Research In Motion	BlackBerry PlayBook	N/A	0	N/A	0	N/A	0
Samsung Electronics Co.	Samsung, Samtron, Syncmaster	3,230,650	3,536,679	3,230,650	3,536,679	0	0
Sceptre, Inc.	Sceptre	0	5,100	0	5,100	0	0
Seneca Data Distributors	Nexlink	0	0	0	0	0	0
Shuttle Computer Group, Inc.	Shuttle Computer Group, Inc.	0	0	0	0	0	0
Sigma ITPD	Sigma ITPD	0	0	0	0	0	0
Sony Electronics Inc.	Sony	1,596,041	1,136,252	1,596,041	1,136,252	0	0
Systemax Inc.	Systemax, Ultra	0	68	0	68	0	0

Manufacturer	Brands	Collected		Recycled		Reused	
		2010	2011	2010	2011	2010	2011
Toshiba America Information Systems, Inc.	Toshiba	11,580	11,525	11,580	11,525	0	0
University Computer Stores	University Computer Store	480	240	120	120	360	120
V7	V7	0	0	0	0	0	0
Velocity Micro	Velocity Micro	N/A	0	N/A	0	N/A	0
VideoTex	VideoTex Systems	0	0	0	0	0	0
ViewSonic	Cybervision, Nokia (CRT & LCD), Optiquest, Utobia, ViewSonic	811	85	811	85	0	0
Wacom Technologies	Wacom	0	0	0	0	0	0
Wakstar, LLC (Ken's Workshop/Southern Star)	Wakstar	2,301	1,707	1,855	1,555	446	152
Wallingford Computer Services	Wallingford	3,000	2,000	3,000	1,000	3,000	1,000
Westgate Computers	Westgate Computers	165	540	0	0	165	540
Workhorse Computers	Workhorse	600	200	0	50	600	150
Wyse Technology	Wyse Technology	0	0	0	0	0	0
ZT Systems	ZT, ZT Systems	0	0	0	0	0	0
Zydeco Technologies	Zydeco Technologies	1,556	1,395	1,090	1,395	466	280

Future of the Program

With the start of the fourth full year of the program, the TCEQ will continue direct contact with local governments and homeowners to emphasize the benefits of recycling. 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 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
for more details.

Questions? Send an e-mail to
recycle@tceq.state.tx.us



Take Care
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