

## Below is an Electronic Version of an Out-of-Print Publication

You can scroll to view or print this publication here, or you can borrow a paper copy from the Texas State Library, 512-463-5455. You can also view a copy at the TCEQ Library, 512-239-0020, or borrow one through your branch library using interlibrary loan.

The TCEQ's current print publications are listed in our catalog at [www.tceq.texas.gov/publications/](http://www.tceq.texas.gov/publications/)

This document is out of print, and should be used for historical reference only.



SFR-99/17  
March 2018

# Program Report on Texas Recycles Computers and Texas Recycles Televisions



**Bryan W. Shaw, Ph.D., P.E., *Chairman***  
**Toby Baker, *Commissioner***  
**Jon Niermann, *Commissioner***

**Richard A. Hyde, P.E., *Executive Director***

We authorize you to use or reproduce any original material contained in this publication—that is, any material we did not obtain from other sources. Please acknowledge the TCEQ as your source.

Copies of this publication are available for public use through the Texas State Library, other state depository libraries, and the TCEQ Library, in compliance with state depository law. For more information on TCEQ publications visit our website at:

**[tceq.texas.gov/publications](http://tceq.texas.gov/publications)**

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

The TCEQ is an equal opportunity employer. The agency does not allow discrimination on the basis of race, color, religion, national origin, sex, disability, age, sexual orientation or veteran status. In compliance with the Americans with Disabilities Act, this document may be requested in alternate formats by contacting the TCEQ at 512-239-0010 or 1-800-RELAY-TX (TDD), or by writing P.O. Box 13087, Austin, TX 78711-3087.

How is our customer service? [tceq.texas.gov/customersurvey](http://tceq.texas.gov/customersurvey)

## **Contents**

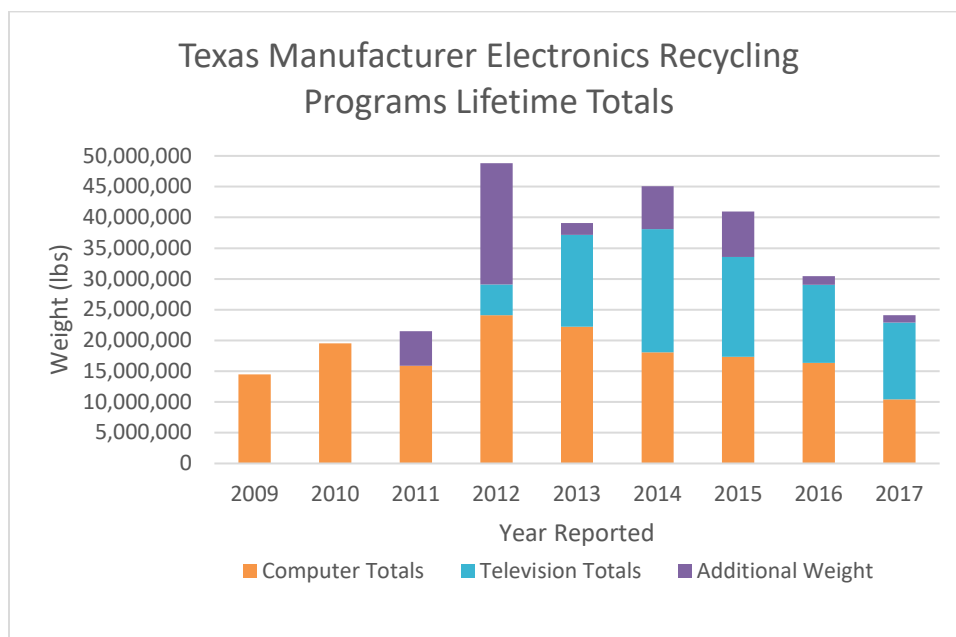
---

<b>Results from Manufacturers' Annual Reports.....</b>	<b>2</b>
Texas Recycles Computers Program.....	2
Texas Recycles TVs Program.....	4
<b>Registered TV Recyclers.....</b>	<b>5</b>
<b>Appendix 1- 2017 Computer Manufacturers' Reported Amounts.....</b>	<b>6</b>
<b>Appendix 2- 2017 TV Manufacturers' Reported Amounts and 2018 Market Share.....</b>	<b>9</b>
2017 Manufacturers' Reported Amounts and 2018 Market Share Allocations.....	9
2018 TV Manufacturers Participating under the Texas Recycles Computers Program .....	10

# Results from Manufacturers' Annual Reports

The Texas Recycles Computers and Texas Recycles TVs programs have been active for several years and together have resulted in 239,757,125 pounds of computers and televisions being collected, with 227,581,813 pounds of this being recycled and 8,330,293 pounds being reused. Computer manufacturers also collected an additional 44,273,798 pounds over the lifetime of the program, bringing the total weight of electronics collected to 284,030,923 pounds. For the 2017 calendar year, the programs collected a total of 24,129,208 pounds, comprising 10,423,186 pounds of computers, 1,199,944 pounds of additional electronic equipment, and 12,506,078 pounds of televisions. See *Chart 1* below for the weights collected since the creation of both programs.

**Chart 1. Texas Manufacturer Electronics Recycling Programs Lifetime Totals**



## Texas Recycles Computers Program

In 2017, the total combined weight of computer equipment collected was 10,423,186 pounds. The total amount recycled was 9,362,462 pounds and the total amount reused was 30,716 pounds.

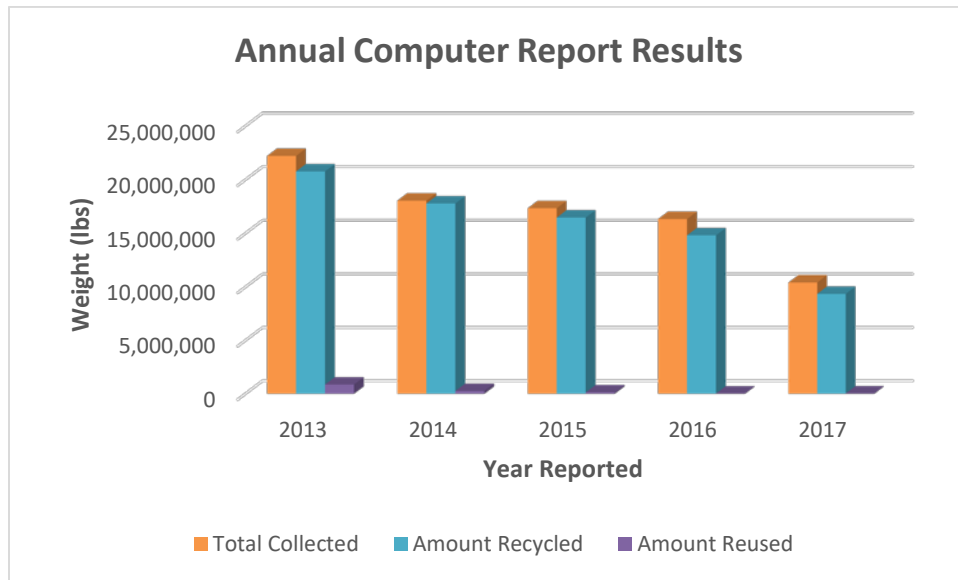
Comparatively, the total weight of computer equipment collected in 2016 was 16,341,812 pounds. Of that collected weight, 14,821,587 pounds were recycled and 26,517 pounds were reused.

In addition to recycling covered computer equipment, many computer manufacturers also voluntarily collect televisions and other electronics for recycling. The TCEQ allows computer manufacturers to report other electronics collected, not just the computer equipment covered under the program. For 2017, manufacturers reported collecting 1,199,944 pounds of additional non-covered electronics. The number was lower than 2016 voluntary collection amounts of 1,403,845 pounds. Some manufacturers who typically reported voluntary collection weight indicated they chose not to report additional voluntary collection weight this year since the electronics were not computer related. The voluntarily

reported numbers that included televisions reported under the Texas Recycles TVs program were excluded.

Historical data for the past five years of reporting is reflected in *Chart 2* below.

**Chart 2. Annual Computer Report Results**



Texans have many opportunities to recycle their computer equipment and other electronics outside of the Texas Recycles Computers program. Collection events coordinated by municipalities, local nonprofit groups, private recyclers, and community-oriented businesses are additional ways Texans can recycle their computers. Since some of the recyclers do not report to the TCEQ, the agency’s reported number does not fully represent recycling activity in Texas.

As in previous years, some reports this year listed zero pounds of computer equipment collected, reused, or recycled. A common reason to report collecting no computer equipment is that 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. With the continuing increase in manufacturers entering the tablet market, relatively few new products have reached their end of useful life and been returned for recycling.

As discussed in previous years, with the rapid advancement of technology, electronics continue to become lighter and more compact. We have proposed that this trend could lead to manufacturers reporting lower total weight of materials collected. A report published in July 2011 on behalf of the

Consumer Electronics Association detailed this manufacturing trend between 2004 and 2010 from cathode ray tubes to lighter flat panel technology for televisions and computer monitors.<sup>1</sup>

*Appendix 1* lists amounts reported by each manufacturer for the 2017 calendar year. Three manufacturers failed to report, as indicated by data in *Appendix 1* being left blank. One manufacturer closed without notice to the TCEQ. The other two manufacturers failed to report and were removed from the program.

### Texas Recycles TVs Program

The weight of television equipment reported as having been collected in 2017 by participating manufacturers was 12,366,771 pounds. Of that collected weight, 12,363,092 pounds were recycled and 3,679 pounds were reused.

This year, all manufacturers participated in the television recycling program by collecting their assigned market share of television equipment. Of the 27 manufacturers that participated in the program, 22 reported their 2017 collection data and submitted registration for 2018. In addition, one manufacturer reported their 2017 collection data but did not register for 2018 and four did not report their 2017 collection data nor register for 2018. Those four have been removed from the program. The TCEQ calculated the recycling rate for these 27 manufacturers to be 15.4 percent. Based on this recycling rate, manufacturers were provided their market share prior to Dec. 1, 2017. Manufacturers are required to collect at least their market share in 2018, as indicated in *Appendix 2*.

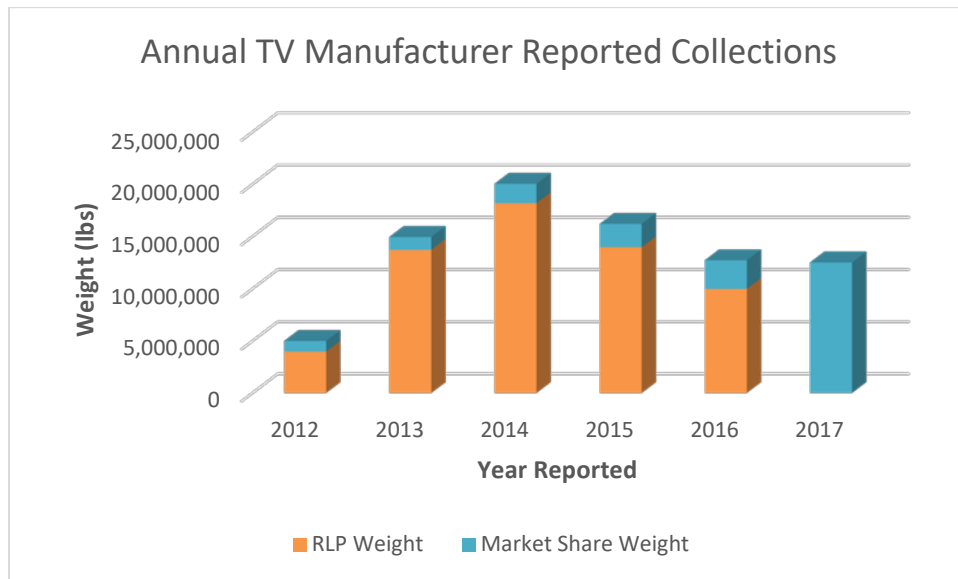
As a mechanism to comply with the rules, manufacturers have the option of participating in a Recycling Leadership Program (RLP). Participants in an RLP do not have a market share to collect, but must recycle equipment from a minimum of 200 collections sites, events, or programs available to the public. In 2017 and 2018, no manufacturers chose to participate in a RLP. With no manufacturers participating, those 200 sites are no longer accessible to public drop-off opportunities. As market share requirements continue to grow in the future, TCEQ believes the Recycling Leadership Program will prove to be a valuable alternative for compliance under the rule and statute.

*Chart 3* shows the weight of television equipment reported as being collected by manufacturers.

---

<sup>1</sup> Available at <[Pike Research: Materials Footprint Reduction of Televisions and Computer Monitors](#)>.

**Chart 3. Annual TV Manufacturer Reported Collections**



*Appendix 2* lists data reported by each manufacturer. The numbers reflect amounts sold and collected in calendar year 2017. Additionally, the individual market shares are provided. This data was submitted by manufacturers through February 2018. At the time of this report, 23 manufacturers representing 42 brands have submitted complete 2017 reports and submitted registration for their 2018 programs. Two additional manufacturers representing four brands satisfied their program requirements by participating in the Texas Recycles Computers program.

## Registered TV Recyclers

Beginning Jan. 31, 2014, television recyclers were required to report the total weight or volume of TVs received, recycled, and disposed of in the preceding calendar year (CY). In CY 2017, Texas TV recyclers received approximately 20.1 million pounds, recycled 18.2 million pounds, and disposed of 64,000 pounds of television equipment.



## Appendix 1- 2017 Computer Manufacturers' Reported Amounts

Manufacturer Name	Brand Name(s)	Wt Collected (lbs)	Wt Recycled (lbs)	Wt Reused (lbs)
@Xi Computer Corp.	Xi Computer, @Xi Computer	0	0	0
Acer America Corporation	Acer, Acer View, Aspire, eMachines, Gateway	515337	515337	0
Advanced PC Products, Inc.	Advanced PC, Advanced PC Quasar	50	50	0
AG Neovo Technology Corporation	Ag Neovo	0	0	0
Altex Electronics Ltd.	Altex Electronics	53166	53166	0
Amazon Fulfillment Services, Inc.	Kindle Fire	18812	9333	9479
Apple Inc.	Apple, Next	5307	5307	0
ASUS Computer International	ASUS	35	35	0
Avinext	Avinext, MicroAge, SuperMicro	7870	7870	0
Azpen Innovation, Inc.	Azpen	98	0	98
Barnes & Noble	Barnes & Noble (NOOK)	11	11	0
Bass Computers	Bass Computers	0	0	0
BenQ American Corp.	Ben Q	0	0	0
Best Buy	Dynex, Insignia	100930	100930	0
Biblezon	Biblezon, Biblezon Catholic Tablet, Biblezon Kids Tablet			
Bits Technical Corporation	Bits Technical Corporation			
Cellco Partnership	Verizon Ellipsis	20093	29	20064
CHUWI Innovation & Tech	CHUWI			
Computer Shak, Inc.	Computer Shak, Inc.	3300	3000	300
Craig Electronics, Inc.	Craig	0	0	0
Curtis International, Ltd.	Klu, Proscan	0	0	0
Cyberpower, Inc.	Cyberpower	0	0	0
Dell Inc.	Alienware, Dell	3805349	2775349	0
DoubleSight Displays	Doublesight	132	132	0
DPI, Inc.	Zeki	0	0	0
ECP Computers & More	ECP Computers	0	0	0
Elo Touch Solutions, Inc	Elo	0	0	0
Envision Peripherals, Inc.	AOC, Envision	0	0	0
Equus Computer Systems Inc.	Mirus, Nobileview, Nobilis, Vitamobility	0	0	0
Fujitsu Computer Systems Corporation	Fujitsu, Fujitsu-Siemens	0	0	0
Gammatech Computer Corporation	Durabook, Slimnote	0	0	0
Google, Inc	Chromebook	0	0	0

Manufacturer Name	Brand Name(s)	Wt Collected (lbs)	Wt Recycled (lbs)	Wt Reused (lbs)
HP, Inc.	Apollo Computer, Compaq, Digital Equipment Corp. (DEC), Hewlett-Packard, VooDoo PC	2490907	2490907	0
Hisense USA	Hisense	0	0	0
Howard Technology Solutions	Howard	0	0	0
HTC Corporation	HTC	0	0	0
HUAWEI DEVICE USA	Huawei	0	0	0
Hyundai IT America Corp	Hyundai, Hyundai Imagequest	0	0	0
iBoss, Inc. (Phantom Technologies)	Phantom Technologies (iBoss)	0	0	0
iBuyPower	iBuyPower	0	0	0
Ingram Micro	V7	0	0	0
Intel	Intel NUC, Intel Compute Stick	0	0	0
International Business Machines	IBM	0	0	0
International Products Sourcing Group	Powerspec, Winbook	8704	8074	0
Kidz delight	Kurio	0	0	0
Komputer + Peripherals, Inc.	Komputer +	2268	2268	0
Lenovo (United States) Inc.	Lenovo, Medion	36	36	0
LG Electronics USA, Inc.	Goldstar, LG, Zenith	619691	619691	0
LINSAY	LINSAY	11	0	0
M&A Technology	M&A Technology, Manda	0	0	0
Mattel	Mattel, Nabi	2	2	0
Maverick Computer Services	Maverick Computer Services	0	0	0
Michley Tivax	Michley, Michley Tivax, Mi-Traveler, Tivax	2	1	1
Microsoft Corporation	Microsoft (Surface)	30	15	15
Motorola Mobility, LLC	Motorola	0	0	0
MSI Computer Corp.	MSI	0	0	0
Naxa Electronics	Naxa	0	0	0
NEC Display Solutions of America, Inc.	NEC, NEC AccuSync, NEC MultiSync	0	0	0
Nixeus Technology	Nixeus	75	0	75
NVIDIA Corp	ShieldPortable, Shield Tablet	0	0	0
Oracle	Sun	0	0	0
Panasonic Corp of North America	Panasonic	0	0	0
Paxson Enterprises, Inc.	Paxson	0	0	0
PC & Cable	PC & Cable	1100	1100	0
Planar Systems, Inc.	Planar	0	0	0
PLR IP Holdings, LLC	Polaroid	0	0	0
Premio, Inc.	Premio	0	0	0
Pro-com Products, Inc.	D2 Pad	0	0	0
Proexpress Distributor, LLC	Dragon Touch, KingPad	58	0	58
Samsung Electronics Co.	Samsung, Galaxy Tab 4 Nook, Samtron, Syncmaster	2760270	2760270	0

Manufacturer Name	Brand Name(s)	Wt Collected (lbs)	Wt Recycled (lbs)	Wt Reused (lbs)
Seneca Data Distributors	Nexlink	0	0	0
Shaghal Ltd.	Ematic, PBS Kids, Xovision, Blaupunkt	11	0	14
Shuttle Computer Group, Inc.	Shuttle Computer Group, Inc.	0	0	0
Sony Electronics Inc.	Sony	0	0	0
TCT Mobile (US) Inc.	Alcatel OneTouch	0	0	0
TMAX Digital	Apex, NuVision, TMAX	0	0	0
Trans Cosmos America (MRM)	VAIO	0	0	0
Toshiba America Information Systems, Inc.	Toshiba	17	17	0
USA111	iRULU	0	0	0
Velocity Holdings, LLC	Velocity Micro	0	0	0
Venturer Electronics, Inc.	Pro12, RCA	0	0	0
ViewSonic Corporation	Cybervision, Nokia, Optiquest, Utobia, Viewsonic	118.5	118.5	0
Visual Land, Inc.	Visual Land	0	0	0
Vizio, Inc.	Vizio	0	0	0
Vtech Electronics North America, LLC	Vtech	1.5	1.5	0
Wacom Technology Inc.	Wacom	0	0	0
Westgate Computers	Westgate Computers	2132	2000	132
Wintec Industries, Inc.	Filemate	32	32	0
YIFANG USA INC.	Nextbook	0	0	0
Zingarr Sales & Marketing, LLC	AARP RealPad	0	0	0
Zydeco Computer Technologies	Zydeco Technologies	7230	6750	480

## Appendix 2- 2017 TV Manufacturers' Reported Amounts and 2018 Market Share

### 2017 Manufacturers' Reported Amounts and 2018 Market Share Allocations

<b>Manufacturer</b>	<b>Brands</b>	<b>Sold (lbs)</b>	<b>Collected (lbs)</b>	<b>Recycled (lbs)</b>	<b>Reused (lbs)</b>	<b>Market Share (lbs) Assigned for 2018</b>
Bang & Olufsen America, Inc.	Bang & Olufsen	1,116	596	596	0	311
Best Buy	Insignia, Dynex, Toshiba, Sharp	8,806,928	1,054,122	1,054,122	0	1,206,273
Craig Electronics	Craig	7,842	1,025	1,025	0	1,078
Curtis International Ltd	Curtis, ProScan, Sylvania, RCA	107,386	9,964	9,964	0	14,708
DPI, Inc.	GPX, iLive, WeatherX, Memorex	28,817	4,774	4,774	0	6,615
EliteLux	Sansui	69,423	17,161	17,161	0	22,304
Funai Corp.	Funai, Magnavox, Philips, Sanyo	5,550,008	1,048,206	1,048,206	0	1,090,424
Haier America	Haier	217,646	44,788	44,788	0	54,243
Hisense USA	Hisense, Sharp	6,147,831	182,699	182,699	0	550,096
Hitachi	Hitachi	525,709	77,993	77,993	0	67,275
JVC America	JVC	50,267	44,996	44,996	0	19,340
LG Electronics	LG, Zenith, Goldstar	12,379,147	2,275,310	2,275,310	0	1,655,563
Naxa Electronics, Inc.	NAXA	542	20	20	0	73
PLR IP Holdings	Polaroid	374,308	20,524	20,524	0	31,534
Samsung Electronics	Samsung	27,542,425	4,879,980	4,879,980	0	4,604,705
Sceptre, Inc.	oCosmo, Sceptre	146,198	11,136	11,136	0	15,125
Seura, Inc.	Seura	7,175	357	357	0	530
Silo TV	Silo, KC	1,800	0	0	0	386
Sony Electronics, Inc.	Sony	5,038,394	596,516	596,516	0	781,087
Sunbrite TV, LLC	Sunbrite TV	53,258	6,689	3,010	3,679	23,965
Tongfang Global, Inc.	Element, Seiki, Westinghouse	1,592,889	377,287	377,287	0	247,242
TTE Technology	TCL	*	210,350	210,350	0	*
VIZIO, Inc.	VIZIO	*	1,502,278	1,502,278	0	*

\*Some manufacturers have marked their sales data as confidential and proprietary, in accordance with [30 TAC §328.189](#)<sup>2</sup>

### 2018 TV Manufacturers Participating under the Texas Recycles Computers Program

<b>Manufacturer</b>	<b>Brands</b>
NEC Display Solutions of America, Inc.	NEC, NEC AccuSync, NEC MultiSync,
Viewsonic Corporation	Viewsonic

---

<sup>2</sup> Available at < [30 TAC, RULE §328.189](#) >.