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# Program Report on Texas Recycles Computers and Texas Recycles Televisions

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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



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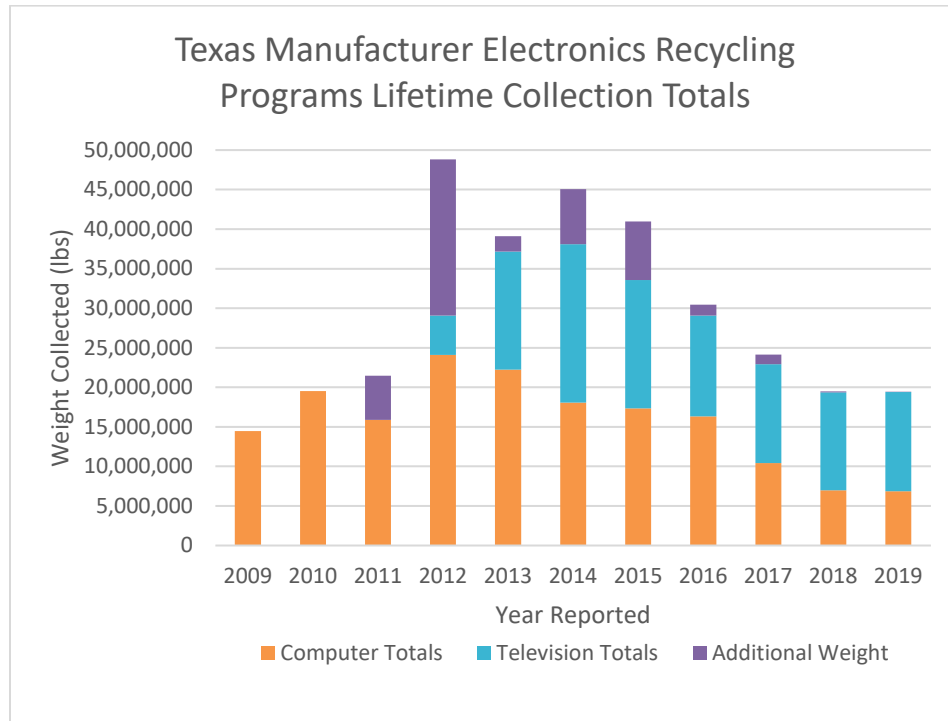
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# Results from Manufacturers' Annual Reports

The Texas Recycles Computers and Texas Recycles TVs programs have been required to submit reports since 2009 and 2013 respectively. Together, these programs have resulted in 278,521,514 pounds of computers and televisions being collected, with 265,823,883 pounds of this being recycled and 8,394,507 pounds being reused. Computer manufacturers also collected an additional 44,441,942 pounds of electronics-related equipment over the lifetime of the program, bringing the total weight of electronics collected to 322,963,456 pounds. For the 2019 calendar year, the programs collected a total of 19,431,737 pounds, comprising 6,857,990 pounds of computers, 21,528 pounds of additional electronic equipment, and 12,552,220 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 2019, the total combined weight of computer equipment collected was 6,857,990 pounds. The total amount recycled was 6,824,929 pounds and the total amount reused was 32,455 pounds.

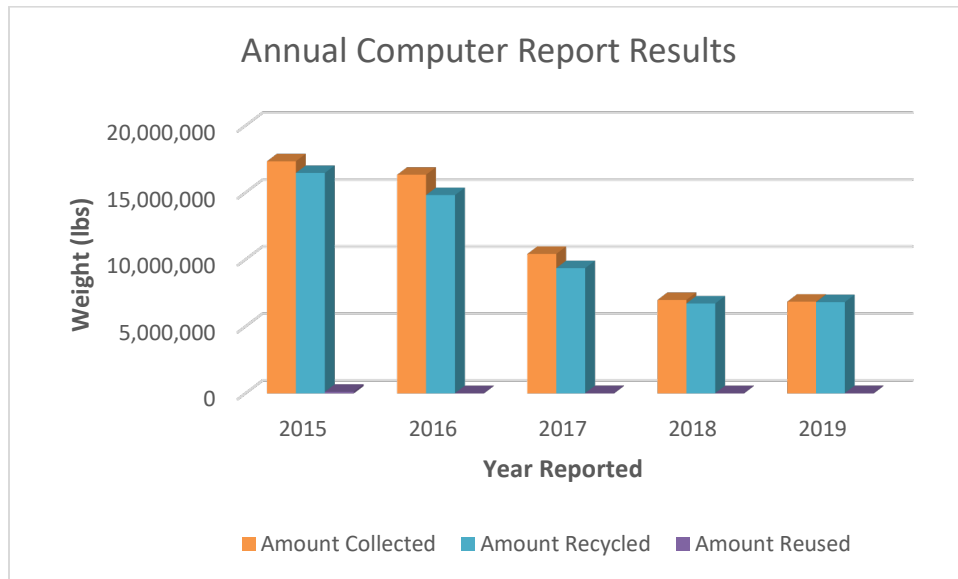
Comparatively, the total weight of computer equipment collected in 2018 was 6,987,319 pounds. Of that collected weight, 6,722,584 pounds were recycled, and 28,080 pounds were reused.

In addition to recycling covered computer equipment, many computer manufacturers also voluntarily collect televisions and other electronics for recycling. TCEQ allows computer manufacturers to report other electronics collected, in addition to the computer equipment covered under the program. For

2019, manufacturers reported collecting 21,528 pounds of additional non-covered electronics. This number was lower than the 2018 voluntary collection amount of 146,616 pounds. Some of the manufacturers who typically reported voluntary collection weight indicated that they chose not to report additional voluntary collection weight this year, since the electronics were not computer related. The voluntarily reported numbers that include 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 TCEQ, the agency’s reported number does not fully represent all 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 2019 calendar year. A total of 13 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 2019 by participating manufacturers was 12,552,220 pounds. Of that collected weight, 12,331,465 pounds were recycled, and zero pounds were reused.

This year, all manufacturers participated in the Market Share option of the television recycling program, in which they are required to collect their assigned market share of television equipment. Of the 22 manufacturers that participated in the program, 16 reported their 2019 collection data and submitted registration for 2020. Four manufacturers reported their 2019 collection data, but have not yet completed their registrations for 2020, and two manufacturers did not report their 2019 collection data or register for 2020; these six manufacturers have been removed from the program. Additionally, one manufacturer has submitted their initial registration for 2020, as well as reported their 2019 data.

TCEQ calculated the recycling rate for the 22 reporting manufacturers to be 11.5 percent. Based on this recycling rate, manufacturers were provided their 2020 market share prior to Dec. 1, 2019.

Manufacturers are required to collect at least their market share in 2020, as indicated in *Appendix 2*.

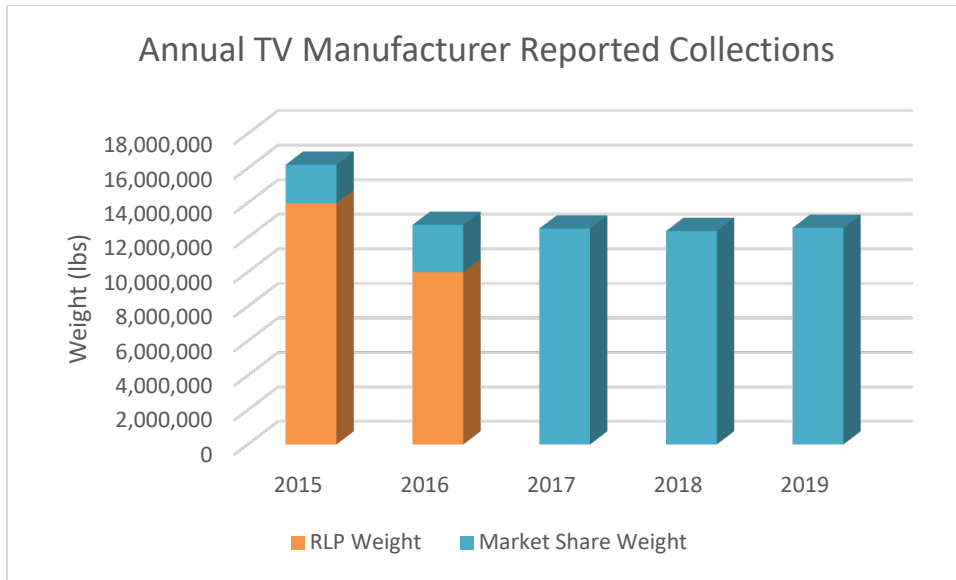
As a mechanism to comply with the rules, manufacturers have the option of participating in a Recycling Leadership Program (RLP). Participants in an RLP do not have a market share to collect but must recycle equipment from a minimum of 200 collection sites, events, or programs available to the public. From 2017-2019, no manufacturers chose to participate in an RLP. However, 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.

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<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 2019. Additionally, the individual market shares are provided. This data was submitted by manufacturers through February 2020. At the time of this report, 16 manufacturers representing 34 brands have submitted complete 2019 reports and submitted registration for their 2020 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 2019, Texas TV recyclers received approximately 11.3 million pounds, recycled 10.7 million pounds, and disposed of zero pounds of television equipment.

**Appendix 1- 2019 Computer Manufacturers' Reported Amounts**

<i>Manufacturer Name</i>	<i>Brand Name(s)</i>	<i>Weight Collected (lbs)</i>	<i>Weight Recycled (lbs)</i>	<i>Weight Reused (lbs)</i>
@Xi Computer Corp	@Xi Computer Xi Computer	0.0	0.0	0.0
Acer America Corporation	Acer View Aspire eMachines Gateway	500,288.0	500,288.0	0.0
Advanced PC Products, Inc.	Advanced PC Advanced PC Quasar	50.0	50.0	0.0
Altex Electronics Ltd.	Altex Electronics	46,132.0	46,132.0	0.0
Amazon Fulfillment Services, Inc.	Kindle Fire	36,220.0	28,456.0	7,764.0
Apple Inc.	Apple Next	20,391.0	20,391.0	0.0
ASUS Computer International	ASUS	126.0	126.0	0.0
Avinext	Avinext MicroAge SuperMicro	3,966.0	3,966.0	0.0
Azpen Innovation, Inc.	Azpen	48.0	0.0	48.0
Barnes & Noble	Barnes & Noble NOOK by Barnes & Noble	26.0	26.0	0.0
Bass Computers	Bass Computers, Inc.	0.0	0.0	0.0
BenQ American Corp.	BenQ	0.0	0.0	0.0
Best Buy	Dynex Insignia	247,941.0	247,941.0	0.0
Cellco Partnership	Verizon Ellipsis	9,608.0	0.0	9,608.0
CHUWI	CHUWI	0.0	0.0	0.0
Computer Shak, Inc.	Computer Shak, Inc.	6,000.0	4,000.0	2,000.0
Craig Electronics, Inc.	Craig	0.0	0.0	0.0
Curtis International, Ltd.	Klu Proscan	0.0	0.0	0.0
Cyberpower, Inc.	Cyberpower	0.0	0.0	0.0
Dell Inc.	Alienware Dell Wyse	2,616,671.0	2,616,671.0	0.0
DPI, Inc.	Zeki	0.0	0.0	0.0
ECP Computers & More	ECP Computers	0.0	0.0	0.0
Elo Touch Solutions, Inc	Elo	0.0	0.0	0.0
Envision Peripherals, Inc.	AOC Envision	0.0	0.0	0.0
Equus Computer Systems Inc.	Mirus Nobilis Nobleview VitaMobility	0.0	0.0	0.0
Fujitsu Computer Systems Corporation	Fujitsu Fujitsu-Siemens	7.7	7.7	0.0
Gammatech Computer Corporation	Durabook Slimnote	0.0	0.0	0.0



Google, Inc	Chromebook Pixel Google Chromebook Pixel C Tablet Project Tango Tablet	17.0	17.0	0.0
Hewlett Packard Company	Apollo Computer Compaq Digital Equipment Corporation (DEC) Hewlett-Packard VooDoo PC	3,053,583.0	3,053,583.0	0.0
HUAWEI DEVICE USA, INC.	Huawei	0.0	0.0	0.0
iBoss, Inc. (Phantom Technologies)	iBoss	0.0	0.0	0.0
iBuyPower	iBuyPower	0.0	0.0	0.0
Ingram Micro (V7)	V7	0.0	0.0	0.0
Intel	Intel Compute Stick Intel NUC	0.0	0.0	0.0
International Business Machines	IBM	0.0	0.0	0.0
Kidz Delight Ltd	Kurio	800.0	800.0	0.0
Komputer + Peripherals, Inc.	Komputer+	3,500.0	0.0	3,500.0
Lenovo (United States) Inc.	Lenovo Medion	107.0	107.0	0.0
LG Electronics USA, Inc.	Goldstar LG Zenith	190,622.0	190,622.0	0.0
LINSAY	LINSAY	7.0	0.0	0.0
Maverick Computer Services	Maverick Computer Services	0.0	0.0	0.0
Microsoft Corporation	Microsoft Nokia	4.0	4.0	0.0
Motorola Mobility LLC	Motorola	0.0	0.0	0.0
MSI Computer Corp.	MSI	0.0	0.0	0.0
NEC Display Solutions of America, Inc.	NEC NEC AccuSync NEC MultiSync	0.0	0.0	0.0
Nixeus Technology, Inc	Nixeus	30.0	0.0	30.0
NVIDIA Corp	Shield Portable Shield Tablet	0.0	0.0	0.0
Oracle	Sun	120,558.0	110,359.0	9,505.0
Panasonic Corp of North America	Panasonic	0.0	0.0	0.0
PC & Cable	PC & Cable	1,000.0	1,000.0	0.0
Planar Systems, Inc.	Planar	0.0	0.0	0.0
PLR IP Holdings, LLC	Polaroid	0.0	0.0	0.0
Razer	Razer	0.0	0.0	0.0

Samsung Electronics Co.	Samsung Samsung Galaxy Tab 4 Nook Samtron Syncmaster	96.5	96.5	0.0
SCEPTRE, Inc	SCEPTRE, Inc	0.0	0.0	0.0
Seneca Data Distributors	Nexlink	0.0	0.0	0.0
Shangal Ltd.	BLAUPUNKT EMATIC PBS Kids XOVISION	0.0	0.0	0.0
Shuttle Computer Group, Inc.	Shuttle Computer Group, Inc.	0.0	0.0	0.0
TCT Mobile (US) Inc.	Alcatel Alcatel One Touch TCL	0.0	0.0	0.0
Toshiba America Information Systems, Inc.	Toshiba	69.0	69.0	0.0
Trans Cosmos America, Inc.	VAIO	0.0	0.0	0.0
Venturer Electronics, Inc.	Pro12 RCA	0.0	0.0	0.0
ViewSonic Corporation	Cybervision Optiquest Utobia ViewSonic	116.4	116.4	0.0
VTech Electronics North America LLC	LeapFrog Vtech	5.0	5.0	0.0
Wacom Technology Inc,	Wacom	0.0	0.0	0.0
Wintec Industries, Inc.	FileMate	0.0	0.0	0.0

## Appendix 2- 2019 TV Manufacturers' Reported Amounts and 2020 Market Share

<i>Manufacturer</i>	<i>Brands</i>	<i>Sold (lbs)</i>	<i>Collected (lbs)</i>	<i>Recycled (lbs)</i>	<i>Reused (lbs)</i>	<i>Market Share (lbs) Assigned for 2020</i>
Best Buy	Insignia, Toshiba, Sharp	10,477,620	1,356,148	1,356,148	0	1,306,856
Craig Electronics	Craig	704	1,208	1,208	0	238
Curtis International	Curtis, ProScan, Sylvania, RCA	136,207	16,536	16,536	0	16,996
DPI Inc.	GPX, iLive, WeatherX, Memorex	9,614	4,437	4,437	0	2,624
Element TV Company**	Element	1,815,732	220,755	0	0	271,568
EliteLux Technologies	Sansui	0	10,690	10,690	0	7,875
Funai Corp.	Funai, Magnavox, Philips, Sanyo	3,857,248	854,626	854,626	0	508,163
Hisense USA	Hisense, Sharp	7,076,083	946,683	946,683	0	1,217,324
Hitachi America Ltd.	Hitachi	285,148	80,952	80,952	0	62,005
JVC Americas	JVC	243,577	7,740	7,740	0	5,631
LG Electronics	LG, Zenith, Goldstar, LG Signature	17,109,973	1,906,222	1,906,222	0	1,958,000
Naxa Electronics**	NAXA	421	83	83	0	39
Peerless Industries	Peerless-AV	2,578	0	0	0	0
PLR IP Holdings	Polaroid	97,481	57,638	57,638	0	35,468
Samsung Electronics	Samsung	38,865,642	4,241,162	4,241,162	0	3,880,752
Sceptre Inc.	oCosmo, Sceptre	241,987	22,512	22,512	0	39,141

<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 2020</b>
Seura Inc.**	Seura	1,436	0	0	0	2,010
Sony Electronics	Sony	4,429,365	775,610	775,610	0	532,060
Sunbrite TV	Sunbrite TV	121,639	8,201	8,201	0	39,178
TongFang Global**	Westinghouse	266,784	245,283	245,283	0	61,071
TTE Technology	TCL	*	965,111	965,111	0	*
VIZIO Inc.	VIZIO	*	830,623	830,623	0	*

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

\*\*4 manufacturers reported their 2019 data but have not yet completed registration for 2020

### **2019 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](#) >.