



SFR-99/22
March 2023

Program Report on Texas Recycles Computers and Texas Recycles Televisions

printed on
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External Relations Division

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



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

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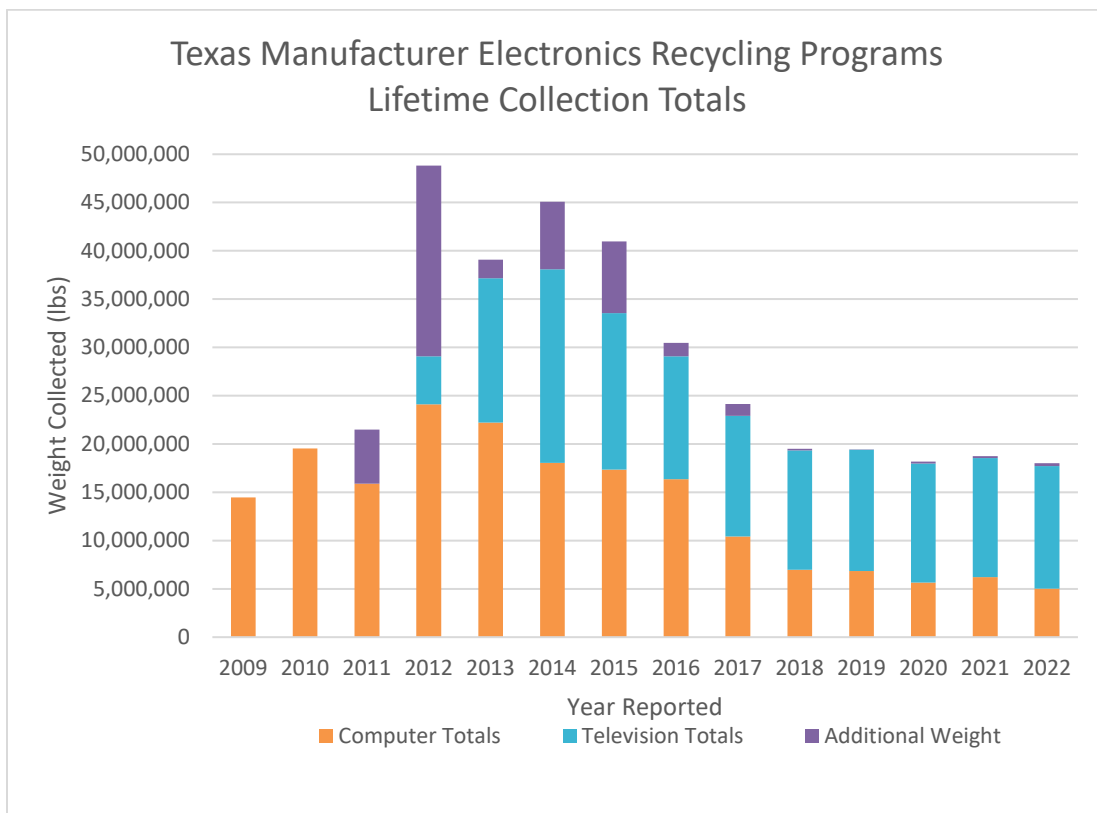
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Results from Manufacturers' Annual Reports

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 332,451,695 pounds of computers and televisions being collected, with 319,685,089 pounds of this being recycled and 68,328,441 pounds being reused. Computer manufacturers also collected an additional 45,135,530 pounds of electronics-related equipment over the lifetime of the program, bringing the total weight of electronics collected to 377,905,076 pounds. For the 2022 calendar year, the programs collected a total of 18,028,344 pounds, comprising 4,695,390 pounds of computers, 329,368 pounds of additional electronic equipment, and 12,685,736 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 2022, the total combined weight of computer equipment collected was 4,695,390 pounds. The total amount recycled was 4,665,158 pounds and the total amount reused was 28,002 pounds. Comparatively, the total weight of computer equipment

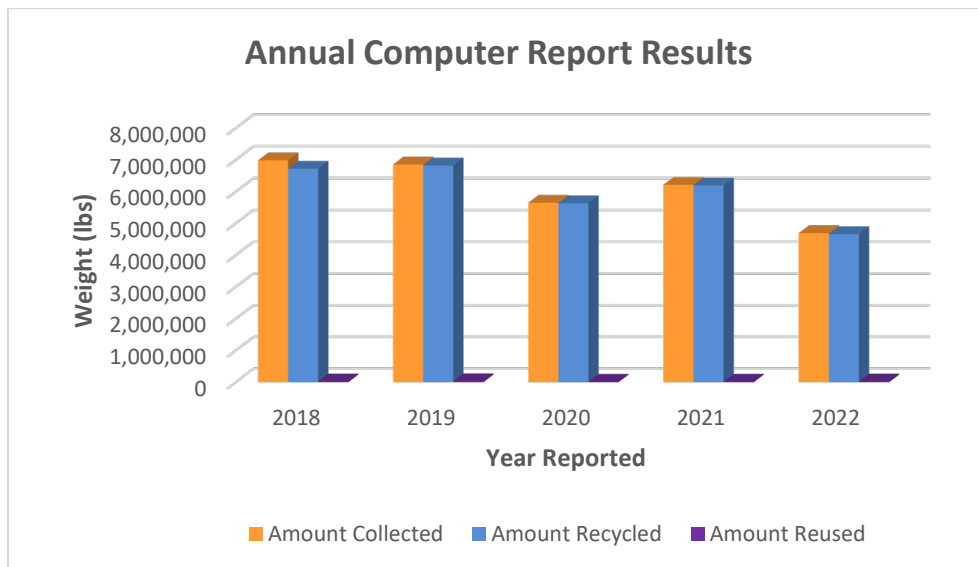
collected in 2021 was 6,217,727 pounds. Of that collected weight, 6,195,992 pounds were recycled, and 20,689 pounds were reused.

TCEQ allows computer manufacturers to report other electronics collected, in addition to the computer equipment covered under the program. Many computer manufacturers also voluntarily collect other electronics for recycling.

For 2022, manufacturers reported collecting 329,368 pounds of additional non-covered electronics. This number was higher than the 2021 voluntary collection amount of 176,937 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 rapid advancement of technology, electronics continue to become lighter and more compact. Manufacturers have reported lower total weight of materials collected year over year. A report published in October 2020 on behalf of the Journal of Industrial Ecology detailed that the total mass of electronic waste has been declining since 2015 with the phase-out of large legacy products like cathode-ray tube (CRT) televisions and computer monitors.¹ Additionally, the reuse market for computer equipment is healthy and less costly than hard to recycle devices such as televisions.

Appendix 1 lists amounts reported by each manufacturer for the 2022 calendar year.

Texas Recycles TVs Program

The weight of television equipment reported as having been collected in 2022 by participating manufacturers was 12,685,736 pounds. Of that collected weight, 12,685,736 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 21 manufacturers that participated in the program, all 21 reported their 2022 collection data and submitted registrations for 2023.

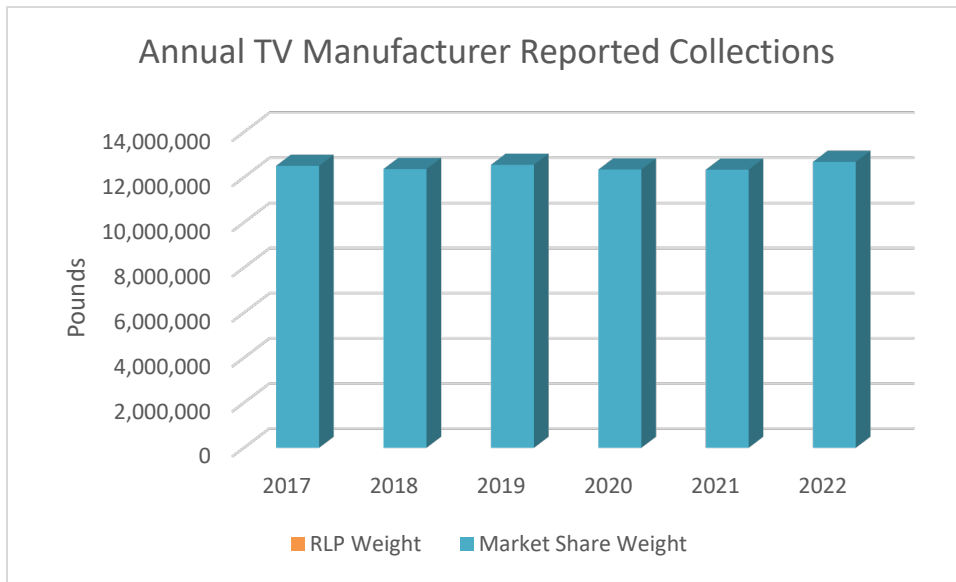
For the 2023 market share allocation, TCEQ calculated the recycling rate for the 21 reporting manufacturers to be 10.95%. Based on this recycling rate, manufacturers were provided their 2023 market share prior to Dec. 1, 2022. Manufacturers are required to collect at least their market share in 2023, 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. From 2017-2022, 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.

¹ Available at [Journal of Industrial Ecology: The evolution of consumer electronic waste in the United States.](#)

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 2022. Additionally, the individual market shares are provided. This data was submitted by manufacturers through February 2023. At the time of this report, 21 manufacturers representing 36 brands have submitted complete 2022 reports. 20 manufacturers submitted registration for their 2023 programs and one manufacturer submitted a new registration. One additional manufacturer representing one brand satisfied 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 2022, Texas TV recyclers received approximately 17.9 million pounds, recycled 17.4 million pounds, and disposed of zero pounds of television equipment. Additionally, one television recycler noted 7,574 pounds of wood casing was generated from projection TV manual breakdown, and was not further recycled by the recycler.

Appendix 1 – 2022 Computer Manufacturers’ Reported Amounts

Manufacturer Name	Brand Name(s)	Weight Collected (lbs)	Weight Recycled (lbs)	Weight Reused (lbs)
@Xi Computer Corp	@Xi Computer Xi Computer	0.0	0.0	0.0
Acer America Corporation	Acer View AOPEN Aspire eMachines Gateway GrandPad	500,540.0	500,540.0	0.0
Advanced PC Products Inc	Advanced PC Advanced PC Quasar	50.0	50.0	0.0
Altex Electronics Ltd	Altex Electronics	49,160.0	49,160.0	0.0
Amazon Fulfillment Services Inc	Kindle Fire	75,140.0	47,434.0	25,481.0
Apple Inc	Apple Next	21,645.0	21,645.0	0.0
ASUS Computer International	ASUS	180.0	180.0	0.0
Avinext	Avinext MicroAge SuperMicro	5,985.0	5,985.0	0.0
Azpen Innovation Inc	Azpen	9.0	0.0	9.0
Barnes & Noble	Barnes & Noble NOOK by Barnes & Noble	4.4	4.4	0.0
Bass Computers	Bass Computers, Inc.	0.0	0.0	0.0
BenQ American Corp	BenQ	8.4	8.4	0.0
Computer Shak Inc	Computer Shak, Inc.	6,000.0	5,000.0	1,000.0
CTL Inc	CTL	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	1,140,340.0	1,140,340.0	0.0
DP Audio	Core Innovations	0.0	0.0	0.0

Manufacturer Name	Brand Name(s)	Weight Collected (lbs)	Weight Recycled (lbs)	Weight Reused (lbs)
DPI Inc	Zeki	0.0	0.0	0.0
Durabook Americas	Durabook	0.0	0.0	0.0
Dynabook Americas Inc	dynabook Portege dynabook TECRA Toshiba	0.0	0.0	0.0
ECP Computers & More	ECP Computers	0.0	0.0	0.0
Element TV Company LP	Element	0.0	0.0	0.0
Elo Touch Solutions Inc	Elo	0.0	0.0	0.0
Envision Peripherals Inc	AOC	0.0	0.0	0.0
Equus Computer Systems Inc	Mirus Nobilis Nobleview VitaMobility	0.0	0.0	0.0
Fujitsu Computers Systems Corporation	Fujitsu Fujitsu-Siemens	0.0	0.0	0.0
Google Inc	Chromebook Pixel Google Chromebook Pixel C Tablet Project Tango Tablet	98.0	98.0	0.0
Hewlett Packard Company	Apollo Computer Compaq Digital Equipment Corporation (DEC) Hewlet-Packard VooDoo PC	2,650,000.0	2,650,000.0	0.0
HMD America, Inc.	Nokia	0.0	0.0	0.0
Hyundai Technology Group Inc	Hyundai Technology	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

Manufacturer Name	Brand Name(s)	Weight Collected (lbs)	Weight Recycled (lbs)	Weight Reused (lbs)
Intel	Intel Compute Stick Intel NUC	0.0	0.0	0.0
International Business Machines	IBM	0.0	0.0	0.0
International Products Sourcing Group	Powerspec Winbook	33,357.0	33,357.0	0.0
Komputer + Peripherals Inc	Komputer+	2,044.0	1,544.0	500.0
Kyocera International, Inc.	Kyocera	0.0	0.0	0.0
Lenovo (United States) Inc	Lenovo Medion	274.0	274.0	0.0
LG Electronics USA Inc	Goldstar LG LG Signature Zenith	205,265.0	205,265.0	0.0
LINSAY	LINSAY	17.0	0.0	12.0
Maverick Computer Services	Maverick Computer Services	0.0	0.0	0.0
Meta Platforms Technologies	Portal	0.0	0.0	0.0
Microsoft Corporation	Microsoft	61.0	61.0	0.0
MSI Computer Corp	MSI	4.6	4.6	0.0
Naxa Electronics	Naxa	0.0	0.0	0.0
NVIDIA Corp	Shield Portable Shield Tablet	0.0	0.0	0.0
OnePlus	OnePlus	0.0	0.0	0.0
Oracle	Oracle MICROS	0.0	0.0	0.0
Panasonic Corp of North America	Panasonic	6.9	6.9	0.0
Planar Systems Inc	Planar	0.0	0.0	0.0
Premio, Inc.	Premio	0.0	0.0	0.0
Razer	Razer	0.0	0.0	0.0

Manufacturer Name	Brand Name(s)	Weight Collected (lbs)	Weight Recycled (lbs)	Weight Reused (lbs)
Russell Distribution Company LLC	EPIK EVOO	0.0	0.0	0.0
Samsung Electronics Co	Samsung Samsung Galaxy Tab 4 Nook Samtron Syncmaster	806.4	806.4	0.0
SCEPTRE Inc	SCEPTRE	800.0	800.0	0.0
Seneca Data Distributors	Nexlink	0.0	0.0	0.0
Sharp NEC Display Solutions of America, Inc.	NEC NEC AccuSync NEC MultiSync	0.0	0.0	0.0
Shuttle Computer Group Inc	Shuttle Computer Group Inc	0.0	0.0	0.0
Sony Electronics, Inc.	Sony	30.0	30.0	0.0
TCT Mobile (US) Inc	Alcatel Alcatel One Touch TCL	0.0	0.0	0.0
Trans Cosmos America Inc	VAIO	0.0	0.0	0.0
ViewSonic Corporation	Cybervision Optiquist Utobia ViewSonic	43.0	43.0	0.0
Vtech Electronics North America LLC	LeapFrog Vtech	0.0	0.0	0.0
Wacom Technology Inc	Wacom	0.0	0.0	0.0
Walmart Inc	Motile Onn	21.0	21.0	0.0
Westgate Computers	Westgate Computers	3,500.0	2,500.0	1,000.0
Westinghouse Electronics USA, Inc.	Westinghouse	0.0	0.0	0.0
Wintec Industries Inc	FileMate	0.0	0.0	0.0

Appendix 2 - 2022 TV Manufacturers' Reported Amounts and 2023 Market Share

Manufacturer	Brands	Sold (lbs)	Collected (lbs)	Recycled (lbs)	Reused (lbs)	Market Share (lbs) Assigned for 2023
Amazon	Amazon Fire TV	**	0	0	0	**
Best Buy	Insignia, Toshiba, Pioneer	71,322,745	750,033	750,033	0	952,542
Curtis International	ProScan, RCA	711,148	9,662	9,662	0	6,921
DPI Inc.	GPX, iLive, Memorex, WeatherX	3,493*	1,223	1,223	0	977
Element TV Company	Element	8,191,089	78,851	78,851	0	85,203
EliteLux Technologies	Sansui	521,022	5,662	5,662	0	8,400
Funai Corp.	Funai, Magnavox, Phillips, Sanyo	26,410,526	266,311	266,311	0	178,316
Hisense USA	Hisense, Toshiba	123,210,765	1,021,406	1,021,406	0	1,144,269
JVC Americas	JVC	667,279	59,742	59,742		44,525
LG Electronics	LG, Zenith, Goldstar, LG Signature	206,418,684.21	2,055,310	2,055,310	0	2,549,584
Naxa	Naxa	4,040	35	35	0	20
Peerless Industries	Peerless-AV	16,444*	278	278	0	253
Samsung Electronics	Samsung	403,987,089	4,723,966	4,723,966	0	3,931,131
Sceptre Inc.	Komodo, oCosmo, Sceptre,	1,612,803	23,187	23,187	0	17,717

Manufacturer	Brands	Sold (lbs)	Collected (lbs)	Recycled (lbs)	Reused (lbs)	Market Share (lbs) Assigned for 2023
Skyworth USA	Skyworth	1,363,119	0	0	0	0
Sony Electronics	Sony	68,681,612	661,786	661,786	0	816,162
Sunbrite TV	Sunbrite TV	87,999	14,357	14,357	0	73,204
TongFang Global, Inc	Westinghouse	3,995,102	122,598	122,598	0	45,036
TTE Technology	TCL	**	1,429,557	1,429,557	0	**
VIZIO Inc.	VIZIO	**	1,350,464	1,350,464	0	**
Walmart Inc.	Onn	67,450,434	111,308	111,308	0	94,656

*In accordance with [30 TAC, §328.171](#)², manufacturers may report weight sold in Texas or nationally. This manufacturer reported weight sold in Texas.

**Some manufacturers have marked their sales data as confidential and proprietary, in accordance with [30 TAC §328.189](#)³.

2022 TV Manufacturers Participating under the Texas Recycles Computers Program

Manufacturer	Brands
Viewsonic Corporation	Viewsonic

² Available at [30 TAC, §328.171](#)

³ Available at [30 TAC, §328.189](#)