



Indiana E-Cycle 2024 Report

Indiana Department of Environmental Management

Executive Summary

Indiana's Electronic Waste (E-Waste) Law (IC 13-20.5) has assisted in the recycling of over 400 million pounds of electronics while expanding electronic collection access for Indiana residents. E-waste continues to be one of the fastest growing waste streams worldwide. Indiana is currently one of 25 states (including the District of Columbia) with e-waste legislation.

This report examines the last fourteen years of the program and provides the required annual information mandated by the Indiana legislature. For example, highlighting Program Year 14 (PY14), which is calendar year 2023, manufacturers collectively funded the recycling of 18,569,252 pounds of covered electronic devices (CEDs). The vast majority of CED's are collected from metropolitan counties in the state, as opposed to non-metropolitan counties.

An analysis of the past thirteen years of the Indiana E-Cycle Program reveals that manufacturers collectively met their annual recycling obligations after the inclusion of recycling credits. To date, a total of 260,860,403 pounds of CEDs (actual pounds without incentives) from Hoosier households, small businesses, and public schools were recycled on behalf of manufacturers to fulfill program recycling obligations. Households, small businesses, and public schools in Indiana are known as covered entities.

Since the implementation of the Indiana e-waste law, the nature of electronics being sold have changed significantly. Due to the increase of smaller and lighter electronic devices, the total weight-based recycling obligations for manufacturers has declined since the program's inception. Demand, however, for the collection and recycling of e-

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waste in the state has not decreased, and the cost to collect this material by e-waste collectors is increasing. Collection of cathode ray tube devices (older non-solid state televisions) are especially burdensome, with dwindling markets, lower commodity prices, and increased costs for recyclers, which are usually passed down to collectors.

Introduction

The Indiana E-Waste Law created an extended producer responsibility (EPR) program, known as Indiana E-Cycle, where manufacturers of video display devices (VDDs) are required to collect and recycle e-waste from covered entities (households, small businesses, and public schools) in Indiana. The law requires that VDD manufacturers offering their products for sale to Indiana households annually register with, and report to, IDEM. Each year these manufacturers are required to collect and recycle 60 percent, by weight, of the VDDs they sold to Indiana households during the previous twelve months. They can collect and recycle a broader range of products of any brand, known as CEDs, to fulfill their obligation.

All collectors and recyclers that collect and recycle CEDs on behalf of a registered manufacturer must also register and report to IDEM annually. If collectors and recyclers do not register with the program, CEDs collected and recycled cannot be credited toward a manufacturer's recycling obligation.

As of January 1, 2011, the law also prohibits covered entities from disposing of CEDs with trash that is intended for disposal at a landfill or by burning or incineration.

Program Successes

Since 2009, Indiana households, schools, and small businesses have recycled over 400 million pounds of electronics. More electronic waste collection options are now available to citizens as well, which allows for better access to recycle unwanted electronic items. As shown in **Figure 4** on page seven, electronic waste collection sites can now be found at 88 of Indiana's 92 counties. Orange county is the latest county within the state to add a collection site.

The vast majority of manufacturers, recyclers, and collectors continue to comply with Indiana's E-Waste Law, and the program has taken actions to ensure a level playing

Covered Electronic Devices (CEDs):

- VDDs (televisions or computer monitors, including laptops, netbooks, notebooks, tablets, and e-readers, that contain a cathode ray tube or flat panel screen with a screen size that is greater than four inches measured diagonally)
- Computers (e.g., computer towers)
- Fax machines
- Peripherals including keyboards, external hard drives, printers, and mice
- An all-in-one printer/copier/scanner or a projector can be considered a peripheral provided that item is designed to be used exclusively with a computer
- DVD players (including gaming systems that are able to play DVDs)
- Video cassette recorders
- Digital photo frames
- Digital media players
- MP3 players
- Camcorders/Cameras
- DVR devices
- Portable GPS navigation systems

field for all program participants. During the previous year, several small manufacturers registered with the Indiana E-Cycle for the first time, thanks in part to compliance efforts by IDEM and electronics retailers. The program has also increased education and outreach along with compliance measures to ensure collectors and recyclers are properly handling electronics.

Legislative Requirements

This report fulfills the requirements contained in IC 13-20.5-7-4. IDEM must submit a report concerning the implementation of the Indiana E-Waste Law to the general assembly, the governor, the Interim Study Committee on Environmental Affairs, and the Indiana Recycling Market Development Board before November 1.

Recycler: An individual or a public or private entity that accepts CEDs from covered entities and collectors for the purpose of recycling.

Household: Occupants of a dwelling located in Indiana who use a VDD at the dwelling primarily for personal use or home office use.

Small Business: A business that satisfies all of the following:

- The business is independently owned and operated.
- The principal office of the business is located in Indiana.
- The business satisfies either of the following:
 - Has less than 100 employees and average annual gross receipts is under \$10,000,000.

Public School: A K-12 public school or charter school.

Required content includes:

- A summary of information in the annual reports submitted by manufacturers and recyclers.
- Information regarding the total weight of CEDs recycled.
- The various collection programs used by manufacturers to collect CEDs.
- Information regarding CEDs that are being collected by persons other than registered manufacturers, collectors, and recyclers.
- Information about CEDs, if any, being disposed of in landfills in Indiana.
- A description of enforcement actions under the Indiana E-Waste Law.

Program Participation

Registration is required for manufacturers that sell VDDs (televisions, computer monitors, laptops, netbooks, notebooks, tablet computers, and e-readers) to Indiana households. While the number of registered manufacturers and brands remained relatively unchanged from PY13, companies registered with the program has varied as new manufacturers entered and others have left the market, and mergers and acquisitions have occurred. As shown in **Figure 1**, a total of 65 manufacturers registered with the Indiana E-Cycle Program for PY14. These 65 manufacturers accounted for 87 different brands of devices that are being sold to

Previous Program Results

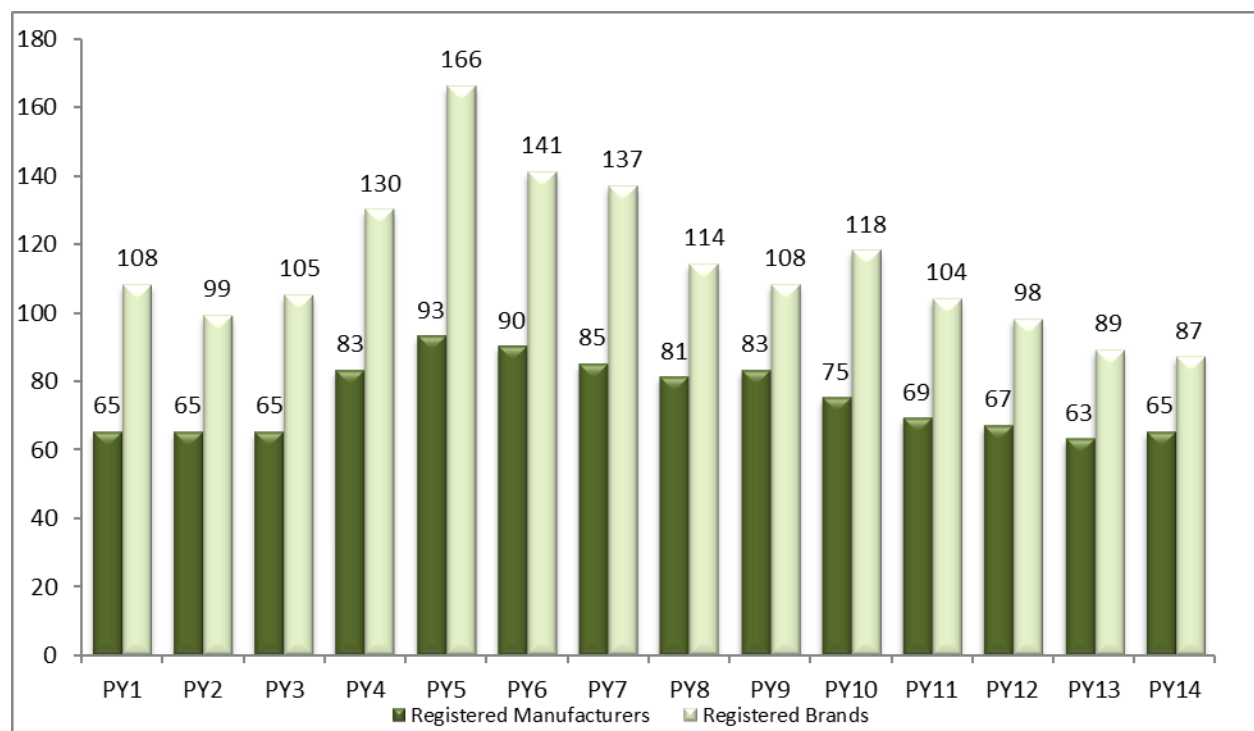
Find earlier Indiana E-Cycle annual reports and program results at:
<https://www.in.gov/idem/recycle/2428.htm>

Indiana households. Fewer manufacturers and brands registered with the program in PY14 when compared to previous years. The decrease can be attributed to several manufacturers ceasing both operations and sales of VDDs within the past year.

IDEM routinely conducts research to determine which companies selling VDDs to Indiana households have not registered with the program. These manufacturers are contacted and informed of the registration requirement and are provided with instructions on how to register with the program.

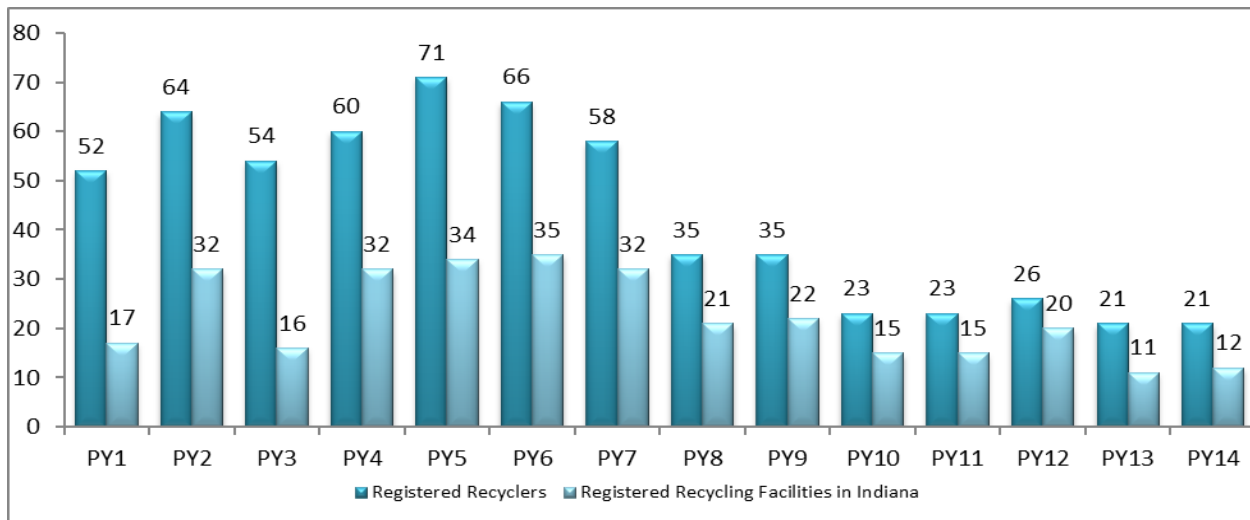
Manufacturers that have sold more than 100 units of VDDs to Indiana households during the previous year are required to pay a \$5,000 registration fee for the first program year they register and a \$2,500 registration fee each year thereafter for which their sales were above the 100-unit threshold.

Figure 1: Registered Manufacturers and Brands



All CED recyclers in Indiana must be registered with the Indiana E-Cycle Program. The term recycler includes any recycling program (in Indiana or elsewhere) in which CEDs are recycled from covered entities (households, small businesses, and public schools). For each program year, the majority of registered recyclers have also been registered collectors. For PY14, of the 21 registered recyclers, 12 of them are located in Indiana. The decrease in the number of registered recycler facilities in years past is likely due to better quality assurance and understanding which facilities need to register with the program. Through outreach and research, it had become apparent that several recycler facilities had incorrectly been registering with the program.

Figure 2: Registered Recyclers and Registered Recycling Facilities in Indiana



All CED collectors from Indiana must be registered with the Indiana E-Cycle Program.

Collectors can include local units of government,

solid waste management districts, curbside collection programs, manufacturer mail back programs, and any other collection program (in Indiana or elsewhere) in which CEDs are collected from covered entities (households, small businesses, and public schools in Indiana). As shown in **Figure 3**, the number of registered collectors for PY14 decreased from PY13. Collectors are not allowed to perform any dismantling of CEDs. Dismantling of CEDs requires registration as a recycler. Most registered recyclers are also registered as collectors; however, most collectors are not also recyclers.

Collector: a public or private entity that:

- receives CEDs from covered entities and arranges for the delivery of the CEDs to a recycler; or,
- collects CEDs directly from covered entities, including curbside collection.

Figure 3: Registered Collectors

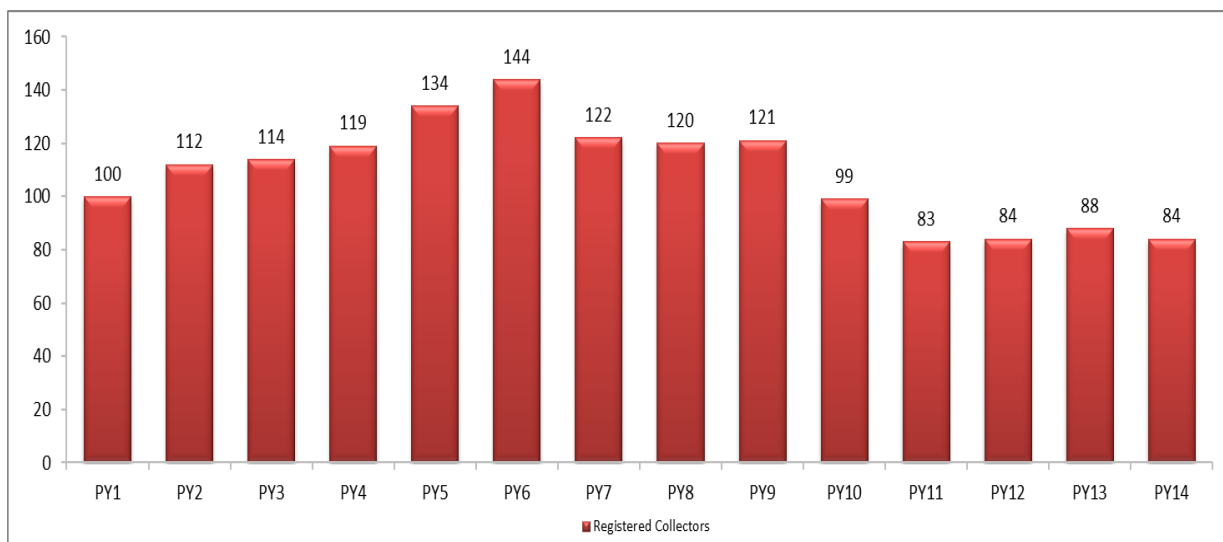


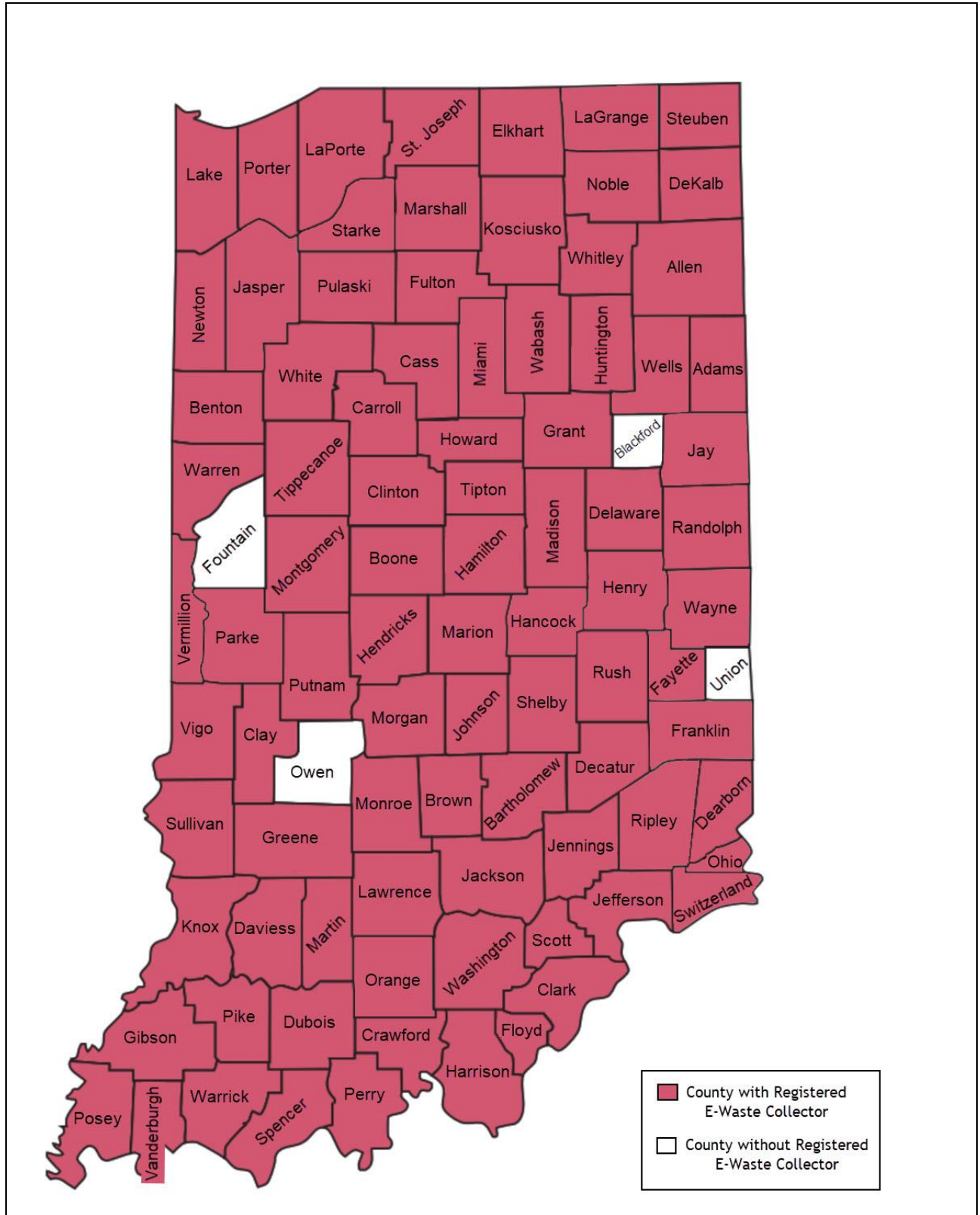
Figure 4 below displays counties with and without an e-waste collection site. Registered collectors and their collection sites include local governments, electronics retailers, other for-profit businesses and non-profits. In PY14, there were registered e-waste collection sites in 88 of Indiana's 92 counties. These collection sites include all registered permanent collection locations in the state and some, but not all, temporary and special collection events.

Indiana residents benefited from having collectors scattered throughout the state. This has allowed for more options to residents when it comes to recycling their unwanted electronic devices. One example that demonstrates this benefit is the Lake County Solid Waste Management District. This district offers citizens residing in the county with eight different electronic waste collection sites. Many of Indiana's solid waste management districts offer electronics recycling programs for residents in their area and are knowledgeable about local electronics recycling options.

Aside from permanent electronic collection sites, citizens benefited from being able to participate in one day electronic collection events, which are often hosted throughout the state. These events are often hosted by county Solid Waste Management Districts.

Indiana's program will continue to focus on assisting counties with the collection of e-waste. A special emphasis will be placed on the four counties that do not have an e-waste collection site.

Figure 4: Indiana Counties with Registered Collection Sites for PY14



Manufacturer and Recycler Annual Report Summaries (Including Total Weight of CEDs Recycled)

Manufacturers of VDDs (televisions, computer monitors, laptops, netbooks, notebooks, tablet computers, and e-readers that contain a cathode ray tube or flat panel screen with a screen size that is greater than four inches measured diagonally) are responsible for collecting and recycling or arranging for the collection and recycling of 60 percent, by weight, of the VDDs they manufacture and sell to Indiana households. Manufacturers are able to count the recycling of a variety of CEDs from covered entities toward their recycling obligation.

A 50 percent incentive is earned for collecting CEDs from non-metropolitan counties in the state and a 10 percent incentive is earned for recycling CEDs at a registered facility in Indiana. These incentives can be combined; for example, each pound of CED collected from a non-metropolitan county and recycled at an in-state recycling facility is counted as 1.6 pounds recycled. Manufacturers can only utilize collectors and recyclers that are registered with the Indiana E-Cycle Program to fulfill their recycling obligation. This includes collectors and recyclers located outside of Indiana as well as manufacturer mail back programs. **Figures 5, 6, and 7** show how many pounds of CEDs were recycled by manufacturers registered in PY14 and the previous program years in which annual reports were submitted.

Figure 5: Covered Electronic Devices Recycled by Registered Manufacturers (lbs)

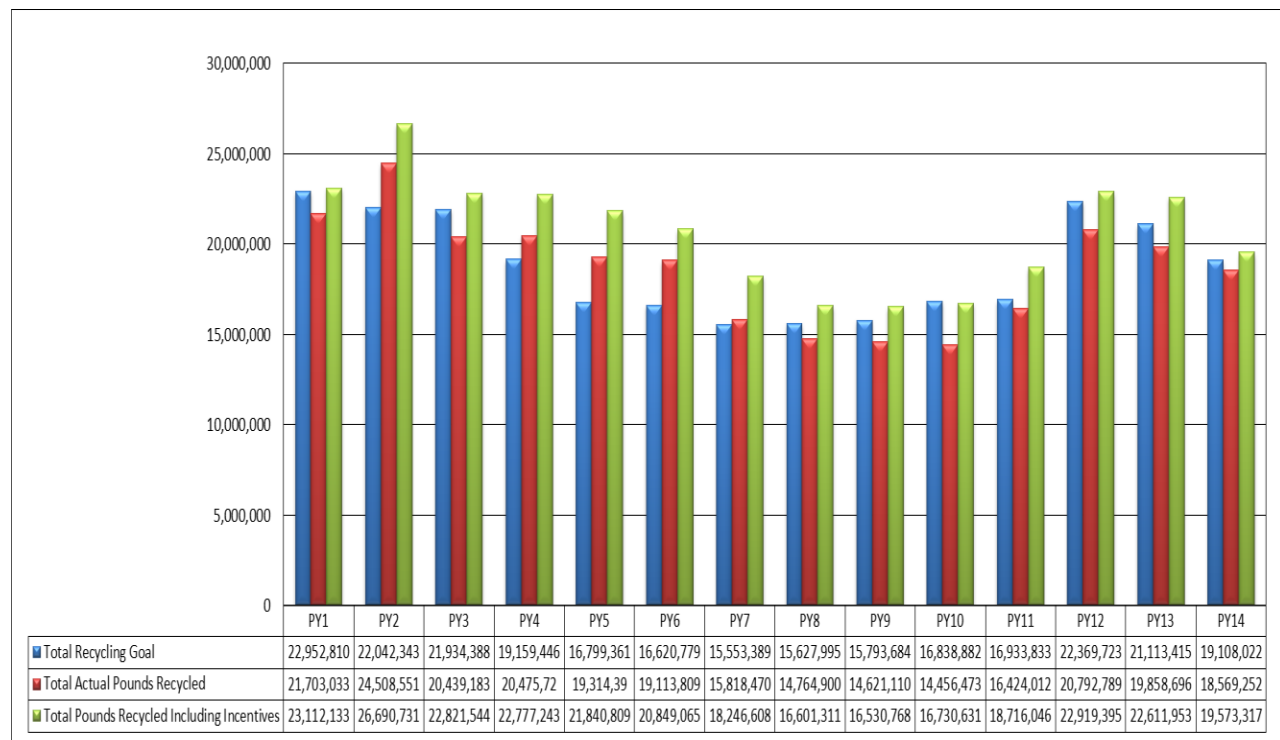


Figure 6: Covered Electronic Devices Recycled by Registered Manufacturers (lbs)

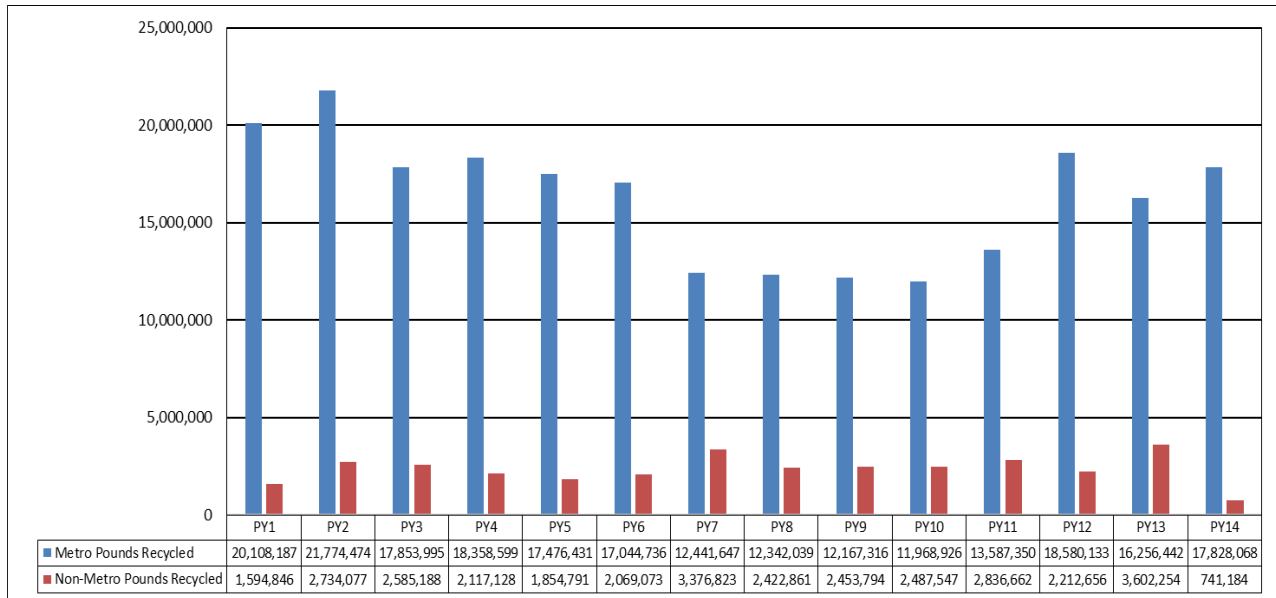
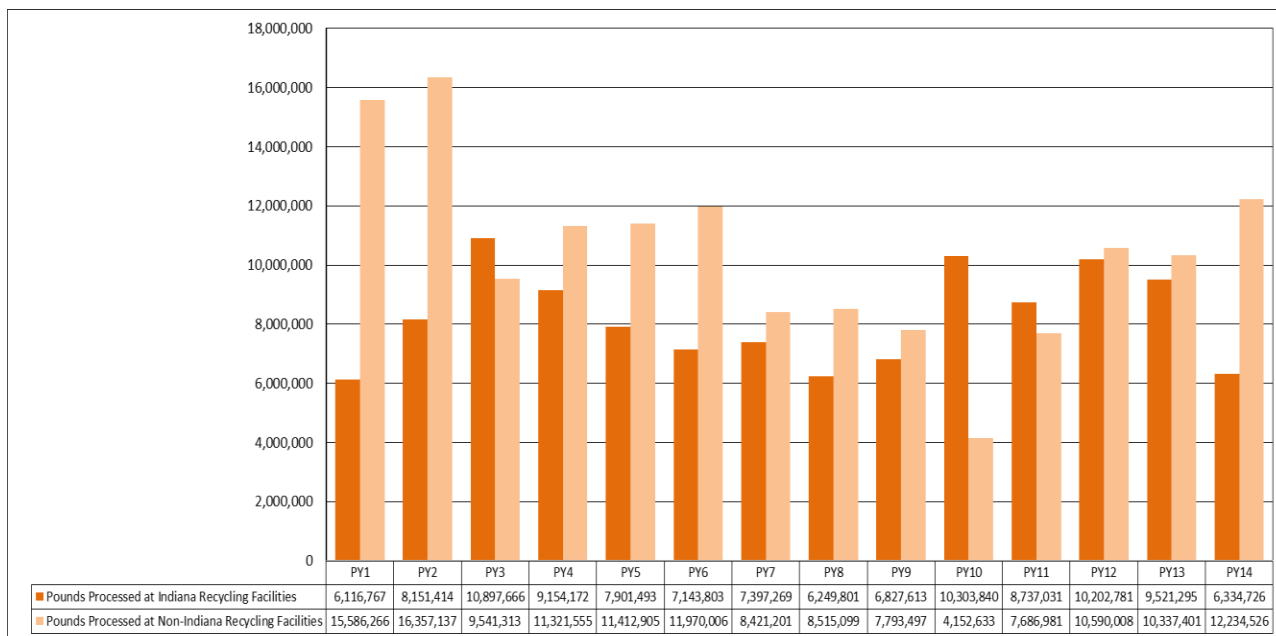


Figure 7: Covered Electronic Devices Recycled by Registered Manufacturers: Details (lbs)



Figures 8, 9, and 10 show how many pounds of CEDs were recycled by recyclers registered in PY14 and the previous program years in which annual reports were submitted. There continues to be more e-waste being recycled than what registered manufacturers are responsible for recycling. For PY14, there was a slight decrease in actual pounds recycled by registered recyclers.

Figure 8: Covered Electronic Devices Recycled by Registered Recyclers (lbs)

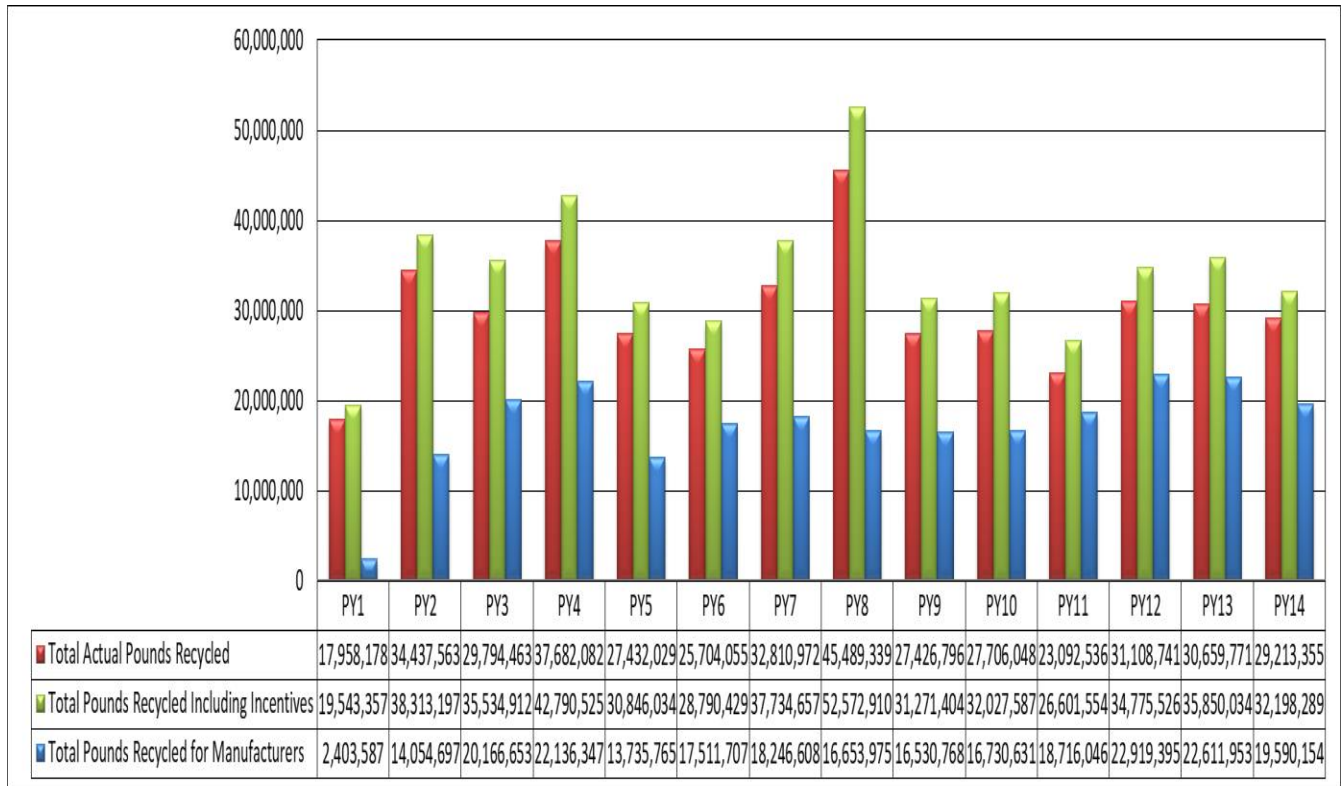


Figure 9: Covered Electronic Devices Recycled by Registered Recyclers: Details (lbs)

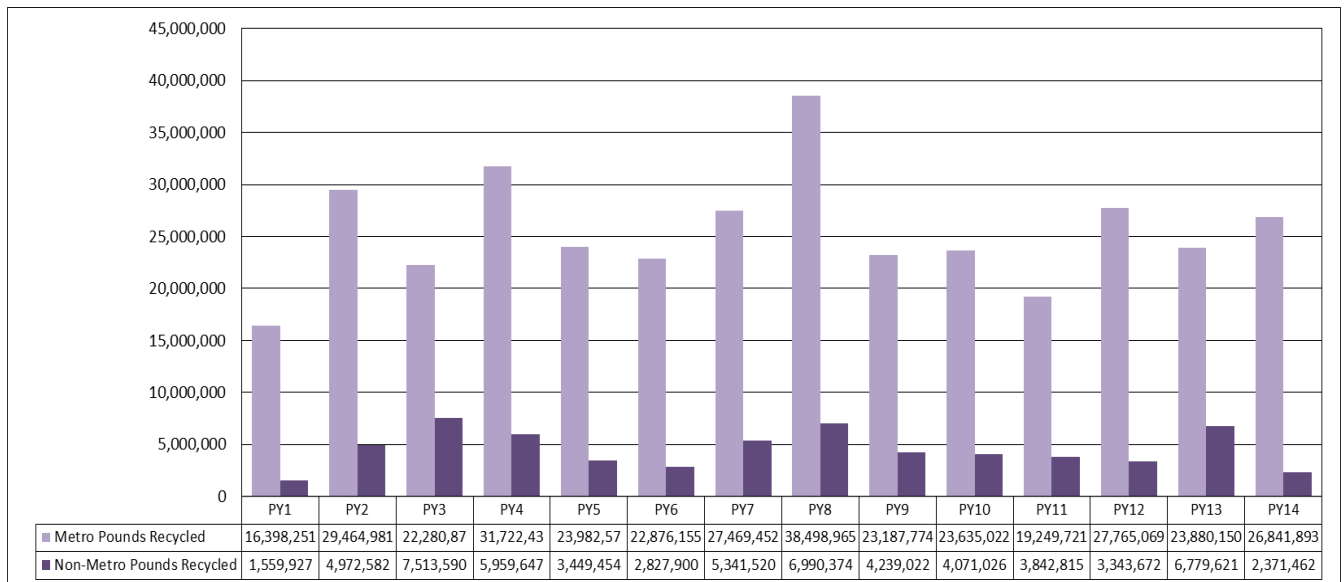
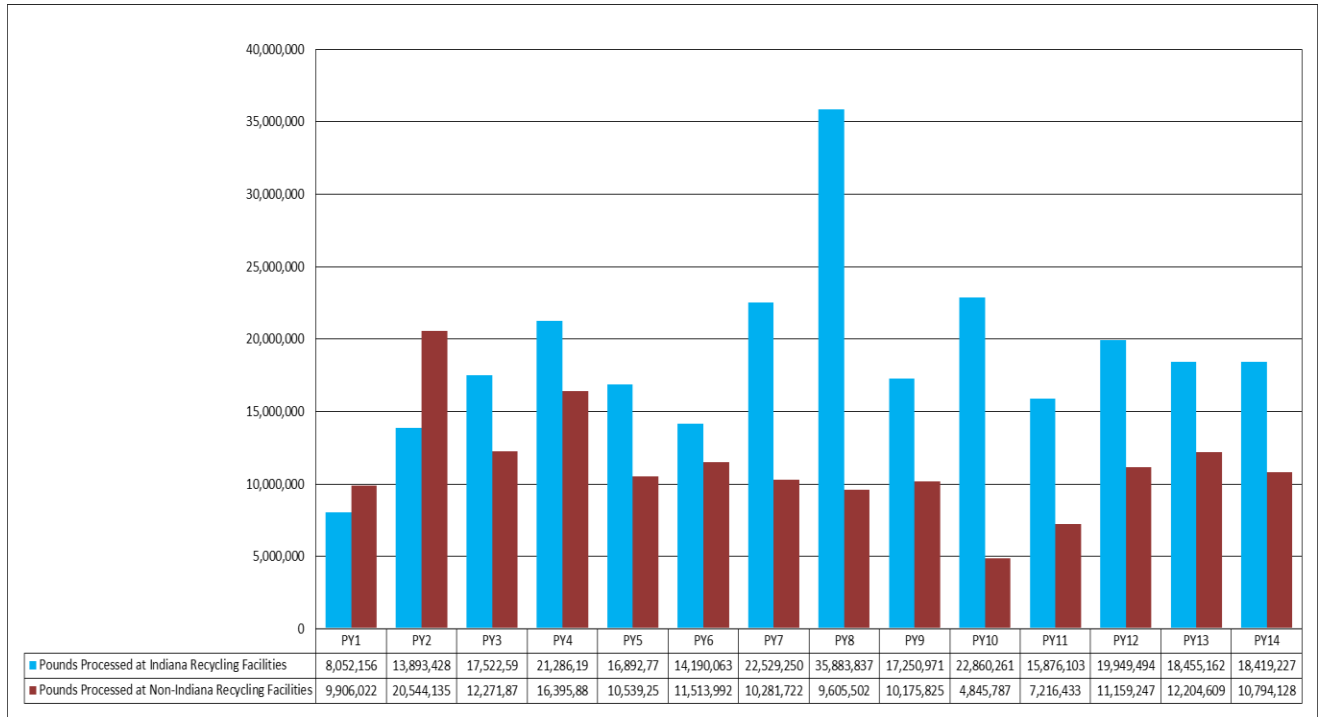


Figure 10: Covered Electronic Devices Recycled by Registered Recyclers: Details (lbs)



Based on the reporting trends, the demand for CED recycling in Indiana will continue to exceed the amount of CEDs that manufacturers are responsible for recycling given that new VDDs are becoming lighter than older CEDs. In addition, the list of items that meet the definition of CED is more extensive than the list of items that are defined as VDDs. Lastly, manufacturers’ recycling obligations are based solely on their sales of VDDs to households, while CEDs collected to meet their recycling obligations can come from households, small businesses, and public schools.

The results of Indiana E-Cycle in terms of pounds of e-waste recycled by manufacturer per resident are as follows:

	<u>Lbs/Capita (Actual Pounds)</u>	<u>Lbs/Capita (Including Incentives)</u>
PY1	3.35	3.56
PY2	3.78	4.12
PY3	3.13	3.49
PY4	3.12	3.47
PY5	2.93	3.31
PY6	2.89	3.15
PY7	2.38	2.75
PY8	2.21	2.49
PY9	2.18	2.47
PY10	2.15	2.49
PY11	2.42	2.86
PY12	3.16	3.47
PY13	2.91	3.31
PY14	2.74	2.89

If a manufacturer exceeds their recycling obligation, 25 percent of the excess pounds are converted to recycling credits that can be used by the manufacturer in any of the three immediately following program years or sold to another manufacturer.

Manufacturer credit details are as follows:

	<u>Credits Earned</u>	<u>Credits Bought/Sold</u>	<u>Credits Used</u>	<u>Credits Expired</u>	<u>Credits Retained</u>	<u>Manufacturers Holding Credits</u>
PY1	1,074,733	0	n/a	n/a	1,074,733	18
PY2	1,623,705	0	19,253	n/a	2,653,837	23
PY3	555,630	0	116,758	n/a	3,090,762	26
PY4	967,292	87,256	104,592	809,875	3,039,188	37
PY5	1,174,168	246,957	808,867	586,136	2,579,219	29
PY6	1,057,072	0	128,070	465,811	3,024,254	25
PY7	673,305	179,919	65,531	698,386	3,170,225	24
PY8	336,481	0	307,559	1,000,579	2,196,005	30
PY9	217,427	0	114,386	1,084,328	1,214,661	29
PY10	126,524	432,805	588,500	254,953	497,465	27

PY11	185,571	0	28,163	278,714	516,820	22
PY12	154,544	25,356	7,774	203,779	433,769	20
PY13	392,717	0	70,874	117,065	638,538	25
PY14	139,384	8,592	18,662	102,717	655,220	27

Various Collection Programs Used by Manufacturers to Collect CEDs

Manufacturers registered with the Indiana E-Cycle Program utilize three types of collection programs to fulfill their recycling obligations:

1. Permanent collection sites
2. Temporary/special collection events
3. Manufacturer take-back programs

Multistate Collaboration

The Indiana E-Cycle Law permits IDEM to participate in and join regional multistate organizations or compacts to assist in implementation of e-waste collection efforts. IDEM participates in regular conference calls with other Midwestern states, which are coordinated by the United States Environmental Protection Agency Region 5 office. The majority of the states that participate in the calls also have e-waste laws, most notably, Minnesota and Wisconsin, which have laws comparable to Indiana's. The information shared and the coordination achieved on these calls is valuable in assisting with the implementation of Indiana's law.

Description of Enforcement Actions Under the Indiana E-Waste Law

Manufacturers that do not meet their recycling obligation are subject to a shortfall fee, or a variable recycling fee (VRF). The VRF is calculated as follows:

- Forty cents per pound of shortfall for manufacturers that recycle less than 50 percent of their goal.
- Thirty cents per pound of shortfall for manufacturers that recycle at least 50 percent, but less than 90 percent, of their goal.
- Twenty cents per pound of shortfall for manufacturers that recycle at least 90 percent of their goal.

One manufacturer was required to pay a shortfall fee for PY13, resulting in a fee of \$106.00 for a total shortfall of 265 pounds. For PY14, one manufacturer will be required to pay a shortfall fee for a total amount of \$131.60.

Manufacturers that were exempt from the registration fee for PY14, because they sold less than 100 units of VDDs to households during PY13, are exempt from the VRF.

There have not been any enforcement actions under the Indiana E-Waste Law.

Retailer Education and Compliance

Throughout the state of Indiana, there are numerous brands of VDDs being sold through various retailer options. As mentioned above, there were 87 various brands of VDDs that registered with the program this past year. In an effort to better educate and inform retailers of manufacturer compliance requirements with Indiana's E-Cycle Law, the department conducts "brand checks" on retailers that might be selling unregistered VDDs to Indiana households.

IDEM has developed a retailer toolkit to assist retailers in complying with the Indiana E-Waste Law. This retailer toolkit can be found by visiting the following website: https://www.in.gov/idem/recycle/files/e-cycle_retailer_toolkit.pdf. Retailers are responsible for knowing which brands of VDDs are registered with the Indiana E-Cycle Program. Retailers that sell new VDDs to households must provide customers information that describes where and how VDDs may be recycled and that advises of opportunities and locations for the convenient collection of VDDs for recycling. Retailers can comply with this regulation by providing IDEM's contact information or website address to customers. The department has had success in having brands register with the program after contacting retailers.

Annual Government Center Collection Event

For several years, the Indiana E-Cycle Program has partnered with Technology Recyclers to host electronic waste collection events at the Indiana Government Center.

This year's event marked the sixth consecutive year that an electronic waste collection event was held at the Indiana

Government Center. The collection event was held on April 17, 2024 and netted over 10,000 pounds of electronics. The collection event was advertised as a state employee only event this year. The events have been well attended, and often, state employees are eager for the next one to occur.



Electronic Waste Collection Event at Indiana Government Center

With such strong support for e-waste collection events, the Indiana E-Cycle Program has begun to engage communities across the state with the idea of hosting similar collection events, especially in rural areas or counties without a registered e-waste collector. Results and discussion of this initiative is discussed below.

Program-Sponsored E-Waste Collection Events

With the growing amount of e-waste, coupled with increasing disposal cost, the Indiana E-Cycle Program recognized the need to assist. After internal and external discussion with various stakeholders, an e-waste collection pilot program was launched in late 2022.

The idea of the pilot program was that IDEM, and specifically the Indiana E-Cycle Program, would organize and fund e-waste collection events in



E-Waste Collection Event Signage

communities across the state of Indiana. All types of e-waste (e.g. televisions, computer monitors, tablets, etc.) are accepted during the collection events free of charge. A special emphasis has been placed on the collection of televisions during the events as most collectors charge a fee to accept and recycle televisions and monitors. This in large part relates to concerns from collectors over the collection costs associated with televisions, especially cathode ray tube televisions.

Criteria as to where these events would be held focused primarily on access to e-waste collection opportunities and socio-economic status of the county itself. To date, two e-waste collection events have taken place. Below is a summary of these two events.

Jackson County E-Waste Collection Event

IDEM hosted its first ever e-waste collection event along with Technology Recyclers, Cummins, and the Jackson County Solid Waste Management District. The event was held on Saturday, November 5, 2022 from 9am – 12pm at the Cummins Engine Plant in Seymour, Indiana. The results of the event were:

- Total Weight Collected: **62,752 Pounds**
- Number of Vehicles: **380**
- Number of TVs/Monitors Collected: **895**

The Jackson County collection event was overall a success. This success can be attributed to the hard work of the volunteers, as well as Technology Recyclers and their staff. Collecting over 60,000 pounds of e-waste material from a smaller rural Indiana County in Indiana further highlights the need for future events.

The event was also a learning experience for IDEM. Management of traffic flow and number of staff on hand to manage material brought to the event were two of the bigger takeaways. These two aspects were addressed, and a strong emphasis was placed on them for future events, which proved to be beneficial with the below mentioned Sullivan County collection event.

Sullivan County E-Waste Collection Event

IDEM partnered with ERI, Sullivan County School Corporation, and the Sullivan County Solid Waste Management District to host an electronic waste collection event. The event was held on Saturday, July 29, 2023 from 9am – 12pm at the Sullivan County High School. The results of the event were:



Staff directing and collecting electronics during Sullivan County E-Waste event

- Total Weight Collected: **42,077 Pounds**
- Number of Vehicles: **264**
- Number of TVs/Monitors Collected: **872**

The Sullivan County collection event was a success. This success can be attributed to the hard work of the volunteers, as well as ERI and Secure Shreds staff on hand. Collecting over 40,000 pounds of e-waste material from a small rural Indiana County over the course of three hours further highlights the need for future events.

E-Waste Collection Events Comparison

Both the Sullivan and Jackson County collection events took place on Saturdays, from 9am – 12pm local time. Below is statical data from counties and a comparison of the two events:

- Jackson County Population: 46,428
- Sullivan County Population: 20,758
 - Total Weight Collected: Sullivan (42,077 lbs.) vs. Jackson (62,752 lbs.)
 - Number of Vehicles: Sullivan (264) vs. Jackson (380)
 - Number of TVs/Monitors Collected: Sullivan (872) vs. Jackson (895)

The amount of e-waste collected and overall participation at both the Jackson and Sullivan County e-waste collection events showcased the need to continue these events in the future. IDEM is currently identifying potential locations for its next e-waste collection event.

Program Outreach

Program outreach was made a priority this past program year in an effort to better educate and provide educational information to citizens and Indiana E-Cycle participants on the program. These efforts included visiting and providing educational materials to solid waste management districts, local recyclers, collectors, and at various events hosted across the state of Indiana.



IDEM staff providing outreach during a community event

The Indiana E-Cycle Program strives to keep the public aware of how they can

properly recycle their unwanted electronic devices, and often utilizes various platforms such as social media to keep the public aware of electronic waste collection events occurring across the state of Indiana. One new outreach approach that began recently was connecting with the public through the use of video, and more specifically with the department's YouTube channel. The following link is an example of this effort:

<https://www.youtube.com/watch?v=yE1VND243iY>. These outreach efforts are ongoing.

IDEM also houses outreach material on their website that local governments, retailers, collectors, recyclers, manufacturers, and others can use to educate residents and customers about Indiana E-Cycle and Indiana's electronics recycling law. All materials on this page are available for free use and can be found by visiting:

<https://www.in.gov/idem/recycle/2440.htm>.

Grant Funding Awarded

Two Indiana organizations received grant funding last year totaling \$226,957 to expand e-waste recycling in the Hoosier state.

Electronics Recyclers International, Indiana Inc., which is located in Hendricks County, was awarded \$139,457 to purchase customized battery collection kits, a battery shake and sort machine, and a Fire Rover system to assist in the safe collection and processing of batteries.

The project allows a variety of battery types to be safely collected in one container for ERI to later sort batteries by chemistry. The Fire Rover system uses thermal camera detection to identify hotspots before flare-ups to prevent battery-caused fires. The project is expected to provide greater access and increase battery recycling and landfill diversion in Indiana and is projected to create six additional jobs.



Collected batteries waiting to be sorted

RecycleForce, which is located in Marion County, was awarded \$87,500 towards the purchase of a polystyrene compactor, three vertical balers, and 30 steel hoppers. In addition, the funding will help provide education through paid tv, radio, & signage.

The award will help RecycleForce to help establish and support a new recycling hub at their new facility that will provide free drop-off recycling and increases their capacity to approximately 4,000 tons per year.

These above-mentioned grant funds were awarded through the Recycling Market Development Program, which was established in the early 1990s to better manage solid waste by developing markets for recycling.

Discussion of Results

Indiana's E-Cycle Program is comprised of collectors, recyclers, and manufacturers. PY14 marked the eighth year that an online reporting system was available for stakeholders to complete their registration and annual report. Previous reports were done on a paper form. Below is a brief discussion of results for each stakeholder group within the Indiana E-Cycle Program.

Collectors:

For PY14, there were 84 collectors registered with the program. This figure is slightly higher than the past several years. This increase is assumed to be the result of improved quality assurance and understanding of what facilities need to register with the program. One goal implemented by IDEM was to educate facilities of the requirement to register with the program. Upon completing this goal, it became apparent that some collection facilities did not need to register with the program because they never collected CEDs. The continual outreach

Find out more information on collectors by visiting the collector's website at:
<https://www.in.gov/idem/recycle/2381.htm>

and education to stakeholders registering as collectors has resulted in fewer facilities needing to register with the program over the course of the last several program years.

For PY14, collectors reported collecting 25,591,246 pounds of CEDs for the program year. Of this total, 23,201,822 came from metropolitan counties, while 2,389,424 came from non-metropolitan counties. Of the total CEDs collected for the program year, 5,434,789 came from Indiana Solid Waste Management Districts, while the remaining 20,156,457 came from other entities. Indiana Solid Waste Management Districts have proven to be a valuable resource for collecting these CEDs, especially in non-metropolitan areas in Indiana. For the program year, Solid Waste Management Districts jointly collected 2,130,961 out of 2,389,424 pounds of CEDs from non-metropolitan areas, while also collecting 3,303,828 from metropolitan areas in Indiana. For the program year, Solid Waste Management Districts accounted for roughly 90 percent of all CEDs collected from non-metropolitan areas in Indiana.

Issues involving the collection of e-waste continue to have effects on both public and private collectors. Over the course of the last several years, there has been an increasing concern from collectors over the collection costs of cathode ray tube devices (e.g. televisions & computer monitors). To mitigate this issue, IDEM has begun hosting free e-waste collection events in communities across the state of Indiana.

Recyclers:

For PY14, 21 recyclers registered with the program. 12 were located in Indiana. Both of these figures are slightly lower than the past several years, and this decrease can be explained by the implementation of improved quality assurance and understanding of which facilities need to register with the program.

Find out more information on recyclers by visiting the recycler's website at:
<https://www.in.gov/idem/recycle/2382.htm>

Recyclers reported recycling 29,213,355 pounds of CEDs for the program year. Of this total, 26,841,893 came from metropolitan counties, while 2,371,462 came from non-metropolitan areas. It should be mentioned that the difference between the total amount collected by collectors and the total amount recycled by recyclers largely pertains to material that was sent out of the state. Another factor contributing to this collection and recycling difference is that not all CEDs that were collected for the program year were processed by the recycler prior to the report being due.

As discussed above, a 50 percent incentive can be earned for collecting CEDs from non-metropolitan counties in the state and a 10 percent incentive is earned for recycling CEDs at a registered facility in Indiana. For PY14, recyclers earned 2,984,934 in total incentives, which brings the total amount of CEDs recycled by recyclers for the program year to 32,198,289 pounds.

Recyclers collectively recycled 18,569,252 pounds of CEDs on manufacturer's behalf before the inclusion of incentives. After the inclusion of incentives, this figure rose to 19,573,317 pounds of CEDs.

Manufacturers:

For PY14, 65 manufacturers registered with the program. For the program year, manufacturers collectively had a recycling obligation of 19,108,022 pounds. Manufacturers met this recycling obligation by recycling 18,569,252 pounds of CEDs before incentives, and this figure increased to 19,573,317 pounds after the inclusion of incentives. Manufacturers used 18,662 credits this year, bringing the total pounds recycled and credited towards their recycling obligation to 19,591,979 pounds. This marks the fourteenth year that manufacturers have collectively met their recycling obligation.

Find out more information on manufacturers by visiting the manufacture's website at: <https://www.in.gov/idem/recycle/2379.htm>

The amount of e-waste that registered manufacturers are responsible for recycling each year is determined based on the weight of products they sold during the previous year. With the continued light-weighting of products (products getting smaller and/or weighing less) and changes in the types of products that are being purchased (e.g., tablets instead of laptops), the total amount of CEDs that registered manufacturers are responsible for recycling has decreased from 22.9 million pounds in Program Year 1 to 19.1 million pounds in Program Year 14. The demand for e-waste collection and recycling in the state, however, has not decreased, meaning that the cost of collection is increasingly burdensome to e-waste collectors including solid waste management districts.

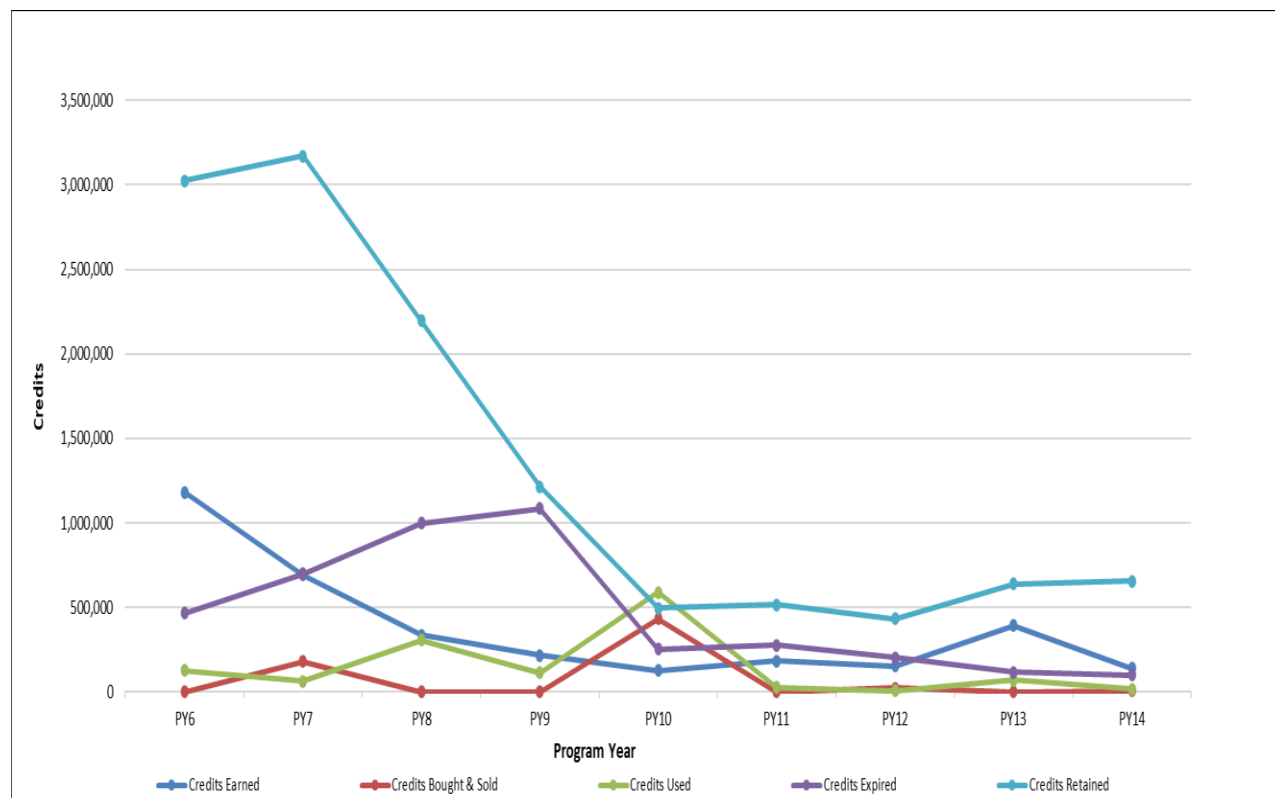
Figure 11 below highlights pertinent credit information over the past nine program years. Traditionally, credits have played a minimal role in helping to achieve manufacturer's recycling obligations for the program. IDEM has focused on efforts to increase awareness by manufacturers of how credits worked within the program and informing each manufacturer of their credit totals. A total of 18,662 credits were used for the program year, while 102,717 credits expired. There were five manufacturers that used credits towards their recycling obligation for PY14.

Twenty-seven manufacturers retained credits that can be used in upcoming years within the program. It should be mentioned, that even though many manufacturers are holding credits within the program, a majority of these credits being held are of insignificant amounts. Out of the 25 manufacturers that retained credits, only 12 of them retained an amount greater than 1,000 credits.

As displayed below, there had been a steady increase in the number of credits expiring each year, coupled with a steady decrease in the number of credits being earned each program year. The department has been placing a special emphasis on making manufacturers aware of these credits and how they can be utilized within the program.

Overall, credits are not as resourceful as was originally intended. One potential solution to making credits bear more weight within the program is to decrease the incentive manufacturers receive for recycling material from non-metropolitan counties in Indiana. This would reduce the number of overall credits, which in return would make their value increase, while lessening the number of credits that go unused and expire on an annual basis.

Figure 11: Credit Information



Conclusion

Indiana has benefited from the registration of a large number of collectors with the program, which allows Indiana residents the ability to have numerous options to recycle unwanted electronic devices. The program has become more efficient and effective since its inception, and this can be observed through action items such as the program’s online reporting platform along with ensuring only required facilities participate in the program.

IDEM has identified potential areas for improvement within the E-Cycle Program. One potential revision and improvement with the program involves lessening or ending the program’s use of the 50 percent incentive given for collecting and recycling CEDs from non-metropolitan counties. Many states require manufacturers to arrange for the collection and recycling of 100 percent, by weight, of the electronic devices they sell within their respective states when recycling obligations are based on weight sold. Indiana, who holds manufacturers responsible for the collection and recycling of 60 percent of the VDDs they manufacture and sell to Indiana households, is on the lower end of the spectrum when compared to other states. The above-mentioned 50 percent incentive for recycling from non-metropolitan counties only inflates recycling data provided by stakeholders within the program, while having the potential to further lessen manufacturers’ recycling obligations.

IDEM is dedicated to providing accurate data regarding the collection and recycling of electronics. Recent modifications and a more streamlined approach, coupled with an online reporting format, has assisted IDEM with achieving accurate data. The reporting

of actual e-waste data by registered stakeholders provides credibility in achieving recycling goals and helps to determine long-term infrastructure needs for the proper management of e-waste in the state of Indiana.