

# Indiana E-Cycle 2021 Report

## Indiana Department of Environmental Management

November 1, 2021



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### Executive Summary

Indiana's Electronic Waste (e-waste) law (IC 13-20.5) has assisted in the recycling of over 350 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 and plays an important role in managing the numerous challenges presented by the significant volumes of e-waste generated each year in the United States.

This report will examine the last eleven years of the program as well as provide the required annual information mandated by the Indiana legislature. For example, highlighting Program Year 11 (PY11), the year 2020, manufacturers collectively funded the recycling of 16,424,012 pounds of covered electronic

devices (CEDs). Majority of the weight recycled as part of the program continues to be collected from metropolitan counties in the state, as opposed to non-metropolitan counties.

An analysis of the 11 years of the Indiana E-Cycle program reveals that each program year, manufacturers collectively met their recycling obligation after the inclusion of recycling credits. To date, manufacturers have had a total of 224,898,491 pounds of

CEDs (actual pounds without incentives) from Hoosier households, small businesses, and public schools recycled on their behalf to fulfill program recycling obligations. Households, small businesses, and public schools in Indiana are known as covered entities. While baseline data on e-waste recycling rates prior to the passage of the Indiana E-Waste Law is not available, the Indiana Department of Environmental Management (IDEM) is confident that more e-waste has been recycled in the state since the implementation of the law than would have been recycled otherwise.

This year marks the fourth consecutive year that the manufacturer's collective recycling obligation increased from the previous program year. This increase in large part is due to an increase in total sales of video display devices to Indiana households. Since the implementation of the Indiana e-waste law, the nature of electronics being sold and purchased has changed significantly. Due to the increase of smaller and lighter electronic devices, the total weight-based recycling obligations for manufacturers have largely been declining since the program's inception. Demand, however, for the collection and recycling of e-waste in the state has not decreased, and the cost to

collect this material is becoming more difficult for e-waste collectors. The costs associated with the collection of cathode ray tube devices are especially burdensome, as dwindling markets and lower commodity prices have increased costs for recyclers, which ultimately get passed down to collectors.

#### **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 the item is designed to be used exclusively with a computer
- DVD players (including gaming systems that play DVDs)
- Video cassette recorders
- Digital photo frames
- Digital media players
- MP3 players
- Camcorders/Cameras
- DVR devices
- Portable GPS navigation systems

#### **Introduction**

The Indiana e-waste law created an extended producer responsibility (EPR) program, known as Indiana E-Cycle, under which 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 manufacturers of VDDs that offer 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 with 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.

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

### Legislative Requirements

This report fulfills the requirements contained in IC 13-20.5-7-4. IDEM is to 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.

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.

**Recycler:** an individual or 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 the following:

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

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

### Program Participation

Registration is required for manufacturers that offer VDDs (televisions, computer monitors, laptops, netbooks, notebooks, tablet computers, and e-readers) for sale to Indiana households. While the number of registered manufacturers and brands remained relatively unchanged from PY9, the companies that are registered has varied

#### **Previous Program Results**

Find earlier Indiana E-Cycle annual reports and program results at:

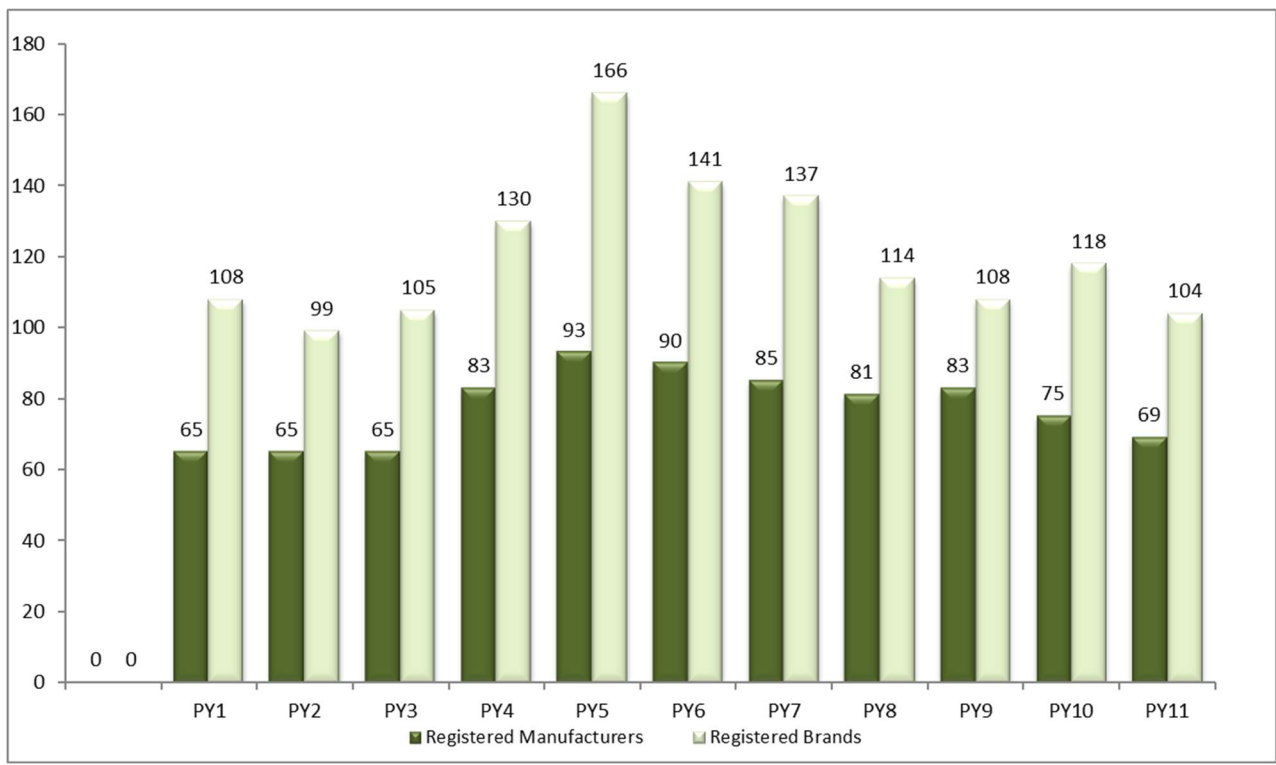
<https://www.in.gov/idem/recycle/indiana-e-cycle/indiana-e-cycle-results/>

as new manufacturers enter the market, other manufacturers exit the market, and mergers and acquisitions occur. As shown in **Figure 1**, a total of 69 manufacturers registered with the Indiana E-Cycle Program for PY11. These 69 manufacturers accounted for 104 different brands of devices that are being sold to Indiana households.

IDEM routinely conducts research to determine which companies selling VDDs to Indiana households have failed to register 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**



### Program Successes

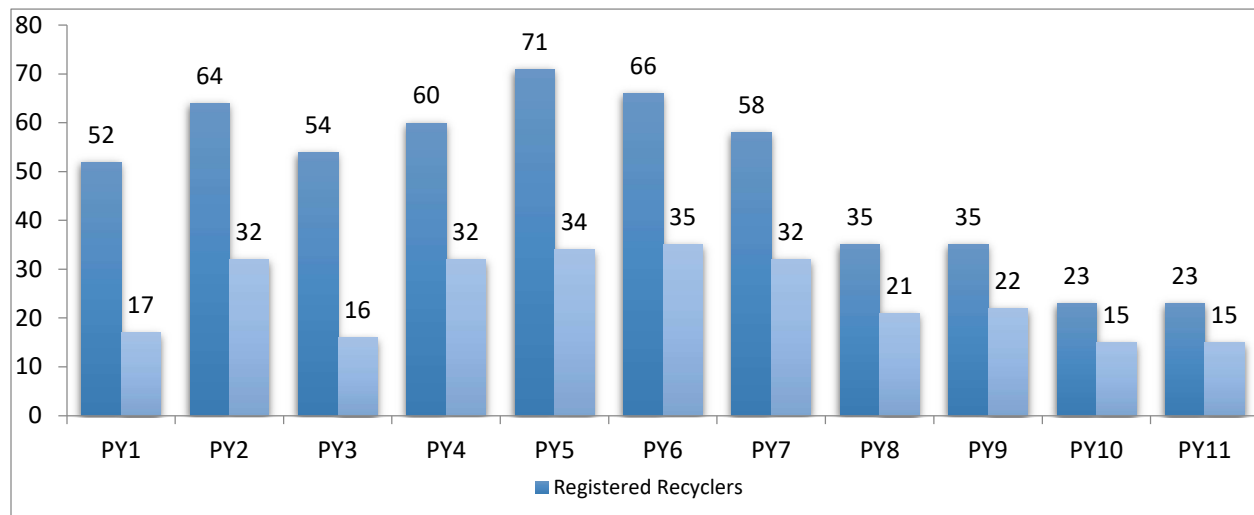
Since 2009, Indiana households, schools, and small businesses have recycled over 350 million pounds of electronics. More electronic waste collection options are now available to citizens as well, which allows for better access to recycling unwanted electronic items. In the previous year, collection sites were located at 77 of Indiana’s 92 counties. As shown in **Figure 4** on page seven, electronic waste collection sites can now be found at 86 of Indiana’s 92 counties.

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 field for all program participants. During the previous year, many small manufacturers registered with the Indiana E-Cycle for the first time, thanks in part to compliance efforts by the department and electronics retailers. The program has also stepped-up efforts through educational outreach and compliance measures to ensure collectors and recyclers are properly handling electronics.

**Registered Manufacturers and Brands**

All recyclers recycling CEDs from covered entities 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, most registered recyclers have also been registered collectors. For PY11, of the 23 registered recyclers, 15 of them are in Indiana. The decrease in the number of registered recycler facilities in years past is likely due to better quality assurance and understanding of what facilities need to register with the program. Through outreach and research, it had become apparent that previously registered recycler facilities were inappropriately registering with the program.

**Figure 2: Registered Recyclers and Registered Recycling Facilities in Indiana**



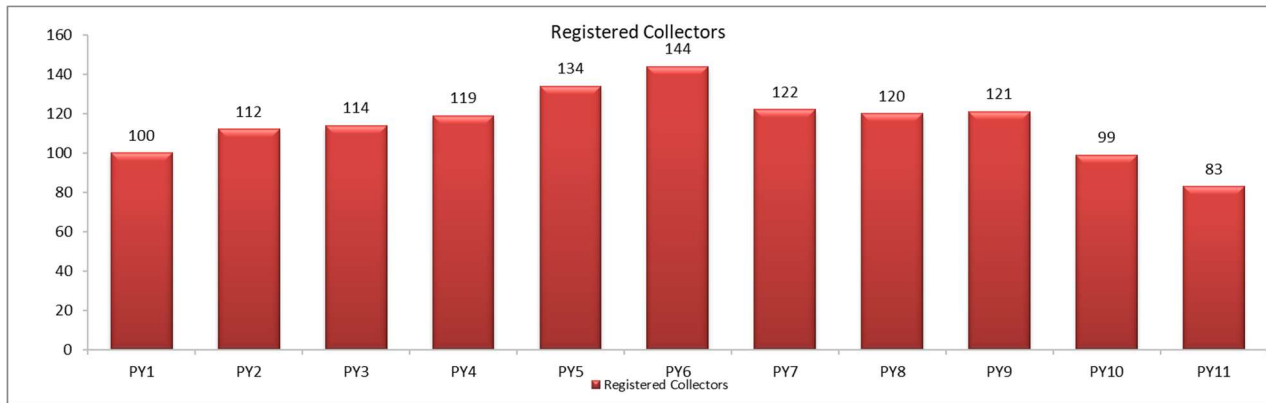
All collectors collecting CEDs from Indiana-covered entities must be registered with the Indiana E-Cycle Program. Collectors can include local units of government, solid waste management districts, curbside collection programs, manufacturer mail-back programs, and

**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.

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 PY11 increased from PY10. 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.

**Figure 3: Registered Collectors**



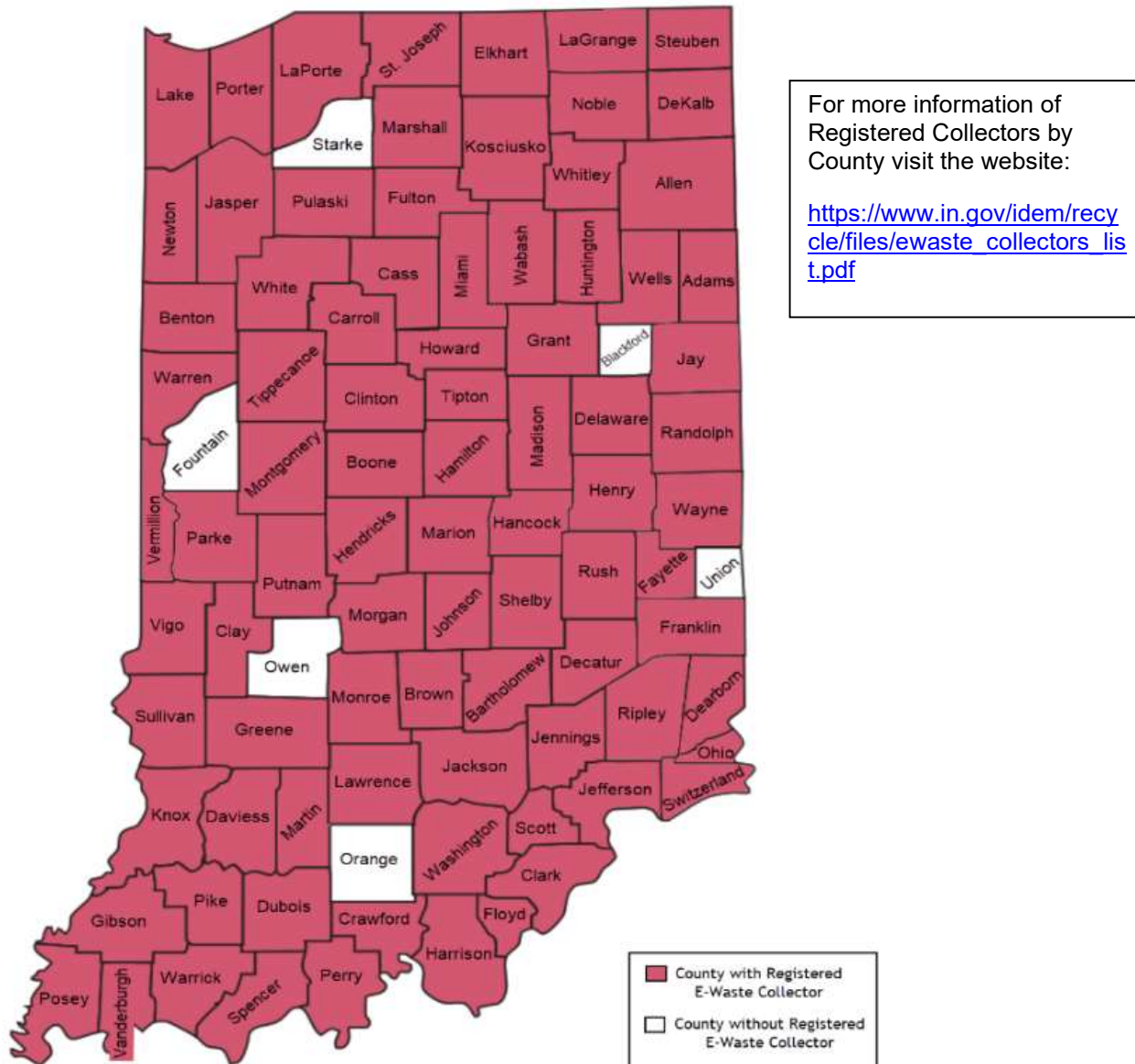
**Figure 4** below displays counties with and without an e-waste collection site. Registered collectors and their collection sites include local governments, electronics retailers, other for-profit businesses, and non-profits. In PY11, there were registered e-waste collection sites in 86 of Indiana’s 92 counties. These collection sites include all registered permanent collection locations in the state and some, but not most, temporary, and special collection events.

Indiana residents have had the benefit of having many collectors scattered throughout the state. This has allowed for more options for residents when it comes to recycling their unwanted electronic devices. One example that demonstrates this above-mentioned benefit is the Lake County Solid Waste Management District. This district offers citizens residing in the county eight different electronic waste collection sites that are scattered throughout the county. 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 have also had the benefit of 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.

The program will continue to attempt to focus on assisting counties with the collection of e-waste. A special emphasis will be placed on the six counties that do not have an e-waste collection site.

**Figure 4: Indiana Counties with Registered Collection Sites for PY11**



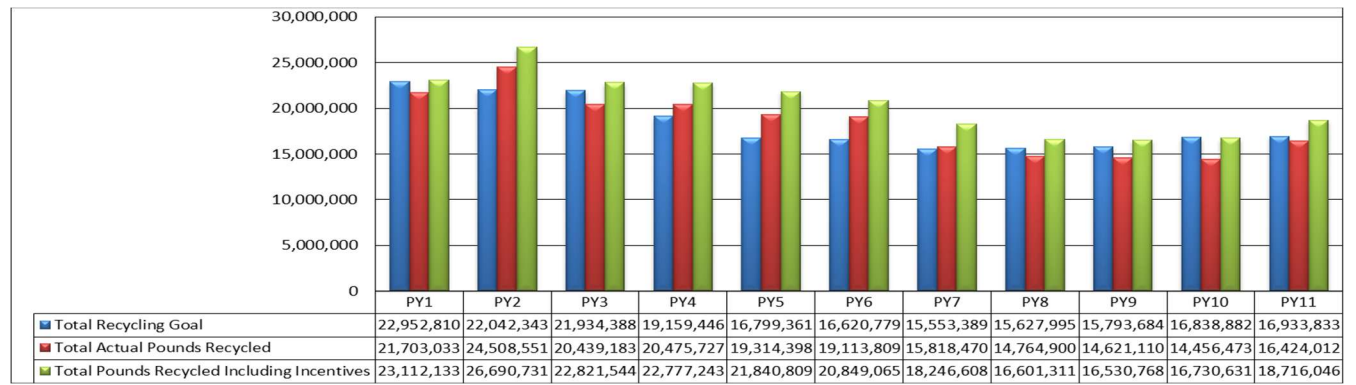
**Manufacturer and Recycler Annual Report Summaries (Including Total Weight of CEDs Recycled)**

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 can count the recycling of a variety of CEDs from covered entities toward their recycling

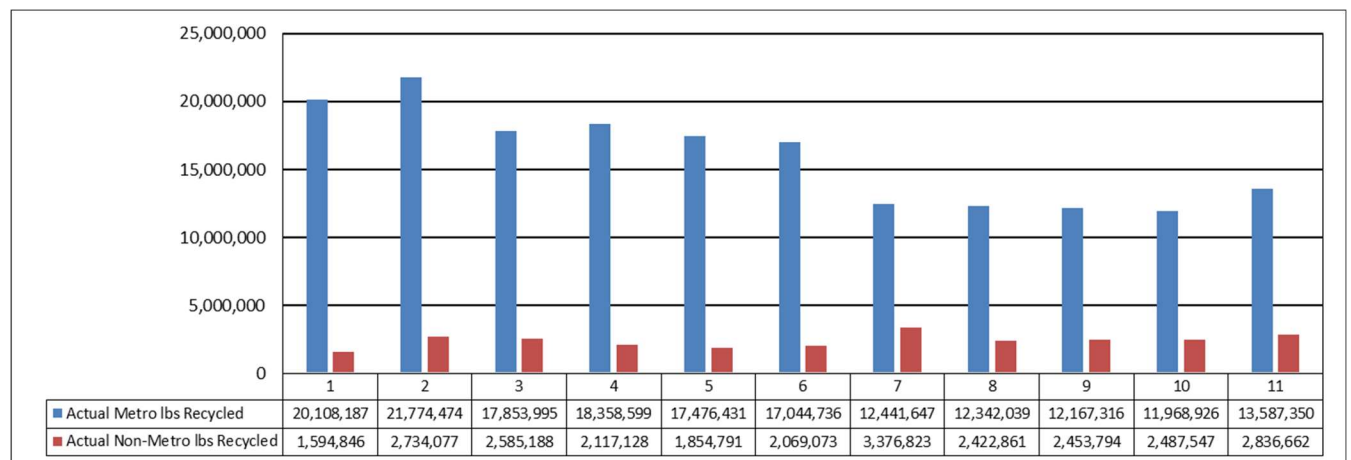
obligation.

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 PY11 and the previous program years in which annual reports were submitted.

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

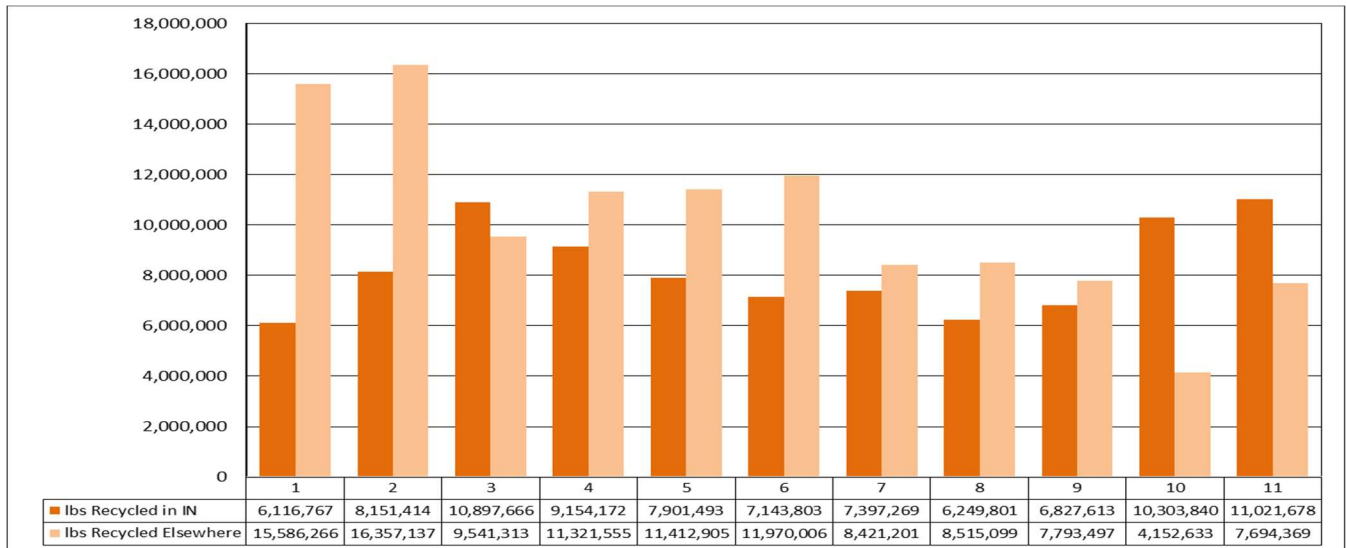


**Figure 6: Covered Electronic Devices Recycled by Registered Manufacturers: Metro and Non-Metro (lbs)**



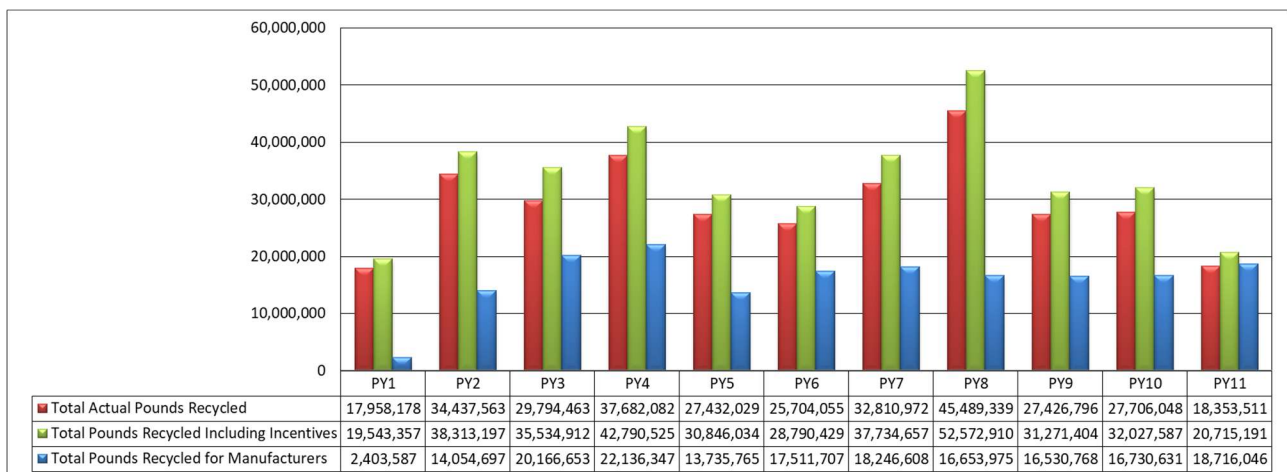


**Figure 7: Covered Electronic Devices Recycled by Registered Manufacturers: In Indiana vs. Elsewhere (lbs)**

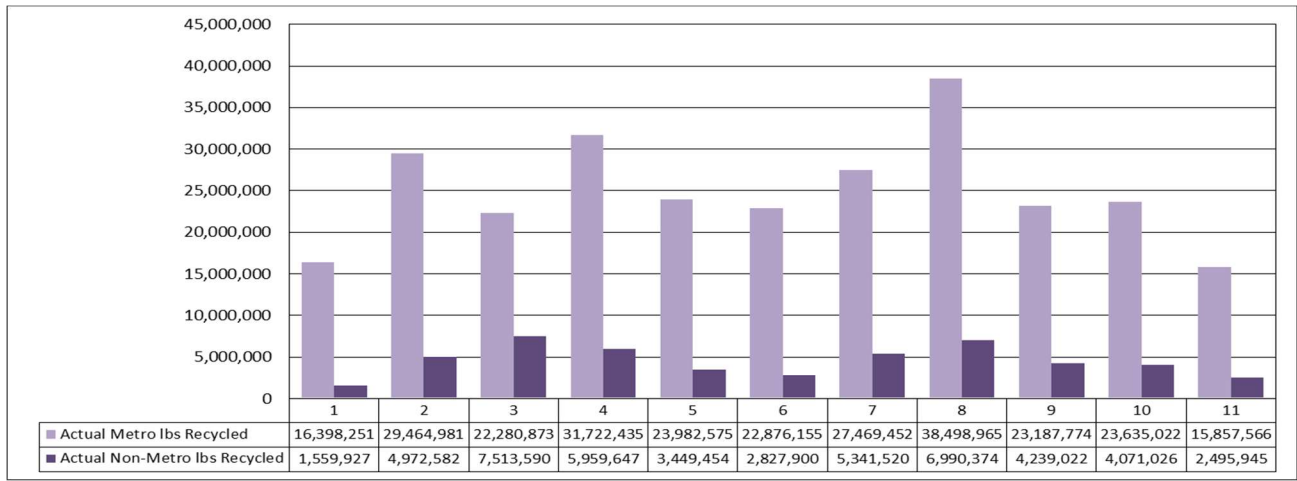


Figures 8, 9, and 10 show how many pounds of CEDs were recycled by recyclers registered in PY11 and the previous program years in which annual reports were submitted. There continues to be more e-waste being recycled than what registered manufacturers are responsible for recycling. For PY11, there was decrease in pounds recycled by registered recyclers.

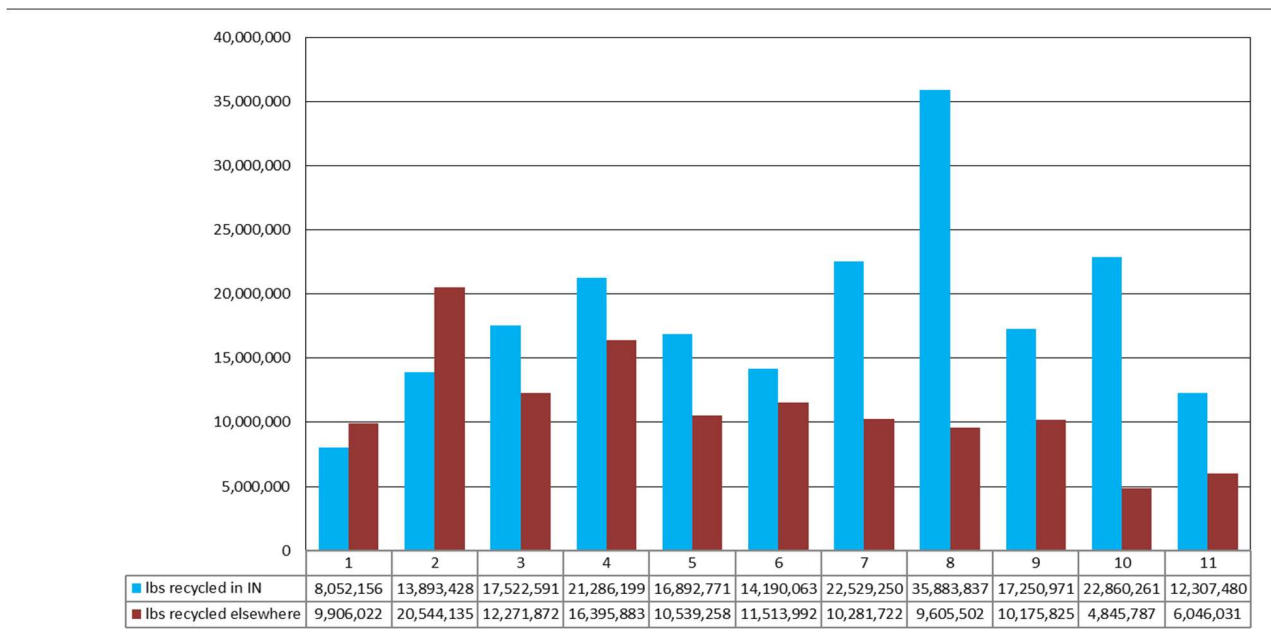
**Figure 8: Covered Electronic Devices Recycled by Registered Recyclers (lbs)**



**Figure 9: Covered Electronic Devices Recycled by Registered Recyclers: Metro and Non-Metro (lbs)**



**Figure 10: Covered Electronic Devices Recycled by Registered Recyclers: In Indiana vs. Elsewhere (lbs)**



Based on the reporting trends, the demand for CED recycling in Indiana will continue to exceed the number 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>
<b>PY1</b>	3.35	3.56
<b>PY2</b>	3.78	4.12
<b>PY3</b>	3.13	3.49
<b>PY4</b>	3.12	3.47
<b>PY5</b>	2.93	3.31
<b>PY6</b>	2.89	3.15
<b>PY7</b>	2.38	2.75
<b>PY8</b>	2.21	2.49
<b>PY9</b>	2.18	2.47
<b>PY10</b>	2.15	2.49
<b>PY11</b>	2.43	2.37

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>
<b>PY1</b>	1,074,733	0	n/a	n/a	1,074,733	18
<b>PY2</b>	1,623,705	0	19,253	n/a	2,653,837	23
<b>PY3</b>	555,630	0	116,758	n/a	3,090,762	26
<b>PY4</b>	967,292	87,256	104,592	809,875	3,039,188	37
<b>PY5</b>	1,174,168	246,957	808,867	586,136	2,579,219	29
<b>PY6</b>	1,057,072	0	128,070	465,811	3,024,254	25
<b>PY7</b>	673,305	179,919	65,531	698,386	3,170,225	24
<b>PY8</b>	336,481	0	307,559	1,000,579	2,196,005	30
<b>PY9</b>	217,427	0	114,386	1,084,328	1,214,661	29
<b>PY10</b>	126,524	432,805	588,500	254,953	497,465	27
<b>PY11</b>	452,504	0	32,528	348,734	883,096	39

## **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 implementing the article. 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 a shortfall for manufacturers that recycle less than 50 percent of their goal.
- Thirty cents per pound of a shortfall for manufacturers that recycle at least 50 percent, but less than 90 percent, of their goal.
- Twenty cents per pound of a shortfall for manufacturers that recycle at least 90 percent of their goal.

Two manufacturers for PY10 were required to pay a shortfall fee for a total amount of \$1,153.20, and in PY11 one manufacturer has a shortfall fee in the amount of \$26.00.

Manufacturers that were exempt from the registration fee for PY11, because they sold less than 100 units of VDDs to households during PY10, are exempt from the VRF.

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

## **Compliance & Reporting**

Throughout the state of Indiana, there are numerous brands of VDDs being sold through various retailer options. As was mentioned above, this past year there were 104 various brands of VDDs that registered with the program. 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](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 overall purpose of these "brand checks" is to educate and inform retailers selling VDDs that Indiana's E-Cycle Law requires they must sell only registered brands and inform their customers of where and how they can recycle unwanted electronics. The department has had success in having brands register with the program after contacting retailers.

Collectors and recyclers in Indiana often collect various types of e-waste that are not considered CEDs. This past year 10 collectors/recyclers received site visits from program staff to educate them on CEDs, proper material storage, labeling, and record keeping. The purpose of these site visits is to evaluate each individual collector/recycler's electronic waste stream and educate them on their requirements as registered participants. Collectors/recyclers also received compliance guidance for Indiana's E-Waste Management Rules (329 IAC 16) administered by IDEM's Office of Land Quality (OLQ).

### Program Outreach

Program outreach was made a priority this past program year 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 at State Fair-2019*

The department participated in several notable outreach events including the Indiana State Fair, the Indiana Recycling Coalition's Annual Conference, Earth Day Festivities, AIM Annual Ideas Summit, and other community events.

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 was taken on was connecting with the public using 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 as described here are a cumulative ongoing effort.

The department also houses outreach material on their website that local governments, retailers, collectors, recyclers, manufacturers, and others can use to educate their 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/indiana-e-cycle/indiana-e-cycle-outreach-materials/>.

The Indiana E-Cycle Program held its first ever e-waste collection event on Robert Orr Plaza at the Indiana Government Center. The target audience for this event was state employees and citizens of Indianapolis. The event was held on two dates in November and diverted over 14,000 pounds from the landfill. The department plans on making this an annual event to offer state employees and citizens an avenue to safely dispose of their unwanted electronic devices.

## Discussion of Results

Indiana's E-Cycle Program is comprised of collectors, recyclers, and manufacturers. PY11 marked the fifth year that an online reporting system was available for stakeholders to complete their registration and annual report. Previously, stakeholders completed their registration and annual report by completing a paper form. Each registered stakeholder in the program completed their registration and annual report through this online format. Below is a brief discussion of results for each stakeholder group within the Indiana E-Cycle Program.

### Collectors:

For PY11, there were 83 collectors registered with the program. This figure is slightly lower than the past several years, and this decrease is assumed to be the result of better-quality assurance and understanding of what facilities need to register with the program. One goal implemented by IDEM was to provide education to facilities to ensure that registered participants were required to register with the program. Completing this goal, it became apparent that some collection facilities were inappropriately registering with the program, as they were not, nor never had, collected CEDs.

Find out more information on collectors by visiting the collector's website at:

<https://www.in.gov/idem/recycle/indiana-e-cycle/indiana-e-cycle-collectors/>

For PY11, collectors reported collecting 18,361,381 pounds of CEDs for the program year. Of this total, 12,846,870 came from metropolitan counties, while 5,514,511 came from non-metropolitan counties. Of the total CEDs collected for the program year, 7,234,212 came from Indiana Solid Waste Management Districts (SWMDs). Indiana SWMDs have proven to be a valuable resource for collecting these CEDs, especially in non-metropolitan areas in Indiana. For the program year, SWMDs jointly collected 4,465,890 out of 5,514,511 pounds of CEDs from non-metropolitan areas, while also collecting 2,768,322 from 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 increasing concern from collectors over the collection costs of cathode ray tube devices (e.g., televisions & computer monitors). To lessen these operating costs, IDEM has begun conducting outreach and research on potential solutions to help mitigate this issue.

### **Recyclers:**

For PY11, 23 recyclers registered with the program with 15 of them being in Indiana. Both figures are slightly lower than the past several years, and this decrease can be explained by the implementation of better-quality assurance and understanding of what 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/indiana-e-cycle/indiana-e-cycle-recyclers/>

Recyclers reported recycling 18,353,511 pounds of CEDs for the program year. Of this total, 15,857,566 came from metropolitan counties, while 2,495,945 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 a 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 before the report being due.

As was addressed 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 PY11, recyclers earned 2,361,680 in total incentives, which brings the total amount of CEDs recycled by recyclers for the program year to 20,715,191 pounds. The decrease in the number of CEDs that were reported being recycled for the program year compared to last year might be attributed to the COVID pandemic as consumers did not go out to recycle unwanted electronic items.

Recyclers collectively recycled 16,424,012 pounds of CEDs on the manufacturer's behalf before the inclusion of incentives. After the inclusion of incentives, this figure rose to 18,716,046 pounds of CEDs.



## **Manufacturers:**

For PY11, 82 manufacturers registered with the program. For the program year, manufacturers collectively had a recycling obligation of 16,838,822 pounds. Manufacturers used 32,528 credits this year, bringing the total pounds recycled and credited towards their recycling obligation to 18,716,046 pounds. Manufacturers continued to collectively meet their recycling obligation.

Find out more information on manufacturers by visiting the manufacturer's website at:  
<https://www.in.gov/idem/recycle/indiana-e-cycle/indiana-e-cycle-manufacturers/>

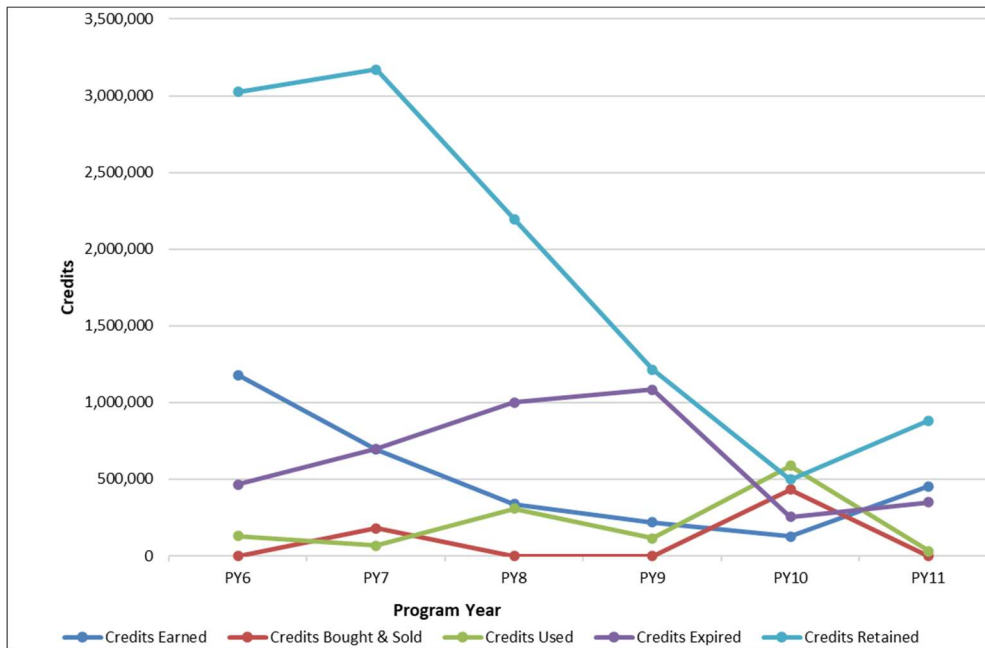
The amount of e-waste that registered manufacturers are responsible for recycling each year is determined based on the weight of products they sold during the previous year. With the continued light-weighting of products (products getting smaller and/or weighing less) and changes in the types of products 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 16.9 million pounds in Program Year 11 despite having six less manufacturers registered in PY11 than in PY10, but four more than PY1. 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 most recent five program years. Traditionally, credits have played a minimal role in helping to achieve the manufacturer's recycling obligations for the program. This program year, however, IDEM tried to make manufacturers more aware of how credits worked within the program, while also explicitly informing each manufacturer of their credit totals. A total of 32,528 credits were used for the program year, while 348,734 credits expired. Ten manufacturers used credits towards their recycling obligation for PY11. Thirty-nine manufacturers retained credits that can be used in upcoming years within the program.

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 had the benefit of having many collectors register with the program, which allows Indiana residents the ability to have numerous options regarding recycling their 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, which 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.

IDEM is determined to provide accurate data regarding the collection and recycling of electronics. Recent modifications and a more streamlined approach, coupled with an online reporting format, have 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.