INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

100 N. Senate Avenue • Indianapolis, IN 46204

(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

2019 Annual Reports

Indiana Department of Environmental Management
We Protect Hoosiers and Our Environment
IC 13-14-1-17

Table of Contents

Permit Process Report

Permit Efficiency:

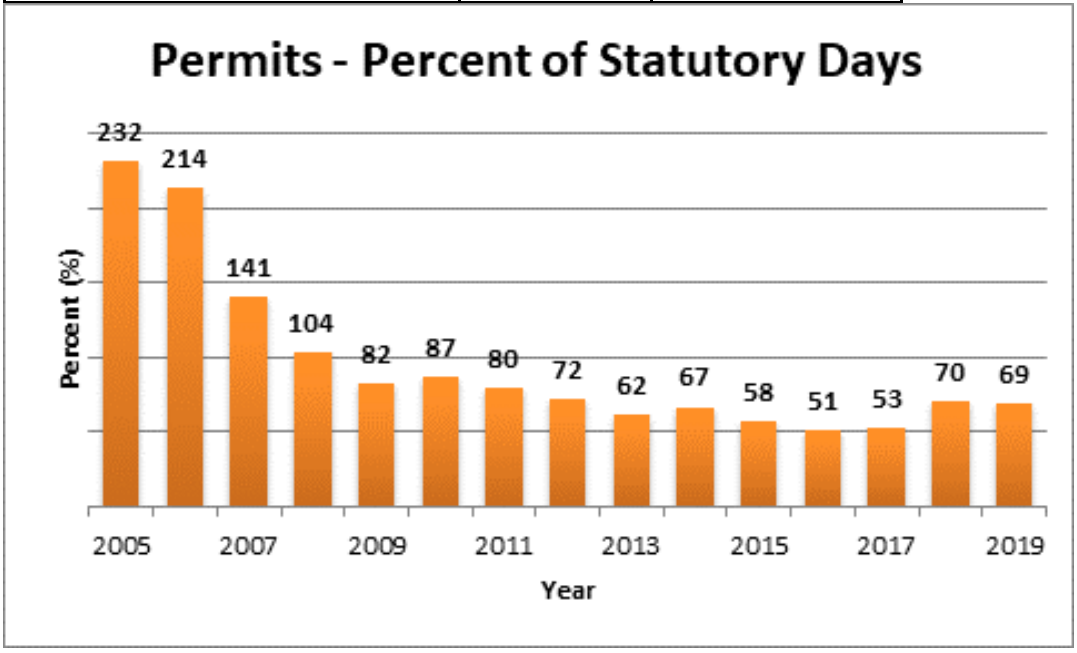
Total calendar days accumulated in issuing environmental permits, as determined by state statute for the latest monthly period as of 9/30/19 by IDEM Office.

Green is at or below 75% Yellow is above 75% and at or below 95%

	Current	75%	95%	Statutory
Land	17,335	17,160	21,736	22,880
Air	58,625	60,986	77,249	81,315
Water	19,058	33,683	42,665	44,910
Totals	**95,018**	**111,829**	**141,650**	**149,105**

Permitting Efficiency:
Measures the percent of total average deadline days for issued and pending permits by IDEM Office.

IDEM Office	12-Month Rolling Average	Target Value (%)
Air	72.2	75.0% or Less
Land	94.4	75.0% or Less
Water	47.6	75.0% or Less



Enforceable Operating Agreement Report (SSOA): IC 13-17-13

The Indiana Department of Environmental Management (IDEM) has a Source Specific Operating Agreement (SSOA) program (pursuant to 326 IAC 2-9) under which specific types of activities may operate, provided that the source accepts the pre-established terms of the SSOA "as is." Although a source may not simultaneously operate under more than one of the same type of SSOA, sources can operate under up to 4 different SSOAs, as long as the total potential to emit for any regulated pollutant, as limited by the SSOAs, does not exceed major source levels.

In all, there are 23 separate SSOAs available to applicants, covering 13 specific types of activities. For those SSOAs that limit the total potential to emit for any regulated pollutant to less than twenty-five (25) tons per year, a public comment period is not required (for a list of these SSOAs, see 326 IAC 2-1.1-3(d)). However, pursuant to 326 IAC 2-5.1-3(a)(1)(E), for those SSOAs that have a limited potential to emit for any regulated pollutant of twenty-five (25) tons per year or more, a New Source Review (NSR) Permit for approval to construct and a thirty (30) day public comment period is required. The final issuance of any SSOA is appealable. With the exception of coal mining and some stone crushing SSOAs there is no annual fee required, but sources are required to file an annual Compliance Notification. Sources are not required to renew their SSOA.

Pursuant to 326 IAC 2-9-1(i), a SSOA does not relieve the Permittee of the responsibility to comply with the provisions of any other applicable federal, state, or local rules, or any New Source Performance Standards (NSPS), 40 CFR Part 60, or National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 61 or 40 CFR Part 63.

As of June 30, 2019, there were 777 currently permitted Source Specific Operating Agreement (SSOA) sources. In FY19 (July 1, 2018 – June 30, 2019), there were SSOAs issued to 28 sources. To date, July – September 2019, there have been 6 new SSOAs issued to sources.

CFO/CAFO Report: Senate Resolution 2517

The Indiana Department of Environmental Management's (IDEM) Office of Land Quality administers the animal feeding operation regulatory program in Indiana. This program includes permitting, compliance monitoring and enforcement activities for 1,808 Confined Feeding Operations (CFOs) and no (0) Concentrated Animal Feeding Operations (CAFOs) for a total of 1,808 operations subject to permitting and inspection. In accordance with Senate Resolution 2512 the below information is provided by the Indiana Department of Environmental Management for the time period July 1, 2018 through June 30, 2019.

CFO and CAFO Inspections
Inspection Conducted from July 1, 2018 to June 30, 2019

Permit Type	Reason for Inspection *(definitions on following page)*	Number of Inspections
CFO	Paperwork (CoC) Follow-Up	9
	Compliance Assistance	20
	Construction	10
	Complaint Inspection	79
	Follow-Up Inspection	31
	Routine Inspection	208
	Spill Response Inspection	1
	Exit/Closure	29
	Other (permit, enforcement, site status…)	13
	Total	**408**
CAFO Size CFO	Paperwork (CoC) Follow-Up	0
	Compliance Assistance	43
	Construction	50
	Complaint Inspection	18
	Follow-Up Inspection	43
	Routine Inspection	172
	Spill Response Inspection	8
	Exit/Closure	3
	Other (permit, enforcement, site status…)	24
	Total	**361**
CFO/CAFO Size CFO Totals	**Paperwork (CoC) Follow-Up**	**9**
	Compliance Assistance	**63**
	Construction	**60**
	Complaint Inspection	**97**
	Follow-Up Inspection	**72**
	Routine Inspection	**380**
	Spill Response Inspection	**9**
	Exit/Closure	**32**
	Other (permit, enforcement, site status…)	**37**
	Total	**769**

CFO and CAFO Violations
Violations Cited from July 1, 2018 to June 30, 2019

Permit Type	Citation/Violation	Number of Violations
CFO	Approval and Performance Standards	16
	Discharge and Spill Requirements	15
	Land Application Records	36
	Operating Records	44
	Operational Standards	24
	Land Application	20
	Total	**155**
CAFO Size CFO	Approval and Performance Standards	36
	Discharge and Spill Requirements	21
	Land Application Records	15
	Operating Records	29
	Operational Standards	32
	Land Application	24
	Total	**157**
CFO/CAFO Size CFO Totals	**Approval and Performance Standards**	**52**
	Discharge and Spill Requirements	**36**
	Land Application Records	**51**
	Operating Records	**73**
	Operational Standards	**56**
	Land Application	**44**
	Total	**312**

Permitting Activities: CFO and CAFO Application Details from July 1, 2018 to June 30, 2019

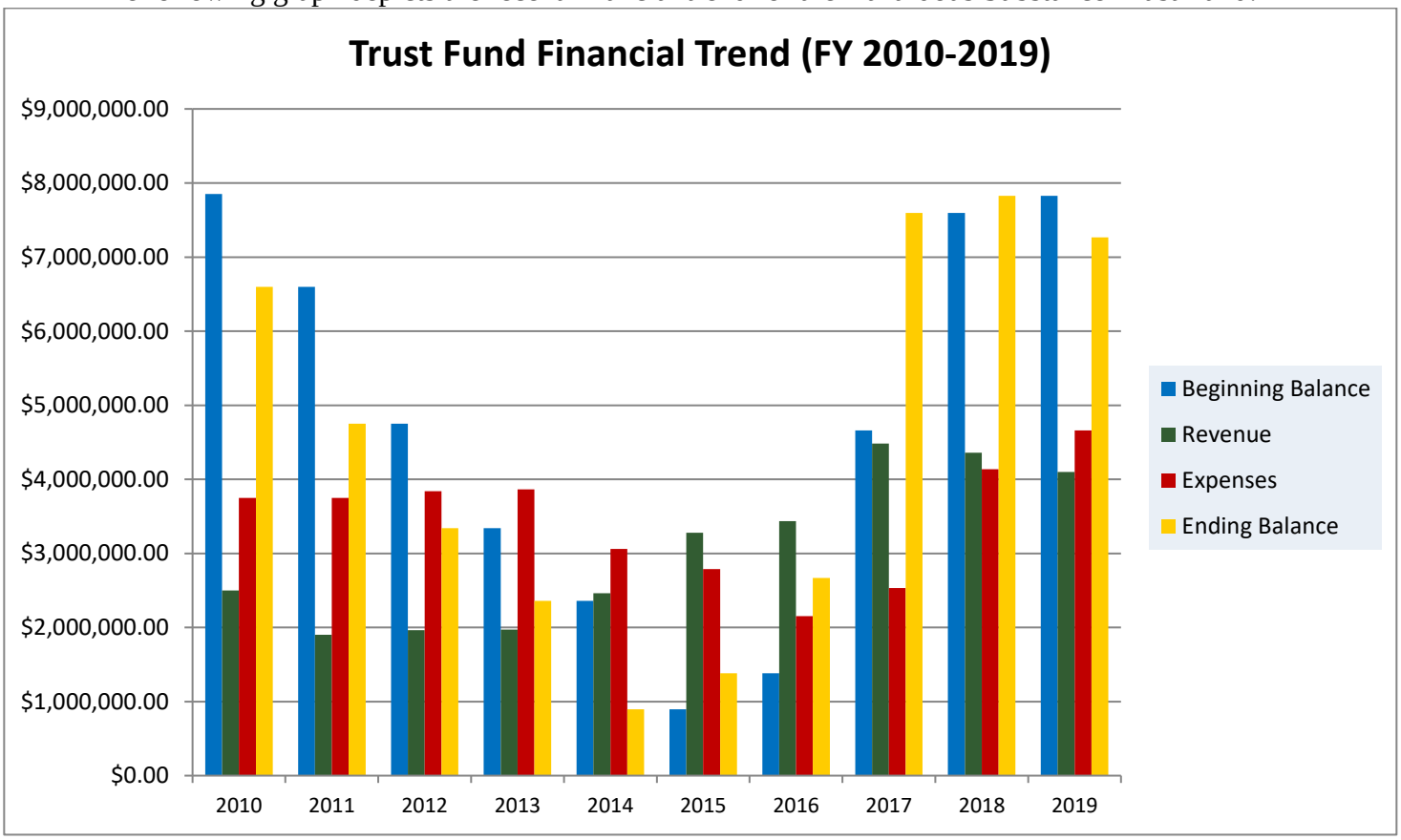
Application Type	Received	Issued	Denied	Withdrawn
CFO Approval Applications	**112**	**106**	**1**	**5**
Individual NPDES CAFO Permit Construction Applications	**0**	**0**	**0**	**0**
Large CAFOs	*0*	*0*	*0*	*0*
Med. CAFOs	*0*	*0*	*0*	*0*
Small CAFOs	*0*	*0*	*0*	*0*
Total Construction Applications	**112**	**106**	**1**	**5**
Individual NPDES CAFO Permit Coverage Application	**0**	**0**	**0**	**0**
Large CAFOs	*0*	*0*	*0*	*0*
Med. CAFOs	*0*	*0*	*0*	*0*
Small CAFOs	*0*	*0*	*0*	*0*
Individual NPDES CAFO Permit Renewal Application	0	**0**	**0**	**0**
Large CAFOs	*0*	*0*	*0*	*0*
Med. CAFOs	*0*	*0*	*0*	*0*
Small CAFOs	*0*	*0*	*0*	*0*
Total Other NPDES Permit Applications	0	**0**	**0**	**0**
All Application Totals	**112**	**106**	**1**	**5**

Hazardous Substance Response Trust Fund Report: IC 3-25-4-25

In FY 2019, the Hazardous Substance Response Trust Fund (Trust Fund) saw expenses exceed revenue. The beginning balance of the Trust Fund for FY 2018 was $7,825,586. The total revenue from cost recovery, enforcement penalties and hazardous waste disposal tax was $4,100,960. Total expenses for FY 2018 were $4,661,509. This left a year-end asset balance of $7,265,037.

Expenses for FY 2019 were higher than for 2018. The revenue total for FY 2019 was slightly lower than for 2018, and has decreased slightly for the third straight year. It is expected that the revenue for FY 2019 will be similar to FY 2018 levels.

The following graph depicts the recent financial trend for the Hazardous Substance Trust Fund:



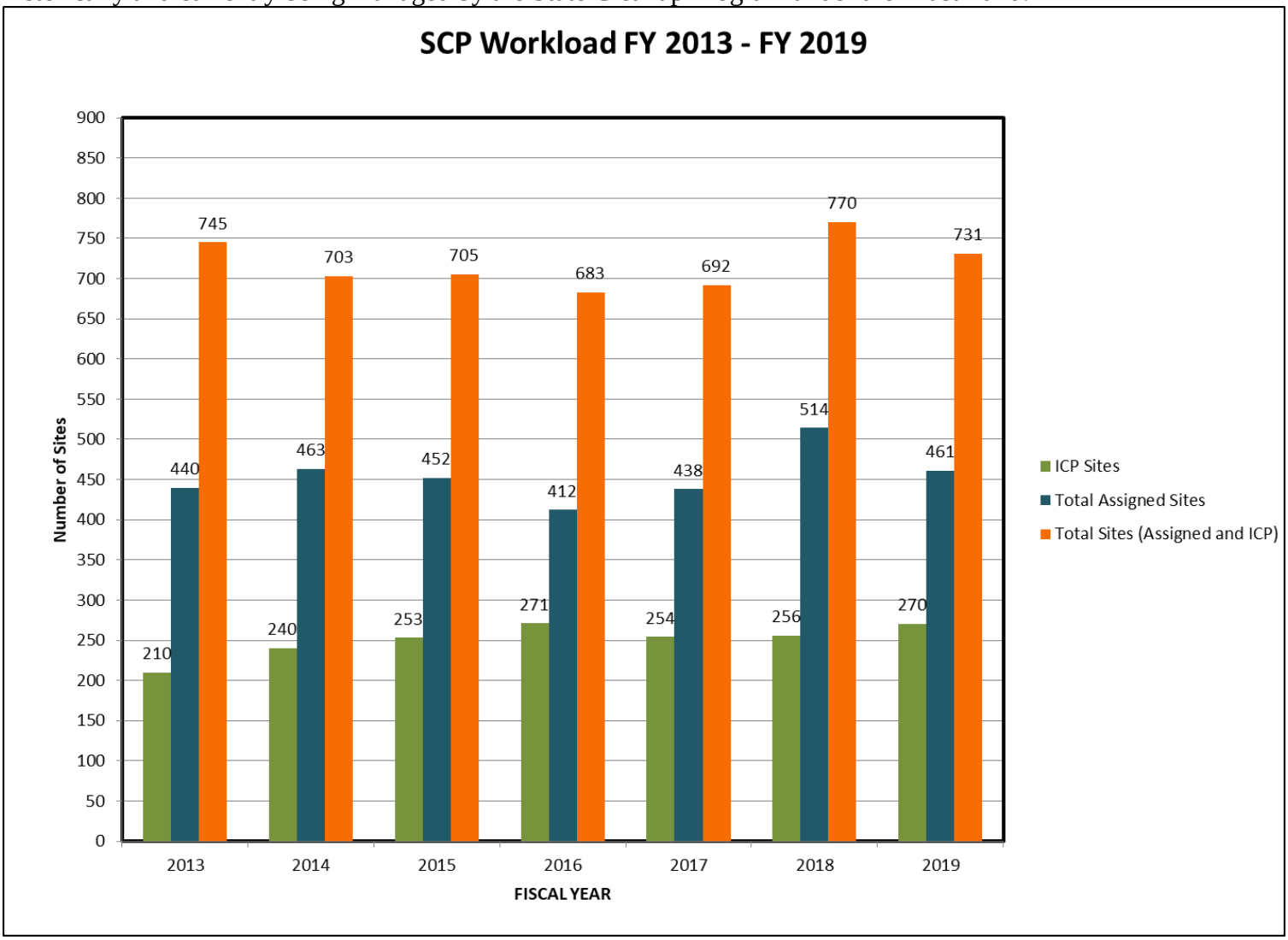
The expenses for the Trust Fund include the State Cleanup Program (SCP), Federal grant matching money for cleanup of sites listed on the National Priorities List (NPL or Superfund), and long-term operation and maintenance of sites completing the Superfund process.

The SCP is an enforcement program in the Remediation Branch of the Office of Land Quality. Administrative costs to operate the SCP are paid out of the Trust Fund and is the largest administrative expense to the Trust Fund. The role of the SCP is to manage the remediation and closure of hazardous substances and petroleum contaminated sites not eligible to be managed by the Federal Superfund Program or by the IDEM Leaking Underground Storage Tank or Excess Liability Trust Fund Sections. Common examples of SCP sites include current and former dry cleaners, current and former manufacturing facilities, petroleum pipelines, refineries, and petroleum bulk storage facilities. The sites within the SCP range from less than a quarter acre of contaminated area to ground water impacted areas well over a mile in length. Typical contaminant exposure risks associated with sites

in SCP are contaminated residential and municipal wells, contaminated indoor air of residential homes or contaminated surface waters and waterway sediments.

The SCP is partially financially self-sustaining through the ability to recover operating costs from parties responsible for conducting a contaminant cleanup. SCP operating and management costs are recovered and placed back into the Trust Fund and included as a revenue stream for the Trust Fund. In FY2019, $799,421 was recovered from responsible parties by SCP. This is lower than the cost recovery total from FY 2018, and is attributable to lower overall staffing and associated productivity, and inconsistency in billing due to staffing levels within the accounting departments of IDEM.

The bar graph below depicts the total number of hazardous substance and petroleum contaminated sites historically and currently being managed by the State Cleanup Program under the Trust Fund.

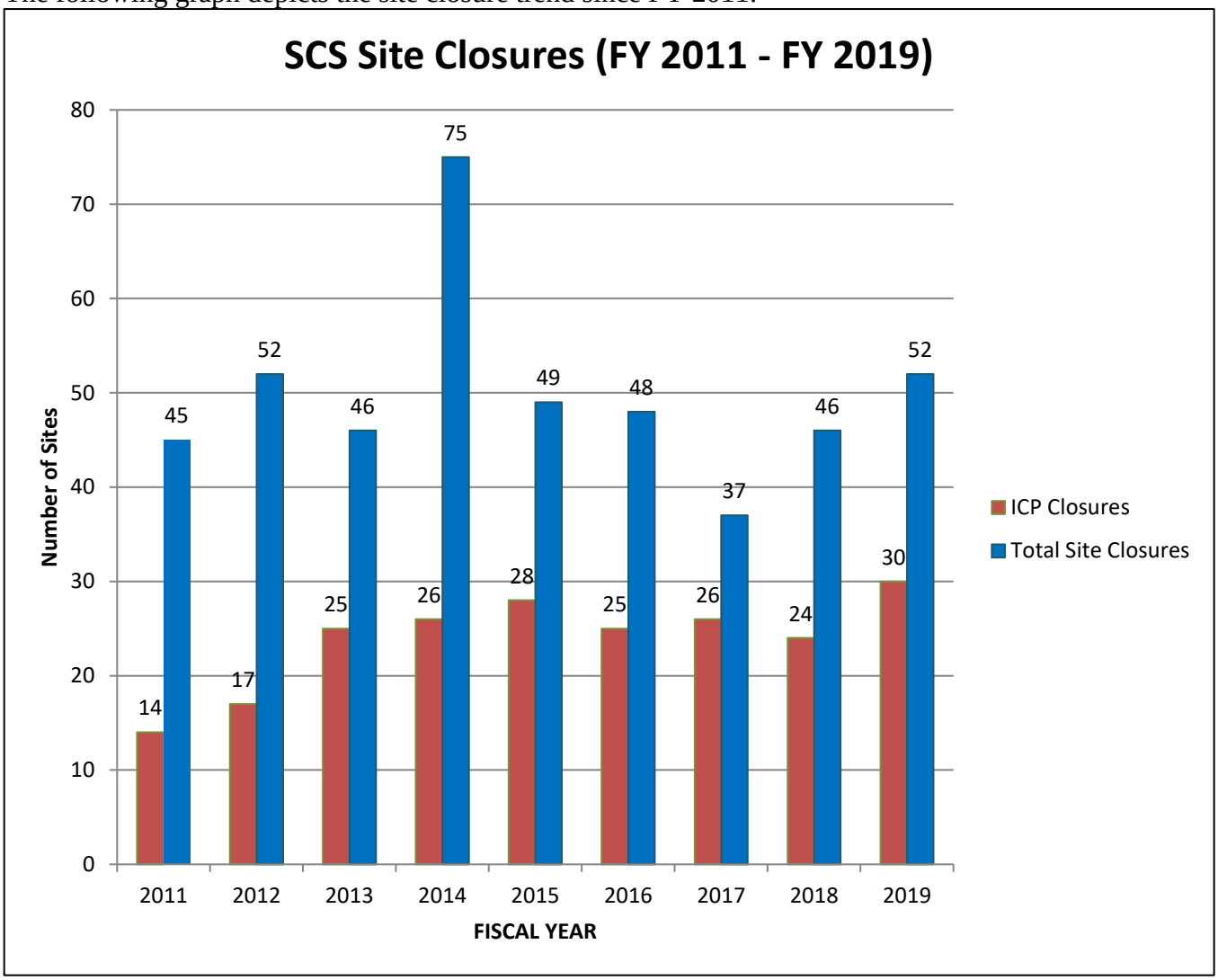


From FY 2013 to FY 2019, SCP has continued to see a stable trend in the total number of sites requiring remediation oversight. The total number of sites in the SCP as of FY 2019 was 731. As of the close of FY 2019, the SCP had 461 high and medium priority sites hazardous substance contaminated sites assigned to 11 SCP project managers. The total number of sites in the Independent Closure Process (ICP) was only slightly higher in FY 2019 with a total of 270. During FY 2012, SCP began full utilization of a self-implementing closure process known as the ICP to address the large number of low priority and medium priority petroleum contaminated sites that could not be

assigned to project management staff due to staffing shortages and the increase in high priority sites. The ICP has created a structured independent process for low priority sites to close with no direct management oversight, only quality assurance auditing, by the SCP. This has allowed the SCP to more effectively and efficiently manage its high priority work load and concentrate its daily efforts on high priority sites contaminated by hazardous substances.

During FY 2019, the SCP completed closure of 52 sites. The SCP has overseen the closure of 1,162 sites during the history of the program.

The following graph depicts the site closure trend since FY 2011:



Waste Tire Annual Report: IC 13-20-13-8

The Waste Tire Management Fund

Indiana Code (IC) 13-20-13-8 establishes the Waste Tire Management Fund (WTMF) to support Indiana's Waste Tire Management Program. The WTMF includes the remediation and removal of improperly disposed waste tires, promotion of the utilization of processed tire products, and the provision of financial assistance to reduce waste tire generation. Management of the WTMF was transferred from the Office of Lieutenant Governor to IDEM on July 1, 2007. Table 1 represents the revenue and expenditures administered through the fund for Fiscal Years 2008 through 2018.

Table 1: Revenue and Expenditures

Fiscal Year	Fee Revenue	IDEM Grants	IDEM Cleanups
2008*	$1,596,240	$292,644	$0
2009*	$1,623,795	$1,000,000	$592,705
2010*	$2,299,645	$0	$0
2011*	$1,380,044	$0	$0
2012*	$1,325,612	$0	$779,873
2013*	$1,362,464	$210,679	$0
2014*	$1,568,844	$0	$0
2015	$1,571,211	$0	$0
2016	$1,632,663	$0	$0
2017	$1,645,090	$0	$0
2018	$1,608,193	$0	$294,845

Suspension of Waste Tire Management Grant Program

The Indiana Department of Environmental Management (IDEM) has temporarily suspended the grant program. Due to the suspension of the grant program, no projects were funded and no money was expended for FY 2015. Estimates of money required to meet grant requests or recommended changes to the program will not be provided through this annual report until the grant program is reestablished. This report will only review the WTMF as related to the management of waste tires through this program.

The Waste Tire Management Program

The Office of Land Quality (OLQ) is responsible for regulating waste tire management activities. Indiana Administrative Code (IAC) 329 15 provides the framework for the 81 transporters, 16 processors, and 10 storage facilities that maintain waste tire registrations.

More than 9 million passenger tire equivalents (PTEs) were received by waste tire processors. Figure 1 shows how waste tires were utilized from January to December of 2018.

Figure 1: Waste tire utilization for Calendar Year 2018.

WASTE TIRE UTILIZATION	TONS
Landfill (Solid Waste)	4,427.93
Landfill (Alternate Daily Cover)	51,593.15
Tire Derived Fuel	26,416.30
Legitimate Use – Civil Engineering	1,594.70
Legitimate Use – Other	43,331.05
Other	5,542.33

The following sections detail the registration program that is supported by the WTMF:

Waste Tire Transporters

Waste tire transporters hauling waste tires in Indiana pay a $25 application fee for their initial 5-year registration, after which they can renew for free. There is an annual $25 operating fee. Transporters must also maintain a financial assurance mechanism of at least $10,000. Transporters must annually report the number of waste tires hauled. A list of currently registered transporters with IDEM may be found online at: http://www.in.gov/idem/wastetire/files/wt_transporters.pdf.

Waste Tire Processors Facilities

The application and renewal fee for a 5-year waste tire processing registration is $200. There are no annual operating fees for waste tire processing facilities. They must annually report the number of tires processed and how the waste tires are utilized. If a processor accumulates more than 1,000 tires, they must also register as a storage site.

Waste Tire Storage Facilities

Waste tire storage is limited to 1,000 tires outdoors or 2,000 tires indoors without needing a permit. Waste tire storage sites must register if they plan on storing waste tires above those limits. The application fee for the initial registration is $500, but there is no renewal fee. Waste tire storage facilities also pay a $500 annual operating fee, and they must establish financial assurance. The financial assurance is based on third-party cleanup costs for the volume of material stored on the site. There are no renewal fees for storage sites.

List of waste tire processors and storage facilities currently registered is available at: http://www.in.gov/idem/wastetire/files/wt_processors_and_storage.pdf.

Registration applications, annual reporting forms, and manifest forms for transporters, processors, and storage facilities are available at: http://www.in.gov/idem/wastetire/2336.htm.

Compliance and Enforcement

Enforcement actions are initiated by OLQ to correct violations, assure facility compliance, and facilitate clean-up of tire dumps that represent a threat to human health and the environment. For the time period of July 1, 2018 to June 30, 2019, Enforcement has received 4 waste tire referrals involving open dumping.

Major sources of waste tires are subject to OLQ compliance inspections for proper waste tire management

practices. These include vehicle maintenance facilities, transportation companies, new and used tire dealers, tire retreading plants, and auto salvage operations.

Although waste tire generators or sources are not required to register with OLQ, IC 13-20-14 has waste tire management requirements for specific operations.

New tire retailers are required to accept the same number of waste tires that are replaced by new tires purchased by the consumer. A handling charge is collected by the dealer for this service, in addition to a $0.25/tire new tire fee. All sources of waste tires are responsible for delivery of their tires to an approved processing facility. This service is provided by registered waste tire transporters. All major sources of waste tires are required to maintain records of waste tire manifests that document proper waste tire management.

Administratively Extended NPDES Report

NPDES Permit Renewals	
Number of Pending Admin Extended NPDES Renewals Submitted On-Time	0
Number of Pending Admin Extended NPDES Renewals Submitted Late (< 180 days prior to expiration date)	0
Number of Pending Admin Extended General NPDES Renewals Submitted Late (< 90 days prior to exp date)	0
Total Number of Pending Admin Extended NPDES Renewals as of 7/1/2019	0
Number of Months the NPDES Permit has been Administratively Extended	0
Number of Months the NPDES Permit processing suspended under IC 13-15-4-10	0

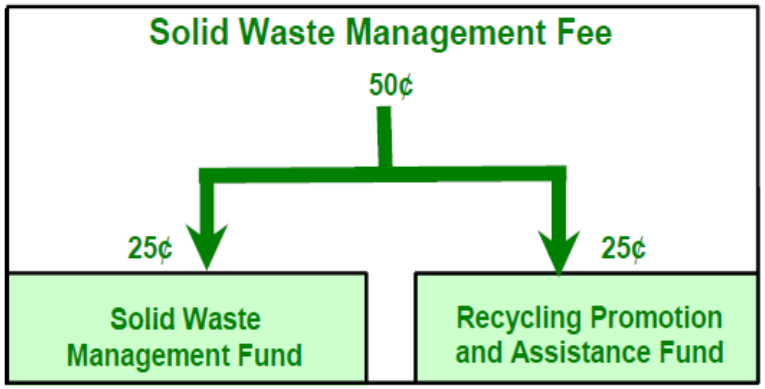
*** Additional Notes**	
Of the Pending Admin Extended NPDES permit renewal(s), number which have already been public noticed.	0
EPA-defined Permit Backlog (only counts a permit as backlogged if it is still pending > 180 days past the Expiration Date)	0

New NPDES Permits	
Number of Pending New NPDES applications exceeding the statutory timeframes of IC 13-15-4-1	0

Annual Recycling Report: IC 4-23-5.5-6

The Recycling, Education, and Quality Assurance Section within the Office of Program Support provides financial and technical assistance to develop recycling activities through two means: the Community Recycling Grant Program (IC 13-20-22-2) and the Recycling Market Development Program (RMDP) (IC 4-23-5.5-14). These programs work to reduce solid waste disposal and increase Indiana's recyclable material manufacturing capacity, as well as increase the use of recycled content products by working with local units of government, solid waste management districts, schools, nonprofits, businesses, and recycling industries. Promoting the concept of collecting, using, and producing recycled materials in Indiana is a means of supporting the agency's initiatives of job creation and economic stability leading to environmental stewardship of natural resources.

Funding for the Programs comes from the Solid Waste Management Fee (IC 13-20-22-1). The fee consists of $0.50 per ton charge on solid waste, which includes municipal solid waste (MSW), non-MSW, as well as construction and demolition debris (C&D) for final disposal at Indiana MSW landfills and incinerators. Total revenue received for the Solid Waste Management Fee for FY 2019, was $4,705,382. According to statute, the revenues are evenly deposited into the Solid Waste Management Fund (SWMF) and the Recycling Promotion and Assistance Fund (RPAF).



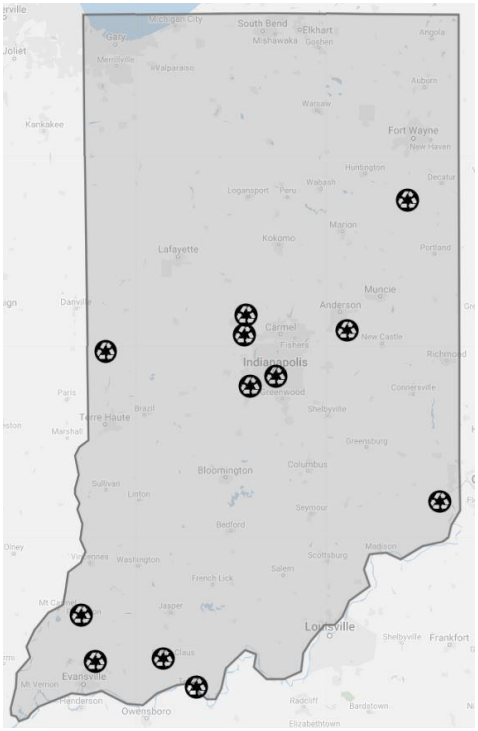
The RPAF supports the Recycling Market Development Program. The RMDP offers grants to eligible Indiana businesses, local government, and nonprofit organizations. Funding decisions for the RMDP projects are approved by the Recycling Market Development Board. The SWMF supports the Community Recycling Grant Program. This program has assisted communities by allocating funding for Public Recycling, Education and Promotion Grants, and School Recycling Learning Grants, but was suspended in 2008.

A total of $1,000,000 was allocated and awarded for grants from the Recycling Market Development Program in FY 2019. No funds were allocated for grants from the Community Recycling Grant Program.

Twelve Indiana organizations received grant funding totaling $1 million to expand recycling in the Hoosier state. The joint effort represents nearly $9.3 million in expected total investments that will benefit the environment and result in the creation of up to 174 new jobs. The 12 recipients and their projects are as follows:

- **AgRecycle (Lamb Farms, Inc.), Boone County** – $125,000 to expand operations and improve efficiencies within the composting business. The funding will go toward a new self-propelled compost turner. The project is projected to divert 5,000 tons of compostable materials from landfills.

- **Cox Recycling, Madison County** – $120,000 toward equipment for an asphalt utilization project to expand asphalt recycling in Indiana. The project allows for the use of reclaimed asphalt currently received at the facility to manufacture a hot mix during the winter months for repair of potholes and utility cuts in road surfaces.



- **Dearborn County Solid Waste Management District, Dearborn County** – $24,251 to purchase and install a compactor to be used to prepare comingled recyclable materials for processing. The additional equipment will allow the Dearborn County Recycling Center to more efficiently and cost effectively process and ship materials that it currently collects.

- **Electronic Recyclers International, Inc. (ERI), Hendricks County** – $124,112 towards the purchase of a mobile electronics recycling shredding truck. In its first year, the project will reach at least 20 interested entities for a community outreach and education program that includes onsite training, mobile electronic recycling shredder truck demonstrations, and an e-recycling bin service.

- **Gibson County Solid Waste Management District, Gibson County** – $10,000 toward the purchase of recycling totes for three local school systems and to expand education through a newly designed brochure to be printed and mailed to residents.

- **Heritage Hills High School, Spencer County** – $6,677.50 toward the purchasing of 100% recycled content outdoor recycling containers, benches, and picnic tables. The purchase will be used to educate and expand recycling efforts to the outdoor areas of the high school campus.

- **IQ Fibers, LLC, Wells County** – $125,000 towards the purchase and installation of a turn-key recycled paper sorting and processing line. The new system will help process lower grades of paper as well as allow for more effective and safe processing of existing grades of recycled paper. The project expects to divert 10,000 ton per year of paper from landfills.

- **Perry County Recycling Management District, Perry County** – $16,340 toward the purchase of recycling trailers. The trailers will be used to improve and expand recycling capabilities at the county's recycling drop-off locations.

- **Plastic Recycling, Inc., Marion County** – $192,336 towards the purchase of a plastic compounding line that allows the company to implement an expanded program to collect plastic polymers from various Indiana and regional sources of scrap and increase the volume of pelletized finished material. The new line will increase current plastic recycling capacity by 7,500 tons/year.

- **PMG Tree Care and Landscape Company, Vanderburgh County** – $120,000 towards the purchase of wood waste processing equipment to expand their operations. This project will allow PMG to contribute to the successful diversion of approximately 223,000 cubic yards of tree and pallet waste from the landfill annually.

- **Royal Interpack Midwest, Inc., Boone County** – $117,082 towards a plastic recycling line to recycle plastic bottles (polyethylene terephthalate or PET) into containers, clamshells, and trays. This project will result in 25,000 tons of PET plastic being processed and diverted from landfills.

- **Vermillion County Board of Commissioners, Vermillion County** – $19,201 to help fund the expansion of the county's Earth Day clean-up, including metal and electronics recycling, as well as two recycling bins for drop-off recycling at their county transfer facility.

For more information about recycling in Indiana and recycling resources, please visit the *Recycle Indiana* Web site at: www.recycle.in.gov .

E-Waste Report

IC 13-20.5-7-4 Indiana's electronic waste (e-waste) law (IC 13-20.5) has assisted in the recycling of over 275 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.

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

This report will examine the last nine years of the program as well as provide the required annual information mandated by the Indiana legislature. For example, highlighting Program Year 9 (PY9), year 2018, manufacturers collectively funded the recycling of 14,621,110 pounds of covered electronic devices (CEDs). The vast 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 nine years of the Indiana E-Cycle program reveals that each program year, manufacturers collectively exceeded their recycling obligation. To date, a total of 170,759,181 pounds of CEDs (actual pounds without incentives) from Hoosier households, small businesses, and public schools has been recycled. 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.

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.

Manufacturer's collective recycling obligations for PY9 did not fluctuate as much as previous years. This year marks the second year that manufacturer's collective recycling obligation increased from the previous program year. Since the implementation of the Indiana e-waste law, both the nature of electronics being sold and purchased have changed

significantly. Due to the increase of smaller and lighter electronic devices, the total weight-based recycling obligations for manufacturers has 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 cost associated with the collection of cathode ray tube devices is especially burdensome, as dwindling markets and lower commodity prices have increased cost for recyclers, which ultimately get passed down to collectors. IDEM is exploring the possibility of establishing new and alternative methods and programs in an effort to combat these collection costs.

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 trash that is intended for disposal at a landfill or for disposal by burning or incineration.

Manufacturer: a person that:

- Manufactures VDDs to be sold under the person's own brand or a brand the person licenses as identified by the person's own brand label or the brand label the person licenses;
- Sells VDDs manufactured by others under the person's own brand or a brand the person licenses as identified by the person's own brand label or the brand label the person licenses; or
- Assumes the responsibilities and obligations of a manufacturer.

Video Display Device (VDD): a television or computer monitor, including a laptop computer, netbook, notebook, tablet computer, or e-reader, that contains a cathode ray tube or flat panel screen with a screen size that is greater than four inches measured diagonally and is marketed by a manufacturer for use by covered entities.

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.

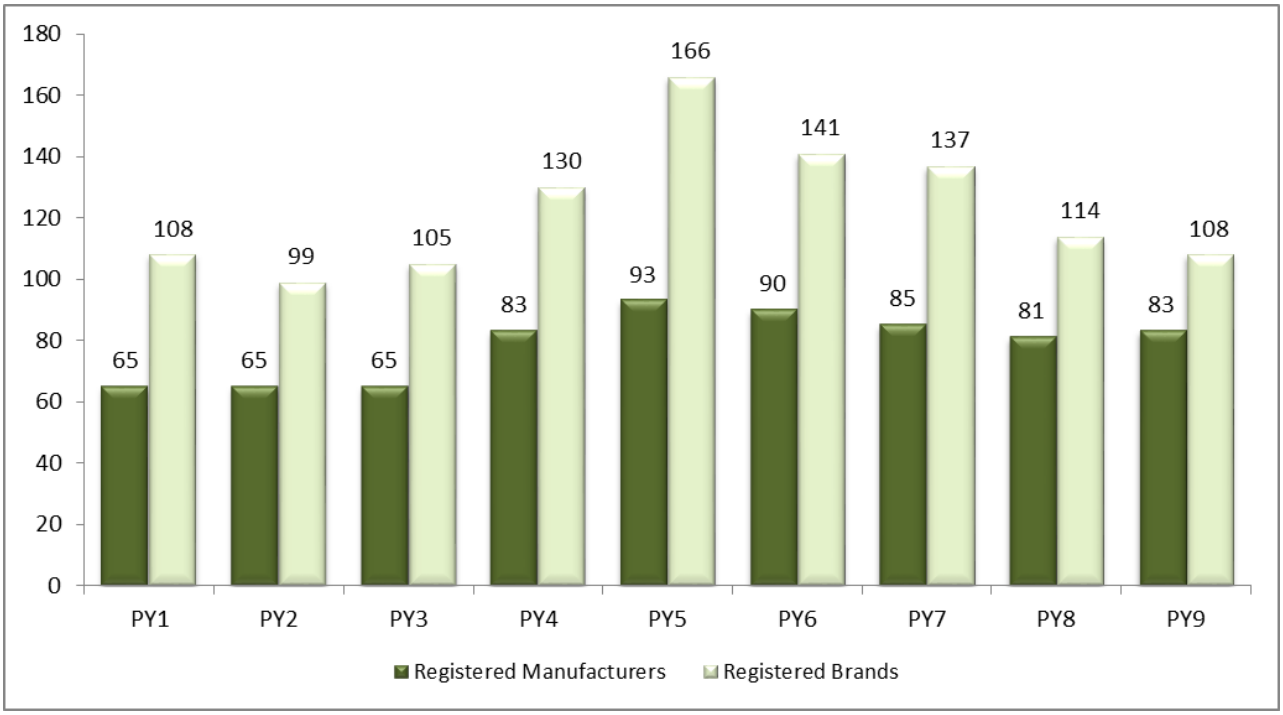
Program Participation

A 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 PY8, the companies that are registered has varied as new manufacturers enter the market, other manufacturers exit the market, and mergers and acquisitions occur. As shown in **Figure 1**, a total of 83 manufacturers registered with the Indiana E-Cycle Program for PY9. These 83 manufacturers accounted for 108 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.

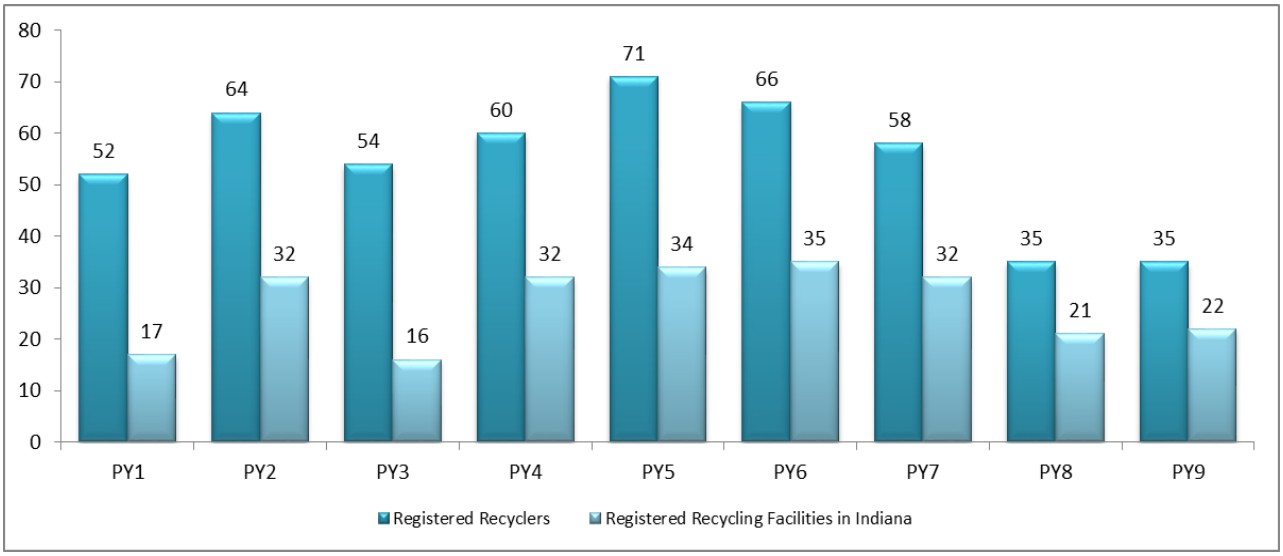
Figure 1: Registered Manufacturers and Brands



All recyclers recycling e-waste 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 of the first nine program years, the majority of registered recyclers have also been registered collectors. For PY9, of the 35 registered recyclers, 22 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 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.

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

Figure 2: Registered Recyclers and Registered Recycling Facilities in Indiana



All collectors collecting e-waste 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 PY9 remained relatively unchanged from PY8. 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

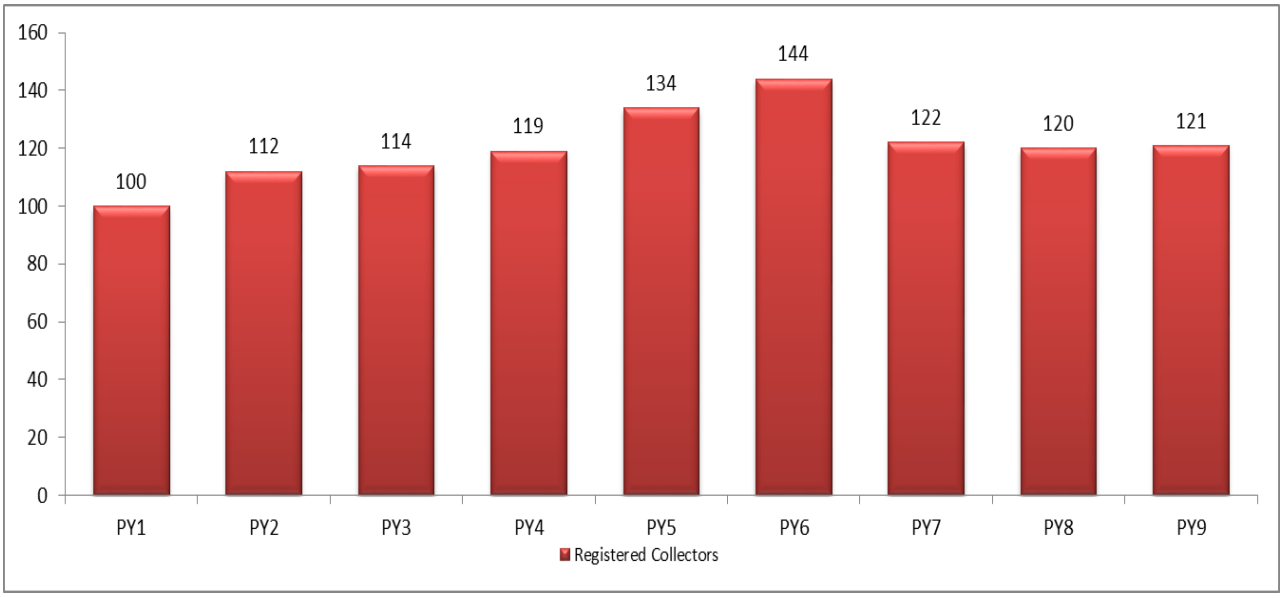
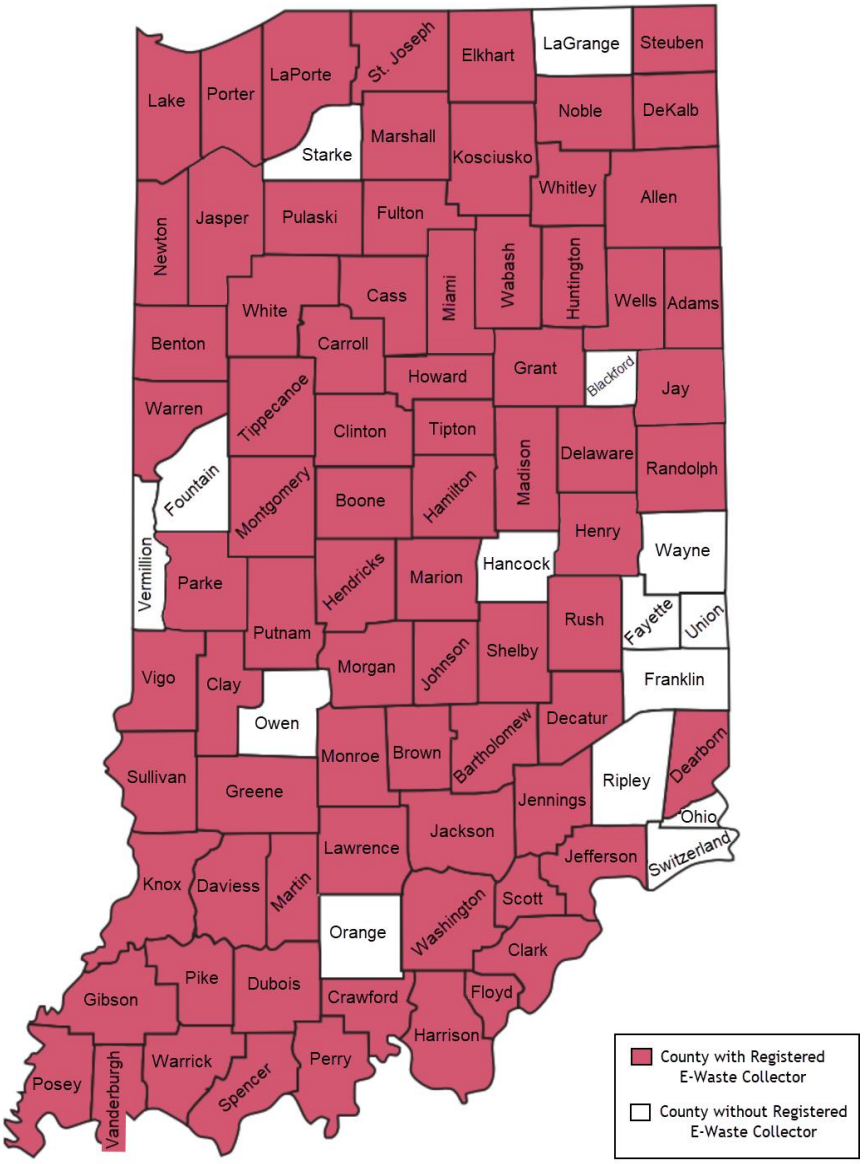


Figure 4 below displays counties with and without an e-waste collection site. In PY9, there were registered e-waste collection sites in 77 of Indiana's 92 counties. These collection sites include all registered permanent collection locations in the state and some, but not most, temporary and special collection events. Indiana residents have had the benefit of having a large number of collectors scattered throughout the state. This has allowed for more options to residents when it comes to recycling their unwanted electronic devices. The program will continue to attempt to focus on assisting counties with the collection of e-waste.

Figure 4: Indiana Counties with Registered Collection Sites for PY9



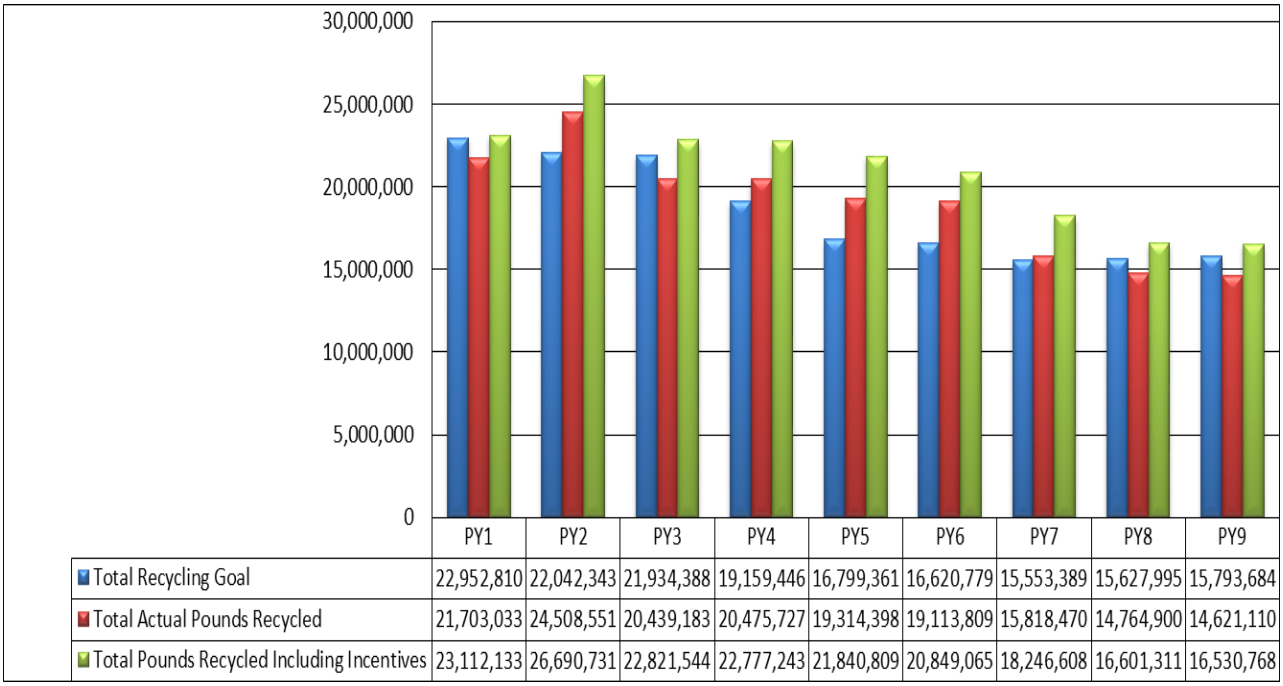
Manufacturer and Recycler Annual Report Summaries (Including Total Weight of CEDs Recycled)

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

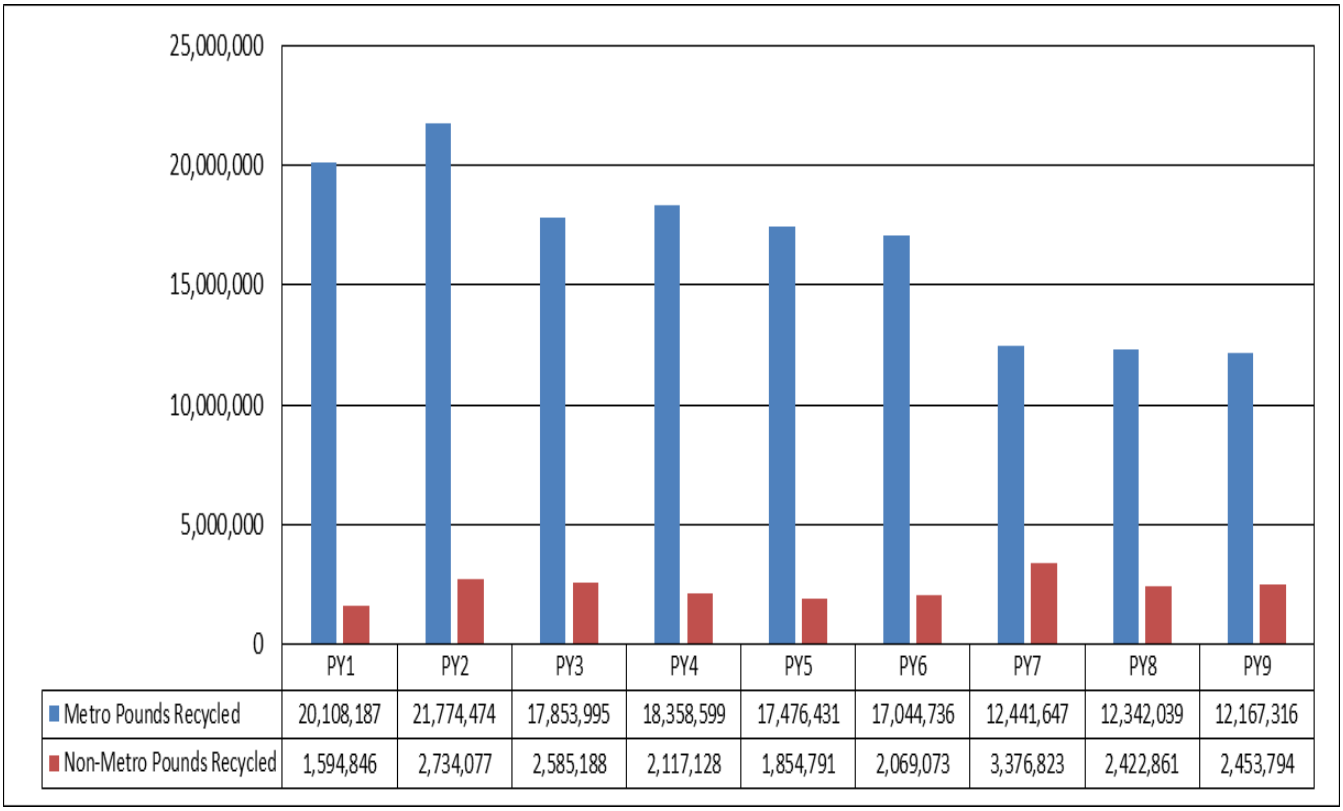
collectors and recyclers located outside of Indiana as well as manufacturer mail back programs. Figures 5, 6, and 7 show how many pounds of CEDs were recycled by manufacturers registered in PY9 and the previous program years in which annual reports were submitted.

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



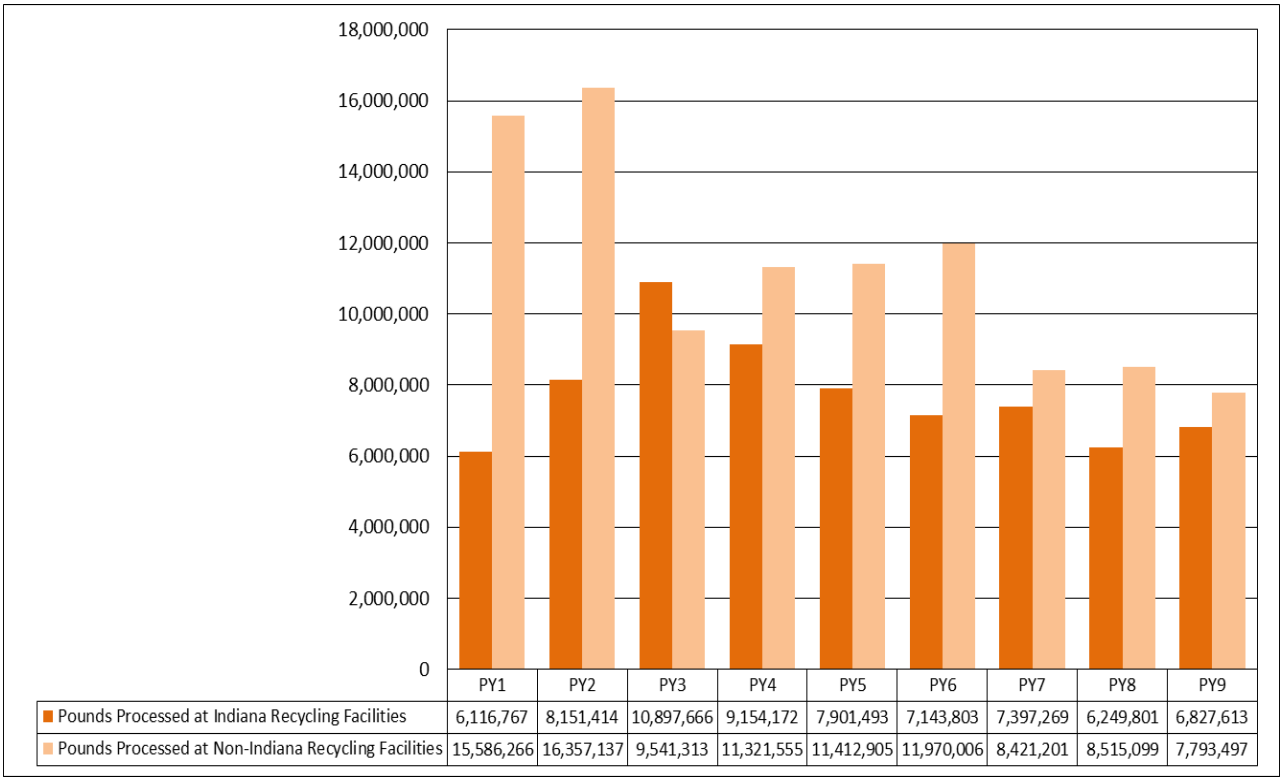
	PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9
Total Recycling Goal	22,952,810	22,042,343	21,934,388	19,159,446	16,799,361	16,620,779	15,553,389	15,627,995	15,793,684
Total Actual Pounds Recycled	21,703,033	24,508,551	20,439,183	20,475,727	19,314,398	19,113,809	15,818,470	14,764,900	14,621,110
Total Pounds Recycled Including Incentives	23,112,133	26,690,731	22,821,544	22,777,243	21,840,809	20,849,065	18,246,608	16,601,311	16,530,768

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



	PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9
Metro Pounds Recycled	20,108,187	21,774,474	17,853,995	18,358,599	17,476,431	17,044,736	12,441,647	12,342,039	12,167,316
Non-Metro Pounds Recycled	1,594,846	2,734,077	2,585,188	2,117,128	1,854,791	2,069,073	3,376,823	2,422,861	2,453,794

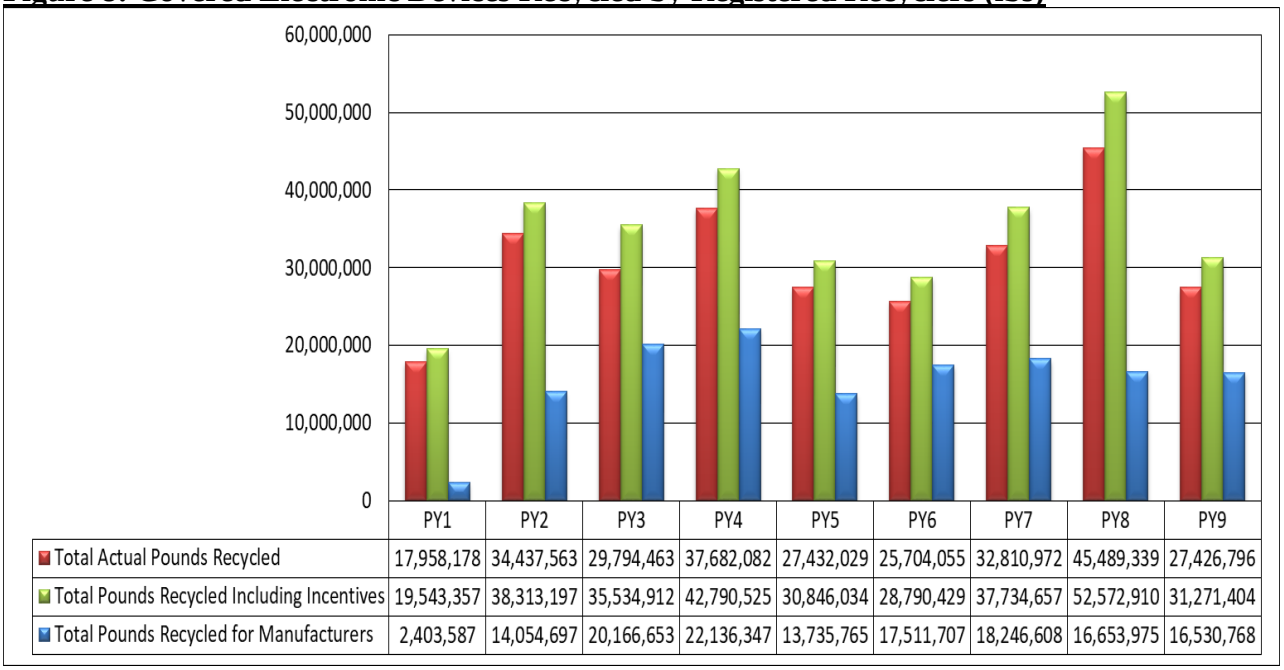
Figure 7: Covered Electronic Devices Recycled by Registered Manufacturers: Details (lbs)



	PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9
Pounds Processed at Indiana Recycling Facilities	6,116,767	8,151,414	10,897,666	9,154,172	7,901,493	7,143,803	7,397,269	6,249,801	6,827,613
Pounds Processed at Non-Indiana Recycling Facilities	15,586,266	16,357,137	9,541,313	11,321,555	11,412,905	11,970,006	8,421,201	8,515,099	7,793,497

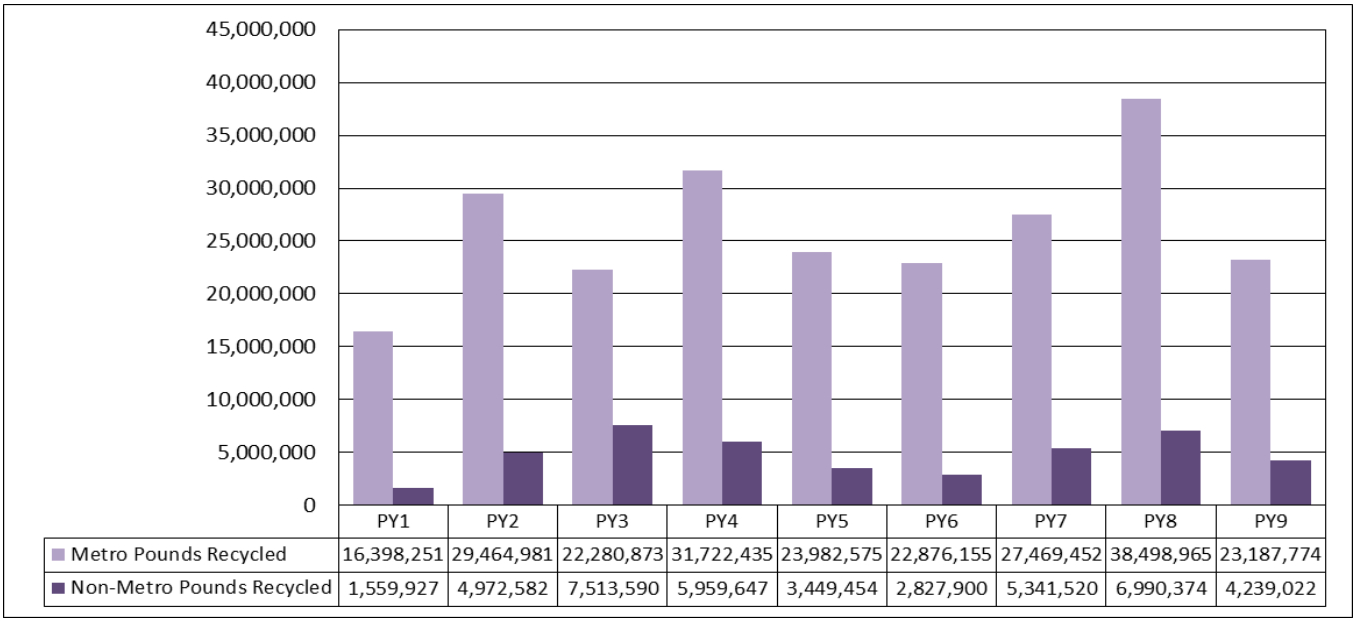
Figures 8, 9, and 10 show how many pounds of CEDs were recycled by recyclers registered in PY9 and the previous program years in which annual reports were submitted. There continues to be more e-waste being recycled than what registered manufacturers are responsible for recycling. For PY9, there was a decrease in pounds recycled by registered recyclers. The decrease in the amount of CEDs that were reported being recycled for the program year compared to the last several years is partially due to better quality assurance and education on the definition of CED.

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



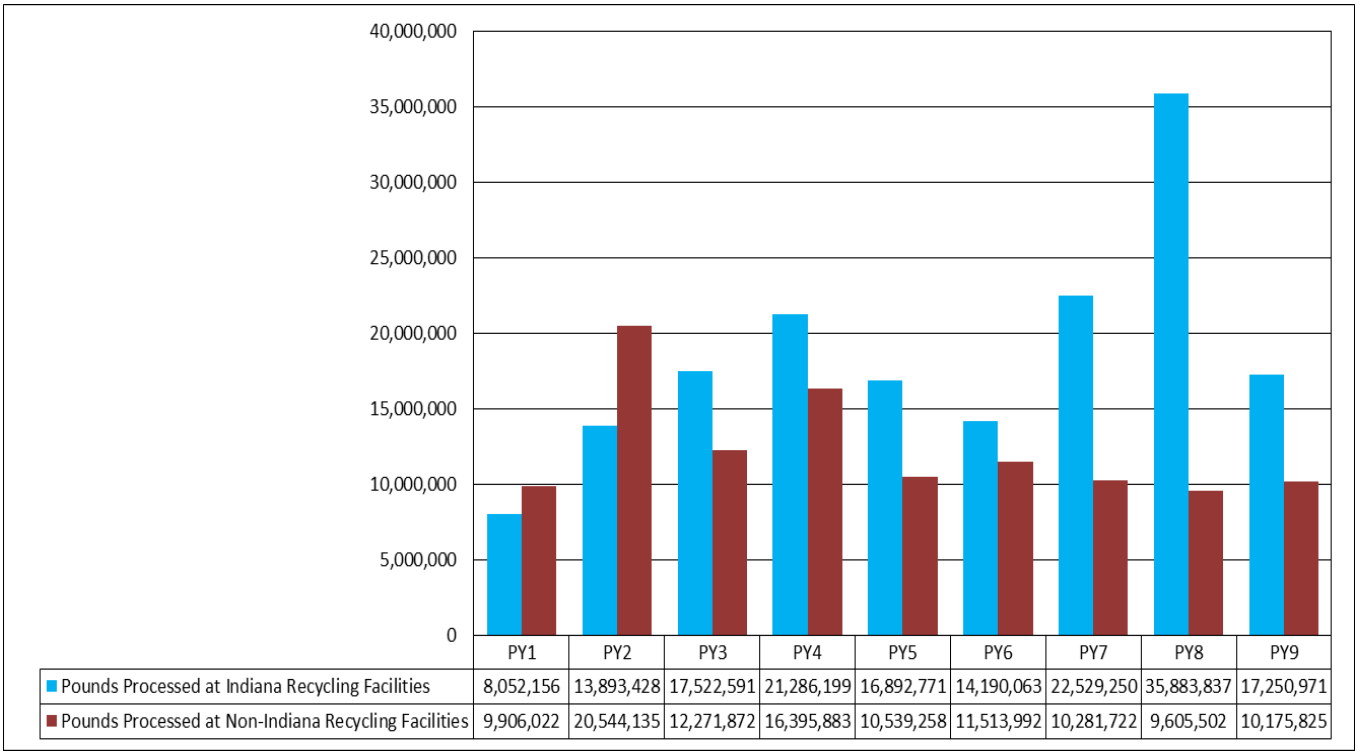
	PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9
Total Actual Pounds Recycled	17,958,178	34,437,563	29,794,463	37,682,082	27,432,029	25,704,055	32,810,972	45,489,339	27,426,796
Total Pounds Recycled Including Incentives	19,543,357	38,313,197	35,534,912	42,790,525	30,846,034	28,790,429	37,734,657	52,572,910	31,271,404
Total Pounds Recycled for Manufacturers	2,403,587	14,054,697	20,166,653	22,136,347	13,735,765	17,511,707	18,246,608	16,653,975	16,530,768

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



	PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9
Metro Pounds Recycled	16,398,251	29,464,981	22,280,873	31,722,435	23,982,575	22,876,155	27,469,452	38,498,965	23,187,774
Non-Metro Pounds Recycled	1,559,927	4,972,582	7,513,590	5,959,647	3,449,454	2,827,900	5,341,520	6,990,374	4,239,022

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



	PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9
Pounds Processed at Indiana Recycling Facilities	8,052,156	13,893,428	17,522,591	21,286,199	16,892,771	14,190,063	22,529,250	35,883,837	17,250,971
Pounds Processed at Non-Indiana Recycling Facilities	9,906,022	20,544,135	12,271,872	16,395,883	10,539,258	11,513,992	10,281,722	9,605,502	10,175,825

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:

	Lbs/Capita (Actual Pounds)	Lbs/Capita (Including Incentives)
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

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:

	Credits Earned	Credits Bought/ Sold	Credits Used	Credits Expired	Credits Retained	Manufacturers Holding Credits
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

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 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.

Seven manufacturers were required to pay a shortfall fee for PY8, resulting in a fee of $5,078.20 for a total shortfall of 12,696 pounds. For PY9, five manufacturers will be required to pay a shortfall fee for a total amount of $7,081.20.

Manufacturers that were exempt from the registration fee for PY9, because they sold less than 100 units of VDDs to households during PY8, are exempt from the VRF.

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

Discussion of Results

Indiana's E-Cycle Program is comprised of collectors, recyclers, and manufacturers. PY9 marked the third 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 new online format. Below is a brief discussion of results for each stakeholder group within the Indiana E-Cycle Program.

Collectors:

For PY9, there were 121 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 educate facilities, to ensure that registered participants were actually required to register with the program. Upon 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. Aside from this discovery, the new and improved online reporting tool requires that a facility only register their primary location, and does not require satellite locations to register.

For PY9, collectors reported collecting 30,113,101 pounds of CEDs for the program year. Of this total, 24,500,859 came from metropolitan counties, while 5,612,242 came from non-metropolitan counties. Of the total CEDs collected for the program year, 9,326,176 came from Indiana Solid Waste Management Districts (SWMDs), while the remaining 20,786,925 came from other entities. 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 3,570,308 out of 5,612,242 pounds of CEDs from non-metropolitan areas, while also collecting 5,755,868 from metropolitan areas in Indiana. For the program year, SWMDs accounted for over 60 percent of all CEDs collected from non-metropolitan areas in Indiana.

Issues involving the collection of e-waste still 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). In an effort to lessen these operating costs, IDEM has begun conducting outreach and research on potential solutions to mitigate this issue.

Recyclers:

For PY9, 35 recyclers registered with the program with 22 of them being 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 better quality assurance and understanding of what facilities need to register with the program.

Recyclers reported recycling 27,426,796 pounds of CEDs for the program year. Of this total, 23,187,774 came from metropolitan counties, while 4,239,022 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 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 PY9, recyclers earned 3,844,608 in total incentives, which brings the total amount of CEDs recycled by recyclers for the program year to 31,271,404 pounds. The decrease in the amount of CEDs that were reported being recycled for the program year compared to last years is partially due to better quality assurance and education on the definition of CED.

Recyclers collectively recycled 14,621,110 pounds of CEDs on manufacturer's behalf before the inclusion of incentives. After the inclusion of incentives, this figure rose to 16,530,768 pounds of CEDs.

Manufacturers:

For PY9, 83 manufacturers registered with the program. For the program year, manufacturers collectively had a recycling obligation of 15,793,684 pounds. Manufacturers met this recycling obligation by recycling 14,621,110 pounds of CEDs before incentives, and this figure increased to 16,530,768 pounds after the inclusion of incentives. This marks the ninth year that manufacturers have recycled more than their recycling obligation.

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 15.8 million pounds in Program Year 9 despite having 18 more manufacturers registered in PY9 than in PY1 of the program. The demand for e-waste

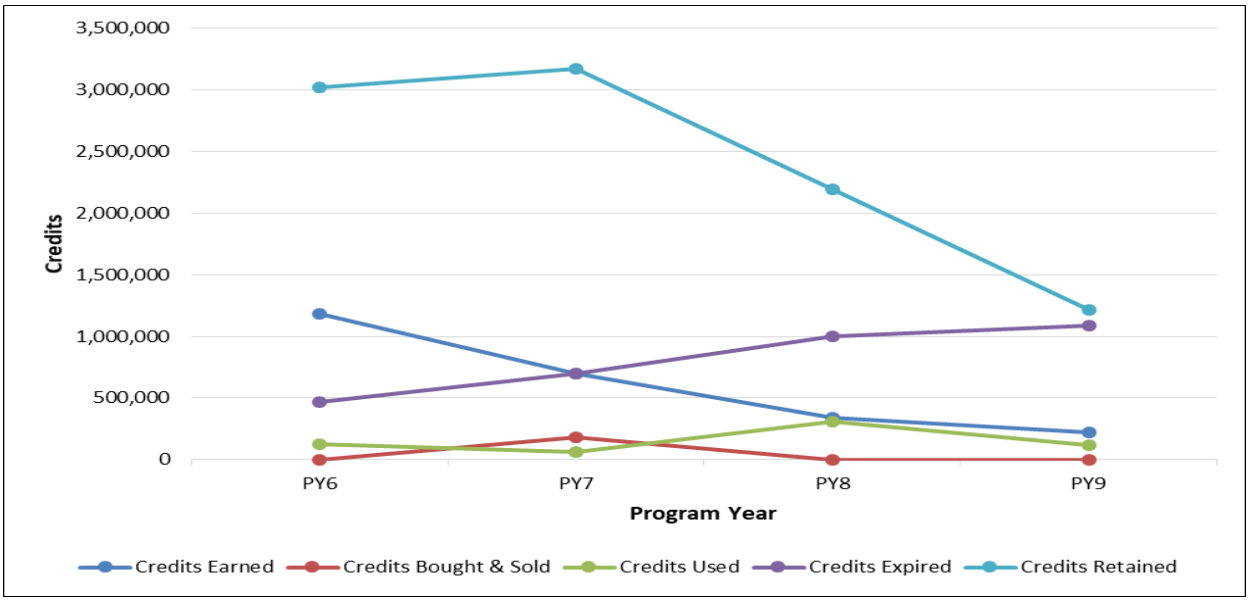
collection and recycling in the state, however, has not decreased, meaning that the cost of collection is increasingly burdensome to e-waste collectors including solid waste management districts.

Figure 11 below highlights pertinent credit information over the most recent four program years. Credits continue to play a minimal role in helping to achieve manufacturer's recycling obligations for the program. This program year, IDEM made an effort 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 114,386 credits were used for the program year, while 1,084,328 credits expired. There were eight manufacturers that used credits towards their recycling obligation for PY9.

Twenty-nine manufacturers retained credits that can be used in upcoming years within the program. It should be mentioned, that even though a large number of manufacturers are holding credits within the program, a majority of these credits being held are of insignificant amounts. Out of the 29 manufacturers that retained credits, only 10 of them retained an amount greater than 1,000 credits.

As displayed below, there has been a steady increase in the number of credits expiring each year, coupled with a steady decrease in the amount of credits being earned each program year. Based on the most recent four program years, it is apparent that credits are not as resourceful as was originally intended. One potential solution to making credits bare 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 amount of credits that go unused and expire on an annual basis.

Figure 11: Credit Information



Conclusion

Indiana has had the benefit of having a large number of collectors register with the program, which allows Indiana residents the ability to have numerous options in regards to recycling their electronic devices. The program has become more efficient and effective since its inception, and this can be observed through action items such 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 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, 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.

Pollution Prevention Report: IC 13-27-6

The Pollution Prevention and Compliance Assistance Section of the Office of Program Support in the Indiana Department of Environmental Management (IDEM) is submitting this report to the Indiana General Assembly as required by Indiana Code 13-27-6. This report describes Indiana's Pollution Prevention (P2) activities and the measurable reduction results from 2018 efforts. The various P2 programs are summarized in the following categories: voluntary reduction programs, technical assistance, partnerships, reports, awards, grants, and education and training programs.

It is important to note that IDEM is continually seeking the most effective method for measuring the positive impact of pollution prevention activities. Currently IDEM uses surveys, annual reports from voluntary recognition program members, and final reports from grantees to measure pollution prevention progress and results. These tools do not capture all achievements resulting from pollution prevention efforts, but they are determined to be the best available method at this time.

Voluntary Recognition Programs

To encourage Indiana entities to pursue better environmental management practices, the P2 program offers recognition for participating in the Indiana Environmental Stewardship Program and Indiana CLEAN Community Challenge.

The Indiana Environmental Stewardship Program (ESP) is a performance-based recognition program for Indiana businesses. Each participating business implements an environmental management system, maintains a positive compliance record, and commits to at least one environmental improvement initiative each year. Participants are provided with regulatory benefits, reduced record keeping, advanced notice of routine inspections, and expedited permitting. In 2018, the fifty-six (56) member facilities collectively realized Indiana environmental achievements in the following areas:

Environmental Achievements	Comparison
Electricity usage reductions by 30,227,223 kilowatt hours	Saved enough electricity to power 2,488 Indiana homes for one year. [1]
Natural gas reductions of 511,842,223 Btu	Reduced the amount of natural gas that would be used in 5.4 homes in one year. [2]
Non-hazardous waste reductions by 6,163,994 pounds	Pounds of non-hazardous waste reduced is equivalent to 514 elephants! [3]
Water usage reductions by 212,129,926 gallons.	Reduced the amount of water usage enough to fill nearly 321 Olympic sized swimming pools. [4]
Increased recycling by 803,796 pounds	Increased recycling by a weight equivalent to about 161 full-sized passenger trucks. [5]
Air emissions reductions by 9,184 pounds of Particulate Matter (PM), and 154,422 pounds of Volatile Organic Compounds (VOCs)	Decreased air pollution by the weight of 32,721 bags of all-purpose flour. [6]

1. Electricity: average of 10,972 kWh per home annually in 2018 according to U.S. Energy Information Administration (U.S. EIA)
2. Natural gas: The average Midwest household consumes 94.3 million British thermal units (Btu) a year, according to U.S. Energy Information Administration (U.S. EIA) 2015 survey data.
3. According to the World Wildlife Fund, an average adult African elephant weighs about 12,000 pounds.
4. Olympic Swimming Pool can hold 660,000 gallons of water.
5. Average pick-up truck weighs 5000 pounds.
6. Weight of a typical bag of all-purpose flour is 5 pounds.

Similar to ESP, the Comprehensive Local Environmental Action Network (CLEAN) Community Challenge is a technical assistance and recognition program for units of local government. CLEAN encourages communities to identify the environmental impacts from municipal operations and to create a management plan focused on continual environmental improvement. Total membership as of December 2018 was 10 municipalities. These members have committed to continuous environmental improvement by identifying the potential environmental impacts associated with municipal operations and implementing plans to proactively manage those impacts. Designated communities are required to submit an annual performance report which describes the progress made and hurdles overcome on their environmental projects for the year. To date, total environmental benefits reported for 2018 include:

- Recycled 850,920 pounds of residential waste, up from 775,920 pounds in the previous year
- Retrofitted governmental buildings with energy efficient upgrades. For example, one community reduced its consumption by 1606.25 kWh per month, which resulted in a savings of $1,606.25, annually. Another community reported installing LED lights in fifteen rooms in its City Hall.
- Developed 11.50 miles of community trails
- Collected 813.19 pounds of unwanted medication
- Created nine acres of pollinator habitat
- Developed16 community and rain gardens

- Installed anti-litter signage at five community parks
- Implemented 20 acres of no-mow areas saving fuel costs and reducing pollution
- Implemented tree plantings or landscape maintenance in several communities, including 244 Trees planted, 770 tree and brush seedlings distributed, while another community increased forestry spending by 16 percent

Partnerships

The Partners for Pollution Prevention, in cooperation with IDEM, held four meetings during 2018 for Indiana entities to share pollution prevention strategies. One of these meetings was the 21st Annual Pollution Prevention Conference and Trade Show. The meeting agenda centered on the theme "Sustainability: Pollution Prevention is a Piece of the Puzzle" and allowed speakers to share information about community resilience and specifics on adopting pollution prevention into everyday business operations. In addition to these ongoing educational opportunities, the Partners' members annually report on the results of their pollution prevention initiatives.

The annual reporting deadline for 2018 for the Partners was June 1, 2019. Total environmental benefits reported by members for 2018 include:

Air Emissions Reductions (pounds/year)	Volatile Organic Compounds (VOCs)	2,833
Solid Waste Reductions (pounds/year)		260,000
Water Usage Reductions (gallons/year)		145,414,348
Non-Hazardous Material Reductions (pounds/year)		586,976
Hazardous Material Reductions (pounds/year)		3,463,872
Hazardous Waste Reductions (pounds/year)		2,238,199
Electricity Usage Reductions (kwh)		11,566,991
Natural Gas Usage Reductions (Btu)		965,020

Governor's Awards for Environmental Excellence

The Indiana Governor's Awards for Environmental Excellence provide recognition to manufacturers, businesses, organizations, vendors, educators, and dedicated individuals for their outstanding environmental initiatives. These awards recognize Indiana's leaders and organizations that have implemented outstanding environmental strategies into business operations and decision-making processes. By seeking out and utilizing innovative environmental practices, the award recipients reduce waste, save money, increase productivity, and contribute greatly to Indiana's environmental protection efforts, as well as benefit the health and welfare of Indiana's communities and the state as a whole. These awards are the highest environmental recognition awards in the State of Indiana. The award categories and the 2018 winners are below:

Pollution Prevention:

- National Office Furniture, Jasper, Dubois County, for "*Robotic Finish Technology.*" National Office Furniture implemented a manufacturing improvement that included an innovative process that utilizes a robotic system for applying finish to seating products. It is one of the first of its' kind in the United States in the wood working industry. It combines multiple advanced technologies into one line that is able to automate several steps of the finishing process, replacing manual operations and gaining efficiencies. The automated system utilizes Radio-frequency identification (RFID) technology throughout the finish process to distinguish color choices and seating models being produced on the line.
  This technology is a repeatable application that improves consistency throughout the process. There is a reduction in product throughput time and material usage. Halogen curing ovens have replaced the older electric ovens that remained on throughout the day to maintain temperatures. Halogen ovens are designed for on-demand operations. This means they operate when product is present within the oven and turn off once target temperatures are met. They have a quick start-up and faster cure times. Therefore, it reduces electrical consumption over the previous conventional convection ovens. With this new robotic technology, National Office Furniture was able to consolidate two traditional finish lines into one state of the art automated finish application line.

Five Year Continuous Improvement:

- Toyota Motor Manufacturing of Indiana, Princeton, Gibson County, for "*Toyota Continuous Improvement."* Toyota Motor Manufacturing of Indiana has been implementing various sustainability projects over the last five years to reduce their operation's impact on the environment. By following the plan laid out in their Environmental Management System, the following reductions have been achieved since 2012:
  - Energy Consumption – 42% per vehicle
  - CO2 Emissions – 31% per vehicle
  - Water Usage – 24% per vehicle
  - VOC Emissions – 20% per vehicle
  - Waste Generation – 19% per vehicle
  - Landfill Waste Disposal – maintained zero landfill

Energy/Renewable Resources:

- Michigan City Area Schools, Michigan City, La Porte County, for " *Michigan City Area Schools Solar and LED Lighting Project 2017*." After completion of a guaranteed energy savings project, Michigan City Area Schools (MCAS) decided to further reduce their energy costs using solar power and LED lighting upgrades. The District selected Performance Services to implement a second guaranteed energy savings project that is reducing overall electricity consumption at seven buildings by 52 percent, saving the District a guaranteed amount of $704,672 annually. Ground-mounted solar arrays and LED lighting were installed at three elementary schools, two middle schools, Michigan City High School and the administration building. In addition, a customized solar curriculum program developed by the National Energy Education Development (NEED) project and sponsored by Performance Services was implemented at MCAS for use in classrooms across the District as a component of the project.

Land Use/Conservation:

- Shirley Heinze Land Trust, Valparaiso, Porter County for "*Little Calumet River Corridor*." Historically, the Little Calumet River watershed included abundant, healthy wetland areas which performed important hydrological and ecological functions. In 2014, Shirley Heinze Land Trust, with the support of more than

30 partner agencies and organizations, successfully spearheaded an effort to attain the Indiana Bicentennial Nature Trust Conservation Area designation. This project has helped to mitigate existing habitat fragmentation and advance a broader conservation vision. Restoration of these areas has enhanced the quality of local waterways and contributed to good storm water management for the community. As a part of this project, a significant portion of the 12-mile waterway was opened for paddling and public recreation. Fall 2017 was the first time in over three decades that paddlers could freely use the waterway.

Greening the Government:

- City of Carmel, Carmel, Hamilton County, for "*Carmel Urban Forestry Program.*" The Carmel Urban Forestry Program directs the City's landscaping efforts through new private development and manages existing greenspace health throughout all city-owned properties and right-of-ways. In 2017, Carmel Urban Forestry staff worked with Duke Energy in Implementing a Plant Growth Regulator experiment on approximately 50 shade trees under powerlines on West Main Street. These plant growth regulators reduce the growth of canopy trees and strengthen root systems. The goal of the plant growth regulator program is to provide the benefits of having trees, and keep them from impeding on the utility's right-of-way. The City also implemented a soil sampling program to better understand how different soils favor growth of certain types of trees. In 2017, the staff conducted sampling at 87 sites across the city, and used this data to work on problem areas.

Outreach/Education:

- LaPorte County Health Department for "*LaPorte County Property Transfer Ordinance.*" The remarkable outreach and education program created by the LaPorte County Health Department was geared towards passing an ordinance that would require inspection of a septic system prior to the selling/transfer of a property. Prior to passing of the ordinance, the health department held 11 public outreach events to educate the public and businesses on the importance of this issue.

Recycling/Re-use:

- Town of Merrillville, Merrillville, Lake County, for "*High-density polyethylene* (*HDPE) Recycled Stormwater Infrastructure Pipe Standards*" The Merrillville Stormwater Utility implemented a new standard for town-owned stormwater infrastructure projects by incorporating pipe that contains at least 40% recycled HDPE material and meets strict Association of State Highway and Transportation Officials' (AAASHTO) standards. There were several projects that were completed with these standards, including the pilot project which was conducted at 58th place and Vermont Street. The Town is currently designing projects that will cost over two million dollars in improvements and have a master plan that will require over 25 million dollars in infrastructure. All of these projects will utilize the new recycled pipe standards.

Grants

In 2018, the Office of Program Support received a grant from the U.S. EPA for $135,000 to fund a project titled "Implementing Pollution Prevention (P2) to Reduce Toxics in Indiana". The project is a partnership between IDEM and Purdue Manufacturing Extension Partnership (Purdue MEP) to demonstrate measurable reductions in toxics and other pollutants while achieving cost savings. These reductions will be achieved by the implementation of a proven Purdue EMP W.A.S.T.E stream mapping process for identifying wastes and pollution prevention opportunities at participating industrial facilities. IDEM will then issue state level grants funded by federal dollars through an established state grant program to implement those projects that will reduce toxics.

Indiana's Clean Vessel Act (CVA) pumpout grant program allows a public or private marina to receive a reimbursement of up to 75% for the purchase and installation of a pumpout. CVA grants have funded over 45 pumpouts, 5 pumpout boats, and 2 floating restrooms in Indiana. Installing such a system at Indiana marinas provides boaters with a proper method to dispose of their sewage and prevent it from entering Indiana's waters. In 2018, two pumpout projects were funded at Patoka Lake Marina and Sammy L. Maletta Public Marina.

Education and Training Programs

The Environmental Education and Outreach (EEO) section offers presentations for youth and adults on a variety of topics, including: air quality; land quality; water quality; recycling and composting. During 2018, EEO participated at Hoosier Association of Science Teachers Indiana, The Children's Museum of Indianapolis Sustainability Fair, Canal Night at the Indiana State Museum, Indiana State Fair, and Statehood Day at the Indiana Statehouse. 2,160 students, teachers and adults were reached through interactive presentations at these events.

During the month of April IDEM's EEO section coordinates Earth Day presentations for Indiana schools. During 2018, 101 IDEM staff visited 127 schools and reached 13,973 Hoosier children in April.

Conclusion

IDEM continues to make progress implementing the Indiana Industrial Pollution Prevention and Safe Materials Act. The Pollution Prevention and Compliance Assistance Section focuses on continually improving the programs' effectiveness to reduce pollution and accurately measure reduction results. At this time, IDEM does not see a need for additional legislation in this area. For additional information on the state of Indiana's P2 Programs, please call (800) 988-7901.

Compliance Advisory Panel Report: IC 13-28-3

CTAP Activities July 1, 2018 - June 30, 2019

The Compliance and Technical Assistance Program (CTAP) is Indiana's small business environmental assistance program, statutorily authorized to operate under Indiana Code (IC) 13-28-1, 13-28-3, and 13-28-5-4. CTAP is a non-regulatory program of Indiana Department of Environmental Management that provides free, confidential compliance and technical assistance to regulated entities.

Per the Clean Air Act 42 U.S.C. 7661f under the heading: Small business stationary source technical and environmental compliance assistance program, the State of Indiana adopted language into the State Implementation Plan establishing a small business stationary source technical and environmental compliance assistance program, CTAP. The Indiana Code 13-28-5-1 Establishment stated in Section 1. The department shall establish a small business stationary source technical assistance program as required under Section 507 of the federal Clean Air Act (42 U.S.C. 7661f).

CTAP was established to help Indiana businesses achieve compliance with environmental regulations.

IC 13-28-3 Chapter 3. Technical and Compliance Assistance Program

Sec. 2. (a) The assistance program established under this chapter shall do the following:

(1) Designate an individual to serve as a liaison and ombudsman to the regulated community to assist the regulated community with specific regulatory or permit matters pending with the department.

(2) Provide assistance to new and existing businesses and small municipalities in identifying:

(A) applicable environmental rules and regulations; and

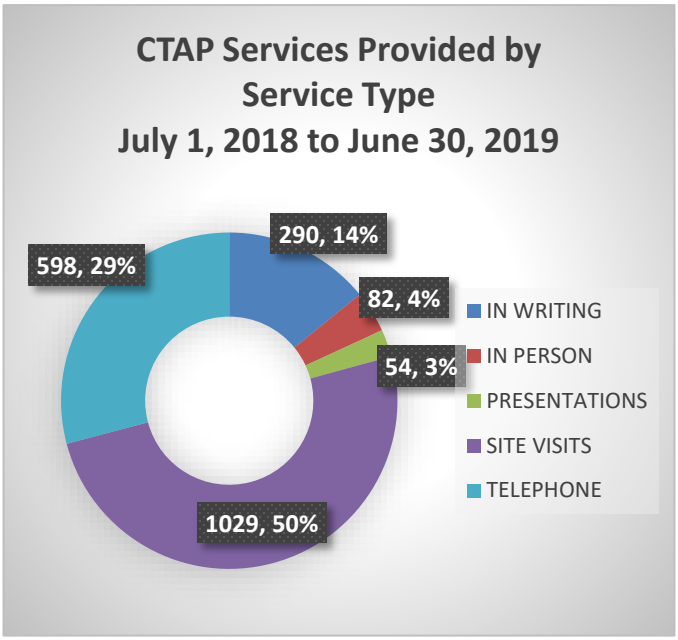
(B) permit requirements;

that apply to new and existing businesses and small municipalities.
(3) Develop and distribute educational materials regarding:
(A) environmental requirements;
(B) compliance methods;
(C) voluntary environmental audits;
(D) pollution control technologies; and
(E) other compliance issues;
including standardized forms and procedures for completing permit applications.
(4) Provide public outreach and training sessions in cooperation with representatives of the business and municipal communities regarding existing and future state and federal environmental requirements.
(5) Develop and operate a clearinghouse to respond to inquiries from businesses and municipalities concerning applicable environmental rules, regulations, and requirements.
(6) Provide technical assistance concerning pollution control techniques to local and state governmental entities and businesses and distribute educational materials regarding pollution prevention developed by the pollution prevention division established by IC 13-27-2-1.
(7) Provide administrative and technical support for the compliance advisory panel established by IC 13-13-7.1-1.
(8) Conduct other activities as required to:
(A) improve regulatory compliance; and
(B) promote cooperation and assistance in meeting environmental requirements.

(b) The assistance program may establish limited onsite assistance to provide compliance information to a small business or small municipality, subject to the confidentiality provisions of section 4 of this chapter. The assistance program may use money from the environmental management special fund to implement this subsection. The assistance program may limit the number of inspections per year and restrict onsite assistance to specific programs.

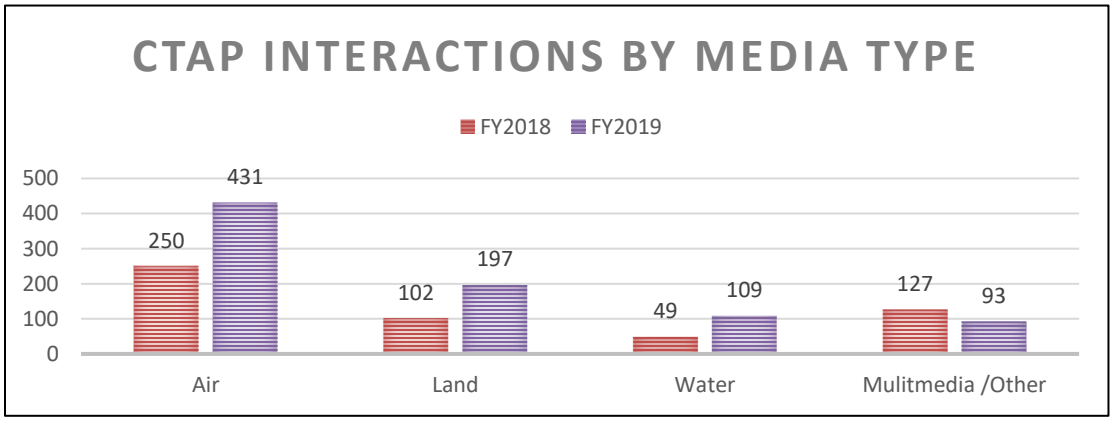
CTAP can assess the environmental compliance a facility or help address concerns about a particular process or regulation via e-mail, phone or site visit. CTAP also has the resources to identify pollution prevention opportunities that can move businesses out of the regulatory loop or move it into a less burdensome regulatory process.

Compliance and Technical Assistance Totals for 2018:



Site Visits

- CTAP staff conducted 874 introductory site visits at various businesses and organizations. These site visits are made to introduce the CTAP program to businesses that have been identified as potentially needing compliance assistance.
- A more in-depth compliance site assessment was performed at 155 locations. During these more in-depth compliance site assessments, a business or organization invites the CTAP staff to visit and assist with compliance with an individual regulatory area or for a full compliance site assessment.



Additional Technical Assistance Provided:

- CTAP staff presented technical and regulatory information at 54 events to 3,363 attendees
- A Fact Sheet was developed on the regulatory requirements related to Power washing.
- Provided assistance to the Environmental Stewardship Program and CLEAN members.
- Made site visits to review activities and monitor environmental compliance of the Indiana Governor's Awards for Environmental Excellence applicants
- Updated CTAP website with current regulatory information and technical guidance
- Worked to update the Environmental Management 101 training for small to medium sized companies to become knowledgeable in the basics of environmental management. Presented the Environmental Management 101 Pollution Prevention Module at five regional locations in Indiana to assist Environmental Managers in developing a pollution prevention program at their facilities and to identify pollution prevention strategies that will assist the business in reducing their environmental impacts and costs.
- Continued to manage Small Business Regulatory Coordinator duties as described in IC 4-22-2-28.1 by providing Rule Summaries for Small Businesses.
- Developed a partnership with the Indiana Economic Development Corporation and Indiana Small Business Development Corporation to assist new businesses in understanding regulatory requirements for Indiana business development.

Mercury Switches in End of Life Vehicles Activities: IC 13-20-17.7

This program was established to remove mercury switches from end of life vehicles processed in Indiana by motor vehicle recyclers.

IC 13-20-17.7-2 requires IDEM to prepare an annual report that includes the number of mercury switches collected from end of life vehicles and the amount of mercury collected.

Mercury Switches Activities January 1, 2018 to December 31, 2018

Total Number of Mercury Switches Collected from End of Life Vehicles	8,288 switches
Total Amount of Mercury Collected	18.23 pounds