



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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2018 Annual Reports

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

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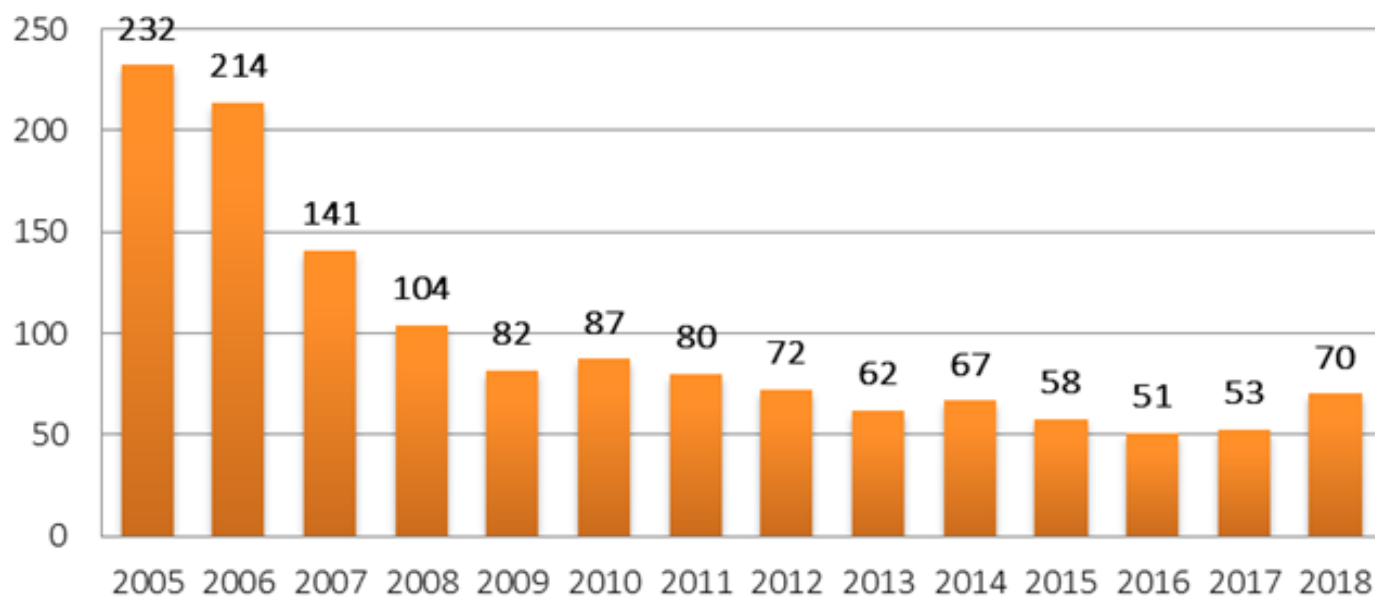
Permit Efficiency:

Total calendar days accumulated in issuing environmental permits, as determined by state statute

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

	Current	75%	95%	Statutory
Land	28,269	21,892	27,730	29,189
Air	63,612	68,027	86,167	90,702
Water	23,974	38,003	48,137	50,670
Totals	115,855	127,922	162,034	170,561

Permits - Percent of Statutory Days





July 2018

ENFORCEABLE OPERATING AGREEMENT PROGRAM REPORT

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, 2018, there were 781 currently permitted Source Specific Operating Agreement (SSOA) sources. In FY18 (July 1, 2017 – June 30, 2018), there were SSOAs issued to 23 sources. To date, in July 2018, there have been no new SSOAs issued to sources.

LEGISLATIVE REPORT ON CFO/CAFO ACTIVITIES FY 2018
Senate Resolution 2512-2007

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 1,001 Confined Feeding Operations (CFOs) and 828 Concentrated Animal Feeding Operations (CAFOs) for a total of 1,829 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, 2017 through June 30, 2018.

Permit Type	Reason for Inspection	Number of Inspections
CFO	Paperwork Certificate of Completion (CoC) Follow-Up	8
	Compliance Assistance	10
	Construction	12
	Complaint Inspection	6
	Follow-Up Inspection	36
	Routine Inspection	225
	Spill Response Inspection	1
	Voidance	33
	Other (permit, enforcement, site status...)	10
	Total	341
CAFO	Paperwork (CoC) Follow-Up	4
	Compliance Assistance	36
	Construction	80
	Complaint Inspection	18
	Follow-Up Inspection	30
	Routine Inspection	177
	Spill Response Inspection	5
	Voidance	16
	Other (permit, enforcement, site status...)	10
	Total	376
CFO/CAFO Totals	Paperwork (CoC) Follow-Up	12
	Compliance Assistance	46
	Construction	92
	Complaint Inspection	24
	Follow-Up Inspection	66
	Routine Inspection	402
	Spill Response Inspection	6
	Voidance	49
	Other (permit, enforcement, site status...)	20
	Total	717

CFO and CAFO Violations Cited from July 1, 2017 to June 30, 2018

Permit Type	Citation/Violation	Number of Violations
CFO	Approval and Performance Standards	6
	Discharge and Spill Requirements	2
	Land Application Records	57
	Operating Records	61
	Operational Standards	23
	Land Application	7
	Total	156
CAFO	Approval and Performance Standards	14
	Discharge and Spill Requirements	4
	Land Application Records	16
	Operating Records	2
	Operational Standards	30
	Land Application	18
	Total	84
CFO/CAFO Totals	Approval and Performance Standards	20
	Discharge and Spill Requirements	6
	Land Application Records	73
	Operating Records	63
	Operational Standards	53
	Land Application	25
	Total	240

Permitting Activities: CFO and CAFO Application Details from July 1, 2017 to June 30, 2018

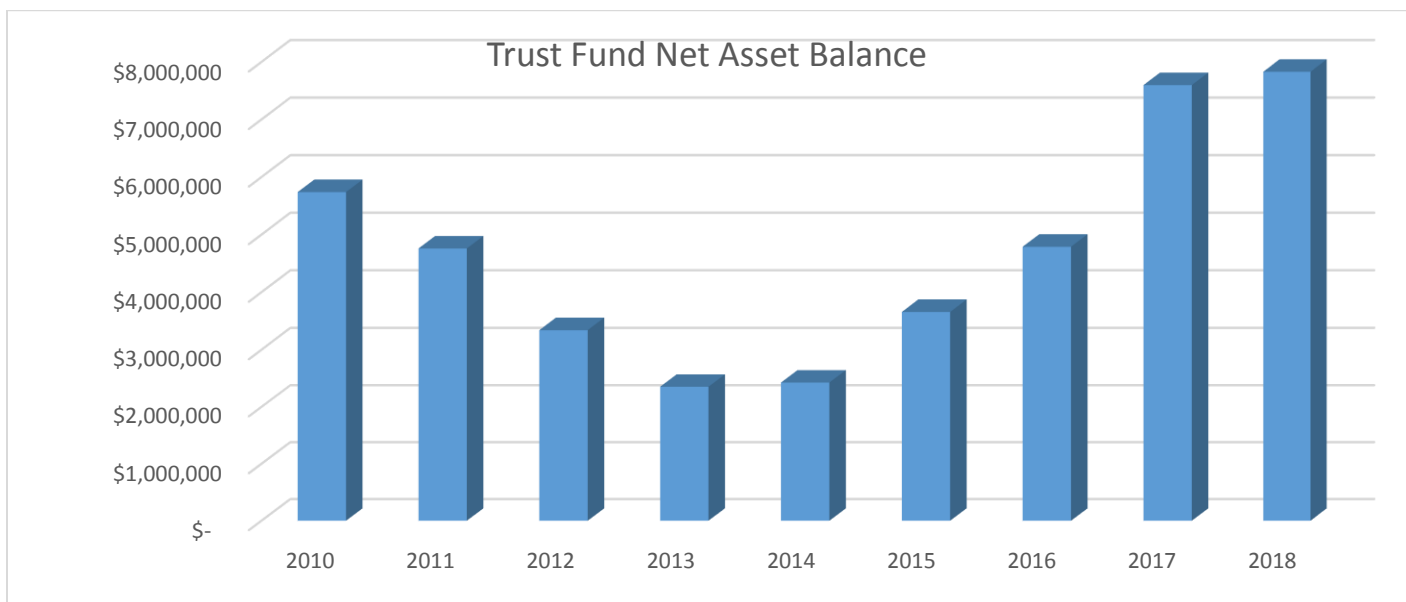
Application Type	Received	Issued	Denied	Withdrawn
CFO Approval Applications	92	87	0	5
Individual NPDES CAFO Permit Construction Applications	0	0	0	0
Large CAFOs	0	0	0	0
Med. CAFOs	0	0	0	0
Small CAFOs	0	0	0	0
Total Construction Applications	92	87	0	5
Individual NPDES CAFO Permit Coverage Application	0	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	92	87	0	5

Hazardous Substance Response Trust Fund Report **IC 13-25-4-25**

In FY 2018, the Hazardous Substance Response Trust Fund (Trust Fund) saw revenue exceed expenses for a third year in a row. The beginning net asset balance of the Trust Fund for FY 2018 was \$7,597,261. The total revenue from cost recovery, enforcement penalties and hazardous waste disposal tax was \$4,366,628. Total expenses for FY 2018 were \$4,138,304. This left a year-end net asset balance of \$7,825,586.

Expenses for FY 2018 were \$1.6 million higher than for 2017. However, the expense total for FY 2018 was attributable to project related contractual expenses for project implementation of the 0153 Ground Water Contamination Site. The revenue total for FY 2018 was slightly lower than for 2017. It is expected that the revenue for FY 2019 will be similar to FY 2018 levels. Expenses are forecasted to remain at similar levels for FY 2019. It is anticipated that a possible net increase will be realized to the Trust Fund balance at the end of FY 2019.

The following graph depicts the recent net asset balance trend for the Hazardous Substance Trust Fund:

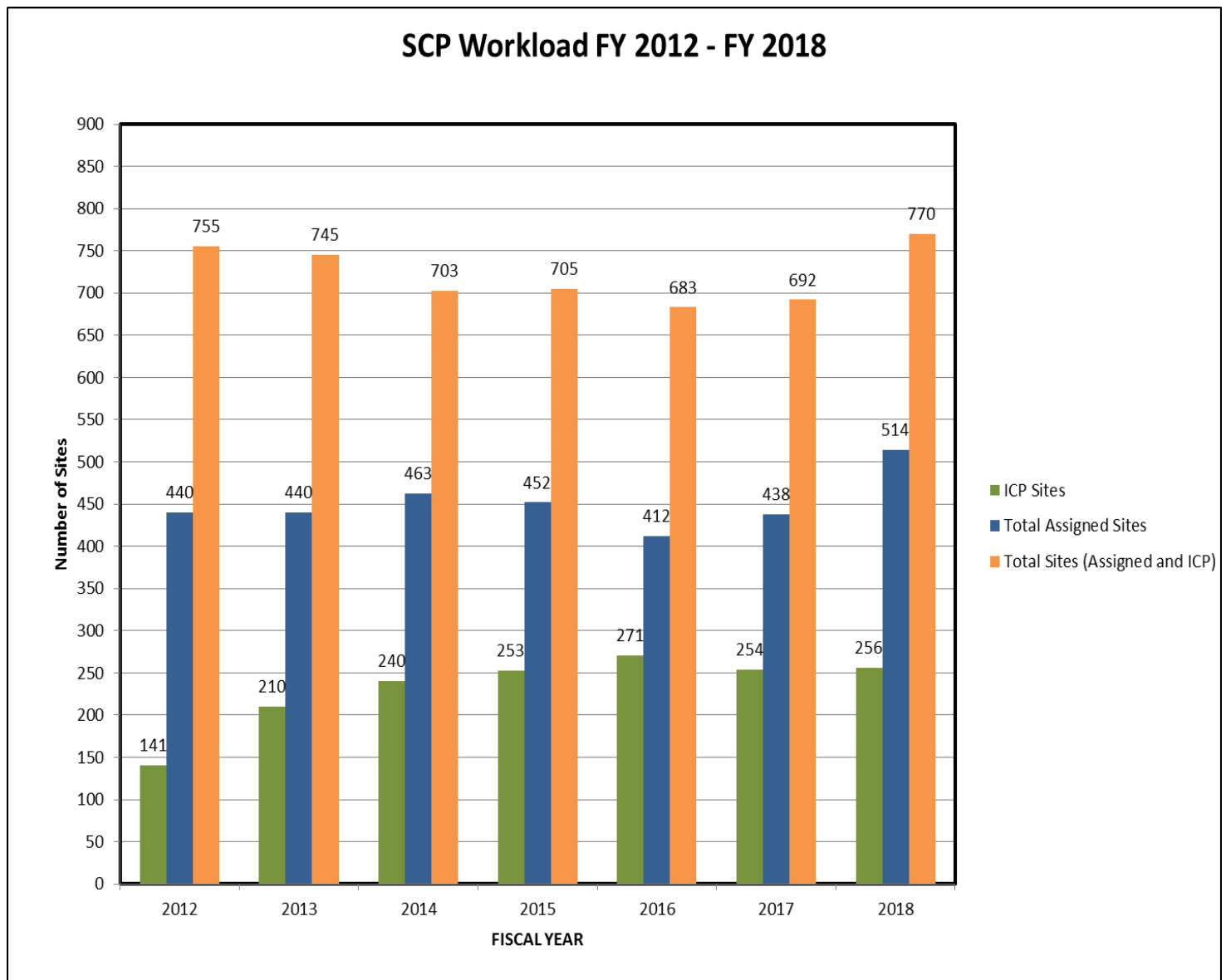


The expenses for the Trust Fund include the State Cleanup Program (SCP), Federal grant matching money for cleanup of sites listed on the National Priorities List (NPL or Superfund), and long-term operation and maintenance of sites completing the Superfund process.

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 FY2018, \$1,112,264 was recovered from responsible parties by SCP through June 30, 2018.

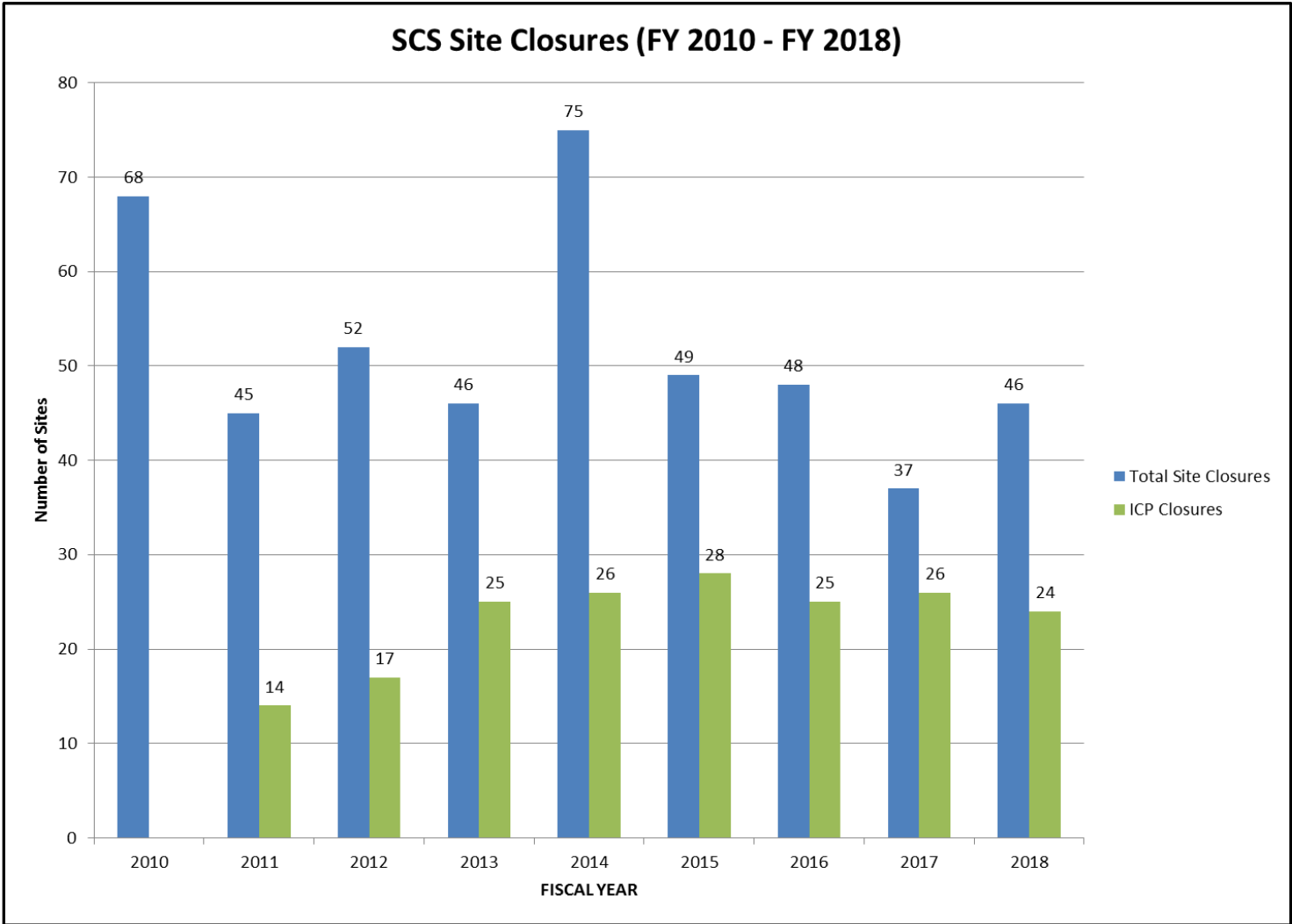
The bar graph below depicts the total number of hazardous substance and petroleum contaminated sites historically and currently being managed by the State Cleanup Program under the Trust Fund.



From FY 2012 to FY 2018, SCP has seen a stable trend in the total number of sites requiring remediation oversight. The total number of sites in the SCP as of FY 2018 was 724. As of the close of FY 2018, the SCP had 514 high and medium priority sites hazardous substance contaminated sites assigned to 12 SCP project managers. The total number of sites in the Independent Closure Process (ICP) remained steady in FY 2018 with a total of 256. During FY 2012, SCP began full utilization of a self-implementing closure process known as the ICP to address the large number of low 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 2018, the SCP completed closure of 46 sites while receiving a total of 147 new sites. The SCP has overseen the closure of 1,110 sites during the history of the program. The following graph depicts the site closure trend since FY 2010:



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 2010 through 2018.

Table 1: Revenue and Expenditures

SFY (7/1-6/30)	Revenue Collected	Salary/Fringe	Contractual	Grants	Other Operating (not already listed)	Total Expenses
2010	\$2,105,354	\$92,390	\$4,000	\$0	\$17,155	\$113,545
2011	\$1,421,724	\$2,439	\$0	\$46,985	\$39,899	\$89,322
2012	\$1,386,281	\$0	\$779,873	\$156,450	\$4,646	\$940,969
2013	\$1,369,059	\$0	\$0	\$0	\$108	\$108
2014	\$1,498,906	\$461,454	\$0	\$0	\$38,612	\$500,065
2015	\$1,548,377	\$210,188	\$15,875	\$0	\$51,455	\$277,519
2016	\$1,572,683	\$516,310	\$187,189	\$0	\$19,236	\$722,736
2017	\$1,589,739	\$ 574,008	\$2,000	\$0	\$34,486	\$610,493
2018	\$1,644,487	\$ 133,511	\$835	\$0	\$12,576	\$146,922

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 76 transporters, 16 processors, and 7 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 2017.

Figure 1: Waste tire utilization for Calendar Year 2017.

WASTE TIRE UTILIZATION	TONS
Landfill (Solid Waste)	4,680.91
Landfill (Alternate Daily Cover)	26,039.56
Tire Derived Fuel	19,459.20
Legitimate Use - Civil Engineering	1,004.00
Legitimate Use - Other	38,839.83
Other	3,682.53

The following sections detail the registration program that is supported by the WTME: 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. There were 7 new cases opened by IDEM's enforcement staff regarding waste tire violations in FY 2018. The new cases were 5 open dumps and 2 registered transporter/processor/storage site with violations.

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.



JULY 2018

ANNUAL REPORT - ADMINISTRATIVELY EXTENDED NPDES PERMITS

IC 13-14-1-17(4)

NPDES Permit Renewals

Number of Pending Admin Extended NPDES Renewals Submitted On-Time 1

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 7/1/2018 1

Number of Months the NPDES Permit has been Administratively Extended 4

Number of Months the NPDES Permit processing suspended under IC 13-15-4-10 3

*** Additional Notes**

Of the Pending Admin Extended NPDES permit renewal(s), number which have already been public noticed. PN date: May 31, 2018 1

EPA-defined Permit Backlog (only counts a permit as backlogged if it is still pending > 180 days past the Expiration Date) 0

The only administratively extended NPDES permit at the end of the state fiscal year was Duke Energy Indiana LLC – Cayuga, which is a Major Industrial Discharger. The facility's application was not only for the renewal of the NPDES permit, but also included a thermal variance request under Section 316(a) of the Clean Water Act. IDEM was required to submit the pre-public notice draft permit to USEPA for their review and approval (non-objection) prior to public notice. The draft permit was public noticed on May 31, 2018. [It should also be noted that the final permit renewal was subsequently issued on July 12, 2018.]

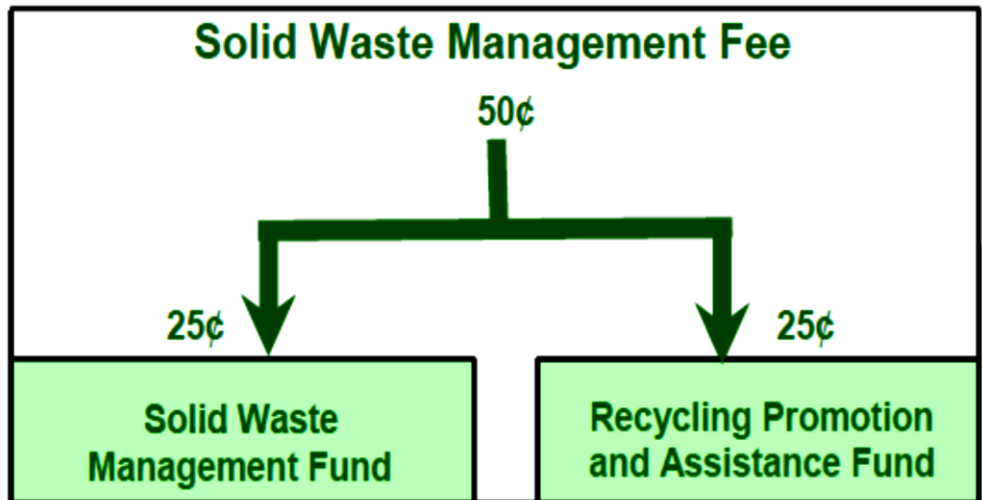
New NPDES Permits

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 and Reporting Section within the Office of Program Support provides financial and technical assistance to develop recycling activities through two means: the 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, not-for-profits, 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--a \$.50 per ton charge on final disposal of solid waste at a landfill or incinerator. Accordingly, the Solid Waste Management Fund receives \$0.25, which supports the Recycling Grant Program. This Program has assisted communities by allocating funding for Public Recycling, Education and Promotion Grants, and, School Recycling Learning Grants.



The other half of the Solid Waste Management Fee is deposited in a separate fund: the Recycling Promotion Assistance Fund, which supports the Recycling Market Development Program. The RMDP offers grants to eligible Indiana businesses. Funding decisions for the RMDP projects are approved by the Recycling Market Development Board.

A total of \$1,000,000 was allocated and awarded for grants from the Recycling Market Development Program in FY 2018. No funds were allocated for grants from the Recycling Grant Program.

Twelve Indiana organizations received grant funding totaling \$1 million to expand recycling in the Hoosier state. The joint effort represents over a \$2 million commitment to operations that will benefit the environment and result in the creation of new jobs.

The 12 recipients and their projects are as follows:

- **Bunn Box, Inc., Allen County** – \$419,698 to expand operations and improve efficiencies with the construction and demolition business. The funding will go toward a new crusher, stationary platform scales, and a front-end loader with scales. Projected amounts to be diverted from landfills include: 150,000 tons of concrete, 2,500 tons of rebar, 2,500 tons of metal, 1,000 tons of wood and 480 tons of cardboard.
- **Child Adult Resource Services (CARS), Parke County** – \$17,908 toward equipment for electronic waste (e-waste) demanufacturing. The new equipment will increase the processing capacity of the facility, and allow for expanded outreach and education to the community on the hazards of e-waste and the need to recycle. The company provides workforce training and jobs in recycling services for adults with disabilities.
- **City of Greendale, Dearborn County** – \$42,346 for implementing a new residential single stream recycling collection program. Funding will go toward the purchase of 65-and 96-gallon recycling rolling carts/recycling containers for residents to use. The city will provide weekly curbside pickup, and expects to collect at least 860 tons of recyclables a year.

- **City of Valparaiso/Public Works, Porter County** – \$93,624 for the Go Green Campaign, a project aimed at increasing efficiencies, education and marketing of Valparaiso’s recycling program. This includes purchasing new radio-frequency identification (RFID) recycling containers for collection of recyclable materials and compost. Also, electronic equipment upgrades for the recycling trucks will improve the collection efficiency and monitoring of materials. Results are estimated to be a 22 percent increase in recycling amounts, equaling 295 tons of solid waste diverted a month.
- **City of Winchester, Randolph County** – \$66,000 toward implementing a curbside recycling project with the purchase of recycling containers for each residential unit. The city will work with the Randolph County Solid Waste Management District and Economic Development Corporation on education campaigns for the pickup of recyclables. The goal is to collect 576 tons of recyclables annually.
- **Republic Services Recycling of Indiana Inc., Marion County** – \$166,355 toward the purchase of a Glass Cleaning Classification System at the material recovery facility. Due to the recycling process (collection and recovery of co-mingled fiber and containers) and the end use market’s requirements, additional cleaning and recovery of glass by screening, air extraction and sizing will be installed. Quality improvement of 30 to 40 percent is expected for the glass stream resulting in a cleaner and more valuable material.
- **Metropolitan School District of Shakamak/Greene County SWMD, Greene County** – \$1,028 toward the purchasing of recycling containers to collect cardboard, paper, plastic, aluminum and steel cans. The school will work with the Greene County Solid Waste Management District, which is providing matching funds and guidance to the project. The organization estimates that 14 yards or more than 1,500 pounds of comingled recyclables will be collected from the bins per week.
- **Upland Brewing Company, Inc., Monroe County** – \$5,344 toward the purchase of a vermicomposting system for processing food and paper waste coming from the Bloomington Brewpub. Upland plans to market and sell the vermicompost, creating a value-added product from solid waste. The plan is to donate a portion of the vermicompost produced to local community garden programs and food banks that operate gardens, and serve as an educational model for an on-site restaurant vermicomposting. The company estimates 31,580 pounds of waste will be diverted, equaling five percent reduction in its annual solid waste disposal.
- **Vidal Plastics, LLC, Vanderburgh County** – \$106,000 toward the purchase of an extruder and quality lab to be used for compounding recycled commodity resin, mainly polypropylene and polyethylene. Markets for the recycled content, engineered resins include injection molding of parts to be used in automotive and other industries. The project will divert up to 750,000 pounds of plastic waste from landfills annually.
- **Warrick County Recycling & Resource Management District, Warrick County** – \$76,935 toward purchasing a new feed conveyor and implementing sorting line modifications at its material recovery facility to increase processing capacity. With the improvements, the organization expects to increase its annual output of recyclables from 1,802 tons to 5,406 tons.
- **West Central School Corporation, Pulaski County** – \$1,200 toward the purchase of recycling containers for initiating a drive to recycle all soda and water bottles in the school. The bottle-shaped recycling containers will be placed throughout the school, including public gathering areas, such as the football stadium. The goal is that containers in this shape will be an immediate visual reminder to recycle in main traffic hubs throughout the community, not just the school. The school hopes to collect at least 7,000 bottles the first year.
- **Woodrow Wilson Middle School, Vigo County** – \$3,562 towards the purchase of recycling and compost bins for the school’s Green Team initiative to collect recyclables as well as begin vermicomposting. The goal is to implement improvements to the current program by including the community in the recycling efforts and using café food waste to create compost, usable for school landscaping.

Total revenue received for the Solid Waste Management Fund for FY 2018, was \$2,241,114; and the total revenue for the Recycling Promotion and Assistance Fund for FY 2018 was \$2,260,901. The difference between the two funds is due to corrections to prior year revenue entries.

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

E-Waste Report

IC 13-20.5-7-4

The Indiana electronic waste (e-waste) law (IC 13-20.5) 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. IDEM manages the program.

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 covered electronic devices (CEDs), to fulfill their 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 by burning or incineration.

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

This report will examine the last eight years of the program as well as provide the required annual information mandated by the Indiana legislature. For example, highlighting Program Year 8 (PY8), manufacturers collectively funded the recycling of 14,764,900 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.

Legislative Requirements

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

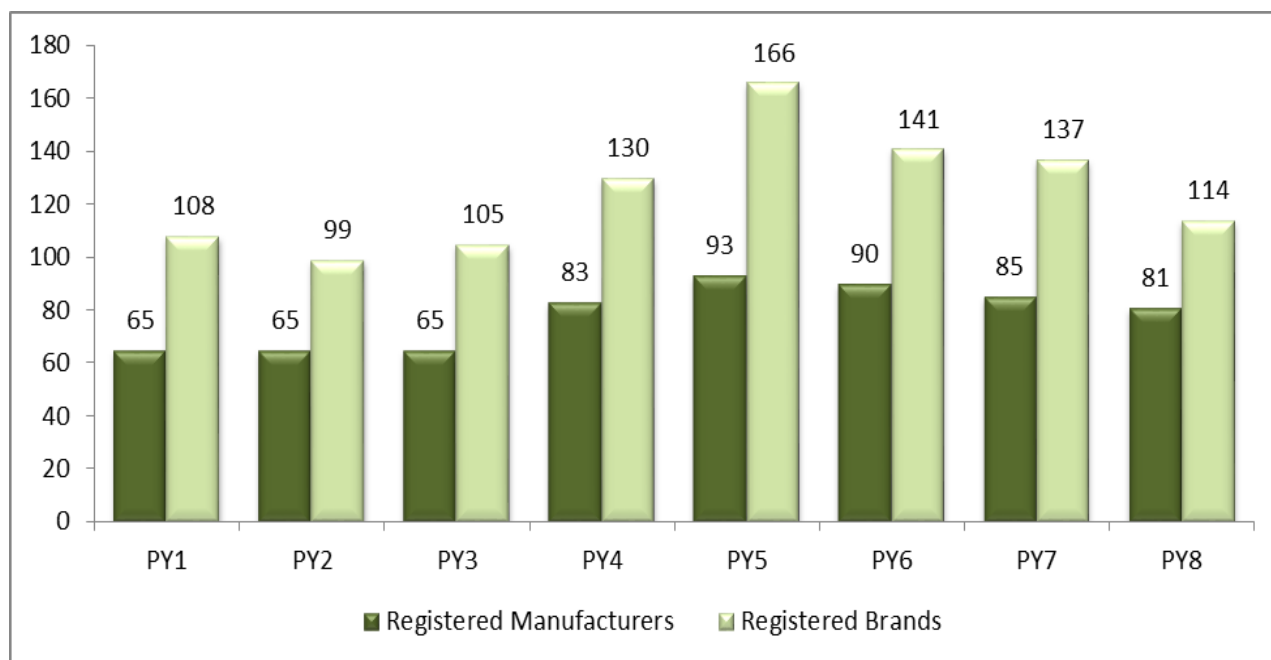
Required content includes:

- 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

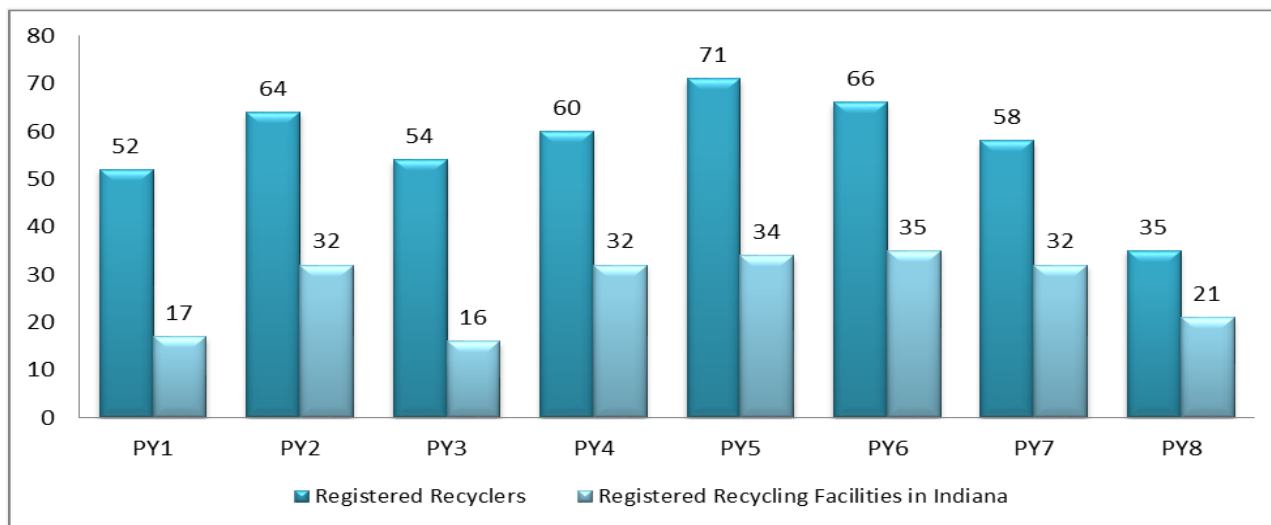
While the number of registered manufacturers and brands remained relatively unchanged from PY7, the companies that are registered has varied as new manufacturers enter the market, other manufacturers exit the market, and mergers and acquisitions occur. A total of 81 manufacturers registered with the Indiana E-Cycle Program for PY8. These 81 manufacturers accounted for 114 different brands of devices that are being sold to Indiana households.

Figure 1: Registered Manufacturers and Brands



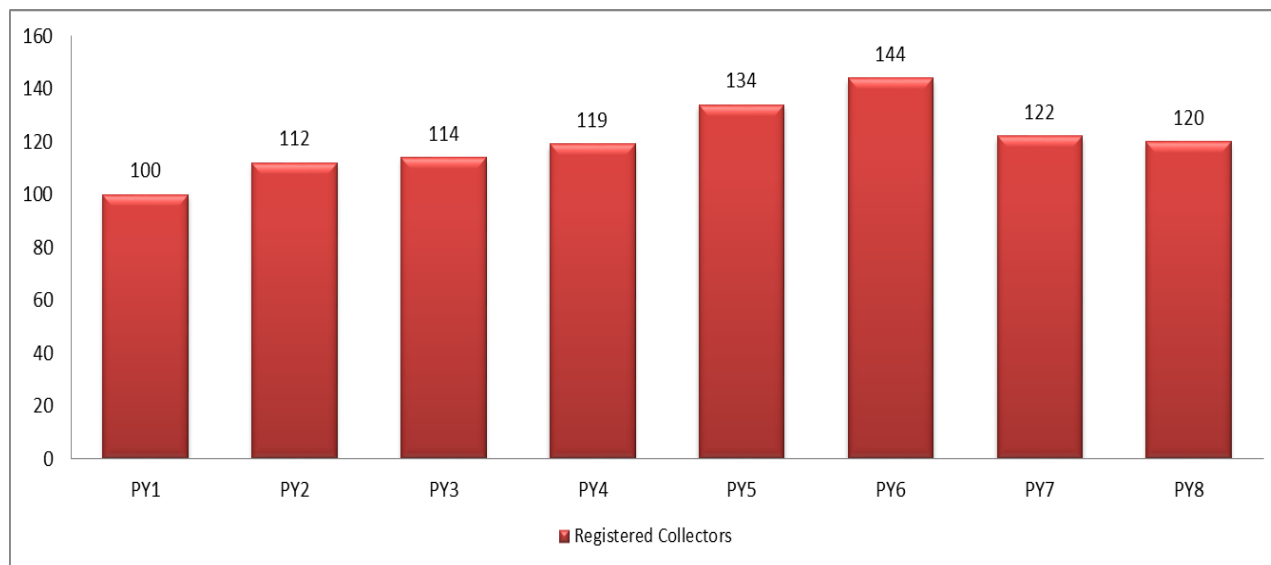
For each of the first eight program years, the majority of registered recyclers have also been registered collectors. The number of registered recyclers for PY8 decreased by 60 percent from PY7. For PY8, 21 of 35 registered recyclers are located in Indiana. The decrease in the number of registered recycler facilities is likely due to better quality assurance and understanding of what facilities need to register with the program. Through outreach and research, it became apparent that previously registered recycler facilities were inappropriately registering with the program.

Figure 2: Registered Recyclers and Registered Recycling Facilities in Indiana



As shown in **Figure 3**, the number of registered collectors for PY8 slightly decreased from PY7. 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 and Collection Sites



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

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. **Figures 4, 5, and 6** show how many pounds of CEDs were recycled by manufacturers registered in PY8 and the previous program years in which annual reports were submitted.

Figure 4: Covered Electronic Devices Recycled by Registered Manufacturers (lbs.)

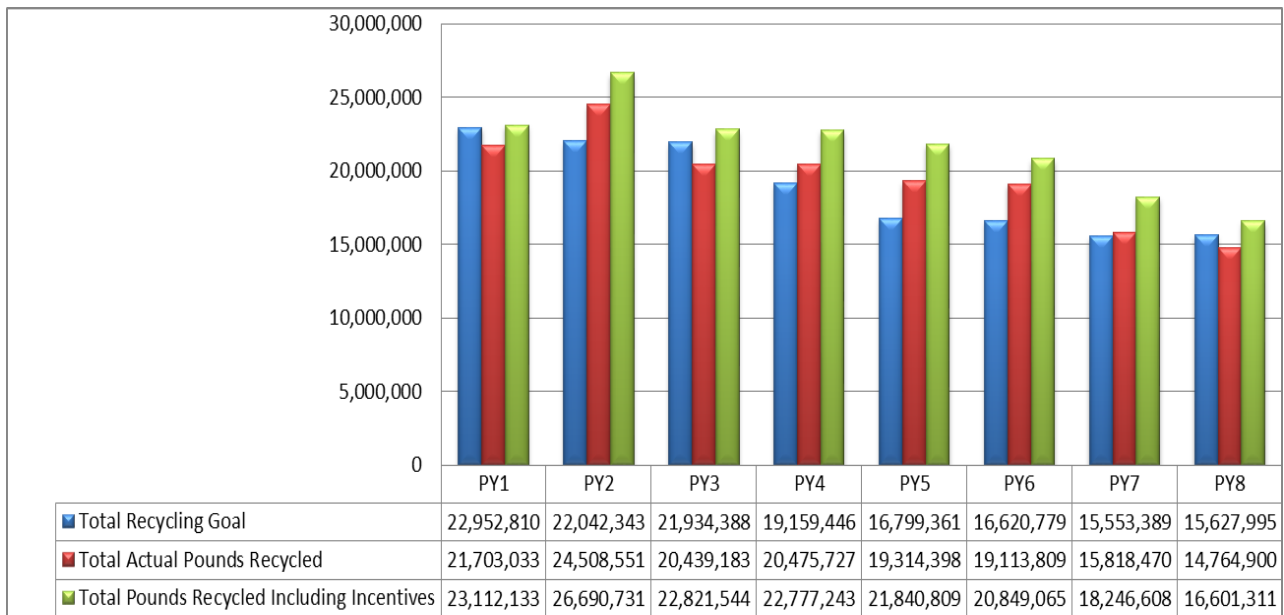


Figure 5: Covered Electronic Devices Recycled by Registered Manufacturers: Details (lbs)

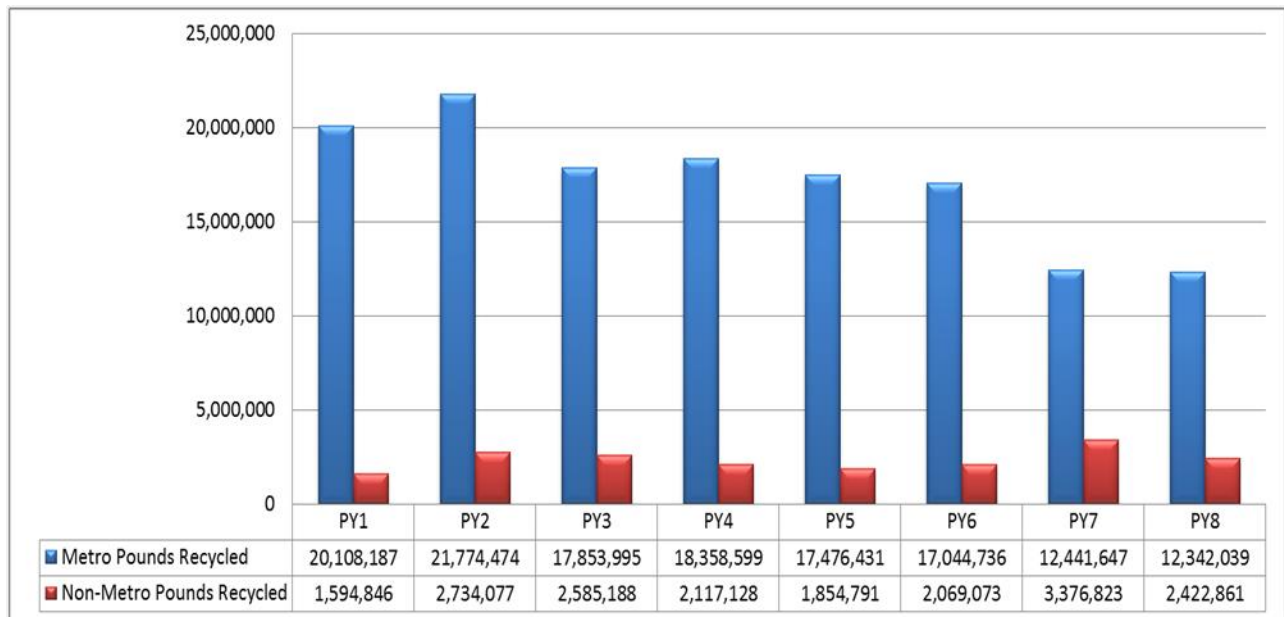
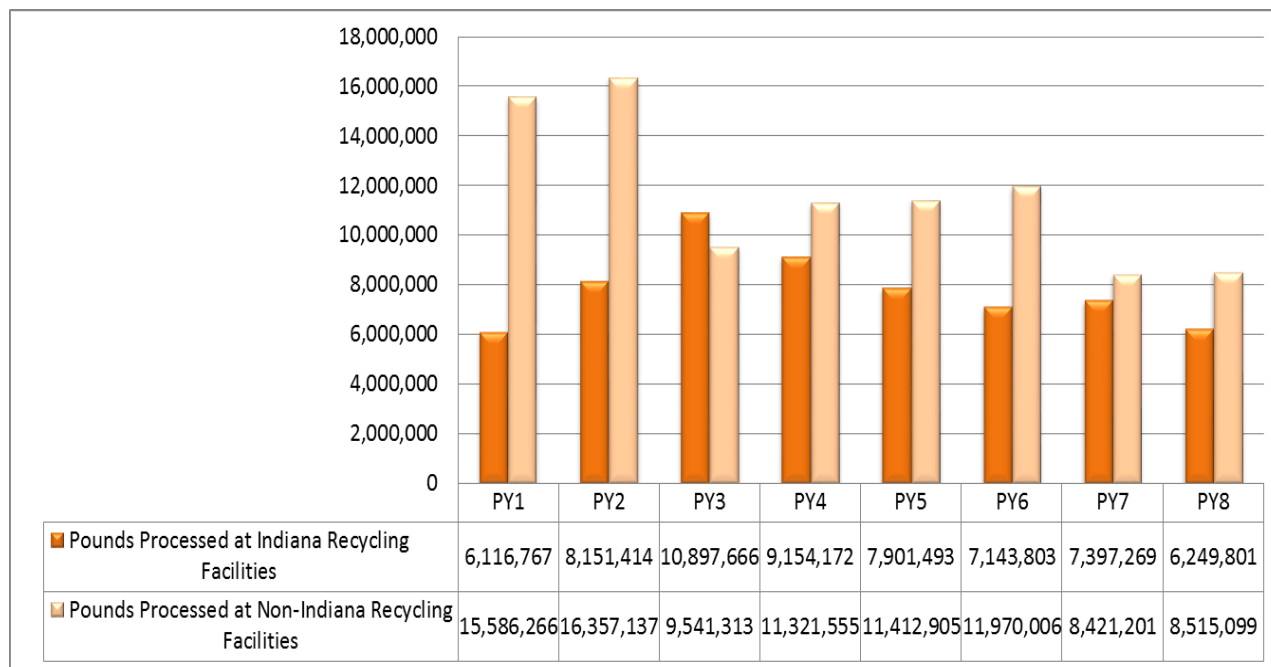


Figure 6: Covered Electronic Devices Recycled by Registered Manufacturers: Details (lbs)



Figures 7, 8, and 9 show how many pounds of CEDs were recycled by recyclers registered in PY8 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 PY8, there was a significant increase in pounds recycled by registered recyclers. The increase in the amount of CEDs that were reported being recycled for the program year compared to the last several years is partially due to several large recycling facilities reporting data that had not been reported in previous years, and due to several facilities expanding their recycling operations.

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

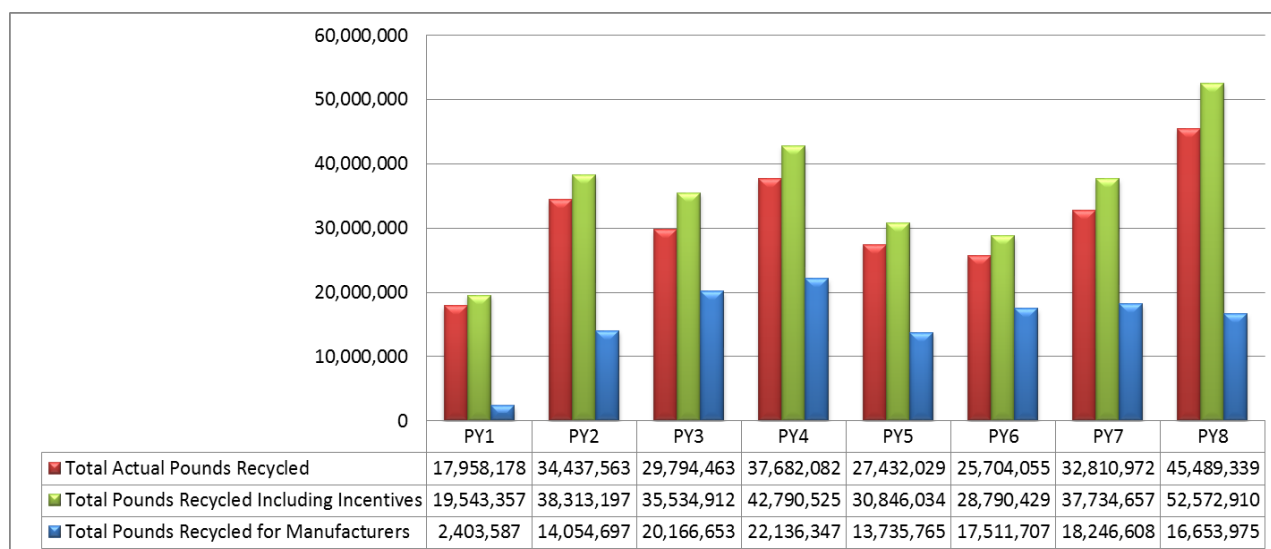


Figure 8: Covered Electronic Devices Recycled by Registered Recyclers: Details (lbs)

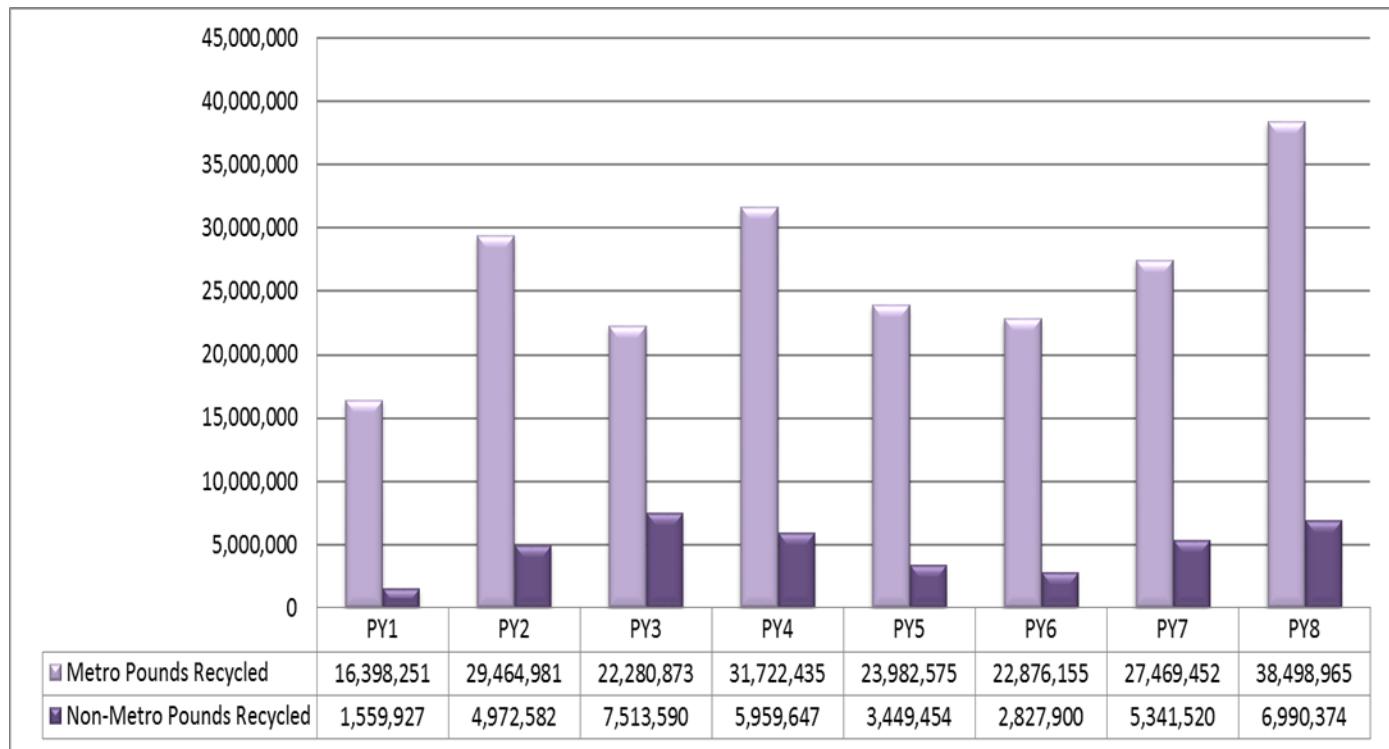
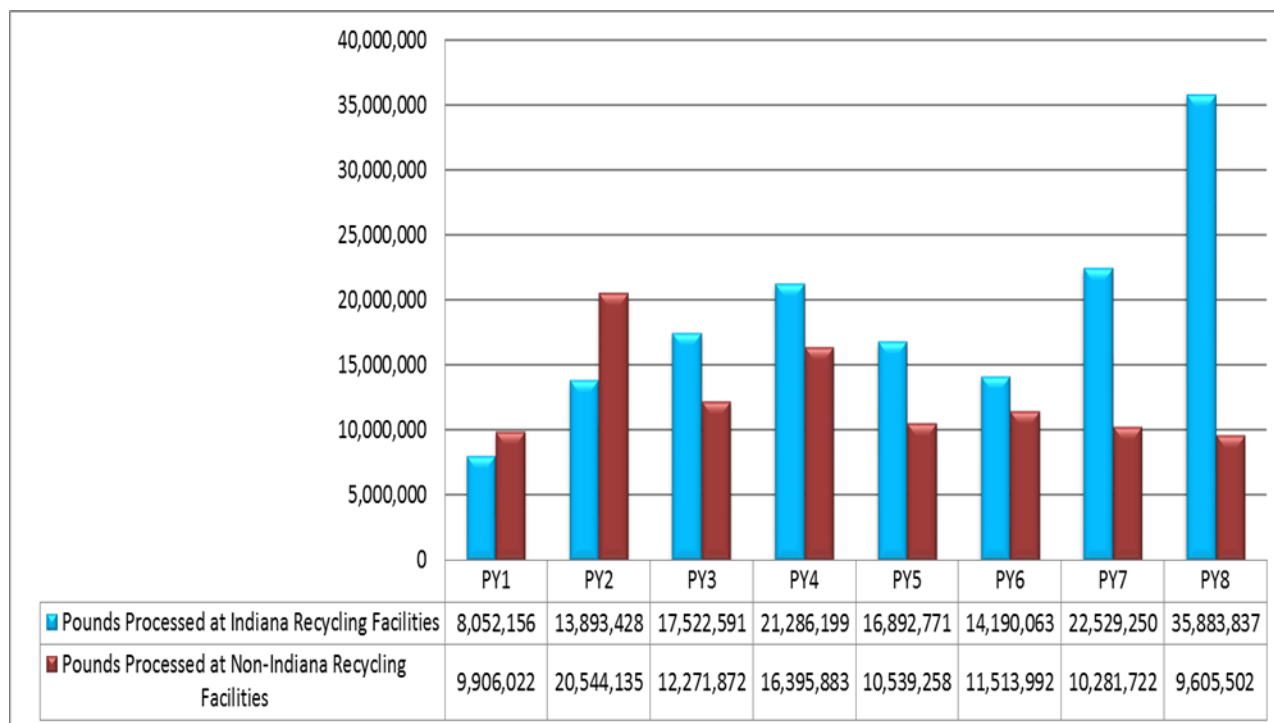


Figure 9: Covered Electronic Devices Recycled by Registered Recyclers: Details (lbs)



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

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

	<u>Lbs/Capita (Actual Pounds)</u>	<u>Lbs/Capita (Including Incentives)</u>
PY1	3.35	3.56
PY2	3.78	4.12
PY3	3.13	3.49
PY4	3.12	3.47
PY5	2.93	3.31
PY6	2.89	3.15
PY7	2.38	2.75
PY8	2.21	2.49

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

	<u>Credits Earned</u>	<u>Credits Bought/ Sold</u>	<u>Credits Used</u>	<u>Credits Expired</u>	<u>Credits Retained</u>	<u>Manufacturers Holding Credits</u>
PY1	1,074,733	0	n/a	n/a	1,074,733	18
PY2	1,623,705	0	19,253	n/a	2,653,837	23
PY3	555,630	0	116,758	n/a	3,090,762	26

PY4	967,292	87,256	104,592	809,875	3,039,188	37
PY5	1,174,168	246,957	808,867	586,136	2,579,219	29
PY6	1,057,072	0	128,070	465,811	3,024,254	25
PY7	673,305	179,919	65,531	698,386	3,170,225	24
PY8	336,481	0	307,559	1,000,579	2,196,005	30

Various Collection Programs Used by Manufacturers to Collect CEDs

Manufacturers registered with Indiana E-Cycle 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. Although, Indiana has not taken advantage of this opportunity, IDEM does participate in regular conference calls with other Midwestern states, which are coordinated by U.S. EPA's 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.

Three manufacturers were required to pay a shortfall fee for PY7, resulting in a fee of \$1,439.80 for a total shortfall of 4,793 pounds. For PY8, seven manufacturers will be required to pay a shortfall fee for a total amount of \$5,078.20.

Manufacturers that were exempt from the registration fee for PY8, because they sold less than 100 units of VDDs to households during PY7, are exempt from the VRF.

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

Conclusion

Indiana has benefited from having a large number of collectors register with the program, which allows Indiana residents the ability to have numerous options regarding recycling of 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 that is 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 video display devices 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 being 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. As the agency continues to better understand the regulated community, the numbers should not only increase, but also remain true to bettering recycling goals throughout the state.

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 2017 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 has implemented 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 2017, the fifty-six member facilities realized environmental achievements in the following areas:

- Water usage reductions by 148,287,465 gallons.
- Electricity usage reductions by 9,599,353 kilowatt hours
- Natural gas reductions of 1,146,644,268 Btu
- Air emissions reductions by 58 pounds of Nitrogen Oxide (NO_x), 300,045 pounds of Carbon Monoxide (CO) and 16,024 pounds of Volatile Organic Compounds (VOCs)
- Non-hazardous waste reductions by 4,236,489 pounds and increased recycling by 60,261,321
- Hazardous Material use reductions by 3,014,949 pounds

Similar to ESP, the 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 create a management plan focused on continual environmental improvement. Total membership as of December 2017 was fifteen 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 2017 include:

- A total of 775,920 pounds of residential waste recycled up from 628,080 in the previous year
- Several communities have retrofitted governmental buildings with energy efficient upgrades. One community reduced their electrical energy consumption, as measured in kilowatt hours (Kwh) from 58,430 to 22,900. Another community reported an energy savings of \$1819.75 which was up from \$275.00 in 2016.
- Two of the cities have updated their ornamental street lighting to LED

Partnerships

The Partners for Pollution Prevention, in cooperation with IDEM, held four meetings during 2017 for Indiana entities to share pollution prevention strategies. One of these meetings was the twentieth Annual Pollution Prevention Conference and Trade Show. The meeting agenda centered on the theme “20 Years of Pollution Prevention in Indiana” and allowed speakers to share information about the history of the pollution prevention movement in Indiana 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 2017 for the Partners was June 1, 2018. Total environmental benefits reported by members for 2017 include:

Air Emissions Reductions (pounds/year)	Greenhouse gases	24,000,000
	Volatile Organic Compounds (VOCs)	39,767
	Nitrogen Oxides (NOX)	4,196,000
	Sulfur Dioxide (SO2)	13,040,000
	Particulate Matter PM 10	728,000
	Particulate Matter PM 2.5	480,000
Solid Waste Reductions (pounds/year)		36,070,894
Water Usage Reductions (gallons/year)		26,643,758
Non-Hazardous Material Reductions (pounds/year)		27,286,088
Hazardous Material Reductions (pounds/year)		938,875
Hazardous Waste Reductions (pounds/year)		84,283,686
Electricity Usage Reductions (kwh)		25,665,367
Natural Gas Usage Reductions (Btu)		79,812,433,347

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 who have implemented outstanding environmental strategies into their 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. Highlights from the 2017 winners can be seen below.

Hanson Park Restoration Project-Michigan City High School Restoration Team, Michigan City IN

The Michigan City High School Wolves Environmental Restoration Team launched the Hansen Park Restoration Project during the 2016-17 school year. The project focused on restoring and monitoring the banks of Trail Creek, a tributary of

Lake Michigan. The project worked to monitor and remove invasive plant species, monitor water quality, establish a native plant buffer, plant trees, and conduct GIS mapping. The park is used for educational field trips and teaches watershed best management practices.

Conversion to Natural Refrigerants- Roche Diagnostics, Indianapolis, IN

Roche Diagnostics converted 98 percent of its halogenated hydrocarbon refrigeration systems to natural refrigerant systems from 2002 to 2016. Roche originally had 6,451 kilograms (kg) of halogenated hydrocarbon refrigerants and reduced it to 161 kg in the last 14 years. This project protects the environment by removing substances that affect the ozone layer in our atmosphere. The innovative nature of this project is evident because the refrigerator, cooler and freezer options were not available on the market when the process began in 2002. Roche Diagnostics partnered with manufacturers to design and develop unique and environmentally safe refrigeration applications. This new energy efficient technology is now a part of the Roche product line

Useful to Usable-Purdue University, West Lafayette, IN

The Useful to Usable project was launched in 2011 to improve the usability and acceptance of stakeholder-driven, applied climate research information for agricultural production in Indiana and the Midwest. The six year project developed climate-based decision support tools which assisted farmers and agricultural advisors regarding planning, purchasing, and marketing decisions. This online supported tool assisted with decisions on over 15.5 million acres across the Midwest.

Grants

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.

Indiana's Boating Infrastructure Grant Program (BIGP) provides grant funds for the construction, renovation, and maintenance of tie-up facilities with features for transient boaters, which are vessels 26 feet or more in length and stay less than 10 days. Eleven (11) marinas in Indiana have received BIG funding. These facilities allow boaters to come on shore and enjoy the regional establishments.

In 2016, hiring freezes prevented IDEM from hiring staff to manage these programs. In 2017, an existing IDEM staff person was transferred to manage this program. 2017 was a rebuilding year for the CVA and BIG programs as the new staff attended multiple trainings from the U.S. Fish & Wildlife Service (USFWS). In addition, USFWS officials met in Indiana several times to provide onsite training to IDEM staff and to meet with management. IDEM staff submitted over a dozen reports due to USFWS for past grants during 2017 and closed out older grants per the request of the USFWS.

Education and Training Programs

The Outreach and Education Coordinator provides pollution prevention education and training to Indiana schools and universities, the regulated industry, and general public.

During April and May 2017, 82 IDEM staff visited 167 schools and reached over 20,477 Hoosier children for Earth Day presentations. A variety of topics were covered including recycling, nonpoint source water pollution, pollution prevention, and landfill construction.

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.

CTAP Activities July 1, 2017 - June 30, 2018

The federal Clean Air Act requires states to provide compliance assistance. IC 13-28-3 further defines Indiana's implementation of compliance assistance through the Compliance and Technical Assistance Program (CTAP) which has expanded assistance to all environmental programs: air, land and water.

Compliance and Technical Assistance Numbers for 2017:

- 528 total phone contacts

250 Air	49 Water
102 Land	127 Multi-Media/ Misc. Assistance

- Site visits
 - Staff conducted 975 introductory site visits at various businesses and organizations.
 - A more in-depth compliance site assessment was performed at 174 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.
- Provided written assistance to 211 businesses
- Presented information at 49 events to 4,535 attendees

Additional Technical Assistance Provided:

- 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 Air Module at five regional locations in Indiana to assist Environmental Managers in understanding air permitting and regulations.
- Provided CTAP Follow-up Letters to each company visited to clarify regulations and provide a document which can be used to demonstrate the customer is proactively pursuing compliance to IDEM inspectors.
- 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 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, 2016 to December 31, 2016

Total Number of Mercury Switches Collected from End of Life Vehicles	7,875 switches
Total Amount of Mercury Collected	17.33 pounds

Mercury Switches Activities January 1, 2017 to December 31, 2017

Total Number of Mercury Switches Collected from End of Life Vehicles	10,994 switches
Total Amount of Mercury Collected	24.19 pounds