

US EPA ARCHIVE DOCUMENT

# Recycling

is working in **Indiana**

## A \$19 Billion Success Story

Indiana's recycling industry is a success. Indiana is reducing waste while adding significantly to its economy, according to the 2001 Indiana Recycling Economic Information (REI) Study.

Recycling plays an important role in Indiana's economy. Recycling and reuse save energy, promote business opportunities, reduce solid waste disposal expenses, and help reduce the need to use natural resources.

Indiana's recycling/reuse industry boasts:

- 1,700 recycling and reuse establishments
- \$3 billion in annual payroll
- \$19 billion in annual revenues
- 75,000 people employed

The recycling industry contributes \$285 million in state government tax revenues annually.

### In addition:

- The average industry wage is \$41,200 - approximately \$14,000 or 52% more than the state's average wage.
- The industry supports 7.9% of the jobs in Indiana: 2.5% through direct employment, and 5.4% by industry and employee spending in the economy.
- Of Indiana's gross state product, 7.2% is attributable to the industry (2.8% provided directly and 4.4% through spending in the economy).



**1,700 Recycling and Reuse Establishments**



**75,000 employees**



**Annual Revenues  
of \$19 billion**



**Annual Payroll  
of \$3 billion**



**Government  
Tax Revenues  
of \$285 million**

## The 2001 Indiana Recycling Economic Information Study

The report is the result of a partnership between the Indiana Department of Commerce, the U.S. Environmental Protection Agency, and the National Recycling Coalition.

The recycling and reuse industry is involved in metals, paper, plastics, glass, organic materials, computers and electronics, tires, and other post-consumer and post-industrial scrap. Jobs in this industry involve collection, processing, reuse, remanufacturing, sales, and more.

The study proves conclusively that the recycling and reuse industry contributes significantly to Indiana's economy by providing a sizeable number of well-paying jobs.

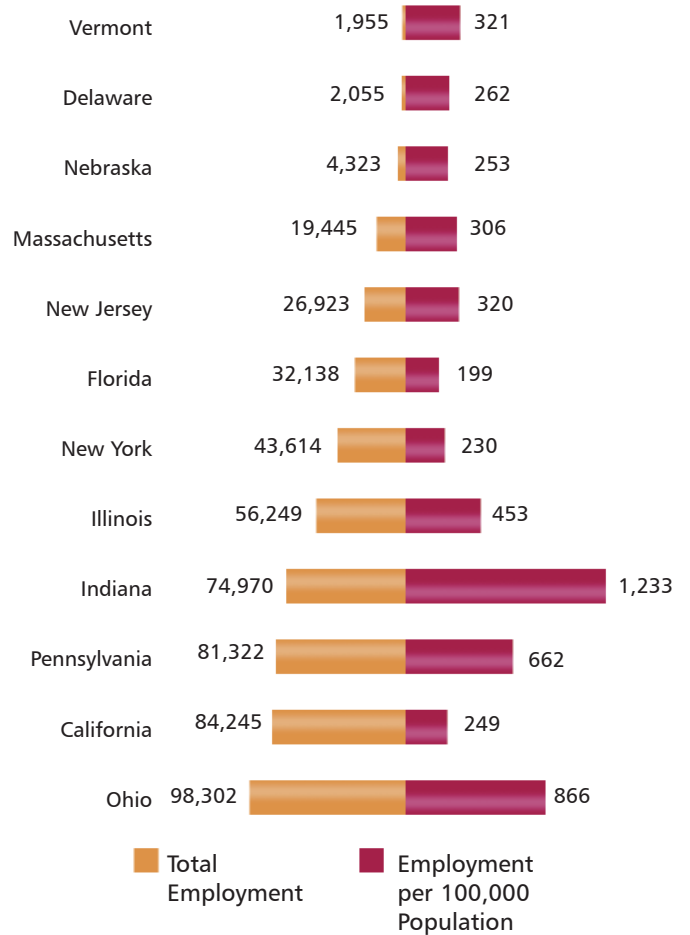
### Indiana at the Top of the List

Indiana is a leader among states that completed the study of recycling's economic impact (Figure 1). Indiana's recycling and reuse industry ranks first in per capita employment. Several other states employ larger numbers of people but fewer when the numbers are normalized to account for population differences. In addition, Indiana ranks higher than the national average in per capita employment.

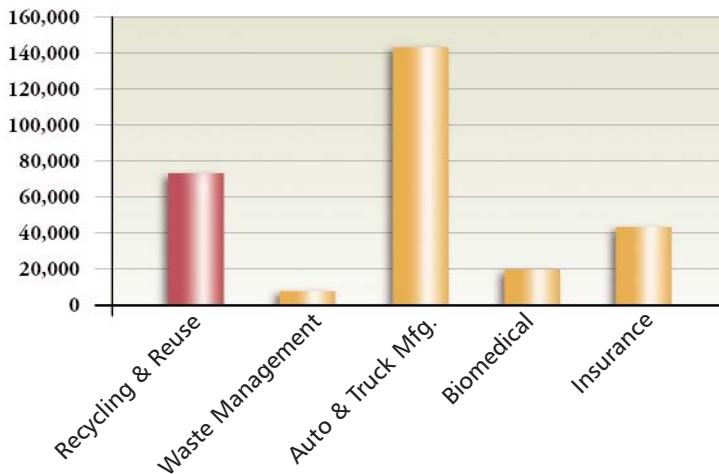
### Comparing to Other Indiana Industries

The recycling and reuse industry compares favorably to several other strong Indiana industries (Figure 2). Comparisons by the number of jobs show that there are more recycling and reuse jobs in Indiana than there are jobs in the biomedical or insurance industries. Especially significant is the finding that recycling far outpaces the waste management industry because recycling adds value to materials, contributing to a growing labor force, and does not lose the value of the material through disposal.

**Figure 1**  
Comparison of Total Employment to Normalized Employment



**Figure 2**  
Comparison to Other Indiana Industries  
Number of Jobs

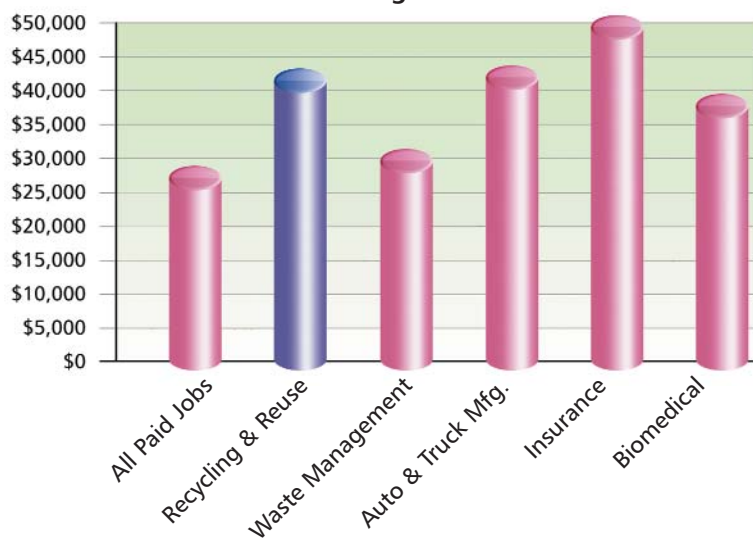


### Well Paying Jobs

Recycling and reuse jobs generally pay above the average state wage (Figure 3). The average industry wage for Indiana recycling and reuse jobs is \$41,200 - approximately \$14,000 or 52% more than the Indiana average wage.

Jobs in the processing sector pay the highest wages in the recycling and reuse industry, followed by manufacturing (Figure 4).

**Figure 3**  
Comparison to Other Indiana Industries  
Annual Wages Per Job



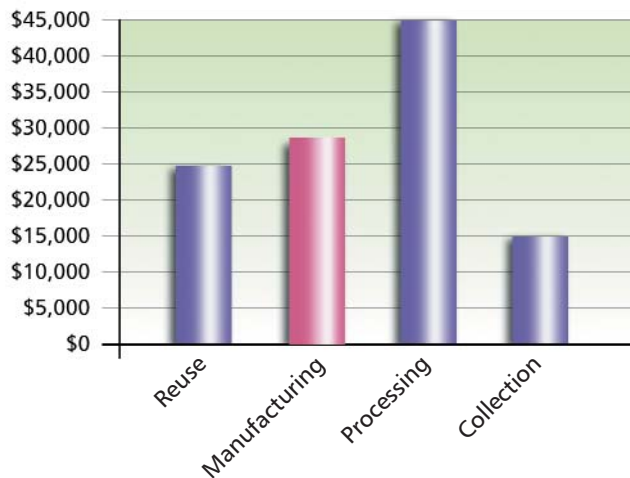
### Recyclables Manufactured into New Products Provide Great Economic Benefits

The economic size of Indiana's recycling manufacturing sector far exceeds the recycling collection, processing, and reuse sectors. The collection and processing sectors make up a smaller portion of total employment but have the very important job of providing feedstock material into the manufacturing and reuse sectors.

The recycling manufacturing sector accounts for 63,000 jobs, \$2.8 billion in payroll and \$16.8 billion in receipts. Ninety-two percent of Indiana's total recycling and reuse industry tax revenues arise from recycling manufacturing establishments and their indirect and induced economic activity.

Indiana's recycling manufacturing sector is strong and covers a wide range of industries. There are local markets for many of the recyclables generated by households as well as the commercial and industrial sectors in Indiana. Recycling of scrap materials feeds directly into building Indiana jobs.

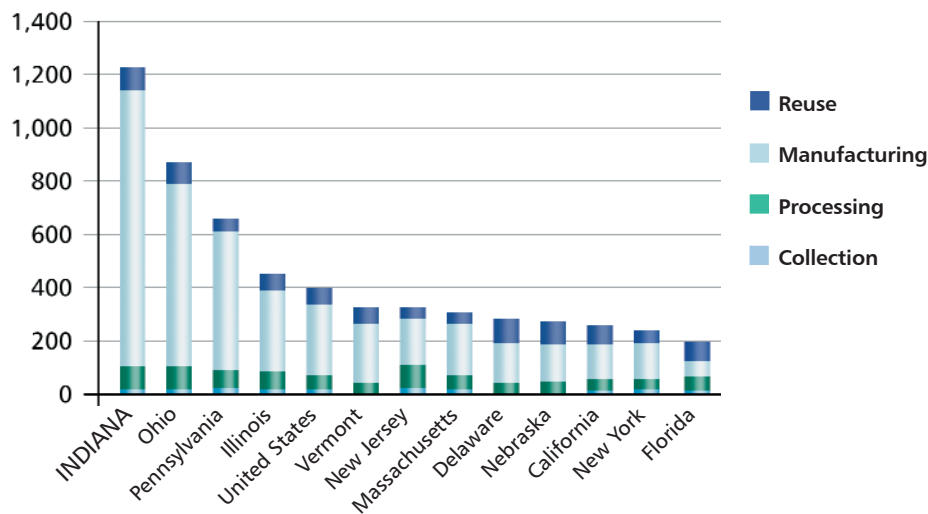
**Figure 4**  
Wages by Recycling Industry Sectors:  
Annual Wages Per Job



Over 70% of the economic activity for the entire recycling and reuse industry is accounted for by four recycling manufacturing sector categories: steel mills; iron and steel foundries; nonferrous metals foundries; and recycled plastics products manufacturers. These four categories alone account for 71% of all employees, 79% of wages, and 75% of total receipts for Indiana's recycling and reuse industry. The many reuse companies are smaller with few employees.

The number of collection, processing, and reuse facilities per capita is fairly close in each state that participated in the survey. Indiana has the highest number of recycling manufacturing jobs per capita (Figure 5).

**Figure 5**  
Employment By Sector Per 100,000 State Population



Indiana, Ohio and Pennsylvania are the top three in the nation in the steel and nonferrous recycling industry. They also ranked very high in terms of other material sectors (Figure 6).

Indiana's recycling industry includes a large diversity of businesses and materials.

**Figure 6**  
State Rank Based on Value of Shipments

Industrial Sector <sup>1</sup>	Indiana	Ohio	Pennsylvania
Steel Mills	1	2	3
Iron and Steel Foundries	4	1	7
Plastics Converters	7	2	6
Nonferrous Smelting & Refining, Product Producers, and Foundries	2	3	1

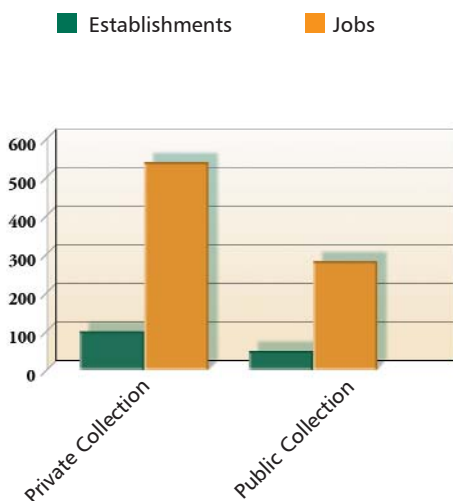
<sup>1</sup> Based on recycling industry size. Paper industry ranking data is not available.

## Recycling and Reuse Industry Sectors

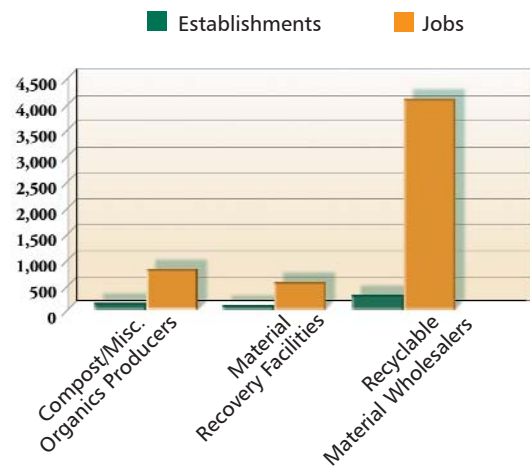
Recycling and reuse jobs include those businesses that collect, process, manufacture and reuse materials.

- Collection includes both public sector and private sector activities, from curbside and drop-off programs to business and industry collection (Figure 7).
- Processors are companies or public entities that prepare material to be sent to the marketplace for recycling. This includes facilities that separate recyclables generated by households and those that prepare industrial generated scrap material, such as plastic converters, for reentry into the manufacturing process (Figure 8).
- Manufacturers are companies that use the scrap to make a new product. This includes long-established sectors like paper and steel making, as well as new entrepreneurial ventures such as composting, plastic and rubber product manufacturers (Figure 9).
- Reuse industries are widespread and range from the more traditional establishments such as local thrift stores and antique shops to more recent, dynamic operations such as computer demanufacturers, pallet rebuilders and material exchanges (Figure 10).

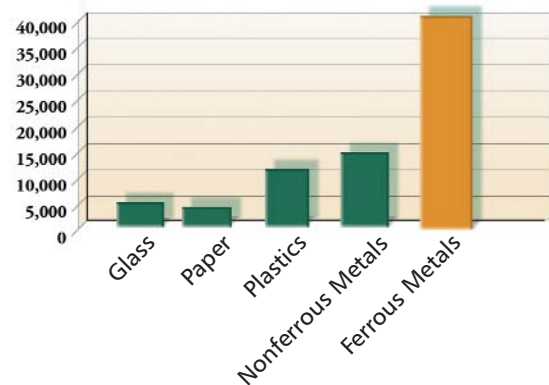
**Figure 7**  
Public versus Private Collection by Number of Establishments and Jobs



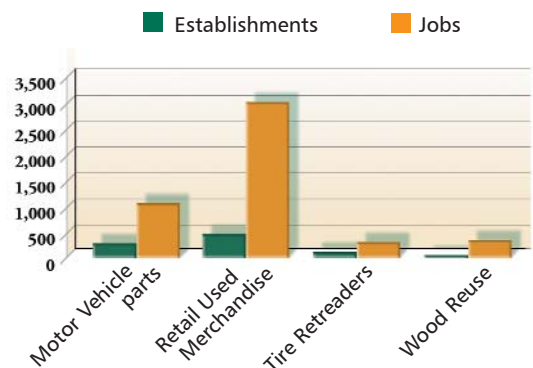
**Figure 8**  
Major Processor Categories by Number of Establishments and Jobs

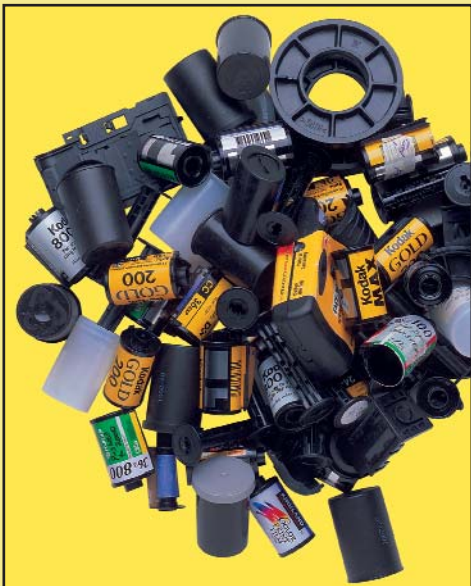


**Figure 9**  
Recycling Manufacturing Jobs by Major Material



**Figure 10**  
Major Reuse Categories by Number of Establishments and Jobs





## **Industrial Demand Is High**

Many of our industrial sectors have such a high demand for recovered materials that a significant amount of material is purchased and imported from other states and countries - to Indiana's benefit. Many of these industries' products support other manufacturing jobs in the state or bring profits into the state from the sale of those products outside Indiana's borders. Indiana's economy significantly benefits from this industrial sector in terms of the jobs it provides, support it gives to the state's manufacturing base and other economic sectors, and tax revenues that flow to the state and local governments.

### **Intended Uses for the Study**

*Indiana's first recycling economic study provides a benchmark of results that can be used by:*

- Economic development agencies, investors, and financiers to evaluate and target development of Indiana's recycling and reuse businesses.*
- Advocates, policymakers and lawmakers to evaluate policies, programs and legislation to target resources for growth.*






## Conclusions

Recycling and the reuse of scrap materials feed directly into building Indiana jobs. Local level public and private investments in the collection and processing of recyclables, and public policies favoring recycling and reuse, are supporting larger private sector investments in downstream processing and manufacturing. Efforts to encourage the public and private sectors to expand recycling and reuse assist in maintaining and raising this significant economic activity.

## About the Study



The Indiana Department of Commerce (IDOC) commissioned this state-specific study as part of the National Recycling Coalition's U.S. Recycling Economic Information (U.S. REI) Study. Consulting firm R. W. Beck, Inc. conducted the study, and Indiana's data was incorporated into the U.S. REI Study results. Fourteen other states also have contracted for state-specific studies.

The study provides economic data for 26 different types of reuse and recycling establishments - from local thrift stores to major paper recycling companies. Jobs in this industry involve collection, processing, reuse and remanufacturing.

The Northeast Recycling Council (NERC) on behalf of the U.S. Environmental Protection Agency (EPA) developed the methodology for the study. This methodology was peer reviewed and is comparable to similar studies of other industries. Data come from existing data (including the U.S. Economic Census, 1997), survey data and economic modeling.

Direct results provide information on the number of establishments in this industry as well as its employment, wages, revenues and throughput (as available). Indirect effects were estimated for the impact of additional economic activity accruing to establishments that provide goods or services to the recycling and reuse industry. Induced effects were estimated for economic activity from workers spending personal earnings on goods and services. Multipliers were identified for jobs, personal income, industrial output and value added.





## Energy Policy Division Recycling Market Development Programs

To assist Indiana in moving recycling to a higher level, the Indiana Department of Commerce's Energy Policy Division (EPD) has several loans and grants in place to encourage businesses to reduce waste and increase recycling and the use of recycled-content products and feed-stocks. All projects require a dollar-for-dollar match. The Recycling and Energy Development Board makes funding decisions quarterly.

### Loans

- Recycling Promotion and Assistance Fund (RPAF) Loan - a zero-percent interest loan for the purchase of equipment to reduce waste or make a recycled-content product.
- \$1 million RPAF Attraction Loan - an RPAF loan at a higher funding level to support existing successful companies that are building markets for hard-to-recycle priority materials.

### Grants

- Innovations Grant - a grant of up to \$100,000 for research or development of a product or process that reduces waste or increases the use of recyclables.
- Recycled Product Marketing Grant - a grant of up to \$30,000 for a company to market its recycled-content product manufactured in Indiana.
- Three R's Assessment - a grant of up to \$6,000 for a company to investigate ways to reduce, reuse and recycle non-hazardous waste.
- Recycled-Content Purchasing Grant - a grant of up to \$5,000 for a government entity to purchase recycled-content products as a trial or demonstration.

### New Web Site Helps Close the Recycling Loop

[www.CommerceRecycles.IN.gov](http://www.CommerceRecycles.IN.gov)

Commerce also assists companies in finding markets for recyclables through the online Recyclable Material Market Directory, a searchable database of over 230 brokers, processors and end-users who are seeking recyclables. Categories include glass, metals, paper, plastics, rubber, wood, construction and demolition debris, and other materials including electronics and textiles.

To help Indiana close the recycling loop and buy recycled, a Recycled Products Showroom has been added to the Web site. This expanding portal provides information on recycled products manufactured or distributed in Indiana.

Please visit our Web site for more program details - [www.CommerceRecycles.in.gov](http://www.CommerceRecycles.in.gov) - or contact the Indiana Department of Commerce, Energy Policy Division, Recycling Market Development Program at 317-232-8940.

### Indiana Department of Commerce Energy Policy Division

One North Capitol, Suite 700

Indianapolis, IN 46204

317-232-8940

[www.CommerceRecycles.in.gov](http://www.CommerceRecycles.in.gov)



Printed on 30% post-consumer paper



**Indiana**  
Be in a state of progress