

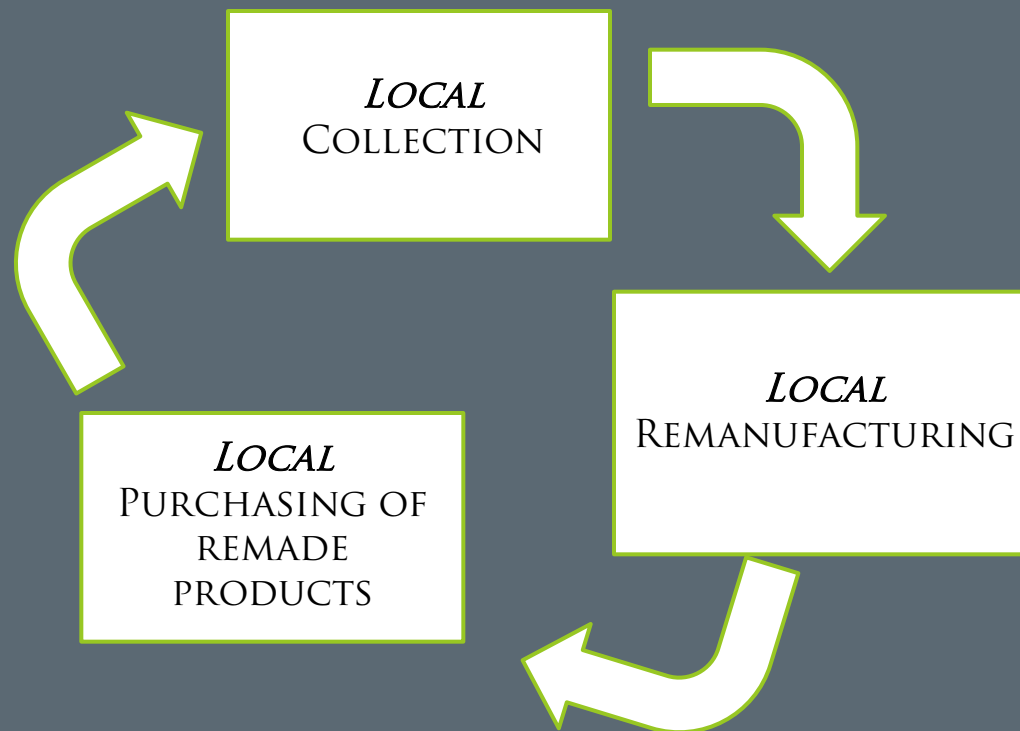


RECYCLING ECONOMIC DEVELOPMENT PROGRAM UPDATE

Zero Waste Advisory Commission
May 13, 2015

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Recycling Economic Development Liaison
City of Austin

*The mission of the Austin Recycling Economic Development Program is to attract, retain, and grow zero waste businesses and entrepreneurs in order to **create local jobs** and foster a **resilient zero waste ecosystem** in Central Texas.*



Austin [re]Manufacturing Hub

- Due diligence, planning and design work
- Diversification of real estate offerings
- Site visits from out-of-town remanufacturing firms & recruitment trips
- Austin Industrial Development Corporation
- Zero Waste as new target market for Economic Development Department



Austin Materials Marketplace

austin
materials
marketplace

- Online, facilitated business-to-business reuse tool
- Turning one company's waste into another company's resource
- Free for the first two years due to City support



**United States Business Council
For Sustainable Development**



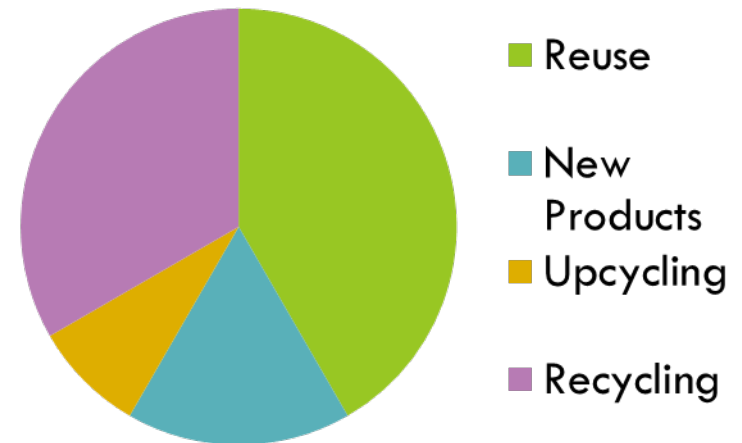
ecologyaction
of texas



Business and organizations networking & brainstorming at AMM Events.
Photos by Rui He, AMM Materials Reuse Expert

- 81 Participants
- 12 Completed Trades
 - Business Furniture for Resale
 - Granite Scrap to Granite Tiles
 - Spent Yeast to Compost
 - Metal Buttons for Creative Reuse
 - Plastic Bins for Reuse & Recycling
 - Window Shade Textiles Recycled
- >\$28,500 in value creation for participants

Diversion Outcomes



Ann Richards School Velocity Capstone

6

- Senior class designed and created business plans for challenging materials in Austin Materials Marketplace



Shop Zero Waste- LocallyAustin.org

7

125 Businesses

□ Recent additions:

- Raven + Lily
- Monkeys Vintage

- Been Around Resale Boutique

- Square Amps
- Under Cover



Shop Zero Waste- LocallyAustin.org



A screenshot of the LocallyAustin.org website. The website has a green header with the "LocallyAustin.org" logo and navigation links. The main content area is orange and features a large banner that says "Purchase with a Purpose" and "SUPPORT LOCAL BUSINESSES". Below the banner are several news articles, including "TIME's Person of the Year: The Ebola Fighters", "Police investigate spike in West Campus burglaries", and "Taylor Middle School cancels classes after fire". There is also a weather forecast for Austin at the bottom right.

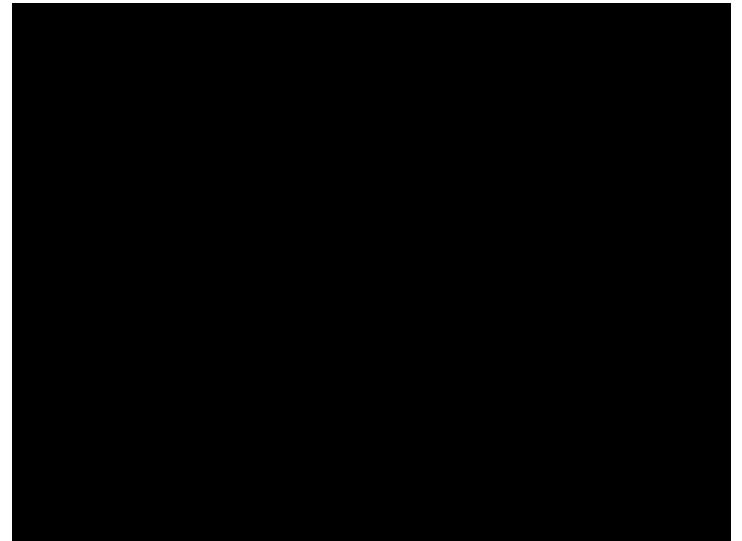
Special Events

- ReuseConex 2014
- Reuse Day Proclamation
- Social Entrepreneurship Opportunities through Furniture Reuse
- SXSW Eco Reuse + Recycling Startup Showcase



Raising National Awareness of Recycling Economic Development

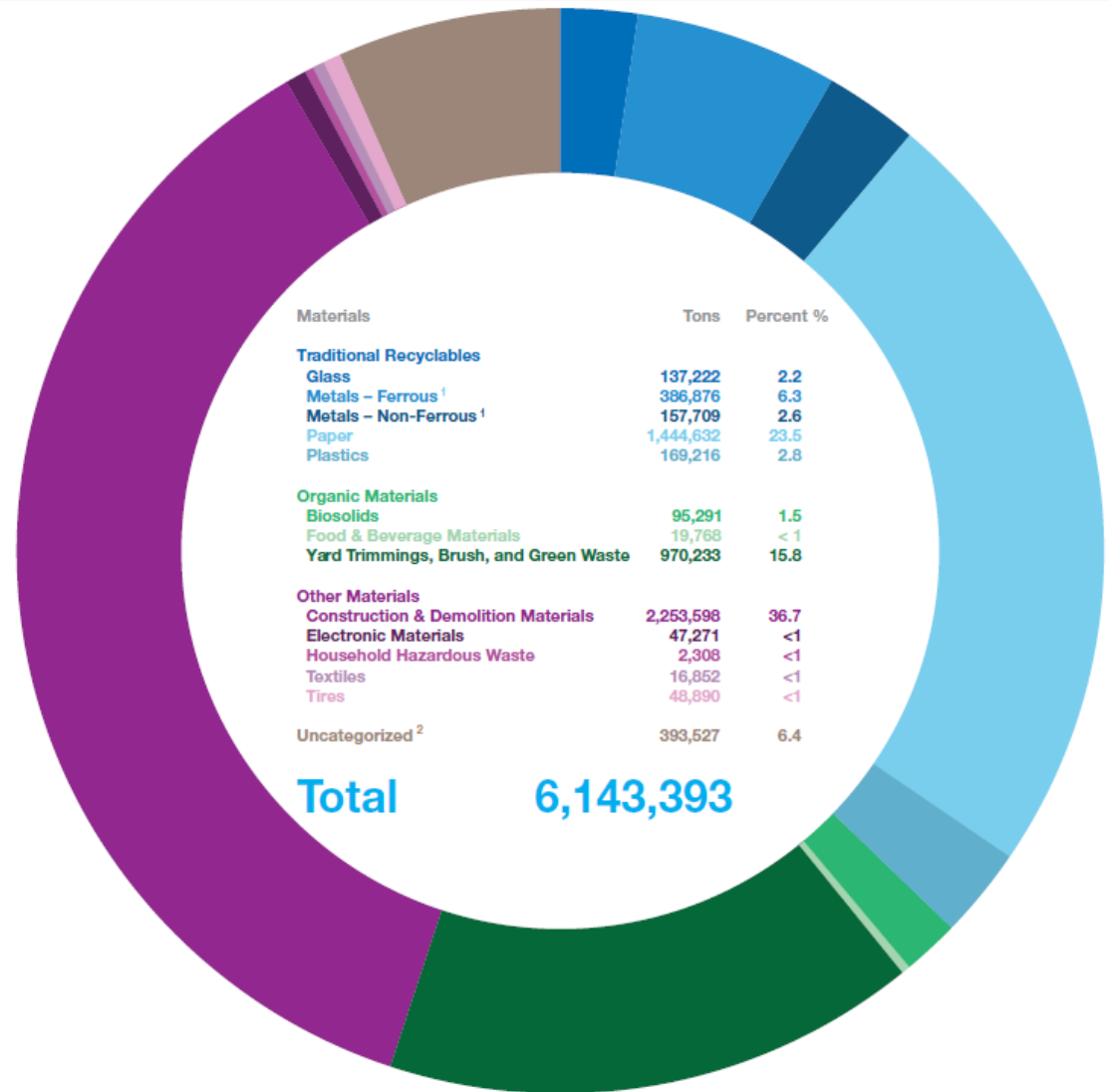
- International Economic Development Council Webinar and Journal Article on Recycling Economic Development
- GreenBiz Article on Austin Materials Marketplace
- Urban Sustainability Directors Network Presentation
- Colorado Association for Recycling Summit (June 2015)

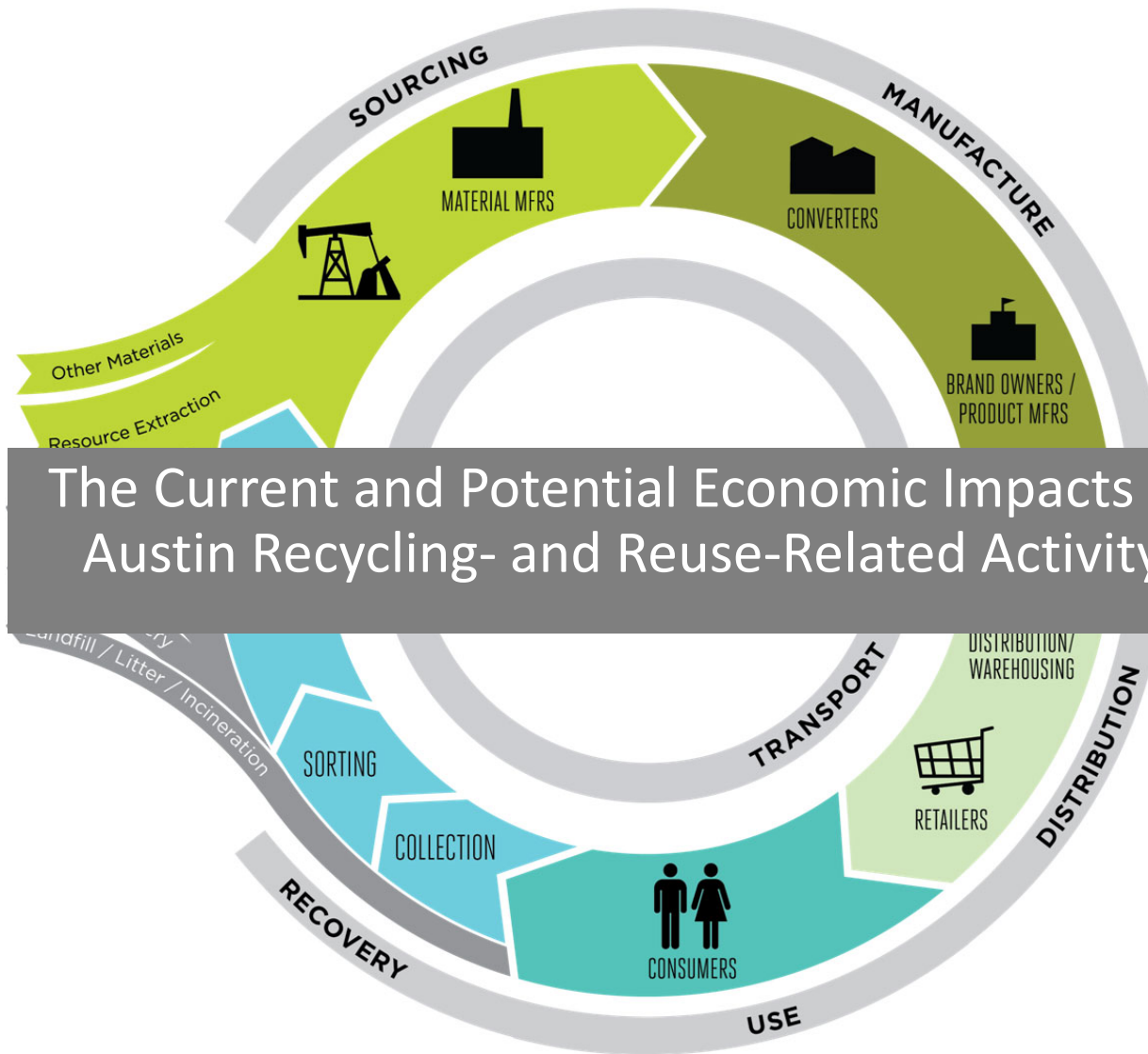


Texas Recycling Data Initiative

11

- Statewide Recycling Rate: 18.9%
- 12,678 Texas jobs supported by MSW recycling processors





The Current and Potential Economic Impacts of Austin Recycling- and Reuse-Related Activity



Spring 2015

austintexas.gov

Overview

Economic Impact Assessment

- COA commissioned TXP, Inc. to evaluate the recycling and reuse sectors' economic impact. This sets baseline impact for the sector, as well as estimating the magnitude of the opportunity to increase its role in the local economy.

Report Structure

- Overview of the industry (including a short discussion of metal, glass, paper, and plastic, and the role of recycled materials in the manufacturing process)
- Key industry trends that point toward economic development opportunities for Austin
- Measurement of the current and potential impact of recycling on the local economy
- Recommendations to achieve this potential future impact

Key Trends in Recycling

Recycled material prices fluctuate

- Excess international supply of steel and scrap has put downward pressure on domestic prices, causing market disruptions in the US. However, many countries (China, India, and Russia, for example) impose quotas and/or taxes on scrap exports. This drives up demand for US exports, which are not restricted.

The need for scale has prompted industry consolidation

- Supply contracts with large customers can bring higher prices over the long-term than the volatile spot market. This has led firms to make acquisitions with an eye towards creating a steady supply of raw material to large producers.

End-use markets determine the demand for recycled materials

- Demand for scrap steel comes mainly from the US steel industry, for example, which depends heavily on the auto, machinery, and construction industries. Increased auto production abroad simultaneously shifts the location of scrap metal demand long-term.

Key Trends in Recycling (continued)

Changes in technology and business practices increase efficiency

- For example, mini-mills make steel by melting scrap in electric arc furnaces (EAF), while traditional steel making can use no more than 20% scrap as raw material. EAFs also have lower carbon dioxide emissions and greater energy efficiency.

Bans on plastic increase demand for product substitutes

- Prohibitions on Styrofoam, plastic shopping bag bans, and plastic bottles are increasingly common, leading the industry to examine bioplastics, hybrids, etc. The declining use of traditional plastics will lead to a more complex recycling process and marketplace.

E-commerce and digital communication continue to impact demand for paper/paperboard materials

- Internet activity and digital record keeping decreases the demand for paper products while at the same time e-commerce has dramatically increased the use of cardboard boxes and other shipping containers.

Measuring the Economic Impact

Calculating the Direct Footprint

- In 2001, the EPA commissioned R.W. Beck (EPA Study) to conduct an analysis of the economic impact of recycling and reuse in the United States. TXP used the EPA Study as the basis of its definition of recycling and recycling-related manufacturing.
- The best recycling economic data source for Austin is the TWC's QCEW
- NAICS codes selected that represent recycling and recycling-related manufacturing. Only those NAICS present in Austin economy were included (for example, pulp and paper mills that make recycled paper were not include as no such business is located in Austin).
- Additionally, not all activity in each of these included industries is recycling-related.

Measuring the Economic Impact

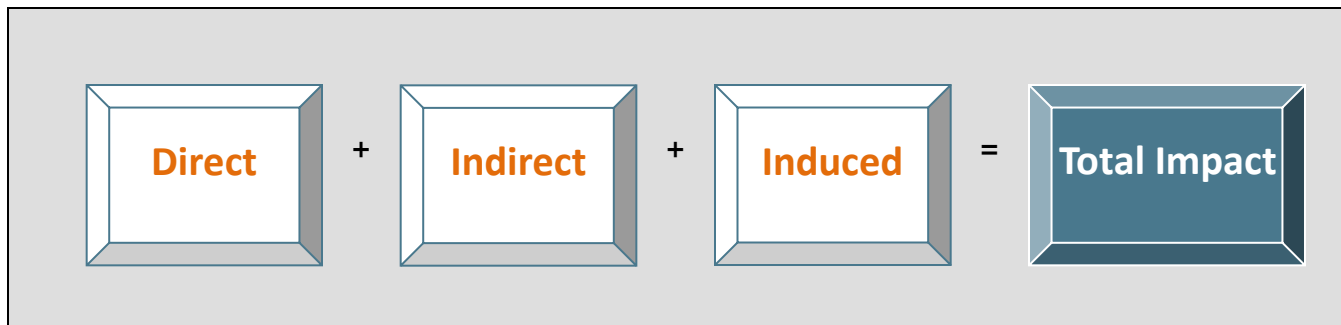
Calculating the Direct Footprint (continued)

NAICS	Industry	Related to Recycling	Recycling-Related Receipts	Recycling-Related Payroll	Recycling-Related Employment
3261	Plastic Products Manufacturing	13%	\$38,423,563	\$7,360,728	170
327215	Glass Product Manufacturing (Using Purchased Glass)	100%	\$2,186,701	\$437,902	16
3314	Nonferrous Metal Production	45%	\$22,289,919	\$2,379,812	50
423140	Motor Vehicle Parts (Used) Merch. Wholesaler	100%	\$7,257,054	\$1,377,050	50
423930	Recyclable Material Merchant Wholesalers	90%	\$288,773,708	\$24,064,752	564
562111	Solid Waste Collection	26%	\$39,332,604	\$19,061,078	382
562920	Materials Recovery Facilities (MRFs)	100%	\$4,372,727	\$2,119,079	61
Total			\$402,636,275	\$56,800,401	1,292

Measuring the Economic Impact

Calculating the Total Economic Impact

- In an input-output analysis there are three types of expenditure effects: direct, indirect, and induced. **Direct** effects are production changes associated with the immediate effects or final demand changes. **Indirect** effects are production changes in downstream industries caused by the changing input needs of directly affected industries. **Induced** effects are the changes in regional household spending patterns caused by changes in household income generated from the direct and indirect effects.
- Once the ripple effects have been calculated, the results can be expressed in a number of ways. Three of the most common are “Output,” equivalent to sales or receipts; “Earnings,” which represents the compensation to employees and proprietors; and “Employment,” which refers to permanent, full-time jobs that have been created in the local economy.



Measuring the Economic Impact

Total Current Economic Impact

NAICS	Industry	Output/Receipts	Earnings/Payroll	Employment
3261	Plastic Products Manufacturing	\$63,222,130	\$14,535,634	338
327215	Glass Product Manufacturing (Using Purchased Glass)	\$4,116,684	\$980,079	23
3314	Nonferrous Metal Production	\$37,736,833	\$5,565,189	102
423140	Motor Vehicle Parts (Used) Merch. Wholesaler	\$13,101,159	\$3,995,008	78
423930	Recyclable Material Merchant Wholesalers	\$521,323,174	\$41,822,133	958
562111	Solid Waste Collection	\$72,257,926	\$38,693,989	1,012
562920	Materials Recovery Facilities (MRFs)	\$8,033,137	\$4,301,730	161
Total		\$719,791,043	\$109,893,762	2,673

Growth Opportunities

- While recycling is clearly embraced by the community in Austin, manufacturing based on recycled materials represents a smaller share of the local economy than the national average. By capitalizing on available opportunities, Austin could replicate the national average for recycling-related manufacturing.
- The translation would be an additional 910 direct manufacturing jobs, representing \$35.2 million in direct annual earnings and \$217.8 million in receipts each year.
- Total economic impact is below.

Total Current & Potential Economic Impact

NAICS Codes	Output/Receipts	Earnings/Payroll	Employment
Manufacturing (3261, 327215, 3314)	\$105,075,647	\$21,080,902	464
Wholesale (423140, 423930)	\$534,424,333	\$45,817,140	1,036
Solid Waste Recovery (562111, 562920)	\$80,291,063	\$42,995,720	1,173
Current Total	\$719,791,043	\$109,893,762	2,673
<i>Additional Manufacturing-Related</i>	<i>\$363,860,498</i>	<i>\$72,999,862</i>	<i>1,606</i>
Potential Total	\$1,083,651,541	\$182,893,624	4,278

Recommendation #1

Work on developing end-use markets locally for products made from recycled materials, with particular focus on the sectors that require upstream packaging.

A clear example is in the food and beverage sector, as Austin is home to a broad and growing range of packaged food and drinks, and glass and plastic (which are typically used in food/beverage packaging) are relatively available locally.

Moreover, stakeholder input indicated that Austin produces twice the national average of glass flow. Given the volume of local food and beverage production that uses packaging materials made elsewhere and larger than normal “raw material,” this is an area of opportunity.

Recommendation #2

Identify meaningful incentives to encourage the use of recycled materials in the production process.

Just as factors such as location in the Desired Development Zone and employing traditionally hard to serve populations are included in the economic incentive evaluation done by the City, the use of recycled materials (by any type of production firm) could also be part of the equation, either as a core consideration or as a means to receive bonus points. Beyond the near-term efforts to leverage available material supply and local demand in the packaging sector, Austin should facilitate the growth of the local materials sector overall. The online marketplace is a good start.

Recommendation #3

Promote end-markets for recycled products by including preference for locally-made recycled-content in COA purchasing process.

Much as the City helped jump-start the market for renewable energy, Austin can leverage the City's buying power as a large enough customer to make a difference with its purchasing decisions.

Recommendation #4

Solicit stronger relationships with the Gulf Coast ports.

In addition to attracting and developing firms that can use recycled materials as feedstock, there could be enhanced export markets for Austin-derived materials if the transportation infrastructure were improved. The widening of the Panama Canal impacts Gulf Coast shipping to and from China, as does new Mexican port capacity at Mazatlan and Manzanillo. Stakeholder input indicated that stronger relationships with these ports could open up broader trade opportunities, either through filling excess capacity on a given shipment or to better understanding market demand via a relationship with those who manage the flow of goods.

Recommendation #5

Focus on business and consumer education efforts connecting recycling and economic development.

Austin's commitment to zero landfill waste by 2040 and its new Universal Recycling Ordinance provide an excellent opportunity to raise local business and community awareness of the economic development opportunities associated with recycling and recycling-related manufacturing.

Conclusions

- Consciousness on recycling steadily rising over past several decades, with common terms such as “carbon footprint” and “sustainability” indicating an awareness of and focus on the environmental implications of reducing waste.
- In recent years, the lens has begun to broaden to include the economic impacts as well, as the use of recycled materials has become a cost-effective factor of production for many industries.
- In 2014, recycling and recycling-related manufacturing activity in Austin had an overall impact of \$720.0 million in economic activity, \$109.9 million in labor earnings, and more than 2,600 jobs. TXP estimates that with leadership by the City, the recycling-related manufacturing sector could expand to create additional potential gains of \$363 million in total economic activity, \$72 million in labor compensation, and approximately 1,600 more permanent jobs.
- The combination of environmental and economic benefits is powerful, and points to a range of economic development opportunities in Austin that can build on the investments and program commitments already made by the City.