



Cal Recycle Waste Characterization Data for State Agencies as Generators

SAGE Meeting
January 20, 2016
Nancy Carr, CalRecycle



2014 Generator-Based Study for the Commercial Sector

- Take samples of materials at sites where they are generated, such as businesses or institutions
- 16 business groups used, base on Federal NAICS codes
- State agencies can find a business group that approximates their activities/operations
- 50 sites used per group for disposal data, 25 sites per group for diversion data
- Sample and sort materials from disposal, recycling, and organics bins; also quantify “other diversion” that occurs apart from the bins

CalRecycle 2014 Business Groups

Arts, Entertainment & Recreation	Manufacturing - All Other	Services - Management, Admin., Support, Social
Durable Wholesale & Trucking	Medical/Health	Services - Professional, Technical, Financial
Education	Public Administration	Services - Repair and Personal
Hotels/Lodging	Restaurants	Not Elsewhere Classified
Manufacturing - Electronic Equipment	Retail Trade - Food & Beverage Stores	
Manufacturing - Food; & Nondurable Wholesale	Retail Trade - All Other	

Public Administration Business Group – data might not reflect individual state facilities

- Includes all levels of government– local, state, federal
- Includes all government functions
- Sampling group included transportation dept., corporation yards, city halls, environmental services, social services, fire dept., water and sewer, law enforcement, probation, CHP, animal shelter, air traffic, US Forestry, etc.
- Data represents overall average of a wide range of government facilities – useful for general statewide planning
- Very low per-employee generation compared to most other groups – could underestimate amounts generated for individual sites

NAICS Codes Included in CalRecycle Business Groups Excerpt from Table 80, p. 155 of final report

Group Number	Included NAICS Codes	Industry
12		Retail Trade - All Other
	441	Motor Vehicle & Parts Dealers
	442	Furniture & Home Furnishings
	443	Electronics & Appliance Stores
	446	Health & Personal Care Stores
	447	Gasoline Stations
	448	Clothing & Clothing Accessories
	451	Sporting Goods, Hobby, Books, Music
	452	General Merchandise Stores
	453	Miscellaneous Store Retailers
	454	Nonstore Retailers
13		Services - Management, Administrative, Support, & Social
	425	Electronic Markets, Agents, Brokers
	551	Management of Companies & Enterprises
	561	Administrative & Support Services
	624	Social Assistance
	813	Religious, Civic, Professional & Similar
14		Services - Professional, Technical, & Financial
	515	Broadcasting, except Internet
	517	Telecommunications
	518	Data Processing, Hosting & Related
	519	Other Information Services
	521	Monetary Authorities - Central Bank
	522	Credit Intermediation & Related
	523	Financial Investment & Related
	524	Insurance Carriers & Related Activity
	525	Funds, Trusts, Other Financial Vehicles
	531	Real Estate
	532	Rental & Leasing Services
	533	Lessors of Nonfinancial Intangible Assets
	541	Professional & Technical Services

NAICS Code Search

NAICS Search:

Enter keyword or 2-6 digit code

2012 NAICS Search

Enter keyword or 2-6 digit code

2007 NAICS Search

Enter keyword or 2-6 digit code

2002 NAICS Search

Downloads/Reference Files/Tools

- [2012 NAICS](#)
- [2007 NAICS](#)
- [2002 NAICS](#)
- [1997 NAICS](#)
- [Concordances](#)
- [NAICS Update Process Fact Sheet \[PDF, 37KB\]](#)

Contact Us

Email Us: naics@census.gov



2012 NAICS Definition

T = Canadian, Mexican, and United States industries are comparable.

Search results for: 624

Number of records found: 22

[624](#) Social Assistance^T

[6241](#) Individual and Family Services^T

[62411](#) Child and Youth Services^T

[624110](#) Child and Youth Services

[62412](#) Services for the Elderly and Persons with Disabilities^T

[624120](#) Services for the Elderly and Persons with Disabilities

[62419](#) Other Individual and Family Services^T

[624190](#) Other Individual and Family Services

[6242](#) Community Food and Housing, and Emergency and Other Relief Services^T

[62421](#) Community Food Services^T

[624210](#) Community Food Services

[62422](#) Community Housing Services^T

[624221](#) Temporary Shelters

[624229](#) Other Community Housing Services

[62423](#) Emergency and Other Relief Services^T

[624230](#) Emergency and Other Relief Services

[6243](#) Vocational Rehabilitation Services^T

[62431](#) Vocational Rehabilitation Services^T

[624310](#) Vocational Rehabilitation Services

[6244](#) Child Day Care Services^T

[62441](#) Child Day Care Services^T

[624410](#) Child Day Care Services

Additional NAICS Information

- Webpage at <http://www.census.gov/eos/www/naics/index.html>
- Can look up individual codes for definition, examples

NAICS Search:

Enter keyword or 2-6 digit code

2012 NAICS Search

Enter keyword or 2-6 digit code

2007 NAICS Search

Enter keyword or 2-6 digit code

2002 NAICS Search

2012 NAICS Definition

T = Canadian, Mexican, and United States industries are comparable.

624410 Child Day Care Services

This industry comprises establishments primarily engaged in providing day care of infants or children. These establishments generally care for preschool children, but may care for older children when they are not in school and may also offer pre-kindergarten educational programs.

Illustrative Examples:

Child day care babysitting services
Nursery schools
Child or infant day care centers
Preschool centers

Table 66. Composition Summary: Services – Professional, Technical, & Financial

Material	Disposed		Curbside Recycle		Curbside Organics		Other Diversion		Total Generation	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Paper	29.1%	1,142,870	86.1%	588,519	0.7%	1,301	40.9%	37,407	36.2%	1,790,097
Uncoated Corrugated Cardboard	4.1%	161,828	51.0%	348,608	0.0%	57	17.7%	16,167	10.7%	526,659
Paper Bags	0.5%	18,127	0.5%	3,124	0.0%	30	0.1%	90	0.4%	21,370
Newspaper	2.5%	98,110	3.2%	22,136	0.1%	107	0.4%	362	2.4%	120,735
White Ledger Paper	2.1%	82,352	7.9%	54,347	0.0%	42	4.4%	3,983	2.8%	140,724
Other Office Paper	2.4%	95,669	3.7%	25,540	0.2%	413	8.0%	7,353	2.8%	128,974
Magazines and Catalogs	1.0%	37,985	4.9%	33,581	0.0%	0	0.7%	625	1.5%	72,191
Phone Books and Directories	0.0%	1,100	0.0%	0	0.0%	0	0.0%	0	0.0%	1,100
Other Miscellaneous Paper - Compostable	0.8%	23,243	4.0%	27,383	0.4%	635	0.0%	1	1.0%	51,262
Other Miscellaneous Paper - Other	3.0%	121,279	10.2%	69,785	0.0%	11	9.8%	8,734	4.0%	199,810
Remainder/Composite Paper - Compostable	9.9%	395,521	0.2%	1,269	0.0%	6	0.0%	0	8.0%	396,796
Remainder/Composite Paper - Other	3.2%	127,658	0.4%	2,747	0.0%	0	0.1%	72	2.8%	130,478
Glass	1.4%	55,539	3.5%	23,814	0.0%	32	1.1%	1,022	1.6%	80,466
Clear Glass Bottles and Containers	0.5%	20,340	2.5%	16,690	0.0%	32	0.4%	403	0.8%	37,665
Green Glass Bottles and Containers	0.4%	17,581	0.5%	3,253	0.0%	0	0.3%	258	0.4%	21,052
Brown Glass Bottles and Containers	0.1%	3,228	0.5%	3,691	0.0%	0	0.4%	373	0.1%	7,283
Other Glass Colored Bottles and Containers	0.0%	203	0.0%	0	0.0%	0	0.0%	0	0.0%	203
Flat Glass	0.0%	943	0.0%	0	0.0%	0	0.0%	0	0.0%	943
Remainder/Composite Glass	0.3%	13,244	0.0%	0	0.0%	0	0.0%	7	0.3%	13,251
Metal	4.1%	162,103	0.7%	4,567	0.0%	23	28.0%	25,586	3.9%	192,279
Tin/Steel Cans	0.2%	8,843	0.2%	1,061	0.0%	0	0.0%	18	0.2%	9,922
Major Appliances	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Used Oil Filters	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Other Ferrous	1.2%	48,400	0.1%	785	0.0%	0	20.0%	18,258	1.3%	65,423
Aluminum Cans	0.1%	3,860	0.3%	1,911	0.0%	23	0.5%	459	0.1%	6,253
Other Non-Ferrous	0.9%	37,317	0.1%	511	0.0%	0	1.8%	1,657	0.8%	39,485
Remainder/Composite Metal	1.8%	65,683	0.0%	320	0.0%	0	5.7%	5,193	1.4%	71,196
Electronics	2.6%	78,459	0.1%	379	0.0%	13	1.4%	1,245	1.6%	80,097
Brown Goods	0.8%	23,189	0.0%	0	0.0%	0	0.0%	0	0.5%	23,189
Computer-related Electronics	0.0%	0	0.0%	254	0.0%	0	1.3%	1,199	0.0%	1,453
Other Small Consumer Electronics	0.0%	60	0.0%	125	0.0%	13	0.0%	6	0.0%	204
Video Display Devices	1.4%	55,210	0.0%	0	0.0%	0	0.0%	40	1.1%	55,250
Plastic	13.2%	528,634	8.0%	54,425	0.2%	397	1.8%	1,649	11.8%	585,305
PETE Plastic Containers	0.4%	14,738	1.0%	6,783	0.1%	147	1.3%	1,225	0.5%	22,890
HDPE Plastic Containers	0.4%	15,241	0.3%	2,043	0.0%	2	0.5%	412	0.4%	17,698
Miscellaneous Plastic Containers	0.2%	8,521	2.7%	18,816	0.0%	84	0.0%	11	0.8%	27,232
Plastic Trash Bags	1.9%	75,823	0.1%	639	0.0%	50	0.0%	0	1.5%	78,313
Plastic Grocery and Other Merchandise Bags	0.2%	7,788	0.0%	313	0.0%	0	0.0%	0	0.2%	8,102
Non-Bag Commercial and Industrial Packaging Film	0.8%	33,130	1.8%	10,880	0.0%	0	0.0%	0	0.9%	43,809
Film Products	0.0%	0	0.0%	150	0.0%	0	0.0%	0	0.0%	151
Other Film - Other	2.2%	88,837	0.2%	1,358	0.0%	54	0.0%	0	1.8%	88,249
Durable Plastic Items - #2 and #5 Bulky Rigid	0.4%	15,730	0.0%	149	0.0%	0	0.0%	0	0.3%	15,879
Durable Plastic Items - Other	1.1%	45,243	0.0%	110	0.0%	57	0.0%	0	0.9%	45,410
Remainder/Composite Plastic	5.7%	225,985	2.0%	13,584	0.0%	2	0.0%	0	4.8%	239,572
Other Organic	23.1%	922,606	0.1%	996	99.0%	173,063	8.2%	7,527	22.3%	1,104,092
Food	8.3%	330,452	0.1%	483	0.1%	203	5.1%	4,674	8.8%	335,811
Leaves and Grass	3.4%	138,387	0.0%	0	98.8%	172,743	3.1%	2,853	8.3%	311,983
Prunings and Trimmings	3.2%	127,780	0.0%	0	0.0%	0	0.0%	0	2.8%	127,780
Branches and Stumps	0.2%	9,888	0.0%	0	0.0%	0	0.0%	0	0.2%	9,888
Manures	0.0%	1,478	0.0%	0	0.0%	0	0.0%	0	0.0%	1,478
Textiles	2.1%	84,487	0.1%	514	0.1%	117	0.0%	0	1.7%	85,118
Carpet	0.8%	23,797	0.0%	0	0.0%	0	0.0%	0	0.5%	23,797
Remainder/Composite Organic	5.2%	208,438	0.0%	0	0.0%	0	0.0%	0	4.2%	208,438
Inerts and Other	25.1%	1,000,711	1.8%	10,908	0.0%	0	16.4%	14,900	20.8%	1,026,609
Concrete	2.0%	79,783	0.0%	0	0.0%	0	0.0%	0	1.8%	79,783
Asphalt Paving	1.0%	40,743	0.0%	0	0.0%	0	0.0%	0	0.8%	40,743
Asphalt Roofing	1.1%	43,328	0.0%	0	0.0%	0	0.0%	0	0.9%	43,328
Clean Dimensional Lumber	1.0%	40,020	0.0%	0	0.0%	0	0.4%	329	0.8%	40,349
Clean Engineered Wood	1.9%	74,531	0.0%	0	0.0%	0	0.0%	0	1.5%	74,531
Clean Pallets & Crates	8.3%	332,687	1.8%	10,908	0.0%	0	14.3%	13,110	7.2%	358,708
Other Wood Waste	3.1%	124,307	0.0%	0	0.0%	0	0.0%	0	2.5%	124,307
Gypsum Board	0.8%	25,730	0.0%	0	0.0%	0	0.7%	642	0.5%	26,372
Rock, Soil and Fines	2.2%	89,852	0.0%	0	0.0%	0	1.0%	908	1.8%	90,560
Remainder/Composite Inerts and Other	3.8%	149,929	0.0%	0	0.0%	0	0.0%	0	3.0%	149,929
Household Hazardous Waste	0.2%	7,437	0.0%	16	0.0%	14	1.8%	1,605	0.2%	9,071
Paint	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Vehicle and Equipment Fluids	0.0%	174	0.0%	0	0.0%	0	0.0%	0	0.0%	174
Used Oil	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Batteries	0.0%	868	0.0%	0	0.0%	14	1.7%	1,570	0.0%	2,450
Remainder/Composite Household Hazardous	0.2%	6,397	0.0%	16	0.0%	0	0.0%	35	0.1%	6,447
Special Waste	1.8%	71,286	0.0%	0	0.0%	0	0.4%	371	1.4%	71,656
Ash	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Treated Medical Waste	0.0%	174	0.0%	0	0.0%	0	0.0%	0	0.0%	174
Bulky Items	1.8%	70,937	0.0%	0	0.0%	0	0.4%	371	1.4%	71,308
Tires	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Remainder/Composite Special Waste	0.0%	174	0.0%	0	0.0%	0	0.0%	0	0.0%	174
Mixed Residue	0.1%	4,898	0.0%	0	0.0%	0	0.0%	0	0.1%	4,898
Totals	100.0%	3,994,643	100.0%	683,626	100.0%	174,642	100.0%	91,402	100.0%	4,944,512
Streams Sampled		53		38		3		83		155
TPE/Py		1.88		0.32		0.08		0.04		2.31

Percentages for material types may not total 100% due to rounding.

Tables detailing the composition for all 82 materials can be found in Appendix E: Detailed Composition Tables



Group Composition Data by Stream

Table 66. Composition Summary: Services – Professional, Technical, & Financial

Material	Disposed		Curbside Recycle		Curbside Organics		Other Diversion		Total Generation	
	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons	Est. %	Est. Tons
Paper	29.1%	1,162,870	86.1%	588,519	0.7%	1,301	40.9%	37,407	36.2%	1,790,097
Uncoated Corrugated Cardboard	4.1%	161,826	51.0%	348,608	0.0%	57	17.7%	16,167	10.7%	526,659
Paper Bags	0.5%	18,127	0.5%	3,124	0.0%	30	0.1%	90	0.4%	21,370
Newspaper	2.5%	98,110	3.2%	22,136	0.1%	107	0.4%	382	2.4%	120,735
White Ledger Paper	2.1%	82,352	7.9%	54,347	0.0%	42	4.4%	3,983	2.8%	140,724
Other Office Paper	2.4%	95,669	3.7%	25,540	0.2%	413	8.0%	7,353	2.6%	128,974
Magazines and Catalogs	1.0%	37,985	4.9%	33,581	0.0%	0	0.7%	625	1.5%	72,191
Phone Books and Directories	0.0%	1,100	0.0%	0	0.0%	0	0.0%	0	0.0%	1,100
Other Miscellaneous Paper - Compostable	0.6%	23,243	4.0%	27,383	0.4%	635	0.0%	1	1.0%	51,262
Other Miscellaneous Paper - Other	3.0%	121,279	10.2%	69,785	0.0%	11	9.6%	8,734	4.0%	199,810
Remainder/Composite Paper - Compostable	9.9%	395,521	0.2%	1,269	0.0%	6	0.0%	0	8.0%	396,796
Remainder/Composite Paper - Other	3.2%	127,658	0.4%	2,747	0.0%	0	0.1%	72	2.6%	130,478
Glass	1.4%	55,539	3.5%	23,814	0.0%	32	1.1%	1,022	1.6%	80,408
Clear Glass Bottles and Containers	0.5%	20,340	2.5%	16,890	0.0%	32	0.4%	403	0.8%	37,665
Green Glass Bottles and Containers	0.4%	17,581	0.5%	3,233	0.0%	0	0.3%	238	0.4%	21,052
Brown Glass Bottles and Containers	0.1%	3,228	0.5%	3,691	0.0%	0	0.4%	373	0.1%	7,293
Other Glass Colored Bottles and Containers	0.0%	203	0.0%	0	0.0%	0	0.0%	0	0.0%	203
Flat Glass	0.0%	943	0.0%	0	0.0%	0	0.0%	0	0.0%	943
Remainder/Composite Glass	0.3%	13,244	0.0%	0	0.0%	0	0.0%	7	0.3%	13,251
Metal	4.1%	162,103	0.7%	4,567	0.0%	23	28.0%	25,586	3.9%	192,279
Tin/Steel Cans	0.2%	8,843	0.2%	1,061	0.0%	0	0.0%	18	0.2%	9,922
Major Appliances	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0

- Percent and statewide tons for each material type in each stream, for each business group
- 82 detailed materials
- Also amounts generated in each stream, on a per-employee basis
- Both composition percentages and amounts are important

Overview of Each Stream

- Top chart – 81% of everything generated ends up in the disposal bin
- Diversion rate for this group is 19%
- “Other Diversion” includes materials diverted outside of bins picked up by a hauler– such as selling cardboard or scrap metal directly to a recycler
- Colors indicate recoverable materials in each bin
- Much of what’s disposed could be recovered, especially organics (food, pallets, and compostable paper)

Figure 50. Annual Tons by Waste Stream: Services – Professional, Technical, & Financial

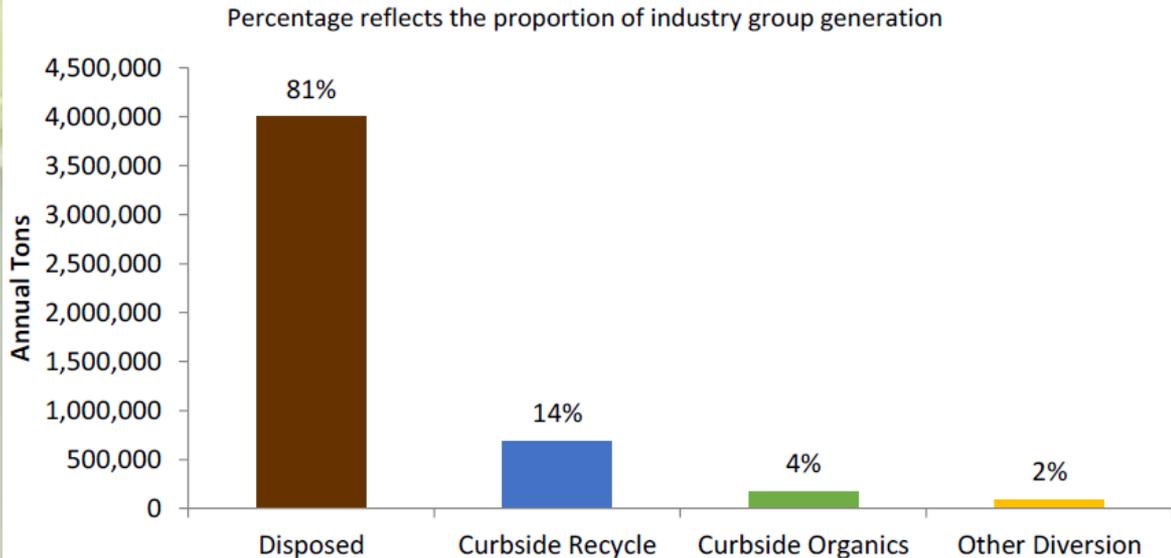
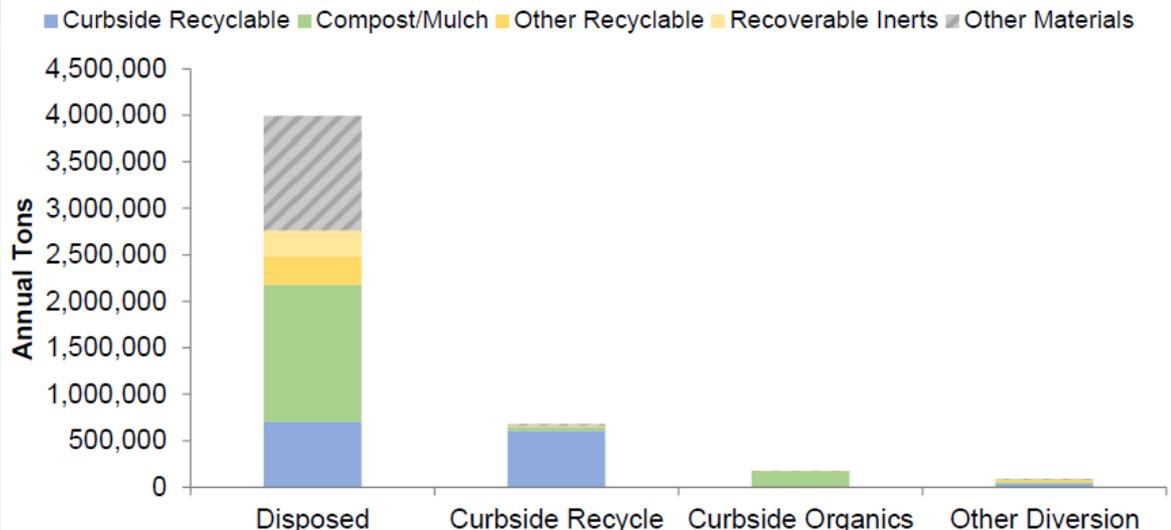


Figure 51. Recoverability by Stream: Services – Professional, Technical, & Financial





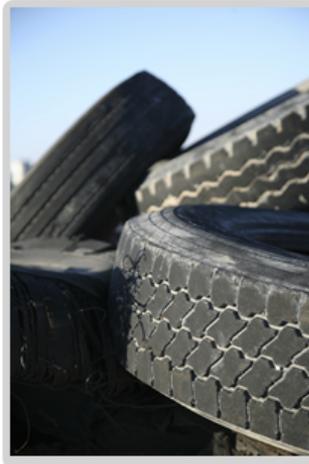
- Information**
- Public Meetings
 - Meeting Webcasts
 - Public Notices
 - Decisions & Public Participation
 - Videos
 - Laws & Regulations
 - Data Central
 - Facility Information Toolbox (FacIT)

- Resources**
- Grant, Payment, & Loan Programs
 - Forms
 - Publications
 - Listservs
 - Employment
 - Contracts



Where Do I Recycle...

- [Beverage Containers](#)
- [Electronic Waste](#)
- [Motor Oil](#)
- [More recycling info](#) | [Public Recycling Facility Map](#)



In the News

→ [It's all fun and games until the batteries go dead—CalRecycle offers tips on safe disposal, reusable alternatives](#)

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In Focus

Waste Characterization Reports

CalRecycle has recently completed two major waste characterization studies: a [Disposal-Facility-Based Study](#), which analyzes the material disposed in the state's waste stream; and a [Commercial Generator Study](#), which includes data on materials disposed and recycled from the state's commercial sector. This information is critical for waste management planning—and for reaching our recycling and greenhouse gas reduction goals.

What are you recycling? Find a recycling location fast!

Whether you've got beverage containers to return for cash, old paint taking up space in the garage, used oil from that last oil change, or another recyclable material, our new [interactive mapping tool](#) will help you find nearby recycling options that accept material from the public.

Mandatory Commercial Organics Recycling

California businesses are required to start recycling their organic waste by April 1, 2016, depending on the amount of waste they generate each week. By 2016, local jurisdictions must have an organic waste recycling program in place for those businesses. See our [Mandatory Commercial Organics Recycling](#) page and our [Organics Materials Management](#) page for more information.

2015 Wildfire Cleanups

CalRecycle crews are currently helping to

State of Recycling in California

As California pursues its statewide goal of 75

California's 75 Percent Initiative

California's goal to recycle 75 percent of its solid



Questions?

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Knowledge Integration Section

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916-341-6216