

SOLID WASTE CAPACITY REPORT  
to the  
HOUSE NATURAL RESOURCES AND ENVIRONMENT COMMITTEE  
and  
SENATE COMMITTEE ON ENVIRONMENTAL QUALITY  
Fiscal Years 2012-2013



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# *Executive Summary*

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The Louisiana Department of Environmental Quality (LDEQ) has evaluated the volume and types of solid waste managed in Louisiana as required by La. R.S. 30:2162(A). Part of the overall evaluation of solid waste management is a determination of permitted capacity available to safely manage the solid waste generated within the state.

After careful review, the LDEQ has determined that although Louisiana currently has sufficient capacity to manage the solid wastes generated within Louisiana, solid waste disposal capacity within the state is not excessive relative to annual waste generation and anticipated increases for municipal and industrial solid waste. Additionally, capacity is one of many factors used in determining whether or not to grant a solid waste processing or disposal permit. Other factors considered are service area, zoning, ability to meet regulatory requirements and compliance history.

# Background

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In Louisiana, solid waste is categorized by type for solid waste management purposes. The types of waste are defined in the solid waste regulations as follows:

## *Industrial Solid Waste:*

solid waste generated by a manufacturing, industrial, or mining process, or that is contaminated by solid waste generated by such a process. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: electric power generation; fertilizer/agricultural chemicals; food and related products; byproducts; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; and transportation equipment. This term does not include hazardous waste regulated under the Louisiana hazardous waste regulations or under federal law, or waste that is subject to regulation under the Office of Conservation's Statewide Order No. 29-B or by other agencies.<sup>1</sup>

## *Commercial Solid Waste:*

all types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential and industrial solid wastes.<sup>2</sup>

## *Residential Solid Waste:*

any solid waste (including garbage, trash, yard trash, and sludges from residential septic tanks and wastewater treatment facilities) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas).<sup>3</sup>

## *Construction/Demolition (C&D) Debris:*

nonhazardous waste generally considered not water-soluble that is produced in the process of construction, remodeling, repair, renovation, or demolition of structures, including buildings of all types (both residential and nonresidential). Solid waste that is not *C&D debris* (even if resulting from the construction, remodeling, repair, renovation, or demolition of structures) includes, but is not limited to, *regulated asbestos-containing material (RACM)* as defined in LAC 33:III.5151.B, white goods, creosote-treated lumber, and any other item not an integral part of the structure.<sup>4</sup>

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<sup>1</sup> See LAC 33:VII.115.

<sup>2</sup> See LAC 33:VII.115.

<sup>3</sup> See LAC 33:VII.115.

<sup>4</sup> See LAC 33:VII.115.

Processing and disposal of solid waste can only be done at facilities permitted to accept the specific type of wastes to be processed or disposed.<sup>5</sup> LAC 33:VII.405 lists five specific categories of facilities (each facility can be one type or more than one type):

*Type I*—industrial disposal facilities (e.g., landfills, surface impoundments, or landfarms).

*Type I-A*—industrial processing facilities (e.g., balers, shredders, transfer stations (processing), etc.).

*Type II*—non-industrial disposal facilities (e.g., landfills, surface impoundments, or landfarms).

*Type II-A*—non-industrial processing facilities (e.g., composting municipal solid waste facilities, balers, shredders, transfer stations (processing), refuse-derived fuel facilities, autoclaves, etc.).

*Type III*—construction/demolition-debris and woodwaste landfills, separation facilities, composting facilities, or other.

Each facility considered and discussed in this report falls into at least one of the above categories. Commercial and residential solid wastes are generally considered together as municipal solid waste and will be considered together in this report.

Unless otherwise noted, the information used in this report was derived from the annual reports and certification of compliance reports submitted by solid waste generators, processing facilities, and disposal facilities.

In addition, to assist in compiling the annual reports and ensure reliable estimates, the LDEQ uses the following terms as defined in the *Guidance Document for Determining Solid Waste Landfill Capacity* on the LDEQ's website.

*Permitted Capacity:*

the initial total volume of waste expressed in cubic yards that a specific bounded facility (total landfill disposal area) is capable of accepting for disposal under an issued permit, i.e. for the permit's duration.

*Used Capacity:*

the volume of waste expressed in cubic yards that has been disposed into a landfill at a specific bounded facility operating under an issued permit.

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<sup>5</sup> See LAC 33:VII.509.A.1.

### *Remaining Capacity:*

the volume of waste expressed in cubic yards that may be disposed into the unused permitted disposal area at a specific bounded facility under an existing permit (for the permit's duration). Remaining Capacity is determined by subtracting the amount of capacity that has been used from the total permitted capacity.

In 2013, LDEQ polled the commercial permitted landfills to determine how the permitted, used, and remaining capacity are determined for each facility and to ensure the estimates provided are reasonable and accurate. Based on the responses received, 89% of the facilities calculated the permitted capacity at the time of application using computer software based on the geometry of the site. In determining used capacity, 47% of the facilities used a ground survey, aerial survey or a combination of the two, 40% summed the volume of waste accepted, and 7% converted weight measurements to volume using a compaction factor. In all cases, the remaining capacity was the difference between permitted and used capacity.

## *Industrial Solid Waste Management*

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For Fiscal Years 2012-2013 (FY12-FY13) which ended on June 30, 2013, Louisiana landfills disposed of approximately 14,514,340 wet-tons of industrial solid waste.

There are currently thirty-six (36) landfills permitted to dispose of industrial solid waste in Louisiana (see Table 1). Of these 36, eighteen (18) dispose of only industrial waste (Type I facilities), and eighteen (18) dispose of industrial wastes, along with municipal and/or construction and demolition (C&D) debris wastes (Type I, II or I, II, III - see Table 1).

The average remaining life (years) of a Type I landfill (industrial wastes only) is 21.1 years. The average remaining life (years) of a multi-type landfill (Type I, II or I, II, III) is 59.2 years.<sup>6</sup> The total remaining capacity for the Type I landfills is approximately 140,285,689 cubic yards. The total remaining capacity for multi-type landfills is approximately 307,934,512 cubic yards.<sup>7</sup>

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<sup>6</sup> The LaSalle-Grant Sanitary Landfill reports a remaining life of approximately 356.3 years. If this landfill is excluded from the calculation, the average life of the multi-type landfills decreases to 47.3 years.

<sup>7</sup> The numbers for the remaining life and capacity of the landfills were taken from the FY13 Certification of Compliance Reports.

Table 1				
Landfills Accepting Industrial Waste Only				
AI	Name	Type	Remaining capacity (cubic yards)	Remaining Capacity (years)
328	International Paper Co - Mansfield Mill	I	5714649	13.0
585	CLECO Corp - Dolet Hills Power Station	I	5451871	7.8
1338	International Paper Co - Louisiana Bastrop Mill	I	4200000	2.0
1396	Exide Technologies - Baton Rouge Smelter	I	142961	71.5
1406	Motiva Enterprises LLC - Norco Refinery	I	130309	10.8
1409	The Dow Chemical Co - Louisiana Operations	I	1013408	23.6
2082	Honeywell International Inc - Geismar Complex	I	1700000	6.0
2140	International Paper Co - Pineville Kraft Mill	I	889789	2.0
2418	ConocoPhillips Co - Alliance Refinery	I	27960	18.1
2532	Mosaic Fertilizer LLC - Uncle Sam Plant	I	100000000	21.0
2617	Georgia-Pacific - Port Hudson Operations	I	733017	11.5
2922	CLECO - Brame Energy Center	I	6843575.35	13.1
3647	Smurfit-Stone Container Enterprises Inc - Hodge Mill	I	139110	100.0
3732	PCS Nitrogen Fertilizer - Geismar Agr. Nitrogen & Phosphate Plant	I	8000000	8.0
9142	Entergy Gulf States - Nelson Industrial Steam Co (NISCO)	I	1687210	9.1
11496	Louisiana Pigment Co LP - Titanium Dioxide Plant	I	652717	7.3
19588	Entergy Gulf States LA LLC - Nelson Electric Generating Plant	I	2225226	45.0
19933	Boise Packaging & Newsprint LLC - DeRidder Paper Mill	I	733887	10.0
Landfills Accepting Industrial and Other Solid Waste (Municipal and/or C&D)				
6961	Jefferson Parish Sanitary Landfill	I, II	16680069	37.6
9077	Woolworth Road Regional Solid Waste Facility	I, II	18016143	43.7 <sup>8</sup>
9340	St Mary Parish Government - Harold J "Babe" Landry Landfill	I, II, III	3644092	32.3
12389	Jefferson Davis Parish Sanitary Landfill Commission	I, II	9042070	26.0
12448	Sabine Parish Sanitary Landfill	I, II	586614	5.3
19447	LaSalle Parish Police Jury - LaSalle-Grant Sanitary Landfill	I, II	31398991	356.3
19803	DeSoto Parish Police Jury - Mundy Sanitary Landfill	I, II, III	2135919	23.3
31128	East Baton Rouge Parish North Landfill	I, II, II-A	19017205	39.3
43506	Tensas Parish Police Jury - Sanitary Landfill	I, II, III	12539492	219.6
85534	BFI - Webster Parish Solid Waste Landfill	I, II	14866530	67.3
4803	Colonial Landfill (BFI)	I, II	11931741.6	47.0
12241	Magnolia Sanitary Landfill (Waste Management)	I, II	17004545	73.8
11767	Woodside Sanitary Landfill (Waste Management)	I, II	29162315	40.5
20061	Tidewater Landfill LLC - Coast Guard Road Sanitary Landfill	I, II	607965	1.3
25491	Reliable Landfill LLC	I, II	3606410	35.0
32219	River Birch Landfill	I, II	44004296	33.0
41194	CWI - White Oaks Landfill LLC	I, II, III	24575000	107.7
52277	IESI Corp - Timberlane Landfill	I, II	32783096	107.2

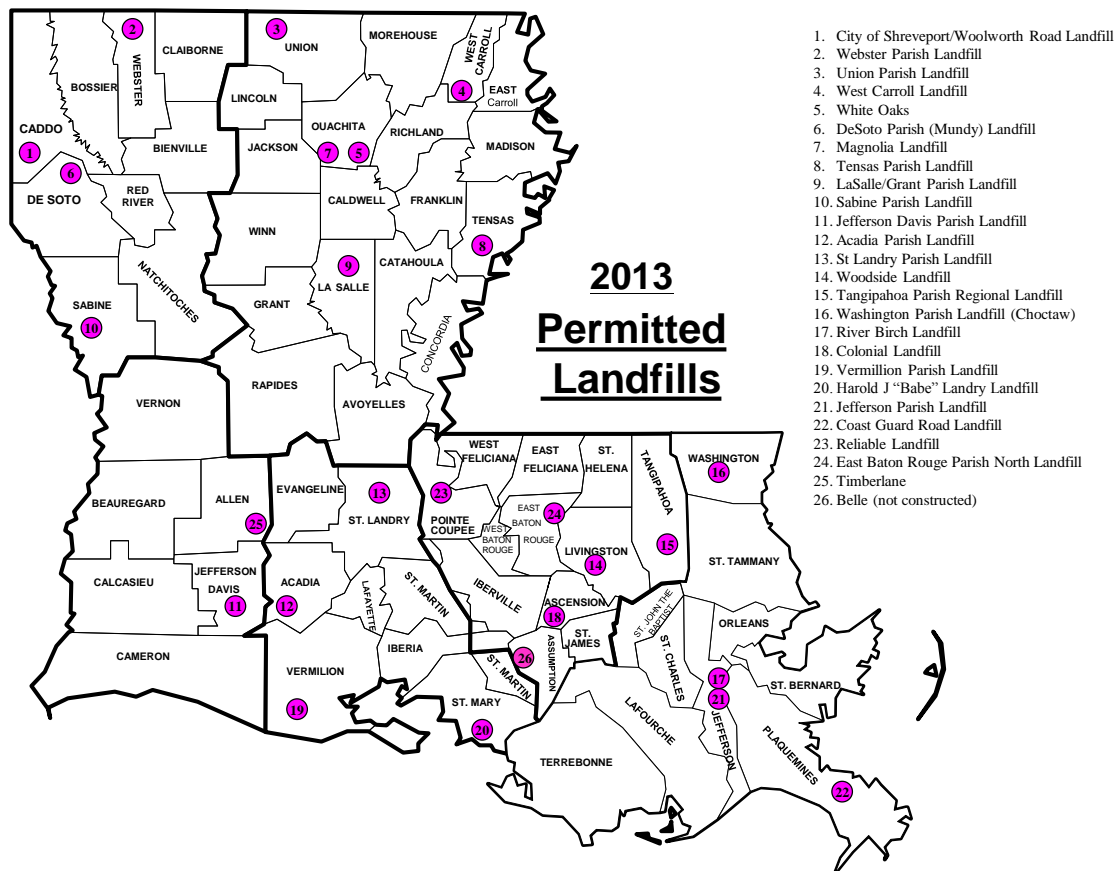
<sup>8</sup> Remaining capacity taken from FY12 Solid Waste Annual Disposer Report. FY13 Certification of Compliance is not available.

# Commercial and Residential (Municipal) Waste Management

Municipal solid waste disposed of in Louisiana for the two years totaled approximately 9,691,845 wet-tons, as reported by the disposal facilities (Type II facilities).<sup>9</sup> Information regarding the amount of municipal solid waste generated, but disposed of out-of-state, is currently not required to be compiled.

There are 26 landfills in Louisiana permitted to accept municipal solid wastes (see Figure 1).

Figure 1



<sup>9</sup> Taken from the FY12 Solid Waste Annual Disposal Reports and FY13 Certification of Compliance Reports.

One of the currently permitted landfills (Belle Landfill) is neither constructed nor operating; therefore, only 25 permitted landfills are actually accepting municipal solid waste at this time. Eight of the 25 are privately owned and operated landfills, while 17 are publicly owned. Of the 17 publicly owned landfills, 3 are permitted to accept only in-parish generated wastes: Acadia Parish Sanitary Landfill, Vermilion Parish Municipal Landfill, and Washington Parish Choctaw Road Landfill. The remaining landfills accept wastes from outside of the parish, including out-of-state wastes, for disposal.

The 17 publicly owned municipal landfills have approximately 144,436,746 yards of remaining permitted capacity, with an approximate average remaining life of 57.7 years (see Table 2).<sup>10</sup> The eight privately owned landfills have a slightly higher remaining capacity of 163,675,368 cubic yards, with an average remaining life of approximately 55.7 years (see Table 3).

The total of all out-of-state wastes received at the permitted municipal landfills is 380,394 wet-tons. In FY12 and FY13, 25 municipal landfills accepted a total of 12,190,614 wet-tons of waste (including industrial, municipal, and C&D wastes). The out-of-state waste accepted totals approximately 3.1 percent of the total.

AI	Name	Type	Remaining capacity landfill (cubic yards)	Remaining Capacity (years)
148	Vermilion Parish Police Jury - Municipal Landfill	II, III	177602	19.8
6961	Jefferson Parish Sanitary Landfill	I, II	16680069	37.6
9077	Woolworth Road Regional Solid Waste Facility	I, II	18016143	43.7 <sup>11</sup>
9340	St Mary Parish Government - Harold J "Babe" Landry Landfill	I, II, III	3644092	32.3
12389	Jefferson Davis Parish Sanitary Landfill Commission	I, II	9042070	26.0
12448	Sabine Parish Sanitary Landfill	I, II	586614	5.3
19220	St Landry Parish Solid Waste Disposal District	II	4056265	23.4 <sup>11</sup>
19447	LaSalle Parish Police Jury - LaSalle-Grant Sanitary Landfill	I, II	31398991	356.3
19803	DeSoto Parish Police Jury - Mundy Sanitary Landfill	I, II, III	2135919	23.3
20036	Acadia Parish Police Jury - Acadia Parish Sanitary Landfill	II, III	5059450	53.6
20076	Washington Parish Police Jury - Choctaw Road Landfill	II	3698632	13.6
20079	West Carroll Parish Police Jury - Sanitary Landfill	II, III	290400	6.0
31128	East Baton Rouge Parish North Landfill	I, II, II-A	19017205	39.3
43470	Tangipahoa Parish Regional Solid Waste Facility	II	1471860	8.7
43506	Tensas Parish Police Jury - Sanitary Landfill	I, II, III	12539492	219.6
69378	Union Parish Sanitary Landfill	II	1755412.29	4.6
85534	BFI - Webster Parish Solid Waste Landfill	I, II	14866530	67.3

<sup>10</sup> The LaSalle-Grant Sanitary Landfill reports a remaining life of approximately 356.3 years. If this landfill is excluded from the calculation, the average life of the remaining publically owned municipal landfills decreases to 39.0 years.

<sup>11</sup> Remaining capacity taken from FY12 Solid Waste Annual Disposer Report. FY13 Certification of Compliance is not available.



<b>Table 3</b>				
<b>Privately Owned Municipal Solid Waste Landfills</b>				
4803	Colonial Landfill (BFI)	I, II	11931741.6	47.0
12241	Magnolia Sanitary Landfill (Waste Management)	I, II	17004545	73.8
11767	Woodside Sanitary Landfill (Waste Management)	I, II	29162315	40.5
20061	Tidewater Landfill LLC - Coast Guard Road Sanitary Landfill	I, II	607965	1.3
25491	Reliable Landfill LLC	I, II	3606410	35.0
32219	River Birch Landfill	I, II	44004296	33.0
41194	CWI - White Oaks Landfill LLC	I, II, III	24575000	107.7
52277	IESI Corp - Timberlane Landfill	I, II	32783096	107.2

# *Construction and Demolition (C&D) Debris Waste Management*

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EPA has estimated that construction and demolition (C&D) debris waste contributes 25 to 45 percent of the waste that is disposed within permitted landfills in the United States.<sup>12</sup> If not for the permitted C&D (Type III) landfills, Louisiana would face a significant reduction in the remaining life of the permitted municipal landfills. There are approximately 34 permitted operating C&D landfills in Louisiana, located throughout the state (see Figure 2).

Approximately 3,593,450 wet-tons of C&D debris was placed in landfills during FY12 and FY13. The waste was disposed of primarily in the 34 permitted Type III landfills. Approximately 527,326 wet-tons were disposed of in municipal landfills permitted to accept C&D wastes. The average remaining life of the Type III landfills is 27.1 years.

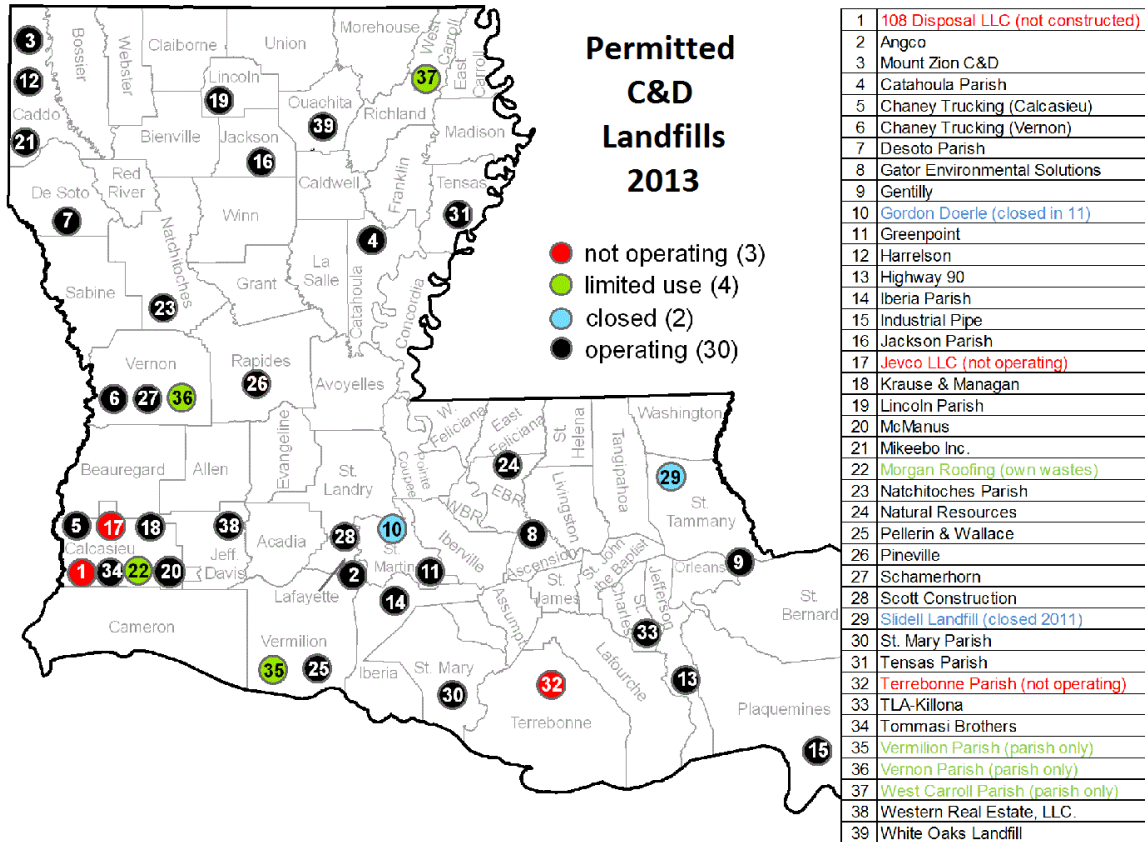
In addition to the permitted Type III landfills, the LDEQ has utilized for C&D waste disposal many sites known as Emergency Debris Management Sites. This type of solid waste management and control was especially useful for the management and reduction of the large volumes of vegetative debris generated by hurricanes. Vegetative debris was processed by the approved sites by burning and chipping, and used as fuel, mulch, and daily landfill cover. Overall, the result is a 68.7% volume reduction of vegetative debris from Hurricane Isaac. Other materials, such as damaged white goods and electronic materials were staged at some of these areas for later recycling or proper disposal.

Based on the success of these emergency debris sites, the LDEQ has begun issuing pre-approvals for emergency debris management sites to other state departments, parish governing authorities, and municipalities. These sites can be activated immediately when needed after an emergency declaration is issued. This will allow for very efficient and effective management of future storm related debris. As of December 20, 2013, 306 applications for pre-approved emergency debris sites have been approved. The LDEQ maintains close scrutiny of these sites via surveillance inspections and reporting requirements. Most of these emergency debris sites are used for staging of debris or for burning or chipping of vegetative debris.

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<sup>12</sup> EPA. *Characterization of Building-Related Construction and Demolition Debris in the United States*. June, 1998. EPA530-R-98-010.

Figure 2



# *Miscellaneous Solid Waste Management*

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Louisiana solid waste regulations require<sup>13</sup> each parish, in conjunction with its municipalities, to prepare and maintain a recycling and reduction plan detailing educational programs; recycling programs; incentives to promote recycling and waste reduction; review of recycling products, markets, and backup markets; a review of existing recycling programs; contingency measures; and a mathematical formula detailing how the parish intends to calculate the percentage of waste reduction. The plans must be reviewed annually by the local governing institution that prepared the plan and the LDEQ. Annual progress reports are required to be submitted by December 31 of each year.

Improperly discarded waste tires may pose a health and safety risk to humans. Disease carrying pests such as rodents can inhabit especially waste tire piles and mosquitoes can breed in the stagnant water that collects inside tires. Several varieties of mosquitoes can carry deadly diseases, including encephalitis, West Nile, and dengue fever.

The LDEQ has regulations<sup>14</sup> in place that enable it to track waste tire generation and processing so that whole tires are not placed into a landfill and are recycled to the maximum extent possible. Louisiana has six permitted waste tire processors. In FY12 and FY13, 296,189,619 pounds of waste tires were processed and 289,911,260 pounds of material were marketed for recycling. This resulted in more material being processed than marketed. Uses for processed waste tire material include, but are not limited to, crumb rubber products, rubberized asphalt and boiler fuel.

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<sup>13</sup> See LAC 33:VII.10307.A.

<sup>14</sup> See LAC 33:VII.10501.

# Summary

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When determining whether to grant or deny a permit application for a solid waste processing or disposal facility, La. R.S. 30:2162(B)(2) requires that permitted capacity along with other relevant factors be considered in the final permitting decision. Other relevant factors include service area, zoning, ability to meet regulatory requirements, and compliance history.

Consideration of the service area of a facility is important in final determinations because transportation costs may limit the ability of a generator of waste to send the waste for proper disposal if the only existing capacity is at a great distance. This tends to increase improper disposal and promiscuous dumping. Where service areas overlap, capacity becomes more significant in final determinations to issue or deny a permit.

Zoning allows local governances the ability to control the location of waste facilities within their jurisdictions. The LDEQ regulations<sup>15</sup> require all permit applicants to disclose the zoning of the proposed or existing facility at the time of the submittal of the permit application. The LDEQ is very dedicated to working with local governments to determine the most useful and appropriate places to locate solid waste facilities.

Compliance history must also be considered for any final permit decision.<sup>16</sup> Facilities that have repeatedly shown recalcitrance or an inability to meet the regulatory requirements may cause the expenditure of public funds at a later time to clean up sites that were improperly managed. Because of this, compliance history is also one of the required measures in determining whether or not to grant a permit for a solid waste facility to operate.

The LDEQ has determined that solid waste capacity in Louisiana is being successfully managed and given the appropriate weight in solid waste permitting decisions. Statewide solid waste disposal capacity is not excessive relative to annual waste generation and anticipated increases for municipal and industrial solid waste. The management of post-hurricane vegetative debris is a good example of waste reduction and reuse being encouraged by programs the LDEQ has undertaken.

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<sup>15</sup> See LAC 33:VII.519.B.1.m.

<sup>16</sup> See La. R.S. 30:2014(A)(2).