### 2021 BIENNIAL SOLID WASTE CAPACITY REPORT

(Fiscal Year 2020 & Fiscal Year 2021)

to the
House Natural Resources and Environment Committee
and
Senate Committee on Environmental Quality



July 2023

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## Executive Summary

La. R.S. 30:2162(A) requires the Louisiana Department of Environmental Quality (LDEQ) to evaluate the volume and types of solid waste managed in Louisiana every two years. This evaluation includes information for both Fiscal Year 2020 (*i.e.*, July 1, 2019, to June 30, 2020) and Fiscal Year 2021 (*i.e.*, July 1, 2020, to June 30, 2021). It includes a determination of permitted capacity available to safely manage the solid waste generated within the state.

After careful review, the LDEQ has determined that Louisiana currently has sufficient capacity to manage the solid wastes generated within Louisiana. Additionally, solid waste disposal capacity within the state is determined to be appropriate in amount relative to current and anticipated solid waste generation.

In the review of a solid waste permit application, capacity is just one of the factors used in the evaluation process. Other factors considered include, but are not limited to, service area, zoning, ability to meet regulatory requirements, public participation, and compliance history.

## Background

Louisiana has a comprehensive solid waste management program. The various areas of responsibility for the state and local governments regarding solid waste management are addressed in state law under Louisiana Revised Statues (R.S.) Title 30, Subtitle II (Environmental Quality). These sections of law establish authority for the Secretary of LDEQ to adopt rules and regulations with respect to solid waste management. The solid waste regulations are codified into the Louisiana Administrative Code by the Office of the State Register and into the Environmental Regulatory Code by the LDEQ (Title 33, Part VII). A copy of LDEQ's governing statutes and regulations can be found on LDEQ's website at <a href="http://deq.louisiana.gov/page/rules-regulations">http://deq.louisiana.gov/page/rules-regulations</a>.

The solid waste regulations<sup>1</sup> define various terms to categorize both solid waste and management practices. Terms important to this capacity evaluation are as follows:

#### Commercial Solid Waste:

All types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential and industrial solid wastes.

#### 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.

#### Disease Vector:

Animals such as rodents, and fleas, flies, mosquitoes, and other arthropods, that are capable of transmitting diseases to humans.

#### 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

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

law, or waste that is subject to regulation under the Office of Conservation's Statewide Order No. 29-B or by other agencies.

#### Municipal Solid Waste (MSW) Landfill:

An entire disposal facility in a contiguous geographical space where residential solid waste and/or commercial solid waste is placed in or on land.

#### **Process:**

A method or technique, including recycling, recovering, compacting (but not including compacting that occurs solely within a transportation vehicle or at a non-processing transfer station), composting, incinerating, shredding, baling, recovering resources, pyrolyzing, or any other method or technique that is designed to change the physical, chemical, or biological character or composition of a solid waste to render it safer for transport, reduced in volume, or amenable for recovery, storage, reshipment, or resale. The definition of *process* does not include treatment of wastewaters to meet state or federal wastewater discharge permit limits. Neither does the definition include activities of an industrial generator to simply separate wastes from the manufacturing process, nor does it include separating recyclable material from commercial waste streams at a *non-processing transfer station*.

#### Putrescible:

Susceptible to rapid decomposition by bacteria, fungi, or oxidation, creating noxious odors.

#### 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).

#### Woodwaste:

Yard trash and types of waste generated by land and right-of-way clearing operations, sawmills, plywood mills, and wood yards associated with the lumber and paper industry, such as wood residue, cutoffs, wood chips, sawdust, wood shavings, bark, wood refuse, wood-fired boiler ash, wood ash, and plywood or other bonded materials that contain only polyurethane, phenolic-based glues, or other glues that are approved specifically by the administrative authority. Uncontaminated, un-treated or un-painted lumber or wooden pallets are considered woodwaste under this definition.

The solid waste regulations<sup>2</sup> define five specific categories (*i.e.*, "types") of permitted facilities (a facility can be one or more type). Solid waste can only be processed and/or disposed at facilities permitted to accept the specific type of wastes.<sup>3</sup> The five types of permitted facilities are as follows:

#### Type I:

A facility used for disposing of industrial solid wastes (*e.g.*, a landfill, surface impoundment, or landfarm).

#### Type I-A:

A facility used for processing industrial solid waste (e.g., a transfer station (processing), shredder, baler, etc.).

#### Type II:

A facility used for disposing of residential and/or commercial solid waste (e.g., a landfill, surface impoundment, or landfarm).

#### Type II-A:

A facility used for processing residential, infectious, or commercial solid waste (e.g., a transfer station (processing), composting municipal solid waste facility, refuse-derived fuel facility, shredder, baler, autoclave, etc.).

#### Type III:

A facility used for disposing or processing of construction/demolition debris or woodwaste, composting organic waste to produce a usable material, or separating recyclable wastes (e.g., a construction/demolition-debris or woodwaste landfill, separation facility, or composting facility).

Solid waste management discussed in this report falls into at least one of the above categories. However, the focus of this report is the remaining disposal capacity for Type I, Type II, and Type III landfills. Of particular interest are the Type II landfills as most solid waste generated by residences and commercial establishments (*i.e.*, municipal waste) are disposed at these landfills. This report also looks at miscellaneous solid waste management (*i.e.*, processing facilities, emergency-generated debris management, recycling, and waste tire processing facilities).

<sup>&</sup>lt;sup>2</sup> See LAC 33:VII.115. (See also LAC 33:VII.405.)

<sup>&</sup>lt;sup>3</sup> See LAC 33:VII.509.A.1.

Commercial and residential solid waste is reported as municipal solid waste in this report. Additionally, for the purpose of disposal at Type III landfills, woodwaste and yard trash are reported with C&D debris.

Unless otherwise noted, the information used in this report was derived from the Annual Certification of Compliance Reports. These reports are submitted in accordance with LAC 33:VII.525, and all permitted facilities are required to submit an Annual Certification of Compliance by October 1 of each year covering the period of July 1 to June 30 immediately preceding the October 1 submittal date.

In addition, to assist in compiling the annual reports and to 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 at <a href="http://deq.louisiana.gov/assets/docs/Land/GuidDocCapRpt2.docx">http://deq.louisiana.gov/assets/docs/Land/GuidDocCapRpt2.docx</a>.

#### 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.

#### 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.

## Industrial Solid Waste Management

For the combined Fiscal Years 2020 and 2021 (FY20 & FY21), which ended on June 30, 2021, Type I landfills disposed approximately 18,133,029 wet-tons of industrial solid waste.

During this reporting period, 39 Type I landfills were permitted to dispose industrial solid waste in Louisiana (see **Table 1**). Note that two of these landfills are not constructed. Of the remaining 37 landfills, 19 are Type I landfills, which dispose only industrial solid waste and 18 are multi-type landfills and dispose industrial solid waste, along with municipal solid waste (Type II) and/or C&D debris (Type III).

The average remaining life of the 19 Type I landfills (industrial waste only) is 23.0 years.<sup>4</sup> The average remaining life of the 18 multi-type landfills (*i.e.*, industrial waste with municipal and/or C&D debris wastes) is 84.7 years.<sup>5</sup> The total remaining capacity for the Type I landfills is approximately 131,153,893 cubic yards. The total remaining capacity for multi-type landfills is approximately 269,235,987 cubic yards.<sup>6</sup>

<sup>&</sup>lt;sup>4</sup> Three Type I landfills (Exide Technologies - Baton Rouge Smelter, Louisiana Land Acquisitions, and Entergy Nisco) reported a remaining capacity of indefinite or no longer active.

<sup>&</sup>lt;sup>5</sup>Two multi-type landfills, LaSalle-Grant Sanitary Landfill and Tensas Parish Police Jury, reported remaining capacities of 7,975 months and 2,563 months, respectively. If these landfills are excluded as outliers from the calculation, the average remaining life of the multi-type landfills decreases to 35.9 years.

<sup>&</sup>lt;sup>6</sup> The numbers for the remaining life and capacity of the landfills are from the FY21 Annual Certification of Compliance Reports.

Table 1 - Landfills Accepting On-Site Generated Industrial Waste Only  Remaining Remai					
Al	Name	Type	capacity (cubic yards)	Remaining Capacity (months)	
328	International Paper Co - Mansfield Mill	i	10,422,460	329	
585	CLECO Power LLC - Dolet Hills Power Station	I	13,715,256	823	
1388	Atlantic Alumina Gramercy Operations	ı	8,605,003	129	
1406	Motiva Enterprises LLC - Norco Refinery	ı	71,653	12	
1409	The Dow Chemical Co - Louisiana Operations	ı	801,551	120	
2082	Honeywell International Inc Geismar Complex	ı	1,035,607	48	
2140	Revolution Aluminum	ı		7	
2418	Phillips 66 Co - Alliance Refinery	ı	16,725	101	
2532	Mosaic Fertilizer LLC - Uncle Sam Plant	ı	77,572,903	240	
2617	Georgia-Pacific Consumer Operations LLC - Port Hudson	i	475,905	176	
2645	International Paper - Red River Mill	i	10,152	2	
2922	CLECO - Brame Energy Center	i	3,392,210	117	
3647	WestRock CP LLC - Hodge Mill	i	139,085	31	
3732	PCS Nitrogen Fertilizer LP	i	95,810	60	
9142	Entergy LA LLC - Nelson Industrial Steam Co (NISCO)	i	1,687,210	8	
11496	Louisiana Pigment Co LP - Titanium Dioxide Plant	i	2,163,521	245	
19588	Entergy Louisiana LLC – Roy S Nelson Plant	i	1,557,259	3,075	
19933	Packaging Corporation of America - DeRidder Paper Mill	i	234,426	99	
137445	International Paper Bogalusa Mill	i	2,200,000	9	
	Landfills Accepting Off-Site Generated Industr	rial Waste O	, ,		
51761	Tradebe Treatment and Recycling of Baton Rouge, LLC		7,227,157	180	
207604	Sugar Creek Landfill	ı	1,930,000	10	
	Landfills Accepting Off-Site Generated Industrial and Other Soli	id Waste (M	unicipal and/or C&	D)	
4803	BFI Waste Systems of Louisiana LLC - Colonial Landfill	1, 11	16,181,923	728	
6961	Jefferson Parish Sanitary Landfill	1, 11	13,396,273	800	
9077	City of Shreveport - Woolworth Road Regional Solid Waste Facility	1.11	17,010,813	601	
9340	St Mary Parish Government - Harold J "Babe" Landry Landfill	1. 11. 111	2,792,268	312	
11767	Waste Management of LA LLC - Woodside Landfill & Recycling	1, 11	22,976,605	306	
12241	Waste Management of Louisiana LLC - Magnolia Sanitary Landfill	1, 11	15,196,150	493	
12389	Jefferson Davis Parish Sanitary Landfill Commission	l, II	6,688,975	215	
12448	IESI - Sabine Parish Sanitary Landfill	1, 11	4,841,100	285	
19447	LaSalle-Grant Sanitary Landfill	1, 11	31,139,101	7,975	
19803	DeSoto Parish Police Jury - Mundy Sanitary Landfill	1, 11, 111	2,199,327	67	
20061	Tidewater Landfill LLC - Coast Guard Road Sanitary Landfill	1, 11	N/A	11	
25491	Reliable Landfill LLC	1, 11	5,507,835	380	
31128	East Baton Rouge Parish North Landfill	I, II, II-A	15,248,185	281	
32219	River Birch Landfill	1, 11	33,273,655	256	
41194	WCI - White Oaks Landfill LLC	1, 11, 111	27,447,883	1,128	
43506	Tensas Parish Police Jury - Sanitary Landfill	1, 11, 111	12,291,467	2,563	
52277	IESI Corp - Timberlane Landfill	1, 11	30,188,680	678	
85534	Webster Parish Solid Waste Landfill	1, 11	12,855,747	1,219	

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<sup>&</sup>lt;sup>7</sup> The remaining capacity for Revolution Aluminum is unavailable, because the facility is inactive.

<sup>&</sup>lt;sup>8</sup> The waste generated at Entergy (NISCO) is currently recycled or reused. The remaining life is indeterminate.

<sup>&</sup>lt;sup>9</sup> The International Paper Bogalusa Landfill is not constructed and is not included in this capacity evaluation. The remaining life is indeterminate.

<sup>&</sup>lt;sup>10</sup> The Sugar Creek Landfill is under construction. The remaining life, based on tipping rates, cannot be determined at this time.

<sup>&</sup>lt;sup>11</sup> The remaining capacity for Tidewater Landfill is unavailable, because the facility is inactive.

## Municipal (Commercial and Residential) Waste Management

For the combined FY20 & FY21, which ended on June 30, 2021, municipal solid waste landfills disposed approximately 9,542,536 wet-tons<sup>12</sup> <sup>13</sup> of waste. Of this total amount, approximately 0.245% (23,372 wet-tons) was generated outside Louisiana.

During this reporting period, 25 permitted municipal solid waste landfills were in operation to dispose municipal solid waste (see **Figure 1** and **Table 2**). <sup>14</sup> Most of these are multitype landfills permitted to dispose municipal solid waste (Type II), along with industrial solid waste (Type I), and/or C&D debris (Type III). Eight of the 25 are privately-owned and operated landfills, while 17 are publicly owned.

Of the 17 publicly-owned municipal solid waste landfills, three 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 the parish, including out-of-state wastes, for disposal.

The average remaining life of the 17 publicly-owned municipal solid waste landfills is 23.12 years 15 with a total remaining capacity of approximately 87,822,067 cubic yards. The average remaining life of the eight privately-owned municipal solid waste landfills is 41.34 years with a total remaining capacity of 150,772,731 cubic yards. 16

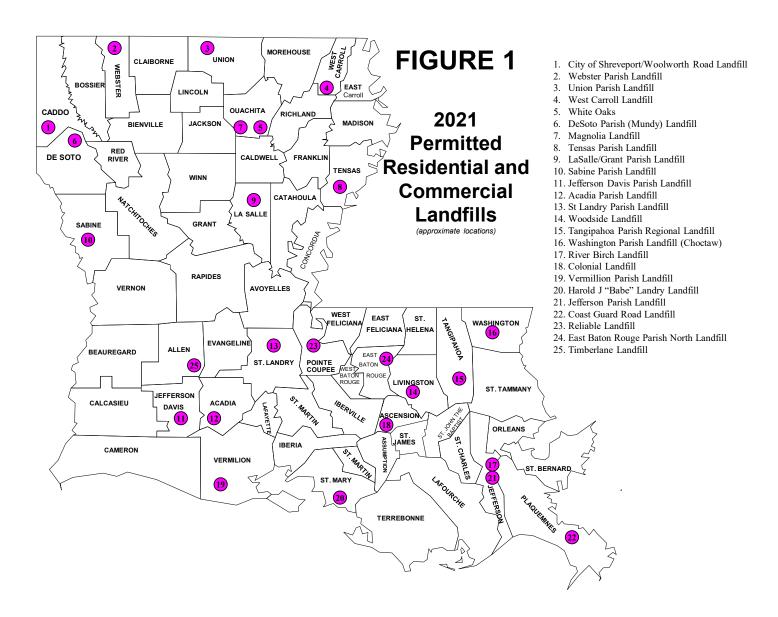
<sup>&</sup>lt;sup>12</sup> This amount does not include industrial solid waste disposed in a multi-type landfill (*e.g.*, Type I/II), which is reported in the disposal amount for Type I landfills.

<sup>&</sup>lt;sup>13</sup> This amount includes C&D debris disposed in Type II landfill cells.

<sup>&</sup>lt;sup>14</sup> Seven of the 25 operating landfills have C&D debris cells constructed separately from the Type I/II cells. The amount of C&D debris disposed in these cells is reported in the section for C&D debris disposal capacity.

<sup>&</sup>lt;sup>15</sup> The LaSalle-Grant Sanitary Landfill and Tensas Parish Police Jury - Sanitary Landfill report a remaining life of approximately 7,975 and 2,563 months, respectively. These landfills are excluded from the calculation.

<sup>&</sup>lt;sup>16</sup> The numbers for the remaining life and capacity of the landfills are from the FY21 Annual Certification of Compliance Reports.



Publicly Owned								
Al	Name	Туре	Remaining capacity landfill (cubic yards)	Remaining Capacity (months)				
148	Vermilion Parish Police Jury - Municipal Landfill	II, III	161,423	5				
6961	Jefferson Parish Sanitary Landfill	I, II	13,396,273	80				
9077	Woolworth Road Regional Solid Waste Facility	1, 11	17,010,813	60				
9340	St Mary Parish Government - Harold J "Babe" Landry Landfill	I, II, III	2,792,268	31				
12389	Jefferson Davis Parish Sanitary Landfill Commission	I, II	6,688,975	21				
12448	Sabine Parish Sanitary Landfill	I, II	4,841,100	28				
19220	St. Landry Parish Solid Waste Disposal District	II	3,835,716	24				
19447	LaSalle Parish Police Jury - LaSalle-Grant Sanitary Landfill	I, II	31,139,101	7,97				
19803	DeSoto Parish Police Jury - Mundy Sanitary Landfill	I, II, III	2,199,327	(				
20036	Acadia Parish Police Jury - Acadia Parish Sanitary Landfill	II, III	4,292,336	3				
20076	Washington Parish Police Jury - Choctaw Road Landfill	11	3,406,160	12				
20079	West Carroll Parish Police Jury - Sanitary Landfill	II, III	673,385	(				
31128	East Baton Rouge Parish North Landfill	I, II, II-A	15,248,185	28				
43470	Tangipahoa Parish Regional Solid Waste Facility	11	4,417,827	26				
43506	Tensas Parish Police Jury - Sanitary Landfill	1, 11, 111	12,291,467	2,50				
69378	Union Parish Sanitary Landfill	11	1,517,017	10				
85534	BFI - Webster Parish Solid Waste Landfill	1, 11	10,952,885	1,2				
	Privately Owned							
4803	Colonial Landfill (BFI)	1, 11	16,181,923	7:				
11767	Woodside Sanitary Landfill (Waste Management)	I, II	22,976,605	30				
12241	Magnolia Sanitary Landfill (Waste Management)	I, II	15,196,150	4				
20061	Tidewater Landfill LLC - Coast Guard Road Sanitary Landfill	I, II	NA	١				
25491	Reliable Landfill LLC	I, II	5,507,835	3				
32219	River Birch Landfill	I, II	29,751,348	2				
41194	CWI - White Oaks Landfill LLC	I, II, III	27,447,883	1,1				
52277	IESI Corp - Timberlane Landfill	I, II	25,660,378	6				

 $<sup>^{17}</sup>$  C&D debris may be disposed in cells designated for only C&D debris. The amount of C&D debris disposed in these cells is reported in the section for C&D debris disposal capacity

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

Since construction and demolition (C&D) debris is relatively inert, non-putrescible, and not likely to promote disease vectors, permitted Type III (C&D debris) landfills do not have to meet the more stringent federal and state requirements necessary for Type I/II landfills. Therefore, C&D debris landfills, in contrast to Type I/II landfills, are less costly to construct and operate.

The United States Environmental Protection Agency (USEPA) has estimated that C&D debris waste contributes up to 45% of the waste disposed in permitted landfills in the U.S.<sup>18</sup> Therefore, if not for permitted Type III (C&D debris) landfills, Louisiana would face a significant reduction in the remaining capacity of the permitted MSW landfills.

For the combined FY20 & FY21, which ended on June 30, 2021, Type III landfills disposed approximately 3,986,923 wet-tons<sup>19</sup> of C&D debris.

During this reporting period, 38 permitted landfills were permitted to dispose only Type III (C&D debris) (see **Figure 2** and **Table 3**). Note that Terrebonne Parish Consolidated Government C&D Landfill is not constructed. In addition to these dedicated Type III landfills, as indicated in the previous sections, there are multi-type landfills permitted to dispose C&D debris along with industrial solid waste (Type I) and/or municipal solid waste (Type II).

The average remaining life of the Type III landfills is approximately 30.70 years.<sup>20</sup> The total remaining capacity for the Type III landfills is approximately 209,227,219 cubic yards.

<sup>&</sup>lt;sup>18</sup> EPA. Characterization of Building-Related Construction and Demolition Debris in the United States. June, 1998. EPA530-R-98-010.

<sup>&</sup>lt;sup>19</sup> This does not include C&D debris disposed in a Type II landfill. This amount of C&D debris is reported in the disposal amount for Type II landfills.

<sup>&</sup>lt;sup>20</sup> The Vernon Parish Landfill and Tensas Parish Police Jury - Sanitary Landfill report a remaining life of approximately 27,960 and 65,484 months, respectively. These landfills are excluded from the calculation.

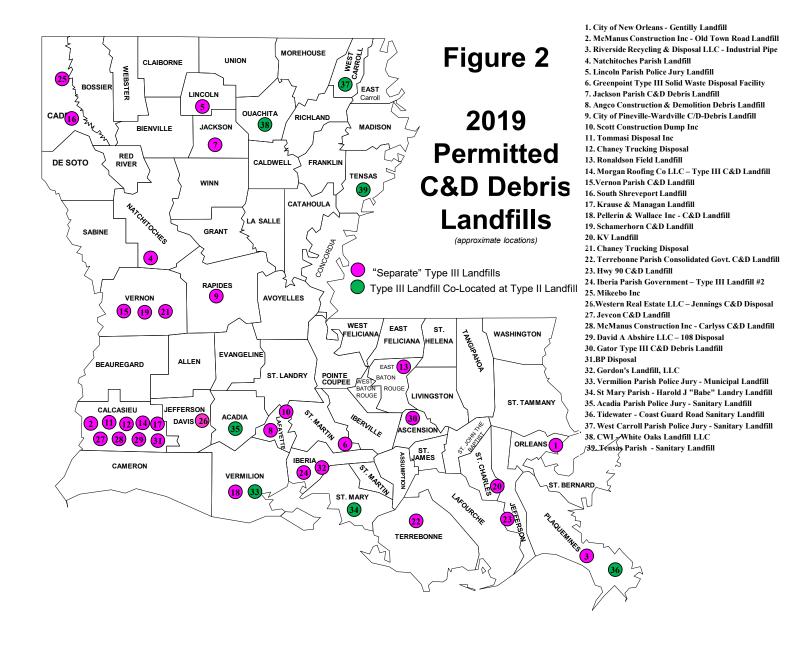


	Table 3 - Type III (C&D Debris) Landfills						
Al	Name	Type	Remaining capacity (cubic yards)	Remaining Capacity (months)			
148	Vermilion Parish Police Jury - Municipal Landfill	II, III <sup>21</sup>	331,186	53			
1036	City of New Orleans - Gentilly Landfill	III	8,626,741	264			
7744	McManus Construction Inc Old Town Road Landfill	III	219,426	54			
9340	St Mary Parish Government - Harold J "Babe" Landry Landfill	II, III <sup>21</sup>	458,771	529			
14689	Riverside Recycling & Disposal LLC - Industrial Pipe Inc.	III	3,767,431	145			
15427	Natchitoches Parish Landfill	III	113,694	162			
19444	Lincoln Parish Police Jury Landfill	III	62,272	24			
20036	Acadia Parish Police Jury - Acadia Parish Sanitary Landfill	II, III <sup>21</sup>	952,541	314			
20061	Tidewater Landfill LLC - Coast Guard Road Sanitary Landfill 22	I, II, III <sup>21</sup>	_21	-			
20079	West Carroll Parish Police Jury - Sanitary Landfill	II, III <sup>21</sup>	398,647	312			
24093	Greenpoint Type III Solid Waste Disposal Facility	III	180,120	29			
25814	Jackson Parish C&D Debris Landfill	III	192,576	238			
28008	Angco Construction & Demolition Debris Landfill	III	1,994,145	352			
28070	City of Pineville-Wardville Construction/Demolition-Debris Landfill	III	114,313	148			
28168	Scott Construction Dump Inc.	III	1,405,995	261			
30781	Tommasi Disposal Inc.	III	185,326	120			
40072	Chaney Trucking Disposal	III	133,390	62			
41194	CWI - White Oaks Landfill LLC	I, II, III <sup>21</sup>	2,866,500	540			
42610	Ronaldson Field Landfill	III	4,100,000	275			
43506	Tensas Parish Police Jury - Sanitary Landfill	I, II, III <sup>21</sup>	4312898	65,484			
52141	Vernon Parish C&D Landfill	III	588,069	27,960			
52368	South Shreveport Landfill	III	4,232,639	234			
67860	Krause & Managan Landfill	III	438,296	21			
80799	Pellerin & Wallace Inc C&D Landfill	III	236,520	216			
82479	Schamerhorn C&D Landfill	III	6,552,297	350			
92039	KV Landfill	III	14,715,268	840			
92737	Chaney Trucking Disposal	III	388,233	456			
97112	Terrebonne Parish Consolidated Government C&D Landfill <sup>23</sup>	III	2300973	289			
100642	Hwy 90 C&D Landfill	III	127,916,510	1,788			
113894	Iberia Parish Government – Type III Landfill #2	III	50,052	42			
117009	Mikeebo Inc.	III	5,234,294	322			
132953	Western Real Estate LLC – Jennings C&D Disposal Facility	III	626,477	1,787			
133512	Jevcon C&D Landfill	III	6,906,582	182			
134011	McManus Construction Inc - Carlyss C&D Landfill	III	2,065,453	164			
151876	108 Disposal	III	91,654	329			
154502	Gator Type III C&D Debris Landfill	III	5,132,732	1,212			
168535	BP Disposal	III	484,651	102			
184164	Pace Landfill, LLC	III	850,547	108			

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<sup>&</sup>lt;sup>21</sup> Seven of the Type III (C&D debris) landfills are co-located at multi-type landfills. In general, the Type III landfill cells are separate and distinct. The amount of C&D debris disposed in these cells is reported in this section.

<sup>&</sup>lt;sup>22</sup> The remaining capacity for Tidewater Landfill is unavailable, because the facility is inactive.

<sup>&</sup>lt;sup>23</sup> Terrebonne Parish Consolidated Government C&D Landfill has not been not constructed. The remaining life is estimated based on the approved permit.

## Miscellaneous Solid Waste Management

#### Generated and Transported Waste

For the combined FY20 & FY21, which ended June 30, 2021, 31,485,781 wet-tons of solid waste (Type I, II, and III) were generated in-state, while 176,707 wet-tons of solid waste was generated by out-of-state sources.

As of July 1, 2022, the state has over 1,000+ waste transporters authorized by the LDEQ to transport solid waste. For the combined FY20 & FY21, 13,562,503 wet-tons of solid waste were transported to an off-site permitted solid waste disposal facilities. The transport of solid waste occurs primarily for Type II and Type III solid waste disposal facilities, while Type I solid waste disposal facilities typically generate and dispose of waste on-site.

#### **Processing Facilities**

Louisiana has 18 permitted processing facilities. Processing facilities permitted by the state include transfer stations, grease trap separation facilities, oil separation and recycling facilities, and medical waste facilities.

For the combined FY20 & FY21, which ended June 30, 2021, 212,543 wet-tons of waste were collected and transferred to landfills; 173,418 wet-tons of grease and oil were processed; and 30,426 wet-tons of medical waste were processed by an autoclave, ozone generator, or incinerator.

#### **Emergency Debris Management**

The 2006 Regular Session of the Legislature directed the LDEQ to develop and implement a comprehensive debris management plan for debris generated by natural disasters (LA R.S. 30:2413.1). The goal of the comprehensive debris management plan is to "reuse and recycle material, including the removal of aluminum from debris, in an environmentally beneficial manner and to divert debris from disposal in landfills to the maximum extent practical and efficient which is protective of human health and the environment." Among other things, the statute dictates the use of the following debris management practices, in order of priority, to the extent they are "appropriate, practical, efficient, timely, and have available funding: recycling and composting; weight reduction; volume reduction; incineration or co-generation; and land disposal."

As part of the comprehensive planning, the LDEQ has encouraged local governments and state agencies to utilize temporary sites known as Emergency Debris Management Sites. This type of solid waste management and control has been especially useful for

the management and reduction of the large volumes of vegetative debris generated by disasters. Site operations must conform to the requirements of R.S. 30:2413.1 which states, "the total green and woody debris intended for final disposal in a landfill, fifty percent (50%) shall be reduced by weight and fifty percent (50%) by volume prior to transport to a landfill" (for disposal). The law states, "The management plan shall be to reuse and recycle material and to divert debris from disposal in landfills to the maximum extent practical, efficient, and expeditious in a manner that is protective of human health and the environment." Since 2005, vegetative debris has been processed by burning and chipping, and used as fuel, mulch, and daily landfill cover. Other materials, such as damaged white goods and electronic materials have been 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 preapprovals for emergency debris management sites to local governments and state agencies. These sites can be activated immediately when needed after an emergency declaration is issued. This allows for very efficient and effective management of future storm related debris. 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.

During the fiscal year 2020, Hurricanes Laura, Delta, and Zeta impacted Louisiana's Gulf Coast. The LDEQ activated 212 Emergency Debris Sites (EDSs). Eleven C&D landfills received waste generated from these hurricanes. The EDSs and landfills managed an estimated 22.6 million cubic yards of waste. LDEQ established an Emergency Debris Management Dashboard, which detailed the estimated waste generated, location of emergency debris sites, and the volume processed. The dashboard may be accessed at the following link:

## <u>https://ldeq.maps.arcgis.com/apps/dashboards/a73e242c1062498187517449118fca4f</u>

#### Recycling

The solid waste regulations<sup>24</sup> require 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 to the LDEQ by December 31<sup>st</sup> of each year.

<sup>&</sup>lt;sup>24</sup> See LAC 33:VII.10307.A.

Solid waste typically generated by households, businesses, government facilities, and schools is managed by parish and municipal governments and in many cases, by private entities. The parish and municipal governments are requested to submit Annual Recycling Reports.

The following is a summary of the 2021 Annual Recycling Reports submitted:

- 20 parishes tendered reports of their activities, two of which reported zero recycling activities in the respective jurisdictions.
- Approximately 2,402,744 residents are represented by the reports or approximately 52% of the state's population.
- The recycling rate for parishes that submitted recycling reports for the year 2021 was 9.2%
- The state's overall reported recycling rate for the year 2021 was 2.9%<sup>25</sup>

To view the Annual Recycling Report, you may access at the following link:

https://deq.louisiana.gov/assets/images/Pages/Land/Recycling/2021AnnualRecyclingReport.pdf

#### Waste Tire Processing

In FY20 and FY21, Louisiana has six permitted waste tire processors. For the combined FY20 & FY21, which ended June 30, 2021, 320,756,296 pounds of waste tires were processed and 280,115,985 pounds of waste tire material were recycled. Uses for processed waste tire material include, but are not limited to, crumb rubber products, rubberized asphalt, boiler fuel, bulkhead fill, and land reclamation.<sup>26</sup>

<sup>25</sup> State recycle rate is calculated from recycling data submitted from the 20 parishes that tendered reports and the total tons of waste landfilled in the state from the 2021 capacity report. This assumes that no recycling was conducted in the non-reporting parishes.

<sup>&</sup>lt;sup>26</sup> Land reclamation was a pilot study promulgated in 2016 and expired December 31, 2020, no projects have been approved after the expiration date.

## Summary

When determining whether to grant or deny a permit application for a solid waste 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, but are not limited to, service area, zoning, ability to meet regulatory requirements, public participation and compliance history.

The LDEQ has determined that solid waste capacity in Louisiana is successfully managed and evaluated appropriately during the solid waste permitting process. State-wide solid waste disposal capacity is not excessive relative to annual waste generation. The management of post-hurricane vegetative debris exemplifies the encouragement of waste reduction and reuse efforts.