

Florida and the 2020 75% Recycling Goal: 2019 Status Report Volume 2 Appendices



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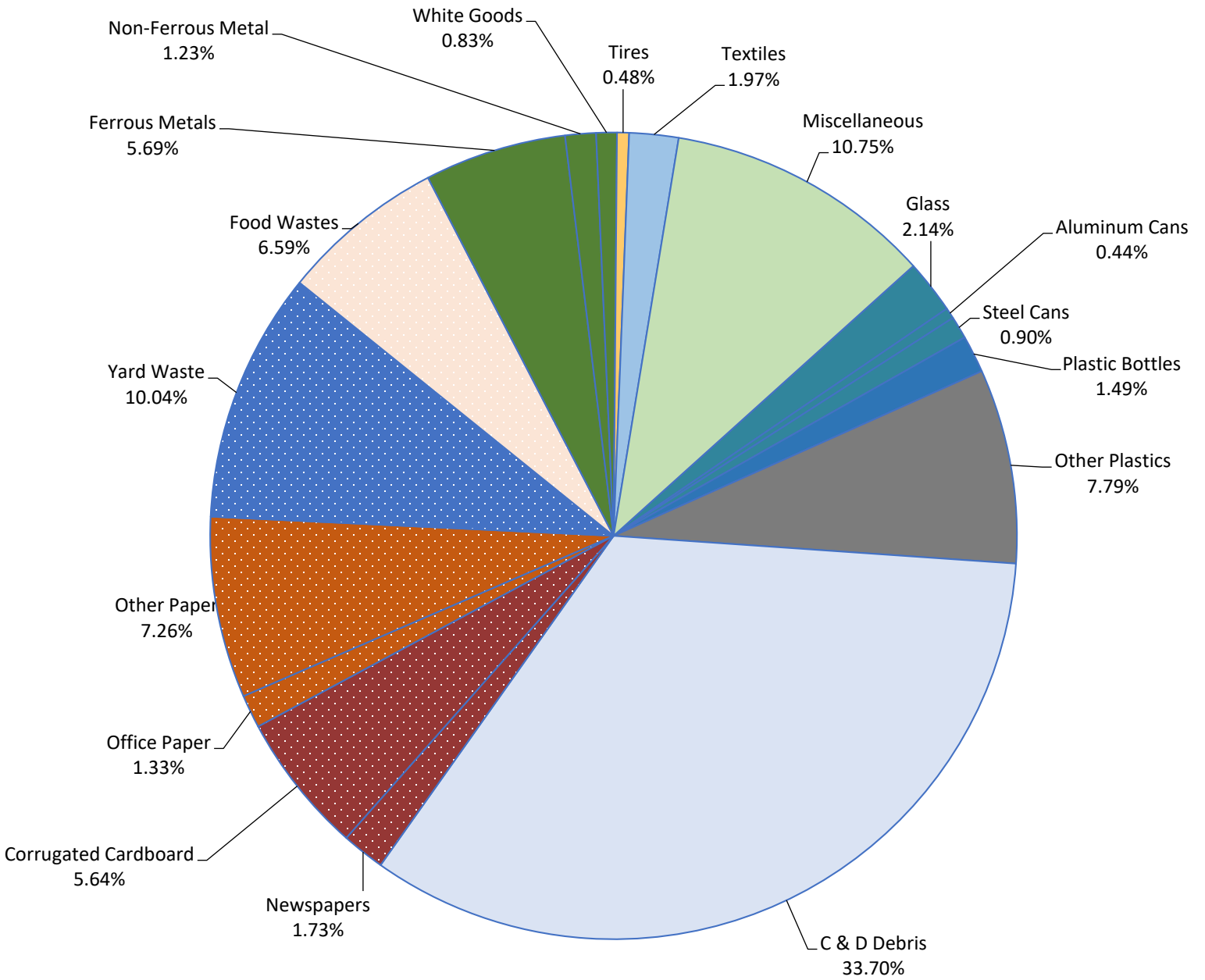
Tables, Charts and Graphs

2018
Summary of Recycling Credits
By Descending Population

County	Population ¹	Total MSW Collected	Traditional Credits ³ Tons	Traditional Credits ³ Unadjusted %	Traditional Credits ³ Adjusted %	Renewable Energy Credits ⁴ Tons	Renewable Energy Credits ⁴ %	Yard Trash Disposed in a Landfill ⁵ Tons	Yard Trash Disposed in a Landfill ⁵ %	Total Unadjusted Recycling Credits Tons	Total Recycling Credits Unadjusted %	Total Adjusted Recycling Credits Tons	Total Recycling Credits Adjusted %
Miami-Dade	2,769,524	4,951,761	767,877	16%	16%	412,982	8%	0	0%	1,180,859	24%	1,180,859	24%
Broward	1,897,976	3,861,856	1,119,618	29%	29%	524,234	14%	0	0%	1,643,852	43%	1,643,852	43%
Palm Beach	1,430,555	3,925,229	1,595,815	41%	41%	962,463	25%	0	0%	2,558,278	65%	2,558,278	65%
Hillsborough	1,408,864	3,302,416	1,455,522	44%	44%	485,283	15%	0	0%	1,940,805	59%	1,940,805	59%
Orange	1,349,597	3,653,664	1,307,251	36%	36%	185,570	5%	0	0%	1,492,821	41%	1,492,821	41%
Pinellas	969,510	2,292,509	1,125,735	49%	49%	488,452	21%	0	0%	1,614,187	70%	1,614,187	70%
Duval ²	952,861	2,860,587	1,605,769	56%	56%	54,571	2%	0	0%	1,660,340	58%	1,673,982	59%
Lee ²	713,618	1,964,787	1,031,509	52%	52%	389,662	20%	0	0%	1,421,171	72%	1,518,586	77%
Polk	673,028	1,233,075	396,651	32%	32%	14,444	1%	0	0%	411,095	33%	411,095	33%
Brevard ²	583,369	1,636,976	872,099	53%	53%	53,784	3%	0	0%	925,883	57%	939,329	57%
Volusia	529,160	1,615,010	738,165	46%	46%	0	0%	0	0%	738,165	46%	738,165	46%
Pasco	515,077	1,088,057	429,140	39%	39%	220,365	20%	0	0%	649,505	60%	649,505	60%
Seminole	463,560	573,440	187,798	33%	33%	13,652	2%	0	0%	201,450	35%	201,450	35%
Sarasota	417,442	1,251,326	506,221	40%	40%	34,916	3%	0	0%	541,137	43%	541,137	43%
Manatee ²	377,826	1,006,155	600,196	60%	60%	26,662	3%	0	0%	626,858	62%	633,524	63%
Collier ²	367,347	1,456,683	862,212	59%	59%	55,360	4%	0	0%	917,572	63%	931,412	64%
Marion	353,898	634,909	208,647	33%	33%	0	0%	26867	4%	235,514	37%	235,514	37%
Lake	342,917	532,113	98,295	18%	18%	21,824	4%	0	0%	120,119	23%	120,119	23%
Escambia	318,560	631,419	254,954	40%	40%	23,298	4%	0	0%	278,252	44%	278,252	44%
St. Lucie ²	302,432	534,059	273,232	51%	51%	7,478	1%	0	0%	280,710	53%	282,580	53%
Leon ²	292,332	756,802	451,788	60%	60%	13,554	2%	0	0%	465,342	61%	468,731	62%
Osceola	268,685	321,840	53,847	17%	17%	0	0%	0	0%	53,847	17%	53,847	17%
Alachua ²	263,291	802,584	468,557	58%	58%	73,669	9%	0	0%	542,226	68%	560,643	70%
St. Johns	241,492	475,544	84,656	18%	18%	0	0%	0	0%	84,656	18%	84,656	18%
Clay	212,034	248,750	48,938	20%	20%	0	0%	0	0%	48,938	20%	48,938	20%
Okaloosa	198,152	315,774	51,437	16%	16%	8,397	3%	0	0%	59,834	19%	59,834	19%
Hernando	185,604	202,652	62,889	31%	31%	10,141	5%	0	0%	73,030	36%	73,030	36%
Bay	181,199	388,316	98,485	25%	25%	51,126	13%	0	0%	149,611	39%	149,611	39%
Charlotte ²	176,745	988,618	737,127	75%	75%	17,212	2%	0	0%	754,339	76%	758,642	77%
Santa Rosa	174,887	319,716	66,872	21%	21%	0	0%	0	0%	66,872	21%	66,872	21%
Martin ²	155,556	392,345	204,147	52%	52%	3,371	1%	0	0%	207,518	53%	208,360	53%
Indian River ²	151,825	562,751	373,645	66%	66%	0	0%	0	0%	373,645	66%	373,645	66%
Citrus	145,721	260,442	100,933	39%	39%	0	0%	0	0%	100,933	39%	100,933	39%
Sumter	124,935	132,451	61,501	46%	46%	0	0%	0	0%	61,501	46%	61,501	46%
Flagler	107,511	107,631	46,390	43%	43%	0	0%	0	0%	46,390	43%	46,390	43%
Highlands	102,441	131,503	49,000	37%	37%	0	0%	0	0%	49,000	37%	49,000	37%
Nassau	82,748	186,920	52,550	28%	28%	29	0%	0	0%	52,579	28%	52,579	28%
Monroe ²	73,940	441,165	259,322	59%	59%	29,973	7%	0	0%	289,295	66%	296,788	67%
Putnam	72,500	109,673	35,497	32%	32%	588	1%	0	0%	36,085	33%	36,085	33%
Walton	67,656	134,437	36,328	27%	36%	0	0%	0	0%	36,328	27%	36,328	27%
Columbia	65,710	101,986	13,539	13%	10%	3,649	4%	0	0%	17,188	17%	17,188	17%
Jackson	50,435	67,973	6,892	10%	10%	179	0%	0	0%	7,071	10%	7,071	10%
Gadsden	48,263	29,813	4,084	14%	14%	0	0%	0	0%	4,084	14%	4,084	14%
Suwannee	44,879	53,613	15,703	29%	29%	0	0%	0	0%	15,703	29%	15,703	29%
Levy	41,054	28,997	4,658	16%	16%	0	0%	0	0%	4,658	16%	4,658	16%
Hendry	39,586	79,127	10,493	13%	13%	17,940	23%	0	0%	28,433	36%	28,433	36%
Okeechobee	38,750	68,887	9,023	13%	13%	0	0%	0	0%	9,023	13%	9,023	13%
Desoto	35,520	93,933	3,536	4%	4%	0	0%	0	0%	3,536	4%	3,536	4%
Wakulla	31,943	13,099	2,587	20%	20%	0	0%	0	0%	2,587	20%	2,587	20%
Bradford	28,057	29,730	9,984	34%	34%	0	0%	0	0%	9,984	34%	9,984	34%
Baker	27,652	26,599	4,812	18%	18%	0	0%	0	0%	4,812	18%	4,812	18%
Hardee	27,296	22,588	2,306	10%	10%	0	0%	0	0%	2,306	10%	2,306	10%
Washington	25,129	20,349	1,484	7%	7%	0	0%	0	0%	1,484	7%	1,484	7%
Holmes	20,133	4,692	861	18%	18%	0	0%	0	0%	861	18%	861	18%
Taylor	20,068	46,498	7,266	16%	16%	0	0%	0	0%	7,266	16%	7,266	16%
Madison	19,473	16,442	2,381	14%	14%	0	0%	0	0%	2,381	14%	2,381	14%
Gilchrist	17,224	7,735	3,327	43%	43%	0	0%	0	0%	3,327	43%	3,327	43%
Dixie	16,726	10,201	486	5%	5%	0	0%	0	0%	486	5%	486	5%
Union	15,867	9,441	495	5%	5%	0	0%	0	0%	495	5%	495	5%
Calhoun	15,093	13,151	3,339	25%	25%	0	0%	0	0%	3,339	25%	3,339	25%
Jefferson	14,733	12,518	713	6%	6%	0	0%	0	0%	713	6%	713	6%
Hamilton	14,621	18,824	6,198	33%	33%	0	0%	0	0%	6,198	33%	6,198	33%
Gulf	13,681	25,741	847	3%	3%	0	0%	0	0%	847	3%	847	3%
Glades	13,002	12,679	115	1%	1%	0	0%	0	0%	115	1%	115	1%
Franklin	12,009	27,519	762	3%	3%	0	0%	0	0%	762	3%	762	3%
Liberty	8,915	2,933	45	2%	2%	0	0%	0	0%	45	2%	45	2%
Lafayette	7,094	2,970	210	7%	7%	0	0%	0	0%	210	7%	210	7%
State	20,729,288	47,133,983	18,896,761	40%	40%	4,204,827	9%	26,867	0.06%	23,128,455	49%	23,309,779	49%

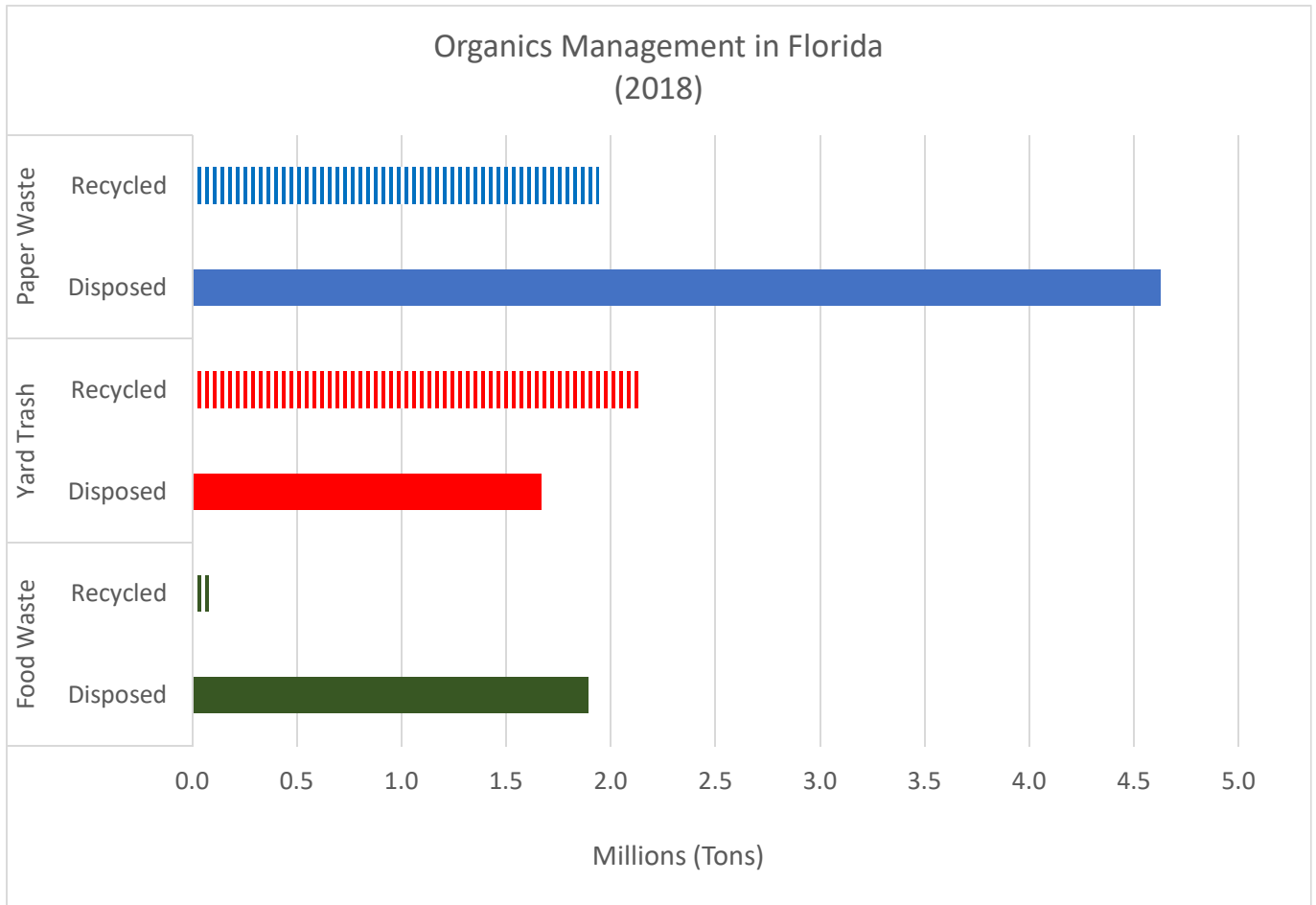
¹2018 Governor's Office Population²County receives 1.25 renewable energy credits for reaching 50% traditional recycling rate³Excludes renewable energy and yard trash disposed in a landfill beneficially using landfill gas other than electricity⁴Includes yard trash disposed in a landfill beneficially using landfill gas.⁵Beneficially Using Landfill Gas for Something other than electricity.

Florida Municipal Solid Waste Collected (2018) (47.1 million tons)



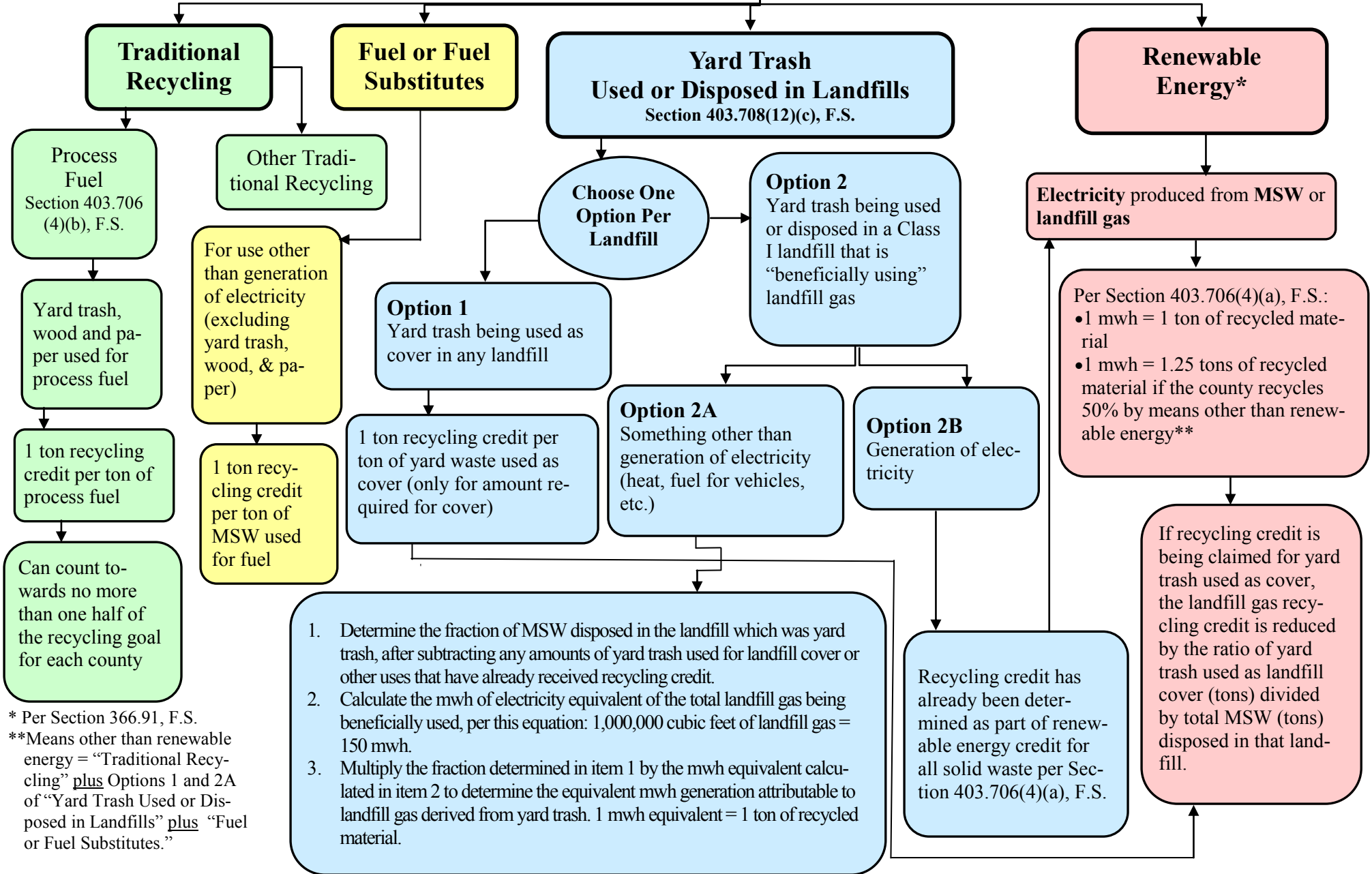
MATERIALS	TONS PER YEAR COLLECTED	PERCENT OF TOTAL TONS RECYCLED
Glass	1,010,333	2.1
Aluminum Cans	205,145	0.4
Steel Cans	423,780	0.9
Plastic Bottles	703,873	1.5
Other Plastics	3,672,577	7.8
C & D Debris	15,886,502	33.7
Newspapers	813,510	1.7
Corrugated Cardboard	2,657,180	5.6
Office Paper	626,933	1.3
Other Paper	3,423,567	7.3
Yard Waste	4,733,223	10.0
Food Wastes	3,106,305	6.6
Ferrous Metals	2,680,313	5.7
Non-Ferrous Metal	580,392	1.2
White Goods	389,618	0.8
Tires	226,776	0.5
Textiles	927,643	2.0
Miscellaneous	5066310	10.7
Process Fuel ³	N/A	N/A
TOTAL	47,133,980	100

Appendix A, Figure 3



Florida DEP
05/31/13

Source of MSW Recycling Credits in Florida



* Per Section 366.91, F.S.
**Means other than renewable energy = "Traditional Recycling" plus Options 1 and 2A of "Yard Trash Used or Disposed in Landfills" plus "Fuel or Fuel Substitutes."

Comparison of Total Tons of Construction Demolition Debris Managed in Florida (2017-2018)
by Descending Population

Appendix A, Figure 5

County	2017			2018			Change in the Amount of C&D Disposed (tons)*
	C&D Debris Total (tons)	C&D Debris Recycled (tons)	C&D Debris Disposal (tons)	C&D Debris Total (tons)	C&D Debris Recycled (tons)	C&D Debris Disposal (tons)	
Miami-Dade	708,736	106,356	602,380	1,381,374	134,580	1,246,794	644,414
Broward	1,691,767	874,174	817,593	1,249,248	696,899	552,349	-265,244
Palm Beach	773,062	732,730	40,332	1,011,379	698,994	312,385	272,053
Hillsborough	753,217	654,136	99,081	790,916	503,534	287,382	188,301
Orange	1,029,746	460,145	569,601	1,075,666	631,884	443,782	-125,819
Pinellas	545,000	528,124	16,876	420,000	412,270	7,730	-9,146
Duval	1,371,828	873,991	497,837	1,547,458	1,076,406	471,052	-26,785
Lee	509,083	329,810	179,273	621,959	495,224	126,735	-52,538
Polk	279,064	30,191	248,873	200,891	76,814	124,077	-124,796
Brevard	407,865	255,794	152,071	409,570	253,752	155,818	3,747
Volusia	479,622	184,058	295,564	1,015,071	521,670	493,401	197,837
Pasco	443,223	190,016	253,207	562,475	255,251	307,224	54,017
Seminole	204,993	122,847	82,146	142,183	70,708	71,475	-10,671
Sarasota	331,096	280,850	50,246	354,371	301,937	52,434	2,188
Manatee	266,878	143,128	123,750	350,991	235,359	115,632	-8,118
Collier	436,612	264,371	172,241	733,301	371,311	361,990	189,749
Marion	126,106	71,022	55,084	215,027	58,603	156,424	101,340
Lake	82,098	86	82,012	242,005	40,787	201,218	119,206
Escambia	201,191	5596	195,595	214,683	132438	82,245	-113,350
St. Lucie	252,960	215,487	37,473	135,140	115,839	19,301	-18,172
Leon	141,104	114,691	26,413	449,391	375,253	74,138	47,725
Osceola	388,573	378,463	10,110	46,869	275	46,594	36,484
Alachua	392,962	312,790	80,172	416,434	369,208	47,226	-32,946
St. Johns	171,833	205	171,628	230,168	2099	228,069	56,441
Clay	22,275	1	22,274	83,582	1,354	82,228	59,954
Okaloosa	132,041	2893	129,148	117,339	2030	115,309	-13,839
Hernando	142,276	38025	104,251	55,146	14494	40,652	-63,599
Bay	69,342	15680	53,662	83,223	15	83,208	29,546
Charlotte	55,113	54,998	115	526,925	444,445	82,480	82,365
Santa Rosa	368,710	330146	38,564	35,435	15090	20,345	-18,219
Martin	91,566	71,117	20,449	89,542	70,679	18,863	-1,586
Indian River	280,430	205,064	75,366	240,315	226,321	13,994	-61,372
Citrus	26,603	26,068	535	102,000	36,467	65,533	64,998
Sumter	213,251	181,923	31,328	69,470	26,317	43,153	11,825
Flagler	2,018	39	1,979	51,350	32162	19,188	17,209
Highlands	36,692	35,045	1,647	43,445	36,924	6,521	4,874
Nassau	92,474	35,920	56,554	125,535	42,809	82,726	26,172
Monroe	266,967	216,967	50,000	268,322	214,279	54,043	4,043
Putnam	20,308	19	20,289	19,061	16	19,045	-1,244
Walton	15,401	16	15,385	8,946	0	8,946	-6,439
Columbia	32,037	0	32,037	4,823	0	4,823	-27,214
Jackson	4,371	0	4,371	9,833	0	9,833	5,462
Gadsden	808	215	593	2,683	63	2,620	2,027
Suwannee	3,817	0	3,817	5,893	501	5,392	1,575
Levy	3,268	0	3,268	1,840	3	1,837	-1,431
Hendry	6,959	0	6,959	3,737	0	3,737	-3,222
Okeechobee	12,031	0	12,031	4,430	0	4,430	-7,601
Desoto	3,073	302	2,771	65,593	1,339	64,254	61,483
Wakulla	1,476	611	865	778	0	778	-87
Bradford	1,524	113	1,411	1,565	113	1,452	41
Baker	1,132	29	1,103	1,140	1	1,139	36
Hardee	1,578	0	1,578	1,720	0	1,720	142
Washington	1,020	0	1,020	1,396	0	1,396	376
Holmes	1,095	0	1,095	283	0	283	-812
Taylor	277	0	277	17703	0	17,703	17,426
Madison	1,743	11	1,732	1,041	0	1,041	-691
Gilchrist	54	0	54	326	0	326	272
Dixie	3,273	0	3,273	758	0	758	-2,515
Union	3,985	0	3,985	675	9	666	-3,319
Calhoun	1,243	31	1,212	6,192	217	5,975	4,763
Jefferson	229	0	229	874	23	851	622
Hamilton	414	0	414	934	0	934	520
Gulf	1203	45	1,158	12530	0	12,530	11,372
Glades	711	2	709	930	0	930	221
Franklin	5,622	40	5,582	1,994	14	1,980	-3,602
Liberty	21	0	21	214	0	214	193
Lafayette	279	208	71	411	0	411	340
State	13,917,329	8,344,589	5,572,740	15,886,502	8,996,780	6,889,722	1,316,982

*A positive number indicates an increase in the amount of C&D disposed. A negative number indicates a decrease in the amount of C&D disposed.

Appendix B

County Recycling Plans

Appendix B- County Recycling Plans

In 2008, the Florida Legislature set a statewide municipal solid waste (MSW) recycling goal of 75% by the year 2020. In 2010, the Legislature further directed that the goal be primarily applied to counties with a population of greater than 100,000. In addition, the Legislature set these interim recycling goals for those counties:

Calendar Year	Interim Recycling Goal
2012	40%
2014	50%
2016	60%
2018	70%
2020	75%

Section 403.706(2)(d), F.S., states that if a county does not achieve an interim recycling goal, the FDEP “may direct the county to develop a plan to expand recycling programs to existing commercial and multifamily dwellings, including, but not limited to, apartment complexes.” In addition to the above changes, in Chapter 2010-143, Laws of Florida, the Legislature also introduced Section 403.706(2)(b), F.S., directing that counties implement a program for recycling construction and demolition debris as part of their efforts to attain the recycling goals noted above.

The Department requested County Recycling Plans from large counties not reaching the 2012, 2013 and 2016 interim recycling goals. Copies of these plans are provided below.

Bay County



Bay County Solid Waste
11411 Landfill Rd.
Panama City Beach, Florida 32413
Telephone: (850) 236-2212
Fax: (850) 233-5053

**BOARD OF COUNTY
COMMISSIONERS**

www.baycountyfl.gov

September 18, 2019

840 WEST 11TH STREET
PANAMA CITY, FL 32401

Jennifer L. Simmons
Permitting & Compliance Assistance Program
Florida Department of Environmental Protection
2600 Blair Stone Road
MS 4550
Tallahassee, Florida 32399
850/245-8706
Jennifer.L.Simmons@dep.state.fl.us

COMMISSIONERS:

TOMMY HAMM
DISTRICT I

ROBERT CARROLL
DISTRICT II

WILLIAM T. DOZIER
DISTRICT III

KEITH BAKER
DISTRICT IV

PHILIP "GRIFF" GRIFFITTS
DISTRICT V

ROBERT J. MAJKA JR.
COUNTY MANAGER

RE: Bay County Recycling Plan

Dear Ms. Simmons:

Attached for your review is a copy of Bay County's 2019 recycling plan.

Please call or email me at my office if there are any questions. I can be reached at (850) 236-2212 or gogborn@baycountyfl.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Glenn Ogborn".

Glenn Ogborn
Solid Waste Division Manager

C: File

Bay County Recycling Plan

Current Recycling Activities:

Bay County Waste-to-Energy Facility - Bay County currently recycles primarily through the Bay County Waste-to-Energy facility (WTE). It is a mass burn unit that utilizes two 250 tons per day, O'Connor rotary combustors to convert waste into steam and ultimately into electrical energy. The facility has been continuously operated since its construction in 1987. On average, the facility produces about 60,000 mW's of electrical energy each year. As long as the facility is operational or the capacity of the unit has not been reached, all municipal solid waste generated within Bay County is processed at the facility.

In 2010, in order to increase our recycling efforts and to comply with the 75% recycling goal, Bay County made a significant financial investment in our recycling program by installing a metals extraction system at the Bay County Waste-to-Energy facility. The extraction system utilizes a system of magnets as well as shaker and eddy current screens to extract both ferrous and non-ferrous materials from the ash residue that remains after the combustion process. The metals are sent to various mills to be recycled and the remaining ash residue is then landfilled at the Steelfield Road landfill.

Landfill Recycling Activities - During normal operations, the landfill is primarily an ash mono fill, a repository for the ash residue from the Bay County Waste to Energy facility. The landfill does accept bulky or non-burnable waste. It also accepts vegetative waste such as lawn clippings, leaves, limbs and trees but the vegetative waste is not landfilled. All yard trash such as this is mulched at the landfill and is used to help stabilize side slopes of the Landfill cells. It is also used in the County's parks along hiking trails.

The landfill also recycles appliances and other scrap metals, electronics, used motor oil, gasoline, batteries, and paints. Recycled paints are used to paint structures at all of the county parks as well at several Department of Correction facilities that are located in the immediate area.

Recycling Drop Off Centers –Prior to Hurricane Michael, Bay County operated a number of recycling drop off centers in order to augment our recycling efforts at the Waste-to-Energy facility. These drop off locations were closed after Hurricane Michael destroyed the facility that processed most of our recyclables.

Private Recycling Activities - Recycling occurs at other facilities in addition to Bay County owned facilities. The News Herald collects newspaper. Redco Recycling collects Mixed paper, Office Paper, Cardboard and Newspaper. Coastal Metals and Lewis metals recycle metal materials. Large commercial facilities such as Target and Walmart also recycle materials.

Currently, C&D Landfills within the County do not appear to be recycling materials.

Currently none of the local municipalities offer curbside recycling. One of the local waste collectors, Trash Rolloff stopped their curbside recycling service.

Several years back, the Panama City Rescue Mission attempted to provide free curbside collections for recyclables but could not make a financial go of it. The thought was that the revenue generated from the sale of recyclables would cover the cost of collections. This of course was not the case and Bay County ,as well as the City Of Panama City were left to clean up the stockpiles of materials abandoned at the Rescue Mission's processing site.

If the State of Florida wishes to achieve the 75% recycling goal they can easily mandate, through permits or otherwise, that Construction and Demolition facilities recycle a certain percentage of their waste streams. The financial impact that such a mandate would have on construction and demolition facilities would be hard to define. It could have minimal impact or it could be devastating to their operation, depending on market conditions for whatever recyclable materials they generate.

Recycling Program Funding and Future:

The Bay County Solid Waste Division is operated as an Enterprise Fund. It is solely funded from the collection of tipping fees, the sale of electricity and the sale of recyclables. The current tipping fee is \$55.07 per ton and we receive \$30.59 per megawatt for electrical energy sold to Gulf Power.

Recyclables themselves do not really generate any real revenue, far less than what it takes to maintain the recycling services that are provided. Prior to Hurricane Michael Bay County was paying our vendor \$42.20 per ton to process the recyclable materials collected at our drop off sites. As such, most recyclable materials have actually had a negative value and collection activities needed to be subsidized with landfill tipping fees.

Operation of the Bay County Waste-to-Energy is also a very expensive process. The revenues generated from electrical power sales have dropped significantly over the last few years. The facility requires vastly more revenue to operate than it generates. It is far more economical to simply landfill waste than it is to try and utilize it as fuel and produce electrical power from it. The operation of the WTE facility was a huge financial

electrical power from it. The operation of the WTE facility was a huge financial commitment that Bay County made in order to protect the environment and to maximize the usefulness of the materials that enter the waste stream. The facility is now 35 years old and in need of major and expensive upgrades to continue operation. In order to sustain operations, tipping fees at our facilities would have to be dramatically increased. The County now must now assess whether to continue operating a Waste to Energy facility or simply shut it down and go to a landfill only scenario. Without the continued operation of the Waste-to-Energy facility and the recycling drop off centers Bay County could actually lower or the tipping fees that we charge to our customers.

As in the private sector, future recycling efforts may be based on market economics.

Brevard County



Solid Waste Management Department

2725 Judge Fran Jamieson Way
Building A, Room 118
Viera, Florida 32940

BOARD OF COUNTY COMMISSIONERS

September 9, 2019

Tim Bahr, P.G., Director
Division of Waste Management, FDEP
2600 Blair Stone Road
MS #4500
Tallahassee, FL 32399

Regarding: Brevard County Recycling Program Plan

Dear Mr. Bahr:

This report has been prepared at your request. It is based on Section 403.706(2)(d) Florida Statutes.

Brevard County's past interim recycling goals are shown in the below table:

Calendar Year	Interim Recycling Goal	Brevard County Recycling Percentage
2012	40%	48%
2014	50%	57%
2016	60%	61%
2018	70%	57%

As you can see Brevard County met all the goals until 2018. Like other entities, Brevard County currently is struggling with a contamination problem of the recycling stream which affected the recycling rates.

All Brevard county residents have single-stream curbside collection services, these services include:

- Mixed paper
- Sorted Residential Paper
- Corrugated Cardboard
- Aluminum Cans
- Steel Cans
- PET
- HDPE Natural
- HDPE Colored

- Mixed Plastics 3-7
- Mixed Glass

There are drop off single-stream services located throughout the county for all county residents which includes:

- Mixed paper
- Sorted Residential Paper
- Corrugated Cardboard
- Aluminum Cans
- Steel Cans
- PET
- HDPE Natural
- HDPE Colored
- Mixed Plastics 3-7

Bulky curbside collection services include:

- Yard Trash
- Scrap Metal
- White Goods
- Tires

Residents are also able to drop-off the bulky items listed above at one of three locations in the County.

Analysis of the percentage of the county's MSW generated by the commercial, multifamily, and residential single-family sectors are as follows:

- Commercial = 40.2%
- Residential = 59.8%
- We do not separate multifamily from single family residential when identifying waste sources.

We have conducted an analysis of any existing recycling programs for the commercial and multifamily sectors, including estimated customer participation rates and recycling rates for each of those sectors.

This analysis concluded that the total commercial businesses being serviced for recycling in Brevard County is 2,302 with one hauler not reporting. All businesses have to pay for recycling services creating a participation rate of 100%, with all having at least once a week pick up. Commercial businesses have the opportunity to choose their hauler.

Brevard County currently recycles any clean concrete brought into our facilities by using it on our own Solid Waste properties or other County property. Scrap metal and white goods are collected separately on our property and recycled through a metal recycler. We have cardboard bailers at two of our three citizens drop off sites which allows our

employees to pull out cardboard from the stream to bail and send to a recycler. Due to economic restraints surrounding C&D construction we will not be expanding recycling options in this area.

All residents receive curbside yard waste collection once a week. Yard waste can also be brought into one of our three drop off sites free of charge if it comes from a residential property. All yard waste brought to our sites is mulched and used for landfill cover. It is also available for residents to take for use on their property at no charge.

Brevard County has recently added an additional Recycling Educator position. The recycling section previously consisted of one Recycling Educator and one Recycling Coordinator. With the addition of a new educator we will be expanding on the number of public events we attend to help increase awareness of proper recycling.

Also, recently conducted was a Lean Six Sigma project looking at ways to reduce the contamination levels in the curbside recycling carts. This project resulted in an overhaul to the recycling webpage along with new brochures, refrigerator magnets and banners to promote our new recycling theme.

We have had an on-going educational program for schools, civic groups, Home Owners Associations and other community events for many years. We have increased our visibility through advertising in various means (busses, billboards, print and digital news) and continue to explore various advertising outlets to get the message out to our residents.

Sincerely,

A handwritten signature in blue ink, appearing to read "Euripides Rodriguez".

Euripides Rodriguez, C.I.A, Director

Broward County



Public Works Department

SOLID WASTE AND RECYCLING SERVICES

1 N. University Drive, Suite 400 • Plantation, Florida 33324 • 954-765-4999 • FAX 954-577-2391

September 24, 2019

Jennifer L. Simmons
Permitting & Compliance Assistance Program
Florida Department of Environmental Protection
Division of Waste Management
RE: Request for Development and Submittal of County Recycling Program Plans

Dear Ms. Simmons,

Please find attached Broward County's 2018 Recycling Program Plan as requested by Tim Bahr, P.G., Director, Division of Waste Management, Florida Department of Environmental Protection dated August 12, 2019.

The report outlines efforts by Broward County to achieve the State of Florida recycling goal of 75% by the year 2020.

If you have any questions, please contact Steve Kasselakis at 954-474-1826.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeff Turpin".

Jeff Turpin, Director
Solid Waste and Recycling Services

BROWARD COUNTY 2018 RECYCLING PROGRAM PLAN

Broward County, with a population of approximately 1.8 million residents, is comprised of 31 municipalities and the Broward Municipal Services District (unincorporated areas). The County currently provides residential solid waste and recycling services for the Broward Municipal Services District, areas that encompass a total population of approximately 15,000. It is important to note that municipalities utilize contracts for solid waste and recycling services independently from the County. Additionally, nearly half of the 800,000 county-wide residential units are considered multi-family. Broward County and its municipalities recognize the significant benefits of regional management of solid waste and recycling and are working towards an integrated and comprehensive solid waste management system.

Some notable highlights and historical solid waste management actions include:

- In 1986, an Interlocal Agreement (ILA) was executed between Broward County and twenty-six municipalities to establish the Broward Solid Waste Disposal District. The collective group developed an integrative resource recovery and solid waste disposal system that included two waste-to-energy facilities, material recovery facility, residential drop-off centers and a robust public education program.
- In 2009, single-stream recycling was introduced within the ILA communities to increase recycling volumes and for convenience.
- In 2011, Broward County and the Broward Solid Waste Disposal District implemented a \$20 million recycling grant program for ILA communities transitioning to single-stream recycling.
- In 2013, the ILA expired and Broward County municipalities began contracting for solid waste disposal and recycling services independent of Broward County. Additionally, one of two privately owned waste-to-energy facilities closed.
- In late 2018, a Solid Waste and Recycling Issues Study was completed examining strategies and options to increase recycling and waste diversion county-wide.

Current Efforts

Broward County and its municipalities provide independent yet comparable residential collection services for recyclables. Curbside recyclables are generally delivered to local recovered materials processing facilities, sorted and sold as commodities. In December of 2018, a consultant study was completed and issued to provide options for a cohesive approach to improve recycling programs and participation. The County and municipalities are currently reviewing the options provided in the Solid Waste and Recycling Issues Study including concepts addressing: 1) methodology to attain 75% recycling, 2) whether retaining public ownership of land would

facilitate meeting the recycling goal, and 3) general solid waste disposal issues. A summary of recycling program plans and ongoing challenges to increase participation are discussed below.

Summary of Services and Materials

Materials generally accepted as part of recycling services within the Broward Municipal Services District and municipalities county-wide include:

- Newspapers, catalogs, magazines, junk mail and office paper
- Plastic containers with narrow-necks
- Glass food and beverage containers
- Milk or juice cartons and drink boxes
- Aluminum, steel or tin food and beverage containers
- Cardboard from non-food items

Analysis of MSW Generated by Commercial, Multi-Family and Single-Family Sectors

Broward County currently analyzes population, property and solid waste collection data to estimate county-wide MSW generation rates across various sectors. The information provides overall trends in the amount of solid waste generated, diverted, disposed and recycled. These analyses highlight that commercial establishments, while making up approximately five percent of the property units county-wide, generate the majority of MSW collected and recycled. The County continues to work with municipalities to further enhance MSW data collection from various sectors and better define recycling efforts at multi-family properties.

Analysis of Existing Recycling Programs for Commercial and Multi-Family

The County collaborates with municipalities to evaluate recycling programs accessible to commercial properties. Survey results have provided insight into the availability of scheduled and on-call service for businesses. This information is utilized to identify possible gaps in service and forwarded to municipalities for facilitation. Additionally, with half of the Broward's residential housing stock comprised of multi-family units, older multi-family properties continue to pose recycling challenges. Space limitations for centralized containers, contamination from chute systems and high-rise inefficiencies were a common detractor to participation rates. Discussion has begun on future options for increasing residential and commercial MSW recovery as highlighted in the Solid Waste and Recycling Issues Study.

Implementation of C&D Recycling and Planned Changes

Broward County historically has had robust recovery opportunities for C&D materials through construction, road development and land reclamation projects. While C&D management remains largely driven by local market forces, it remains one of the most collected and recovered material county-wide. However, recent decline in the number of local C&D processors has led to a forty percent reduction in recovery rates. The Solid Waste and Recycling Issues Study identified options to increase potential diversion including voluntary, incentivized and mandatory programs (expedited permitting, reduced permit fees and processing requirements). While the County

examines the feasibility of these options, planned changes include efforts to more accurately capture C&D reuse data from local construction and reclamation applications.

Efforts to Encourage Yard Trash and Other Organic Waste

Broward County continues to identify and encourage yard waste and organic composting opportunities. These efforts include promoting local programs that provide yard waste recovery (such as chip-a-tree mulching programs), home composting information and listing of local organic processors. Additionally, the feasibility of pay-as-you-throw programs as well as a mixed waste processing facility have been discussed as potential future options.

Analysis of Reclamation and Donation Efforts of Food and Organic Waste

The County has experienced reporting challenges on diverted food and organic waste. Although food waste is estimated to comprise a significant portion of the total MSW collected, most recovery actions have gone unidentified and go unreported. However, recent collaboration with the Florida Department of Environmental Protection has led to better identifying food recovery actions. Additionally, preliminary discussions have begun with local school and hospitality affiliates on quantifying food recovery efforts from large events, food banks, pantries and donation centers. The County anticipates in the coming years promoting various food waste reclamation projects and improving data collection methods on food recovery.

Strategy for Expanding Recycling Programs

Broward County continues to follow the effects of recycling market volatility, implications of processing fees and contamination on local recycling programs. Furthermore, additional actions have included increased public education on proper recycling practices at county government facilities, libraries and at community events. The County and municipalities have expressed a desire to formalize their shared and ongoing commitment to work cooperatively on solid waste management in the coming year to address recycling opportunities and challenges. As a result, collaborative discussions have initiated with the municipalities for a potential regional approach to achieve a 75% recycling rate. Additionally, the Solid Waste and Recycling Issues Study provided several beneficial strategies to potentially increase and expand recycling.

Citrus County

Citrus County Central Landfill

320 West Gulf to Lake Highway

Lecanto, FL 34460

WACS ID: 39859

2019 Recycling Plan

INTRODUCTION

In 2008, the Florida Legislature set a statewide municipal solid waste (MSW) recycling goal of 75 percent by the year 2020. In 2010, the Legislature further directed that the goal be primarily applied to counties with a population greater than 100,000. In addition, the Legislature set these interim goals for those counties:

<u>Calendar Year</u>	<u>Interim Recycling Goal</u>
2012	40%
2014	50%
2016	60%
2018	70%
2020	75%

In Calendar Year 2012, Citrus County held a Traditional Recycling Rate of 25%, below the rate of 40% as stated in the Florida Statutes. In Calendar Year 2013, this rate rose to 33%, which was still below the 40% Interim Recycling Goal. Calendar Year 2014 saw Citrus County's rate climb to 45%, which was still below the 50% Interim Recycling Goal. In Calendar Year 2015, Citrus County's recycling rate soared to 51+%, surpassing the 50% Interim Recycling Goal. Citrus County maintained that rate for Calendar Year 2016, but it was not sufficient to meet the new Interim Recycling Goal of 60%. In Calendar year 2017 Citrus County's recycling rate was 48%, below the rate of 60%. In Calendar year 2018 Citrus County's recycling rate dropped down to 39% well below the 70% recycling goal.

On August 12, 2019, Tim Bahr, P.G., Director of the Division of Waste Management with the Florida Department of Environmental Protection, penned a *Request for Development and Submittal of County Recycling Plans*, which was sent to identified counties which failed to meet the 70% Interim Recycling Goal for Calendar Year 2018. Said request is for those counties to submit, in writing, to the Department of Environmental Protection, by September 15, 2019, their plan for increasing their recycling rate. Those counties include: Bay, Brevard, Broward, Citrus, Clay, Collier, Duval, Escambia, Flagler, Hernando, Highlands, Hillsborough, Indian River, Lake, Leon, Manatee, Marion, Martin, Miami-

Dade, Okaloosa, Orange, Osceola, Palm Beach, Pasco, Polk, Santa Rosa, Sarasota, Seminole, St. Johns, St. Lucie, Sumter, and Volusia.

At a minimum, the county recycling program plans should include:

- Summary of the services and materials for which you offer recycling such as newspaper, aluminum cans, steel cans, glass, plastic bottles, cardboard, office paper and yard trash;
- Analysis of the percentage of the county's MSW generated by the commercial, multifamily, and residential single family sectors;
- Analysis of any existing recycling programs for the commercial and multifamily sectors, including estimated customer participation rates and recycling rates for each of those sectors;
- Description of the county's implementation, including any planned changes, for your program for recycling construction and demolition debris;
- Description of efforts or opportunities to encourage recycling of yard trash, and other organic materials or mechanically treated solid waste, into compost or mulch that may be made available for agricultural and other acceptable uses;
- Strategy (including general timeframes) for expanding your county's recycling programs, or for creating new programs if needed, as part of your county's efforts to achieve the statewide recycling goals set forth in s. 403.706(2), F.S.; and
- Discussion of any additional steps, initiatives and anticipated challenges that are critical to implementing your strategies to achieve the next interim recycling goal of 70 percent in 2018, and ultimately statewide goal of 75 percent by the end of 2020.

Mr. Bahr's letter is attached as Appendix A for reference.

PAST AND PRESENT

Throughout the years considered in this document, the population of Citrus County has hovered in the 140,000 range. During this time, in addition to private businesses offering recycling of various metals, papers, plastic, and construction and demolition debris, Citrus County has had its own recycling program, offering recycling to its residents for the following materials:

1. Newspaper
2. Old Corrugated Containers (OCC)
3. Mixed papers
4. Office paper
5. Glass bottles and jars
6. Aluminum cans and foils
7. Steel cans
8. Plastic bottles
9. Plastics #1 through #7
10. Scrap metal
11. Tires
12. Waste Vegetable Oil (WVO)
13. Waste motor oil
14. Antifreeze
15. Rechargeable batteries
16. Automotive and Small Lead Acid Batteries
17. Yard trash
18. End-of-life electronics
19. Spent fluorescent lamps
20. Asphalt millings

Items #1 through #9 are dropped off by residents at the County's twelve unmanned single-stream recycling centers; three of which have limited hours, while the majority is open to the public twenty-four/seven. A private business, contracted by the County empties the eight-yard containers, and takes the recyclables to a Material Recovery Facility for processing. Curbside recycling is not widely available to the residents of the unincorporated areas of Citrus County, only to residents within the cities of Crystal River and Inverness.

Scrap metal is collected at the Central Landfill, and two to three ninety-cubic-yard loads are recycled per week by a private company contracted by the County. In addition, the County's contractor also has roll off containers, for the collection of scrap metal, at Utilities and at the Fleet complex.

Tires from the Central Landfill are recycled as Waste-To-Energy by a private business contracted by the County.

Waste vegetable oil (WVO) is collected at the Central Landfill, and recycled by a private company, converting it into biodiesel.

Waste motor oil and used automotive antifreeze are recycled as used commodities by an environmental recycling company contracted by the County.

Rechargeable batteries are collected at the Central Landfill, and shipped to a private company for reuse of the metals and various chemicals.

Lead-acid batteries are collected at the Central Landfill and recycled by a contractor for their non-ferrous metal content.

Yard trash is collected at the Central Landfill, ground and screened by a private contractor into mulch, for use by citizens, businesses and government.

End-of-life electronics are collected at the Central Landfill, and turned over to a private contractor for reuse of the various components and proper disposal.

Spent fluorescent lamps are brought to the Central Landfill where they are pulverized in a bulb crusher, for recycling of the glass, metal and mercury contained therein.

Recovered asphalt millings, from County road resurfacing projects, are recycled and the tonnage reported to the Solid Waste Management Division for inclusion in the Annual Municipal Solid Waste and Recycling Report to FDEP.

A copy of the 2018 County Annual Solid Waste Management Report for Citrus County is attached as Appendix B for reference.

TRANSITION FROM PRESENT TO FUTURE OF RECYCLING IN CITRUS COUNTY

The first type of item to be considered for future recycling in Citrus County is the type that will yield a high number of tons for recycling. This would be concrete recycling. Concrete rubble, brought to the Central Landfill, can be ground to a workable, beneficial size, such as 2"-. This recycled material can serve the beneficial purpose as being used as a base for road-construction projects, and other County projects, as well as the recovered rebar being recycled.

At this time, the Citrus County Division of Solid Waste Management has approximately 2600 tons of concrete rubble, and has entered into an agreement with a private contractor to crush the concrete, and extract the rebar from the material. This will add approximately 2600 tons of C&D material (concrete) and scrap metal to the recycled side of the municipal solid waste ledger. This will be an ongoing project, which will result in a marked increase in Citrus County's recycling rate. In addition, there is a private construction and demolition debris landfill in Citrus County that is also just starting with concrete crushing/recycling, and their tonnage numbers will also be captured for Citrus County's reporting to FDEP.

Citrus County Board of County Commissioners, following a lengthy study, has decided to start a three year clock, to give Citrus County Private Haulers notice that Franchising may be implemented here in Citrus County. At the end of this three year period, the Board of County Commissioners will vote on transitioning to franchised universal collection, or leave it as is. This will provide for curbside collection of trash, yard waste, and recyclables at each household in the unincorporated areas of Citrus County. (The incorporated cities of Inverness and Crystal River already provide this for their residents.) Once this goes into effect, which is estimated to be during calendar year 2020, curbside collection of commingled recyclables will be available to each and every household, both single-family and multi-family, County-wide. Yard waste, which is also a recyclable commodity, will also be collected curbside regularly from each of these households. The Recycling Partnership (formerly Curbside Value Partnership) estimated that this type of recycling program increased recycling by over 25% in Orlando, Florida. Making curbside recycling available to all Citrus citizens will result in a substantial increase in the County's recycling rate. Further, by providing collection of yard waste curbside, this will be a viable alternative to many residents simply burning their yard debris. Citrus County has its yard waste ground and screened and the resulting mulch is provided, free of charge, back to the citizens and local businesses for beneficial uses. As a result of countywide curbside collection of this material, there will be a resultant increase in the amount of material recycled, thereby also increasing the recycling rate.

APPENDIX "A"

August 12th, 2019 Letter of Tim Bahr, P.G.,
Director of Waste Management
Florida Department of Environmental Protection

APPENDIX “B”

2018 County Annual Solid Waste Management Report for Citrus County

Clay County



Environmental Services

Rosemary Hill SWMF
3545 Rosemary Hill Road
Green Cove Springs, FL
32043

Phone: 904-284-6374

Fax: 904-284-0345

County Manager
Howard Wanamaker

Commissioners:

Mike Cella
District 1

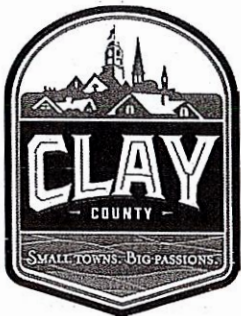
Wayne Bolla
District 2

Diane Hutchings
District 3

Gavin Rollins
District 4

Gayward F. Hendry
District 5

www.claycountygov.com



September 13, 2019

Jennifer L. Simmons
Permitting and Compliance Assistance Program
Division of Waste Management
2600 Blair Stone Road, MS4550
Tallahassee, FL 32399-2400

RE: Clay County Recycling Goals Plan

Dear Ms. Simmons,

As stated in the August 12, 2019 memorandum from FDEP to solid waste directors of large counties, the Florida recycling goal of 75% by 2020 includes interim goals for counties with a population greater than 100,000. These interim recycling goals for large counties are 40% by 2012, 50% by 2014, 60% by 2016, 70% by 2018, and 75% by 2020. Clay County (the County) is the twenty-fifth most populated county in Florida, with an estimated population of 212,034 (BE BR 2018). FDEP has directed counties that did not meet the interim recycling goal of 70% for 2018 to submit a recycling program plan.

The following is submitted in response to the FDEP memorandum date August 12, 2019 requesting Clay County's future recycling program plans in accordance with 403.706(2)(d), F.S.

1. Summary of the services and materials for which you offer recycling such as newspaper, aluminum cans, steel cans, glass, plastic bottles, cardboard, office paper, and yard trash.

Clay County utilizes a universal collection program that serves all households within the unincorporated area of the county. Residential services include weekly collection of household garbage, recyclable materials, and yard trash. The county's four municipalities, City of Green Cove Springs, Town of Orange Park, Town of Penney Farms, and City of Keystone Heights also provide curbside recycling collection. These county and municipal residential recycling programs utilize a two-bin, dual-stream collection system. Clay County also provides six residential drop off locations throughout the County that accept recyclable materials. The opportunity to recycle is available to all residents of Clay County through collection these programs. The following recyclable materials are accepted:

Containers:

- Glass Bottles and Jars
- Metal Cans and baking tins (aluminum, steel, tin)
- Plastic containers #1-7 (including clamshells and CD cases)
- Food and beverage cartons

Paper Products:

Newspaper, catalogs, magazines
Junk mail, office paper, envelopes, paper bags
Pasteboard (cereal boxes, drink cartons)
Books, workbooks, textbooks (including hard back)
Paper bags, pet food bags
Corrugated cardboard

The County also provides for the separation and collection of recyclable materials at offices and facilities of Clay County, the Library District, and the Sheriff. Clean corrugated cardboard is accepted for recycling from commercial entities at no charge. Clay County's Rosemary Hill Solid Waste Management Facility includes a: materials recovery facility (MRF), Class I transfer station, construction and demolition debris (C&D) transfer station, yard trash processing facility, large metal recycling facility, and a household hazardous waste facility. Recyclable materials are segregated at the County's MRF and transported to various vendors for further processing. Yard Trash is collected separately and delivered to the Rosemary Hill Solid Waste Management Facility for processing.

2. Analysis of the percentage of the County's MSW generated by the commercial, multifamily, and residential single family sectors in Clay County for 2018.

22% Residential Single Family

6% Residential Multi Family

71% Commercial

3. Analysis of any existing recycling programs for the commercial and multifamily sectors, including estimated customer participation rates and recycling rates for each of those sectors.

Drop-off recycling is available to all multifamily dwellings. Commercial and multifamily recycling collection services are available via private hauling companies. We estimate 71% of recycling collected is from commercial customers and 6% is collected from multifamily customers (estimated only).

4. Description of the county's implementation, including any planned changes, for your program for recycling construction and demolition debris.

Clay County currently does not have plans to process and recycle construction and demolition debris (C&D). There are several private sector companies within the county's area that are recycling selected C&D (concrete, asphalt, shingles, etc.). A long-term hauling and disposal agreement for C&D is in place and the county does not plan on any changes at this time.

5. Description of efforts or opportunities to encourage recycling of yard trash, and other organic materials or mechanically treated solid waste, into compost or mulch that may be made available for agricultural and other acceptable uses.

Clay County operates a yard waste processing facility at the Rosemary Hill Solid Waste Management Facility. All curbside yard waste collected within the county is brought to this facility. Commercial yard waste is accepted. All yard waste received at this facility is processed, ground, and transported to the Chesser Island Landfill to be used as intermediate cover and soil stabilization. Yard Trash accounts for 50% of the County's recycling percentage.

6. Strategy (including general timeframes) for expanding you county's recycling programs, or for creating new programs if needed, as part of county's efforts to achieve the statewide recycling goals set forth in s. 403.706(2), F.S.; and

Clay County coordinates collection and management of materials and recyclables from single-family residences in the unincorporated area, whereas each municipality controls its own waste collection program. The County has an exclusive franchise agreement for collecting waste from single-family residences of the unincorporated area of the County. The contractor is required to deliver all solid waste, recyclable materials, and yard trash collected under the agreement to the county owned and operated Rosemary Hill Solid Waste Management Facility (SWMF). The Town of Orange Park and City of Keystone Heights also utilize a contractor for residential collection, whereas Green Cove Springs and Penny Farms utilize city personnel and collection equipment. All waste and recycling collected from the municipalities is also delivered to the Rosemary Hill SWMF. All the Class I and C&D received at the Rosemary Hill SWMF transfer stations is transported to a Georgia landfill, owned and operated by Chesser Island Road Landfill, Inc., a subsidiary of Waste Management, Inc.

The waste generated by multifamily residential units and the commercial sector from the unincorporated areas of the County is collected by non-exclusive franchised waste haulers, which are overseen by the County. As with the residential waste collection, the municipalities manage their commercial waste collection using either a single waste hauler or a non-exclusive franchise system. Orange Park and Penney Farms granted exclusive franchises for commercial collection. Green Cove Springs recently implemented a non-exclusive franchise system for commercial services and Keystone Heights allows for an "open market" for its commercial waste collection.

C&D in the unincorporated areas is collected by franchised haulers. The county's franchised haulers are required to deliver wastes collected within the County to the Rosemary Hill SWMF. Yard waste collected from residences throughout the county and its municipalities is delivered to the Rosemary Hill SWMF, where it is ground into a mulch material.

Clay County employs a dual-stream recyclables collection system for all the single-family residences in the unincorporated areas of the County; participation in the program is voluntary. The unincorporated area single-family recyclables are collected and transported to the Rosemary Hill SWMF. Clay County also operates four Environmental Convenience Centers (ECCs) where recyclables are collected from residents. Residents are also able to drop off recyclables at the Rosemary Hill facility and at a location in the Town of Penney Farms. Clay County's residential recycling program includes newspapers and all inserts, telephone books, hardback and paperback books, magazines, mixed office paper, junk mail and catalogs, shredded paper, corrugated cardboard, paperboard, all household use plastics (#1 through #7), CDs and CD cases, milk/creamer cartons, soup and broth cartons, juice boxes, steel and aluminum beverage containers. Prior to September 2014, recyclables were processed at the county's MRF. In October 2014, the County discontinued its sorting lines and has since been selling the mixed recyclables to private entities for further processing and recovery. This change allowed the County to expand the acceptable materials list for recycling to include plastics #3-7 and CD cases. Based on a participation rate study conducted by the county's hauler, approximately 40% of the unincorporated area single-family residents actively participate in the residential curbside recycling program.

Clay County also collects waste tires, used motor and cooking oils, batteries, e-waste, and white goods at the four ECC's and at the Rosemary Hill SWMF. The County does not control recycling programs and practices at multifamily residences and commercial establishments, their participation is voluntary. Some multifamily developments in the County provide recycling programs through private entities who offer such services.

Clay County controls the flow of a significant portion of the waste generated in the County as a majority of the waste is generated in the unincorporated areas of the County subject to county ordinance. Clay County's solid waste ordinance and county franchise agreements require delivery all of the waste to the County's designated facility. The municipalities primarily use Clay County franchised haulers meaning that most municipal waste, though not under county control, is delivered to the county's facility.

The County recognizes the need to improve its recycling rates for Class I and C&D waste generated from commercial and residential sectors to achieve an overall recycling rate of 75%. The County envisions progressive evaluation and implementation of strategies to gradually increase the overall recycling rate from 20% to the goal of 75%. The County foresees significant challenges in achieving a 75% recycling rate by 2020. The total of recycled materials for Clay County

does not include C&D materials processed by source-segregated debris processing facilities. These facilities, unlike C&D processing facilities, are not required to report quantities of materials processed and recycled. The amounts, if accounted for, may have a significant impact on the overall recycling rate. The County realizes there will be challenges in tracking the amount of C&D processed by these facilities. In addition, the County sees a challenge in accounting for the recycled tonnages from entities that manage less than 600 tons per year of recovered materials and are not required to report their waste stream to the FDEP. This results in underestimation of the recycled tonnage. The County realizes that the lack of a waste-to-energy (WTE) facility near the county negatively impacts the County's ability to increase its recycling rate by obtaining RERCs. The nearest WTE facility (Lake County) is over 100 miles from the Rosemary Hill SWMF. The waste transport cost in combination with a relatively high tipping fee at WTE facilities limits the County's ability, economically, to increase the recycling rate with RERC-associated waste combustion for energy recovery. Several of the proposed options, such as mixed waste processing and C&D recyclables recovery facilities are expected to involve significant capital investment and operating cost, and will therefore significantly increase the materials management cost for the County. The County foresees a significant challenge in obtaining funding for these efforts.

7. Discussion of any additional steps, initiatives and any anticipated challenges the county foresees would be critical for implementing your strategies to achieve the next interim recycling goal of 70% percent in 2018, and ultimately statewide goal of 75% by the end of 2020.

The County is considering implementing multiple strategies to increase the recycling rate while realizing that reaching the 75% recycling goal from the current recycling rate of 20% within 1 year is a nearly impossible challenge. The County is envisioning a progressive increase in the recycling rate of various materials. The County has added public information and social media staff who have and are developing promotional materials, media releases, social media posts, etc. to raise public awareness about the importance of, and benefits to materials recycling. Clay County understands that it will be unable to meet the 75% goal by 2020 without recycling a majority of C&D and significantly more materials from the commercial MSW waste stream. To do so would require construction of a C&D processing facility, and market development for the product materials. This is not currently economically feasible for the county. Increasing amounts of source separated recyclable materials from commercial and institutional entities, depends upon the ability of each to incur additional collection costs. The County encourages such voluntary recycling programs and requires its franchisees to offer recycling service. Currently, there is not support for a mandatory recycling requirement.

After talking to several peers, Recycling Coordinators and staff, it is clear the state is not going to meet the 75% goal and there are more pressing local demands on many recycling programs in the state right now. There should be a discussion among all participants and more realistic goals should be identified.

Sincerely,



Milton Towns
Interim Director

MT/jw

Cc: Howard Wanamaker, County Manager

Collier County



Collier County
Public Utilities Department
Solid & Hazardous Waste Management Division

September 1, 2019

Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32299-2400

Re: Collier County Recycling Program Plans

The following information is submitted in response to your memorandum dated August 8, 2019 requesting Collier County future recycling program plans in accordance with Florida Statue Section 403.706 (2)(d).

1. Summary of the services and materials for which you offer recycling such as newspaper, aluminum cans, steel cans, glass bottles, cardboard, office paper and yard trash.

Basic Collection Service and Collection Frequency:

Collier County Residential Curbside Collection Service:

1. Garbage shall be collected curbside at least two times each week
2. Yard trash shall be collected curbside at least once a week. This service shall be provided on one of the two days when garbage is collected.
3. Program recyclables shall be collected curbside once a week. This service shall be provided on one of the two days garbage is collected.
4. Bulk waste shall be collected curbside at least once a week. This service shall be provided on one of the two days when garbage is collected, whenever possible.
5. White Goods shall be collected at curbside at lease once each week. This service shall be provided on one of the two days when garbage is collected, whenever possible. However, a request for white goods collection must be made at least forty-eight (48) hours in advance of the next regularly scheduled day for the collection.
6. Tires and lead acid batteries shall be collected curbside once each week when bulk waste is



collected. However, the contractor is not required to collect more than (4) four tires and (2) two lead acid batteries per month from any residential customer.

7. Electronic equipment shall be collected at curbside at least once each week. This service shall be provided when bulk waste is collected. A request for the collection of electronic equipment must be made at least forty-eight (48) hours in advance of the next regularly scheduled day for the collection.
8. Contractor shall provide back door service to handicapped residential customers at no additional cost.

Multi-Family Collection Service:

1. Customers occupying Multi-family residences shall receive residential collection service or commercial collection service. A customer occupying a Multi-family residence shall receive residential collection service if the customer pays the county's special assessment.

Commercial Collection Service

1. Commercial collection service for garbage shall be arranged between the commercial customer and contractor. Commercial customers shall enter into a contract with contractor for the collection of commercial waste and shall pay the county's approved rates for their collection service. The minimum collection frequency for commercial customers shall be one time per week, with collection not more than seven (7) calendar days apart, except for Holidays.
2. Contractor shall offer to collect Recyclables materials from its commercial customers. The contractor shall act as a private hauler. The contractor shall be responsible for billing and collecting payment for its services as a private hauler.
3. Businesses in Everglades City, Marco Island and the unincorporated areas of Collier County are required to recycle under the Recycling Ordinance 2009-56.

Materials accepted protocol

Steel and Tin cans

Includes steel, tin and aerosol cans, bi-metal containers, and lids composted primarily of whole iron or steel. Paper labels are acceptable. Aerosol cans containing household hazardous waste are not acceptable.

Aluminum

Includes aluminum beverage containers, food trays without food residue, sheet and flexible containers.

Glass

Clear (flint), brown (amber) and green food and beverage jars and bottles. Paper labels on glass containers are acceptable. Metal lids should be removed and included.

PET Plastics (No. 1)

Examples included but are not limited to: Plastic soft drink, water, sports drinks, beer, mouthwash, ketchup and salad dressing bottles. Peanut butter, pickle, jelly and jam jars. Oven-able prepared food trays.

HSPE Plastics (No.2)

Example includes but are not limited to: Milk, water, juice, cosmetic, shampoo, dish and laundry detergent bottles, yogurt, margarine tubs. Motor oil bottles are not acceptable.

V Plastics (No. 3)

Examples include but not limited to PVC products such as clear food and non-food packaging

LDPE Plastics (No. 4)

Examples included but are not limited to dry cleaning, bread and frozen food bags, squeezable bottles

PP Plastics (No. 5)

Examples include but not limited to compact disc jackets, food service applications, grocery store meat trays, egg cartons, aspirin bottles, cups, plated and cutlery.

Other Plastics (No. 7)

Examples include but are not limited to: Three- and five-gallon reusable water bottles, some citrus juice and ketchup bottles. Preparation of plastics, glass and metal containers: Remove organics, other contents and plastic caps, but the inclusion of organics, caps, rings, and labels will not be reason for rejection of Program Recyclables.

Paper Recyclables

Paper Recyclables consist of the following materials, commingled together, except aged, yellowed, or sunburned paper or water saturated paper.

ONP

All loose or bagged newsprint is acceptable, including all paper which is distributed with or as part of general circulation newspapers.

OCC

All loose or bagged old corrugated cardboard containers that are flattened and either cut down or folded to size, no more than 3 feet by 3 feet. Staples and tape with water-soluble glues do not have to be removed. Wax-coated corrugated cardboard is not acceptable.

Paper Bags

All loose or bagged paper sacks. May be used to hold mixed paper.

Chipboard/Fiberboard/Paperboard

All product packaging materials, such as cereal boxes, packaged food boxes, shoe boxes, and small manufactured item packaging.

Telephone Books

Old telephone directories.

Magazines

Old magazines, including small catalogs and similar printed material with glossy pages.

Mixed Paper

Mixed paper, including shredded paper, including but not limited to the following: junk mail; high-grade paper; white and colored ledger; copier paper; office paper; laser printer paper; computer paper, including continuous-formed perforated white bond or green bar paper; book paper; cotton fiber content paper; duplicator paper; form bond; manifold business forms; mimeo paper; note pad paper (no backing); loose leaf fillers; stationery; writing paper; paper envelopes; carbonless (NCR) paper; tabulating cards; facsimile paper; and manila folders. Paper with metallic, carbon, ammonia or non-soluble glue is not acceptable.

Even though the franchise agreement speaks to some plastic bags and plastic film packaging acceptable materials we are helping in changing the message to take back to your local store for plastic bag and plastic film packaging reuse and recycling options.

Supplemental Services

Collier County Solid & Hazardous Waste Management Division provides several opportunities for residents to recycle or divert materials from the landfill. Six (6) Residential Recycling Drop off Centers and one (1) Household Hazardous Materials Collection Center. The residential recycling drop-off center allows residents to source separate metals, tires, white goods, e-waste, cardboard etc. in separate rolls offs and the newly added, highly participated paper-shredding event. The household hazardous materials collection center accepts a significant amount of material for diversion such as but not limited to mercury devices, batteries, latex and oil-based paints, household chemicals and cleaners, pool chemicals, solvents, glues, paint strippers, waste oil, used oil and filters, antifreeze gasoline, diesel, propane tanks, flares, ammunition, fire extinguishers, electronics, cables, sharps in approved containers, cooking oil, fertilizers for environmentally safe recycling and disposal.

1. North East Recycling Drop Off Center
2. Naples Recycling Drop Off Center
3. Marco Island Recycling Drop Off Center
4. North Collier Recycling Drop Off Center
5. Carnestown Recycling Drop Off Center
6. Immokalee Recycling Drop Off Center
7. Household Hazardous Materials Collection Center

2. Analysis of percentage of county’s MSW generated by:

In line with the demographics trends more waste is collected during the winter than the summer and more commercial waste is collected than residential waste in both seasons.

Commercial county generated waste 57%
Residential county generated waste 43%

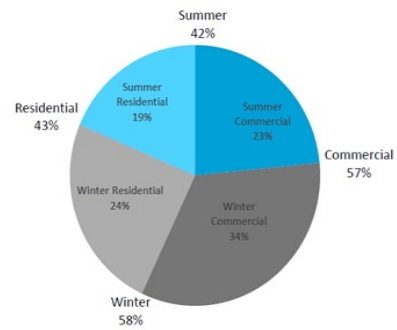


Figure 2-2. Collier County Municipal Solid Waste Distribution by Season and Material Stream

3. Analysis of any existing recycling programs for the commercial and multi-family sectors including estimated customer participation rates and recycling rates.

Currently, multifamily residences shall receive residential collection service or commercial collection service. A customer occupying a Multi-family residence shall receive residential collection service if the customer pays the county’s special assessment. Commercial collection service for garbage shall be arranged between the commercial customer and contractor. Commercial customers shall enter into a contract with contractor for the collection of commercial waste and shall pay the county’s approved rates for their collection service. Contractor shall offer to collect Recyclables materials from its commercial customers. The contractor shall act as a private hauler. The contractor shall be responsible for billing and collecting payment for its services as a private hauler.

Businesses in Everglades City, Marco Island and the unincorporated areas of Collier County are required to recycle under the Recycling Ordinance 2009-56. In order to increase the participation rate of commercial recycling, reduce the recycling contamination rate, and achieve the State of Florida 75% recycling goal by 2020 staff must complete audits. Waste Reduction and Recycling team provides a comprehensive commercial and multi-family recycling program requires continuous inspection and audits, education outreach, distribution of educational resources and enforcement to approximately 1,000 commercial businesses and 400 multi-family units annually per team member.

There are several challenges to recycling in multi-family and commercial sectors. Messy disposal areas cause litter issues, confusion as to what to be recycled, and insufficient space for recycling containers could lower the amount of material that is getting recycled. In order to address these issues, the County and Franchise hauler are working together to provide onsite visits, one on one discussions with property managers, attending meetings, providing presentations, and offer educational materials. Collier County plans on enhancing the commercial business recycling program to enhance awareness with conducting business recognition programs in recognizing business that implement innovative approaches to enhance recycling rate in local newspapers in addition during board meetings.

Collier County ensures public health, safety and preservation of natural resources by utilizing a customer oriented, environmentally sound and cost-efficient operational approach that provides best value service

for approximately 128,000 residential curbside collection accounts and 5,500 commercial accounts and provides landfill disposal services for 445,000 peak season residents and visitors of Collier County.

4. Description of county's implementation, including any planned changes, for your program for recycling construction and demolition debris.

Collier County currently does not have plans for any type of ordinance mandate within the next year for recycling construction and demolition debris (C&D). Collier County Landfill does crush and repurpose C&D materials as road base at the landfill. Waste Reduction and Recycling team has discussed to develop plans to work with building contractors, and franchised haulers to encourage the development of strategies to enhance and capture recovery of wood, roofing, concrete, etc... Some counties in Florida (e.g Lee and Seminole County) have implemented ordinances to mandate C&D recycling.

5. Description of efforts of opportunities to encourage recycling of yard waste and other organic materials or mechanically treated solid waste, into compost or mulch that may be available for agricultural and other acceptable uses.

Currently all residential yard waste is collected from franchisee. Yard waste calculates to 96% MSW collected and recycled. Collier County captures an abundant of yard waste from external non-certified vendors which repurpose into mulch and composting.

Collier County has discussed working with private and public schools to implement source segregation food scraps in school cafeterias and composting of source segregated organics. Collier County has also started discussion with supporting local University of Florida Extension IFAS in Collier County to expand options for residents to reduce and reuse their waste. Composting is a beneficial way of diverting yard waste and food scraps from the landfill to reduce disposal fees and save valuable airspace.

6. Strategy (including general timeframe) for expanding your county's recycling programs, or to creating new programs if needed, as part of your county's efforts to achieve the statewide recycling goals set forth in 403.706 (2) F.S

Collier County strategy for increasing recycling rate is capturing non-certified numbers from vendors such as C&D (aggerate, asphalt millings) mattress recycling, Styrofoam, carpet, and food banks.

The county has plans to increase public education awareness campaigns directed at commercial recycling, reducing contamination, and specific message aimed what to recycle. The county currently works with Collier County School Board to increase awareness, among elementary, middle and high school students. Education is key, school education benefits of recycling at school and home. The county is developing educational materials documenting clear message and benefits of recycling for distribution at community events, direct mailers and digital outreach.

The county has recently started a public education campaign tri-county collaboration with surrounding counties to reduce waste, decrease recycling contamination and increase recycling message such as do not bag, return plastic film and packaging to local stores.

The county has recently started accepting paper for shredding for free up to 20 pounds once a month, with the additional in fiscal year 2020 everyday up to 5 pounds. This has been a highly successfully participated event. Hopefully will increase the traditional non-certified paper recycling tonnage collected.

A comprehensive, ongoing public education and outreach campaign is an essential component of an effective recycling programs. Residents and business owners cannot fully participate in the program if they are not aware of how to participate and the types of materials accepted. Developing a comprehensive public communication and outreach campaign to include traditional media (television and radio), social media, advertising, town hall public meeting, direct mailers, events, etc. Collier County is analyzing updating the website to be more user-friendly and ADA compliant. The message needs to be consistent including what materials are accepted and how they need to be separated. Key elements of an effective public education campaign include pre-planning, targeting the audience and stakeholders, branding, messaging, utilizing technologies such as social media developing public relations and media utilization plans and expanding the community involvement and visibility. Currently reviewing and updating recycling handouts to list common items we do not want in the recycling cart, top contaminants. Include working with external community partners such as Keep Collier Beautiful, local community colleges and universities, public and private schools, neighborhood newsletters, environmental groups, cooperative extensions etc.)

The Collier County feels that there are still opportunities to raise our recycling rate through traditional recycling and do not have reasons to pursue new renewable energy options as waste to energy facilities. Instead, the County will continue its efforts to raise the recycling rates by focusing on outreach and educational efforts to encourage voluntary participation in the recycling program. With actions outlined above we hope to reach the 75% recycling rate by 2020 and continue to rise in overall recycling as we reach out to the residential and business sectors to implement and capture the non-certified tonnages with commercial entities.

Duval County



ONE CITY. ONE JACKSONVILLE.

City of Jacksonville, Florida

Lenny Curry, Mayor

Department of Public Works
Solid Waste Division
1031 Superior Street
Jacksonville, FL 32254
(904) 255-7500
www.coj.net

September 13, 2019

Ms. Jennifer L. Simmons
Florida Department of Environmental Protection
Permitting & Compliance Assistance Program
Division of Waste Management
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

**Reference: Duval County Recycling Plan
Calendar Year 2018 Recycling Rate**

Dear Ms. Simmons:

Attached please find the FDEP County Recycling Plan for Duval County as required to be submitted per Section 403.706(2)(d), Florida Statutes. The plan is being submitted because Duval County did not achieve the interim recycling goal of 70% by end of year 2018.

If you have any questions, please contact the undersigned at (904) 255-7500.

Sincerely,

**CITY OF JACKSONVILLE
PUBLIC WORKS DEPARTMENT, SOLID WASTE DIVISION**

A blue ink signature of Eric B. Fuller, written in a cursive style.

Eric B. Fuller
Environmental Programs Manager

A blue ink signature of Cletus Kuhn, written in a cursive style.

Cletus Kuhn
Solid Waste Specialist



DUVAL COUNTY RECYCLING PLAN

DUVAL COUNTY, FLORIDA

September 13, 2019

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DUVAL COUNTY RECYCLING PLAN DUVAL COUNTY, FLORIDA

1.0 INTRODUCTION

On behalf of Duval County, the City of Jacksonville has completed this County Recycling Plan for Duval County as required to be submitted per Section 403.706, Florida Statutes. The plan is being submitted because Duval County did not achieve the interim recycling goal of 70% by year end 2018. For calendar year 2018, Duval County had a recycling rate of 59%.

In 2008, the Florida Legislature set a statewide municipal solid waste (MSW) recycling goal of 75% by the year 2020. In 2010, the Legislature further directed that the goal be primarily applied to counties with a population of greater than 100,000. Additionally, the Legislature set interim recycling goals as follows: 40% by year 2012; 50% by year 2014; 60% by year 2016; 70% by 2018; and 75% by year 2020. The recycling rate for Duval County over the past five years has been as follows: 50% in year 2014; 50% in year 2015, 52% in year 2016, 60% in 2017 and 59% in year 2018.

On August 12, 2019, the Florida Department of Environmental Protection (FDEP) sent a memorandum to large counties that did not meet their 2018 interim recycling goals and requested that they submit a county recycling plan to FDEP by September 15, 2019.

2.0 SOLID WASTE MANAGEMENT AND SUMMARY OF RECYCLING SERVICES

Duval County consists of five cities including the City of Jacksonville, the City of Atlantic Beach, the Town of Baldwin, the City of Jacksonville Beach and the City of Neptune Beach. All waste generated in Duval County that requires disposal in a Class I solid waste disposal facility is flow controlled to the City of Jacksonville-owned Trail Ridge Landfill per City of Jacksonville Ordinance Code Section 386. The City of Jacksonville maintains inter-local agreements with the other cities within Duval County for the disposal of their Class I waste. There is no flow control within Duval County for other forms of waste such as construction and demolition debris or recyclable materials. Each city within Duval County is responsible for the collection of their waste and recyclables. The management of solid waste facilities within Duval County is under the purview of the City of Jacksonville per Ordinance Section 380, Part 1. The City of Jacksonville prepares and submits the annual recycling report to FDEP on behalf of Duval County.

Significant efforts and expense have been undertaken by the cities within Duval County to recycle municipal solid waste (MSW). Currently, all cities within Duval County offer single stream recycling for Duval County residents that is picked up at least every other week. Single stream curbside recycling includes materials such as office paper, newspaper, magazines, paper bags, cardboard, plastics # 1-3, 5 and 7, milk containers, juice boxes, glass (green, brown or clear), aluminum cans and steel cans. Traditional curbside recycling (excluding yard trash) represents approximately 3-5% of all Duval County recycling.

The majority of yard trash generated in Duval County is collected curbside from residents and taken to Trail Ridge Landfill where it is currently mulched and used as daily cover in accordance with the landfill's permit conditions. The usage of mulched yard trash for cover material has historically accounted for approximately 5-10% of Duval County's overall recycling rate.

Tires are collected from City of Jacksonville residents at curbside at no additional charge. The tires collected are taken to Trail Ridge Landfill's tire storage area and eventually transported to Liberty Tire Recycling in Rockledge, Florida where they are recycled in a variety of ways which

count as recycling credit. In addition, tires that are hidden in loads that are dumped at the working face of the landfill are pulled off the landfill, placed in the tire storage area and taken to Liberty Tire Recycling for recycling. Lastly, for the past five years (2014-2018), the City of Jacksonville has held a tire buyback event where Duval County residents can bring in waste tires and receive payment for each tire. This tire buyback event is held in order to encourage residents to clean up the County of waste tires, reduce the blight caused by tires and reduce breeding grounds for mosquitoes. The City of Jacksonville funds this effort and it is scheduled to occur again in 2019. This event has averaged the collection of over 21,645 tires per year which were previously taken to Ridge Generating Station for incineration and Duval County recycling credit.

The City of Jacksonville offers free pick-up of appliances at curbside for its residents. The appliances that are collected curbside are taken to a metals recycler which ultimately provides additional recycling credits for Duval County.

The City of Jacksonville offers free drop off of household hazardous wastes to all Duval County residents. Household hazardous wastes accepted includes gasoline, motor oil, cooking oil, antifreeze, electronic wastes, batteries, paints, pesticides, herbicides, fluorescent bulbs, and pool chemicals. The City of Jacksonville has a household hazardous waste facility that is open year round, five days a week and eight hours each day. In addition to the stationary facility, the City of Jacksonville holds 12 remote collections events at various areas of the County for residents to bring in their household hazardous wastes. Many of the household hazardous wastes that are collected are ultimately recycled.

3.0 ANALYSIS OF MUNICIPAL SOLID WASTE GENERATED

The vast majority of MSW generated in Duval County originates in the City of Jacksonville. The percentage of MSW generated for each city within Duval County for the year 2018 was estimated as follows: City of Jacksonville 94%; City of Atlantic Beach 1%; Town of Baldwin <1%; City of Jacksonville Beach 4%; and the City of Neptune Beach 1%.

A further breakdown of the MSW generated by the various commercial, multi-family and single family residential sectors for the year 2018 was estimated as follows: residential single family 16%; residential multi-family 4%; and commercial 80%. The percentage of overall recycling attributed to the various commercial, multi-family and single family residential sectors for the year 2018 was estimated as follows: residential single family 31%; residential multi-family 9%; and commercial 66%.

City of Jacksonville Ordinance Section 380, Part 5 makes residential recycling mandatory. Seven compliance inspectors and officers oversee the curbside collection efforts by the City and its three subcontract residential haulers. The City has made a significant investment to maximize the curbside recycling effort by entering into contracts with all three subcontract residential haulers to use automated collection efforts and equipment. The effort has resulted in an approximate doubling of the tonnage of recyclable materials that are collected at residential curbsides over the past several years. The City has invested in this effort by authorizing the subcontract haulers to purchase new automated collection trucks and 96 and 64 gallon recycle containers as part of their contracts. The City has also directly invested in this effort by purchasing new collection trucks and recycle containers for its core service area. This investment by the City literally represents millions of dollars pledged to increase recycling rates to meet the state's recycle goals. It is currently estimated that approximately 60% of the county residents participate in recycling. Recycling participation rates amongst residents appear to vary based on geographical and economic areas of the county. Recycling rates in the core city area and in the more rural areas of the county tend to have the lower participation rates while the suburb areas have the higher participation rates.

Commercial/multi-family recycling is currently done on a voluntary basis and is not mandated by ordinance. Small commercial establishments that receive city service have high participation rates but services are only offered to small commercial establishments. Participation and recycling rates amongst the commercial/industrial sector that handles yard trash and construction and demolition debris (particularly concrete) appears high, especially with favorable economic conditions. The commercial recycling market for metals and cardboard appear to be steady but many other commercial recycling markets are depressed.

4.0 SOLID WASTE MANAGEMENT FACILITIES AND RECYCLING

Duval County has one of the most comprehensive solid waste management facilities program in the state of Florida. City of Jacksonville Ordinance Section 380, Part 1 outlines the duties of the City in regulating solid waste management facilities within Duval County. All solid waste management facilities are required to have a Certificate of Public Convenience and Necessity ("CON") issued by City Council in order to operate. This certificate covers all different types of solid waste management facilities including landfills, construction and demolition debris (C&DD) recycling facilities, concrete recycling facilities, vegetative debris/yard trash mulching/recycling facilities, biomedical waste sterilization facilities and incineration facilities. Each of these facilities is required to weigh all incoming and outgoing materials and provide monthly reports to the City of Jacksonville's Solid Waste Division. The operation of these solid waste management facilities results in a large portion of the commercial recycling percentage within Duval County. Recycling of materials at these facilities is incentivized by the City of Jacksonville by waiving our \$7.16 per ton host fee on all incoming materials that are recycled.

4.1 Landfills

The landfills located within Duval County follow the FDEP's procedure on recycling materials that are economically feasible to do so. Because the recycling market is currently depressed, the recycling of materials that are taken to the County's various landfills do not represent much in the way of recycling based on incoming waste streams. Landfills do, however, provide opportunities for recycling by utilizing mulched yard trash as daily cover and the opportunity for collection of landfill gas (discussed in Section 5).

4.2 Construction and Demolition Debris

There are numerous C&DD recycling facilities located within Duval County including three full C&DD recycling facilities, ten concrete/clean debris recycling facilities and two shingle recycling facilities. Concrete recycling facilities typically recycle over 98% of all incoming materials. Shingle recycling is currently limited by the amount of recycled shingles that can be effectively mixed to create asphalt or can be utilized on FDOT roadways.

4.3 Yard Trash/Vegetative Debris

The City of Jacksonville currently regulates five yard trash/vegetative debris facilities within Duval County. The facilities are spread over various areas of the county which provides disposal/recycling opportunities for companies performing land clearing operations, landscape maintenance and similar type activities. The recycling rate for these facilities is in excess of 98%. Recent challenges of finding facilities which accept mulched vegetative debris for use as boiler fuel has put a strain on the economic viability of these facilities. Many facilities which historically used vegetative debris as boiler fuel are looking to natural gas as a fuel source. Additionally, Alachua County's energy facility in north-central Florida has operated intermittently which has further reduced the choices of mulching facilities to find end users of their recyclables.

5.0 WASTE TO ENERGY

The City of Jacksonville's existing Trail Ridge Landfill has a waste to energy (WTE) plant that utilizes the landfill gas for the production of electricity by six (6) engines that use landfill gas as the fuel source. This is the primary source of Duval County's renewable energy recycling credits. The City of Jacksonville has a three party agreement with Trail Ridge Landfill, Inc. (a.k.a. Waste Management) as the operator of the landfill, Arias Gas which operates the WTE plant, and the City which is the permit holder for the Title V air permit and owner of the landfill. The three party agreement details the responsibilities of the parties as it relates to the operation of the landfill and gas destruction via the electric-generating engines. The City receives \$193,500 per year for the sale of the gas and spends hundreds of thousands of dollars per year on expanding the gas system as waste is placed both horizontally and vertically within the disposal units. The three party agreement allows the WTE plant to install up to six additional engines for a total of twelve (12) engines that can convert the landfill gas to electricity. The plant currently produces enough electrical output to power a little over 5,000 homes and would increase if additional engines are added. Each of the engines can produce 1.6 megawatts of power for a total of 19.2 megawatts of power. The landfill infrastructure has a house load of approximately 0.5 megawatts which would allow the WTE plan to produce approximately 18 to 18.7 megawatts of power at full engine capacity. The City of Jacksonville recently invested over 2.6 million dollars in the replacement of gas collection wells, headers, manifolds and ancillary piping including pumps and condensate sumps to maximize gas flow to the plant. Trail Ridge Landfill's newest disposal unit is currently under design for the installation of a gas collection system into this area which will collect landfill gas and use it to power a new leachate evaporator system planned for the site.

6.0 RECYCLING ANALYSIS AND STRATEGIES FOR INCREASING RECYCLING RATE**6.1 Traditional Recycling**

An analysis of Duval County's recycling statistics verses those of other counties with higher recycling rates was conducted. Traditional recycling rates of other counties' commodities were very similar to Duval County with the exception of the commodities of yard trash and construction and demolition debris. Generally speaking, the traditional recycling rates of other counties that had high recycling rates had commodity recycling percentages of their total traditional recycling that were no more than 3% higher than Duval County with the outliers of food, miscellaneous, yard trash and construction and demolition debris. As indicated previously, Duval County is one of the few counties in Florida that actually independently regulates solid waste management facilities in their county and requires them to weigh their materials on an incoming and outgoing basis. Other counties rely on estimated cubic yard or tonnage amounts of yard trash and construction and demolition debris. Weights of yard trash and C&D material vary widely by content of load which can lead to a significant variance in cubic yard to tonnage conversion rates for these materials. Based on this analysis of traditional recycling commodities, it does not appear that other counties with higher recycling rates are significantly ahead of what Duval County is currently doing. Further, it would appear that other counties with higher rates may have had large construction projects in their area or had high estimates/used high conversion factors for their yard trash and construction and demolition debris recycling tonnages. It is worth noting the significant variance of yard trash tonnage collected per capita in FDEP's recycling reporting by county. Whereas Duval County has a reported population of 952,861 people with a collected yard trash tonnage of 215,294 tons, an approximate 4.4:1 ratio, Charlotte County has a reported population of 176,745 people with a collected yard trash tonnage of 225,741 tons, an approximate 0.78:1 ratio. Other counties have reported yard trash tonnages approaching a 1:1 ratio or 2:1 ratio of population to ton of yard trash which in many cases, correlates to a high recycling percentage for those counties largely based on yard trash totals. The variance of yard

trash collected tons per capita is likely related to the conversion factors and cubic yard estimates of this waste stream. Examination of these numbers, along with C&D debris estimates, becomes an important factor when considering what recycling goals are realistic for the counties/state.

6.2 Waste to Energy/Renewable Energy Recycling

Three out of the four large counties in Florida that are currently making their 70% recycling goal are doing so based on high renewable energy credits. These high renewable energy credits provide some large counties with up to 25% of their recycling total. The renewable energy recycling credits for these counties are received based primarily on the incineration of their trash. Not all Florida counties have readily available resources to establish high renewable energy credits. Duval County currently has a city-owned landfill that has permitted capacity for approximately another 25-30 years. The cost of landfilling is significantly less expensive than the incineration technology currently available. Investing in waste to energy technology through trash incineration would require significant capital investment for Duval County and does not appear feasible at this time. Duval County regularly monitors the cost of waste to energy processes and meets with vendors to discuss their products when new technologies are identified. As previously discussed in Section 5 of this report, Duval County has recently invested a considerable amount of money in increasing the landfill gas production at Trail Ridge Landfill to bolster our county's renewable energy credits. We have also examined the possibilities of implementing landfill gas collection systems at older disposal sites; however, economic conditions (including the low price of natural gas) have made this pursuit not economically viable.

6.3 Strategies for Increased Recycling

Duval County currently provides an extensive amount of recycling opportunities for the residents of Duval County. Curbside single stream recycling, appliance recycling, tire recycling and household hazardous waste collection and recycling are all provided. Recycling is not a revenue generating activity based on current markets and these programs should be viewed as a substantial effort and commitment by Duval County to recycling. Residential recycling is mandatory per City of Jacksonville ordinance; however, recycling participation rates are estimated to be around 60%. The City of Jacksonville has been conducting outreach and education methods to increase participation rates and reduce recycling contamination amongst residents. The City of Jacksonville has participated in FDEP's Rethink, Reset, Recycle media program as well as going on local television to discuss the City's recycling program. Further, the City's subcontract recycling facility, Republic Services, Inc., has also done outreach into the community, including appearing on local television news stations to discuss recycling. Public service announcements, mailing of flyers, community outreach through local organizations, and social media campaigns are all being looked at for possible implementation in 2019 and beyond.

Multi-family and commercial recycling is not currently mandated within Duval County. The City of Jacksonville provides collection service to a small number of multi-family units and small commercial establishments but many of the multi-family and commercial units throughout the county rely on the private owners to provide any sort of recycling services. Market conditions are currently the main driver of such recycling services and this mostly means an additional cost to owners of commercial properties. The City is examining the potential to require mandatory recycling for multi-family units or for newly permitted/constructed facilities to have a dedicated space for recycling dumpsters to serve their residents. Recycling in the commercial/industrial sector for yard trash and construction and demolition debris appears steady but there may be opportunities for increased recycling amongst commercial office facilities and small businesses.

The City of Jacksonville is examining policy for ways to promote, incentivize and/or mandate recycling within the commercial sector.

Waste to energy/renewable energy recycling credits are currently provided to Duval County through collection of landfill gas and subsequent conversion to energy at Trail Ridge Landfill. The City of Jacksonville has worked toward maximizing the gas collection at the landfill and hence maximizing our available renewable energy credits. Limited opportunities currently exist for Duval County to increase renewable energy credits without significant capital expenditures toward incineration technologies. Duval County will continue to monitor and track technologies for cost effectiveness of waste incineration technologies.

7.0 STATEWIDE OPPORTUNITIES FOR REPORTING AND INCREASED RECYCLING

In examining ways for increased recycling potential and opportunities statewide, several possibilities were identified that could be provided to assist counties in reaching their goals. Below are some suggestions for consideration:

- The FDEP currently requires registered vegetative debris facilities to provide their annual tonnage amounts in July for the previous year. Changing the reporting requirements of these facilities to a time period earlier in the year (say February or March) would allow this information to be included on county recycling reports.
- Consideration of counting vegetative land clearing debris (specifically trees not planted for siliculture) taken to a lumber mill as eligible recycling.
- Providing recycling credit for used oil recycling and have FDEP provide counties with the amounts (gallons or tons) of used oil recycled by county.
- Providing recycling credit for vehicular (car/boat/truck, etc.) batteries and have FDEP provide counties with the amounts (tons) of batteries recycled by county.
- Provide greater enforcement and availability of the reporting of textile recycling by county. It appears that many facilities required to report their textile recycling to FDEP are not providing this information.
- FDEP reviews all county recycling reports and may be approving various recyclables/recycling methods available but not utilized by many counties. If these alternant sources of recycling credit are available, it is suggested that FDEP provide these recycling methods (and others) to all counties so that they may also utilize these methods of reporting.
- Provide regulatory incentives and benefits for waste to energy technologies to potentially expand this market in terms of tire and shingle incineration to create energy.
- Consider providing renewable energy recycling credits for counties utilizing solar power for electric generation.

8.0 CONCLUSIONS

Duval County has expansive recycling programs currently in place offering county-wide single stream recycling of a large variety of recoverable materials, tire recycling, appliance recycling and household hazardous waste collection and recycling. Analysis of Duval County's traditional recycling verses other large counties that are currently achieving the state goals indicates that Duval County matches up well with these other counties except in the areas of yard trash and construction and demolition debris. Duval County has a comprehensive solid waste management system for the tracking of yard trash and construction and demolition debris tonnage – perhaps

the most comprehensive system in the state. It would appear that other counties with higher rates may have had large construction projects in their area or had high estimates/high cubic yard to tonnage conversion rates of their yard trash and construction and demolition debris recycling tonnages. Weights of yard trash and C&D material vary widely by content of load which can lead to a significant variance in cubic yard to tonnage conversion rates for these materials. Since Duval County requires actual weighing of these materials at County solid waste management facilities, there is greater assurance of the accuracy of reporting related to these waste streams. Examination of per capita generation of yard trash and C&D indicate large variances between Florida counties. One of the four large counties making the FDEP's interim recycling goal has reported collecting greater than a one ton of yard trash per person. Several other counties with high recycling rates also have a high per capita yard trash collection rates of 2:1 or greater. It would appear that Duval County's apparent lower collection and recycling of yard trash and/or C&D debris is likely more of a function of other county's cubic yard estimates and tonnage conversion rates.

Other large counties currently achieving their state goals are doing so based largely on high renewable energy credits from the incineration of trash. Not all Florida counties have readily available resources to establish high renewable energy credits. Duval County currently has permitted landfill space of another 25-30 years which is more economical than incineration. Duval County has invested heavily in the gas collection system at the City's Trail Ridge Landfill to increase the amount of gas collected and subsequent energy creation.

The City of Jacksonville and Duval County have conducted media outreach efforts along with our subcontract recycling contractor in order to increase the quantity and quality of recyclables. Additional strategies being researched as potential areas to increase our recycling percentages include further awareness/education programs through a variety of methods and potential policy changes to increase/mandate commercial recycling.

There are significant hurdles to achieving a 70 plus percent recycling rate including a depressed recycling market, cross-contamination of single-stream recyclables, capital costs for implementing programs and the current economic practices and policies of foreign market end users of bulk recyclable materials. Without "new" recycle methods and materials (or a changing of rules as to what counts as recycling), it will be extremely difficult for counties such as Duval that rely more on traditional recycling for the majority of its credits to reach the state's ultimate recycling goals. Duval County has identified several suggestions for FDEP to consider that may be a benefit to all counties in increasing their recycling percentages. It is also suggested FDEP review if these current interim recycling goals are realistically and economically achievable for the majority of counties which do not engage in trash incineration and, in doing so, examine reported per capita waste generation for yard trash and C&D debris to ensure some consistency and accuracy. Duval County will continue to look at ways of providing an efficient and cost-effective solid waste management system that includes an emphasis on recycling.

Escambia County



Patrick T. Johnson, Director
Waste Services Department

Escambia County Recycling

On August 12, 2019 Escambia County Waste Services Department received notification from the Florida Department of Environmental Protection (FDEP) concerning the interim recycling goal of 70% by 2018. It is understood FDEP may request from counties who fail to meet interim goals a plan to expand recycling within their jurisdictions. Escambia County received 44% recycling rate. During this period our economy improved resulting in more waste generation however, recycling commodity markets declined resulting in many recyclables being landfilled. Consequently, more waste generated and less recycled.

Upon review of the data provided in the FDEP's 2018 Annual Report, 63 out of 67 counties did not meet the interim goal. Additionally, far less counties met the goal with respect to traditional methods; i.e. no large waste to energy facility.

Based on interviews conducted with counties which have been successful obtaining interim goals, it appears there is no "one size fits all" scenario for success. Successful programs utilize a variety of approaches.

Escambia County's recycling programs are volunteer and include the following:

- Residential/Commercial collection
- Yard Waste Composting
- Yard Waste grinding/screening
- Vegetation grinding
- Materials recovery facility (MRF)
- E-waste recycling
- Waste-to-energy
- Concrete crushing
- Ten residential drop-off centers
- Waste oil recovery
- Oyster shell collection
- Organic waste screening
- Re-blended paint

- Scrap metal
- Contracted recyclables collection for County owned facilities
- Various large retail recyclers e.g. Walmart, Publix, etc.
- Battery recycling

Large volumes of Construction and Demolition Debris (CDD) including land clearing debris continue to be landfilled primarily due to inexpensive disposal options.

CDD, multi-unit dwelling and vegetation recycling are areas for improvement for Escambia County. Compared to Escambia County, counties with higher CDD, multi-unit and vegetation recycling rates typically have mandatory recycling programs, large waste incinerators, higher disposal rates and/or a combination of each.

Escambia County has invested significant time and money to pursue technology to improve recycling. Projects were deemed cost prohibited due to the risk and high cost to taxpayers.

Since 2017, one local commercial processor closed and the City of Pensacola closed two Recycling Drop Off sites. In February 2018, a proposal was made to Pensacola Naval Air Station for recycling collection and processing. To date, no response has been received. Residential Recycling Drop Off Sites were patrolled after hours to inform/educate citizens and curb illegal dumping with limited success.

Locally, public health/safety, investment in human capital, roads/bridges, sewer and storm water management have been major concerns. The existing waste management portfolio could be stronger; however, there has been and continues to be a significant public investment to divert waste from traditional landfilling.

As requested, please accept the following as it pertains to Escambia County:

- **Summary of the services and materials for which you offer recycling such as newspaper, aluminum cans, steel cans, glass, plastic bottles, cardboard, office paper and yard trash;**

Volunteer residential curbside collection of recyclables is offered in the incorporated and unincorporated areas as well as ten Drop Off Centers strategically located throughout the county.

These materials are typically processed through one of three MRFs. Additionally, residential yard trash is collected curbside and composted or beneficially reused.

• Analysis of the percentage of the county’s MSW generated by the commercial, multifamily, and residential single family sectors;

For Escambia County, the percentage of MSW generated from the commercial sector is approximately 52%, MSW generated from residential sector approximately 30%, MSW from multifamily is approximately 18%.

• Analysis of any existing recycling programs for the commercial and multifamily sectors, including estimated customer participation rates and recycling rates for each of those sectors;

Existing privately operated recycling programs are economically driven. In addition to typical scrap processors, Emerald Coast Utilities Authority (ECUA) offers recycling for the commercial sector which accepts a large menu of items processed at a publicly owned/operated MRF. Private Commercial participation rates are minimum. Participation and recycling rates are as follows:

- Estimated customer participation rate for commercial sector is approximately 6%. Data required for this estimate extremely difficult to obtain from the private sector.
- Estimated customer participation rate for multifamily sector is approximately .3%.
- Estimated customer recycling rate for commercial sector is approximately 73%.
- Estimated customer recycling rate for multifamily sector is approximately 7%

• Description of the county’s implementation, including any planned changes for your program for recycling construction and demolition debris;

No changes are currently planned. Due to the low cost of CDD disposal in our region, processing appears not economically viable. County Demolition permitting criteria is being evaluated to consider criteria for contractors to report material recycled.

• Description of efforts or opportunities to encourage recycling of yard trash, and other organic materials or mechanically treated solid waste, into compost or mulch that may be made available for agricultural and other acceptable uses;

Currently there are three vegetation processing operations and one organic materials processing in place. Escambia County has permitted LCD disposal facilities with inexpensive disposal rates. Low disposal rates are often much less expensive than vegetative processing costs.

• Strategy (including general time frames) for expanding your county's recycling programs, or for creating new programs if needed, as part of your county's efforts to achieve the statewide recycling goals set forth in s. 403.706(2), F.S.;

Strategic goals to be implemented calendar years 2018/19:

- Goal is to maintain and improve existing programs

• Discussion of any additional steps, initiatives and anticipated challenges that are critical to implementing your strategies to achieve the next interim recycling goal of 70 percent in 2018, and ultimately statewide goal of 75 percent by the end of 2020.

Significant challenges critical to achieving the recycling goal are:

- Obtaining data from private sector operations that is typically deemed proprietary by the companies
- With limited staff, it is very difficult to conduct labor intensive research efforts for new waste diversion activities in our community with a result of very low increases in the recycling rate
- Based on informal rate surveys of CDD processors in Florida, it is apparent CDD landfilling in this region is much less expensive than processing. Also, there has been significant private investment made into a permitted, unopened CDD landfill located in Escambia County
- The requirement that all wastes need to be accounted for in the County tonnage, yet certain wastes are excluded from non-certified recycling numbers based on origin (e.g. bio solids mixed with compost)
- Unstable market for sale of commodities

- The current recycling credit calculation method appears to not allow credit for positive impacts to reducing carbon footprint resulting from recycling

On behalf of the Escambia County Waste Services Department, I would like to thank FDEP and staff who have been very helpful assisting Escambia County along with other counties, through education and outreach activities. Their commitment and dedication to share best management practices and promote recycling across the state have served us well. Thank you and keep up the good work.

Regards,

Patrick Johnson, Waste Services Department

Flagler County

September 5, 2019

Flagler County Recycling Plan

Prepared by: Tishia Peterson

Currently Flagler County has a two part recycling program. Part one is our residential curbside collection which includes yard waste and is offered to any county resident that has trash collection services. Part two is our community drop off locations.

The recycled materials collected include: Newspaper, aluminum cans, plastic bottles, steel cans, corrugated boxes, office paper, yard trash, other plastics, ferrous and non-ferrous metals, white goods, other paper, textiles, C&D debris and tires.

Flagler County's generated 2018 MSW is:

Residential Single Family: 45%

Residential Multi Family: 30%

Commercial: 25%

Current efforts in Flagler County are focused on residential recycling. 51% of our residents utilize curbside recycling services and 16% use drop off locations. All recycling in Flagler County is completely voluntary. C&D is picked up by our contracted solid waste collector and transported to the nearest transfer station located out of county, where it is sorted and recycled. Also, residents can personally take C&D material to any transfer station location of their choice to dispose of it at their convenience.

Commercial businesses have the choice of using a dumpster at their place of business for recycling if they choose to recycle, which is also collected by our contracted solid waste collector. Yard waste is also picked up by them as well, then taken to an in-county location where it is turned into mulch and reused for various projects.

The goal of Flagler County would be to meet the recycling percentages in the time frame set by the legislature or work as diligently as possible to reach that goal in a timely manner. While keeping in mind our residents, and the effort to keep the financial impact on them very minimal as we try to achieve our recycling goals.

To achieve this goal, and to get our residents recycling more I have reached out to our contracted solid waste collector and together we agreed that more recycling education is essential to meet that goal. Our contracted solid waste collector is currently working on a recycling book that will be distributed to our residents in hopes of educating them

on the benefits of recycling, recycling particulars and the services available to them in our community.

Even with more education on recycling, we feel that without a mandatory recycling program within our county it will be difficult to obtain the state goal of 75% in 2020.

If you have any questions about our steps and/or goals please feel free to call me or my director.

Thank you,

Hernando County



DEPARTMENT OF SOLID WASTE

SOLID WASTE ♦ RECYCLING ♦ SW CODE ENFORCEMENT ♦ FINANCE ♦ HOUSEHOLD HAZARDOUS WASTE

14450 LANDFILL RD ♦ BROOKSVILLE, FLORIDA 34614

P 352.754.4112 ♦ F 352.754.4118 ♦ W www.HernandoCounty.us

September 6, 2019

Jennifer L. Simmons
Florida Department of Environmental Protection
2600 Blair Stone Road MS 4550
Tallahassee, Florida 32399-2400

Re: Hernando County Solid Waste and Recycling
Recycling plan

Dear Ms. Simmons:

Hernando County continues to maintain a two-part approach to recycling; a residential curbside collection program and community drop off containers.

The curbside collection program is offered at no additional charge to any county resident that has curbside trash service. The curbside program includes one day per week collection of dual stream materials and one day per week collection of yard waste. The dual stream collection includes paper products, paperboard, white paper, newspaper, corrugated cardboard, plastics 1 through 7, tin cans, and aluminum cans.

The community drop-off containers serve both residential customers and commercial users that do not have recycling collection services or have larger quantities of material. The materials collected include paper products, paperboard, white paper, newspaper, corrugated cardboard, plastics 1 through 7, tin cans, and aluminum cans. The drop-off program also includes glass and yard waste at select locations.

The County also provides drop off centers for metal, tires, paint That are also reused or recycled.

The County continues a program to educate residents about home composting. Residents who take the composting course receive a free home composting unit.

According to the information submitted by Hernando County for the 2018 annual solid waste management report the percentages are below (data is in tons), These numbers include material landfilled (lf) and recycled (r). The commercial recycling tonnage includes categories like tires, Construction & Demolition debris, m Miscellaneous, textiles, yard trash, and others that cannot be linked to curbside collection.

Table with 5 columns: Category, Tons, Percentage, Landfilled (lf), Recycled (r). Rows include Single family MSW, Multifamily MSW, Commercial MSW, and County total MSW.


Hernando County has worked with Republic Services, the local residential hauler, to increase single family curbside recycling. The curbside collection program has grown from four full time routes in 2015 to seven in 2019. Currently, Republic is evaluating using a new split body collection vehicle that will offer more cargo space to meet the growing needs of residents. The first vehicle of this kind was put on the road in Hernando County in August 2019 and is expected to be more efficient and allow for continued growth in curbside recycling.

In April 2020, the current contract for recycle processing will expire. The County is in the process of receiving bids for the new processing contract and are using the opportunity to explore adding new recycled materials. Based on a 2016 waste composition study two potential waste streams were added to the upcoming bid. Those materials are construction and demolition debris and mattresses. The County will evaluate the feasibility of adding them based on the pricing information submitted.

The County is also in the process of developing a bio-solids/yard waste composting operation to be located at the Northwest Landfill. Material produced by the composting operation will be offered for sale bagged or for bulk pick-up.

The goal of the County is to work as diligently as possible to produce positive results in a timely fashion. The county is committed to using a mix of existing and emerging methods that are well suited to our community, while minimizing the financial impact to our citizens. To achieve this, our recycling coordinator has recently been named the Chairperson for Recycle Florida Today (RFT), where ideas for best practices and emerging technologies are shared throughout the State. His participation in RFT will help bring the best ideas and opportunities to Hernando County, while also helping to increase recycling state-wide.

Sincerely,


Scott Harper
Solid Waste Services Manager
Hernando County

Cc: Gordon Onderdonk
Carmen Bruno

Highlands County



HIGHLANDS COUNTY

BOARD OF COUNTY COMMISSIONERS

SOLID WASTE DEPARTMENT

September 13, 2019

Tim Baer, P.G., Director
Division of Waste Management
Florida Department of Environmental Protection
2600 Blair Stone Road
MS #4500
Tallahassee, FL 32399-2400

RE: HIGHLANDS COUNTY RECYCLING PROGRAM PLAN

Dear Mr. Baer:

The following information is submitted in response to your memorandum dated August 12, 2019 requesting Highlands County's future recycling program plans in accordance with Florida Statutes Section 403.706(2)(d).

Background and Regulations

In 2008, the Florida Legislature set a statewide municipal solid waste (MSW) recycling goal of 75% by the year 2020. In 2010, the legislature further directed that the goal be primarily applied to counties with a population of greater than 100,000 with interim goals as follows:

Calendar Year Interim Recycling Goal

2012 -	40%
2014 -	60%
2016 -	70%
2018 -	70%
2020 -	75%

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Highlands County just within the last couple years exceeded the 100,000-population threshold thereby requiring the county to meet the interim recycling goals. Highlands County did not meet the 2018 recycling goal.

This report is being submitted to satisfy the requirements of Florida Statutes Sections 403.706(2)(b), 403.706(2)(d), and 403.706(2)(e) as follows:

403.706 (2)(b) F.S.: Directs that counties implement a program for recycling construction and demolition debris as part of their efforts to attain the recycling goals noted above.

403.706(2)(d) F.S.: States that if a county does not achieve an interim recycling goal, the FDEP “may direct the county to develop a plan to expand recycling programs to existing commercial and multifamily dwellings, including, but not limited to, apartment complexes.”

403.706(2)(e) F.S.: States that if the State does not achieve an interim recycling goal, the FDEP will provide a report to the President of the Senate and the Speaker of the House of Representatives. The report shall identify those additional programs or statutory changes needed to achieve the recycling goals.

Summary of Recycling Services and Materials

Single Stream Recycling Program

Highlands County approved a new contract with Waste Connections for waste collection and disposal services in June, 2016 and implemented as part of that service a curbside single stream recycling program in April, 2017. That program offers recycling of aluminum and steel cans, mixed paper, cardboard and plastic containers #1-7. Each resident was provided with a maximum 65 gallons recycling can as part of the curbside recycling collection program which is offered as part of the annual non-advalorem assessment for curbside garbage service to approximately 37,000 single and multifamily residences in the unincorporated areas of Highlands County. The curbside program includes one day per week garbage collection, one day per week collection of single stream recycling materials and one once a week every alternating week collection of yard waste and bulk waste. As part of the solid waste and recyclable materials collection contract, the contractor, Waste Connections, constructed a recycling transfer facility (RTF) that is owned and operated by the contractor at the Highlands County Solid Waste Management Center (HCSWMC). The contractor transports and dumps the single stream recyclables to the RTF where they are loaded into live bottom trailers that transport the materials to processing centers in either St. Petersburg or Miami, Florida.

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Prior to the implementation of the single stream recycling program the county had recycling drop off sites located throughout the county where roll-off containers for cardboard, plastic bottles, aluminum and steel cans, mixed paper and glass were provided for voluntary recycling. These containers when full were transported to the Highlands County Recycling Center where the materials were sorted, baled, and loaded in semi-trailers that were picked up by commodity brokers. Clean glass was crushed and used as alternative cover on the County's C & D landfill due to the restrictive market for glass in Florida that returned no revenue. The county also had roll-off containers that they would set at various commercial business locations throughout the county at no cost to the business where businesses could recycle only cardboard. The County would pick up the containers when the customer called for a pick-up and would process, sort, bale and load the baled cardboard into semi-trailers that were picked up by a commodity broker. When the curbside single stream recycling collection program was implemented in 2017 the County removed all the residential drop off containers from throughout the county, so the residents would focus on using the curbside collection program and eliminate the need for the county to operate their own material processing facility at the recycling center. Closing of the material processing center also included the removal of all the commercial cardboard recycling containers throughout the county and created an open market for commercial cardboard recycling vendors within the County. Businesses that were receiving a free service from the county now do not want to pay a vendor to recycle their cardboard especially with drastic drops in material market value that requires the vendors to charge the business for setting a bin, transporting the material to their processing centers and processing. Commercial businesses have found it cheaper to just throw the cardboard in the trash than pay to have it recycled.

Approximately 24% of Highlands County's population is located within the three (3) municipalities, City of Avon Park, City of Sebring, and Town of Lake Placid, located within the county. Each of these municipalities are not serviced by the County's contracted hauler and instead have their own garbage collection departments. None of the municipalities have a recycling program or have discontinued their recycling programs due to cost and poor revenue markets for the recyclable materials. Attempts have been made by the County and their contracted hauler to work out agreements with the municipalities, but the cities want to maintain their own garbage collection departments and want the County's contracted hauler to pick up just recycling or let them take their recycling to the RTF owned and operated by Waste Connections. This is uneconomical to Waste Connections due to the cost to transport and process the materials and the low market value and the cost to the municipalities for Waste Connection to take is more than the municipalities want to pay. This has led to zero participation by the municipalities in recycling as well as helping to increase the County's recycling rate.

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County Government Facility and School Recycling

As part of the County's contract with Waste Connections, enclosed roll-off containers were placed at county government facilities and all schools, colleges and school board administration offices in the county for the collections of same recyclable materials collected in the County's curbside single stream recycling program. When the containers are full the contractor hauls the materials to the RTF where they are mixed with other recycled materials.

Yard Waste Recycling

In addition to the single stream recycling program yard waste in the unincorporated area of the County is picked up once every other week and brought to the HCSWMC where it is ground and recycled by mixing it in a 50/50 ratio with sand to produce a blend material that is used as daily cover in the County's Class I and C & D landfills. Ground mulch is also available at no charge to residents to use on their property.

C & D recycling

The County's construction and demolition debris recycling program includes taking clean concrete, concrete blocks, bricks, tile, asphalt and shingles at no cost and recycling those materials by grinding and re-purposing them for use as alternative cover and for maintenance of landfill roads. Scrap ferrous and non-ferrous metals from the MSW and construction and demolition materials are also recycled and taken to a scrap metal dealer.

Tire Recycling

As part of the curbside collection service for each residence in the unincorporated area of the county each residence is entitled to have up to six (6) tires collected at no additional cost and residents can bring tires up to 20" radius to the HCSWMC at no cost. All tires are shipped out and ground by a contractor and returned to the landfill to be reused as stabilization of landfill roads and dump areas of the landfill. The ground tires are also used as alternative to stone as backfill around leachate and gas collection piping within the landfill. To prevent illegal dumping of tires the county has held several tire-buy back events to try and get residents to collect tires that have been illegally dumped or prevent tires from being illegally dumped. The tire-buy backs are for residents only and allow unlimited loads of up to 25 tires per load to be brought to the landfill the day of the event in return for a payment per tire. The incentive is to get the public to help clean up illegally dumped tires in the community and reduce the cost of the County's Road and Bridge department from having to clean up the tires.

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Asphalt Recycling

Highlands County is also the only county in the state of Florida that owns and operates their own Asphalt plant that is located at the HCSWMC. The county uses millings and reclaimed asphalt from within the county and processes the materials to be used to produce asphalt for the construction and maintenance of county roads.

Other Recycling

Highlands County also offers several other countywide voluntary programs to encourage recycling:

- **Used Oil:** Residents (not businesses) may drop off used oil and other automobile fluids at the Highlands County Recycling Center at 6000 Skipper Road, Sebring.
- **Residential Electronics Recycling:** Residential Electronics are accepted at the Highlands County Recycling Center at 6000 Skipper Road, Sebring free of charge from residential households. The electronics recycling program is available to all County residents for E-scrap generated in a home.
- **White Goods Recycling:** White goods (appliances) are accepted at the HCSWMC for recycling. Properly prepared white goods are recycled by a scrap metal dealer.
- **Battery Recycling:** Residents may drop off lead acid batteries and rechargeable batteries at the Highlands County Recycling Center at 6000 Skipper Road, Sebring free of charge. Lead acid batteries are recycled by a battery recycling contractor for their non-ferrous metal content and the rechargeable batteries are sorted, packaged and shipped to a private company for reuse of the metals and various chemicals.
- **Used Cooking Oil Recycling:** Residents may drop off used cooking (vegetable oil) at the Highlands County Recycling Center at 6000 Skipper Road, Sebring that is recycled by a private company converting it into biodiesel.

Analysis of MSW by Sector

The tons of MSW generated by the various sectors delineated by FDEP terminology are calculated using FDEP certified and noncertified tons listed in the 2018 annual solid waste management report for Highlands County.

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MSW Figures for 2018

Generator Type	MSW Collected Tons	MSW Percent Tons
Residential Single Family	68,158	52%
Residential Multi-Family	11,674	9%
Commercial	51,671	39%
Total Tons	131,503	100%

Analysis of Recycling Programs for Commercial and Multifamily

Currently, multifamily residences shall receive residential service or Commercial collection service. A customer occupying a Multi-family residence shall receive residential collection service for garbage and recycling using cans if the customer pays the county's assessment for the multi-family unit. If the multi-family unit is larger and is serviced by a dumpster they are considered to be receiving commercial collection service for garbage which is arranged between the commercial customer and the County's hauling contractor. Commercial customers shall enter into a contract with the contractor and pay the County's established rates with the contractor for their collection service. The contractor shall offer to provide recyclable materials collection service but at the County's established rates for that recyclable materials collection service. Since recycling is not mandatory and there is a charge for this service most multi-family residences, apartments and condo management companies receiving commercial collection are reluctant to add recycling costs to already high rents and condo fees for the recycling collection service. There are also several challenges to recycle in the multi-family sector such as messy disposal areas that can cause litter and varmint issues, confusion as to what to be recycled, and insufficient space for recycling containers.

Highlands County does not currently have a mandatory Commercial recycling ordinance or a Commercial recycling program in place. When the curbside single stream recycling collection program was implemented in 2017 the County closed its material processing center, which included the removal of all free service commercial cardboard recycling containers set at businesses throughout the county and created an open market for commercial cardboard recycling vendors within the County. The County's contracted hauler reached out to those businesses that were receiving the free service from the County for cardboard recycling to see if they still wanted to receive the service but now at a cost. Most of the businesses receiving the free service from the county did not want to pay a vendor to recycle their cardboard. The current market requires the vendors to charge the business high costs for setting a bin, transporting the material to their processing centers and processing in order to cover their costs due to the current value

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of materials and contamination. Commercial businesses have found it cheaper to just throw the cardboard in the trash than pay to have it recycled.

Description of Implementation and Any Planned Changes for C & D Recycling

Highlands County does not have any immediate plans for any type of ordinance mandate for recycling C & D debris. The county's current C & D recycling program consists mainly of taking clean concrete, concrete blocks, bricks, tile, asphalt and shingles at no cost and recycling those materials by grinding and re-purposing them for use as alternative cover and construction and maintenance of landfill roads. The County tries to sort scrap ferrous and non-ferrous metals from the MSW and construction and demolition materials and takes the materials to a scrap metal dealer for recycling. The majority of C & D material that comes to the HCSWMC is disposed of in the C & D landfill. The county will try and capture more ferrous and non-ferrous metals from C & D materials disposed of in the C & D landfill. On a tonnage basis, C & D debris offers one of the greatest opportunities to increase the County's recycling rate. Highlands County will investigate the cost towards equipment that can sort and separate certain C & D materials to determine if it is an economically feasible investment to generate additional C & D recycling. However, the equipment and associated maintenance costs can be a costly investment and may not be able to be supported within the landfill budget. The County plans to research the possibility of excavating the C & D landfill to recycle metal, wood and other products and reuse the dirt for landfill cover. This could provide both renewed disposal space as well as an increase in the amount of C & D materials recycled. As part of the research process additional options to increase material recovery from the C & D debris stream will be evaluated.

Description of Yard Debris and Other Organic Material Recycling

Yard waste in the unincorporated area of the County is picked up once every other week and brought to the HCSWMC where it is ground and recycled by mixing it in a 50/50 ratio with sand to produce a blend material that is used as daily cover and to stabilize side slopes on the County's Class I and C & D landfills. Highlands County also captures an abundant amount of yard waste from landscaping vendors which is also ground to be used as blend material. The ground mulch is also available at no charge to residents to use on their property.

Strategy for Expanding County's Recycling Program

A comprehensive, ongoing public education and outreach campaign is an essential component of an effective recycling program. The main elements of an effective public education campaign include pre-planning, targeting the audience and stakeholders, messaging, utilizing technologies such as social media, developing public relations and media utilization plans and expanding the community involvement and visibility.

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Residents cannot fully participate in the program if they are not aware of how to participate and the types of materials accepted. The message needs to be consistent including what materials are accepted and explain how they need to be separated to achieve a higher recycling rate and minimize contamination. Developing a comprehensive public communication and outreach campaign is crucial to properly educate the public. Highlands County does not have a local television media market therefore the county's campaign needs to focus on radio, newspaper, social media, advertising, billboards, town hall public meetings, direct mailers and events. Highlands County's website is currently being updated to be more user friendly, informative and ADA compliant.

The county has plans to work together with the hauling contractor to increase public education awareness campaigns directed at reducing contamination and focus on a specific message aimed at educating the public on the materials that can be recycled and eliminating plastic bags from the waste stream. The following public education will be provided to the county by contractor:

- Locations will be identified at parks, other public facilities and at special events where the contractor will set up recycling carts and "Drop-off containers" for recyclables.
- An outreach program will be implemented in the county school system where the contractor will provide elementary, middle and high school students with the benefits of a recycling program at school and at home and will supply a recycling representative at the schools and Chamber of Commerce events at least ten (10) times per year.
- An annual recycling notice will be published in all local newspapers describing the available recycling program. The notice shall contain definitions of the materials that may be collected and the schedule for collection of recyclables.
- The contractor will produce and distribute a magnet to the residents which describes materials collected and the schedule for collection.
- Contractor will provide the County with monthly recycling tips to be included on the County's website.

In the fiscal year beginning October, 2019 Highlands county will be adding an additional Public Information Officer position that will be involved with public education and increasing the number of public events we can attend to help increase the awareness of proper recycling.

County staff will be researching the county for additional non-certified recycling centers and businesses to capture their recycling materials as recycling credits as well as those companies that have no waste diversion activities. However, this process, may prove to be uneconomical to conduct since it involves a very labor intensive and time consuming

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search throughout the county that must be conducted with limited staff and often results in a very low increase in the recycling rate, not to mention that obtaining data from private sector operations is typically deemed proprietary by the companies and will not be released.

Highlands county will continue discussions with the local municipalities to encourage them to implement recycling programs to capture recycling tonnages from 25% of the county's population that is currently being missed.

Discussions of Additional Steps, Challenges, and Strategies

Highlands County's recent transition from a small county to a county above the 100,000-population threshold has created many new demands and challenges that the county did not have to face before. Implementing strategies to meet these new demands and challenges all come with additional economic costs that the county must carefully research to determine which new programs would bring the highest increase and most immediate results in the county's recycling rate versus the monetary investment in new programs.

There are several challenges that the County faces in terms of reaching the 75% state recycling goal, including:

- Highlands County's recent transition from a recycling program that consisted of voluntary community drop-off containers for separated recyclable materials to a curbside single stream residential recycling program in 2017 has greatly increased the traditional residential recycling rate for the county. The effectiveness of the program faces many challenges due to the high percentage of contamination that is difficult to reduce and more difficult to meet requirements of foreign markets setting standards for contamination that many material processors are unable to attain and has forced processors to sell materials for a much lower value. The higher costs for processing and lower return for commodities has changed recycling programs and has forced contracted haulers and processors to eliminate cost sharing programs with counties and pass the increase in costs off to the county's and its residents. Programs that generated revenue are now costing contractors to maintain the same programs and most residents do not want to pay additional assessments or fees to maintain recycling programs. Many counties are facing serious issues with their recycling haulers and processors based on new contamination standards, current markets and economies that has led towards discussions of discontinuing or temporarily stopping recycling programs.

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- Recycling markets are depressed due to the economic policies of foreign markets that have driven up the costs for processing to reduce contamination to a level that would return a more profitable value for materials.
- Recycling in Florida, the United States and the world has changed significantly over the last 10 years. Many of the challenges the County currently faces with recycling have occurred as a result of changes in collection methods, shifts in the recycling markets, stricter contamination requirements and new and lighter weight packaging. The improvement, reduction and elimination of measurable recycling packaging materials may be beneficial in some ways but is detrimental to the goal of reaching the statewide recycling goal of 75% by the end of 2020 since it reduces the amount and weight of measurable recyclable commodities. These factors make achieving the 75% goal challenging and quite simply unattainable for many counties in the current market.
- The County does not own or operate the Recycling Transfer Facility so has little control over operations and decisions by the hauling contractor to receive recyclables from commercial customers, the local municipalities and a portion of the county's multi-family residences.
- The County does not have a waste-to-energy facility nor the capital to invest in such infrastructure.
- Most of the county's C & D debris is disposed of in the County owned C & D landfill at the HCSWMC and even though materials such as clean concrete, bricks, concrete blocks, tile, asphalt and shingles are recycled from disposed debris materials there are many materials that are currently not being recycled or cannot be economically removed without major changes in C & D material separation and disposal policies and ordinances in the county and substantial costs in the investment of equipment and machinery to perform more thorough removal of materials from the C & D landfill.
- The depressed recycling markets and changes in economic policies and foreign markets have caused significant increases in the cost for implementing recycling programs has led to the refusal of the municipalities in Highlands County, that make up 24 % of the County's population, to re-start or implement new recycling programs that would add to the County's recycling rate.

There are significant hurdles to achieving a 75% recycling rate including a depressed market, cross-contamination of single stream recyclables, capital costs for implementing programs, and the current economic practices and policies of foreign markets and end users of recyclable materials. Without additional funding programs, development of new recycling methods and materials, and changes in the markets, foreign policies and standards it will be extremely difficult if not impossible for counties such as Highlands to reach the state's ultimate recycling goals.

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Highlands County would like to see the state accept that the goals established by Florida Statute 403.706 are unattainable and that the population threshold for counties that must meet the goals be increased or that the recycling percentage be re-evaluated and lowered to a more attainable goal of 50%. Smaller counties such as Highlands do not have the funding or personnel to provide a recycling program that's capable of achieving the 75% recycling rate goal without making both residential and commercial recycling mandatory and increasing solid waste assessments in the unincorporated areas of the county to fund the programs necessary to achieve that goal.

Highlands County's will be diligent in their efforts to produce positive increases in their recycling rate in a timely fashion. The County is committed and will continue to look at improving existing recycling methods as well as introducing new methods of providing an efficient and cost-effective solid waste management system that has the best chance at attaining the 75% recycling goal while minimizing the fiscal impact to our citizens.

If you have any questions, please contact me at (863) 402-6877.

Sincerely,



Clinton Howerton, Jr. P.E.
County Engineer

Cc: Randy Vosburg, County Administrator
Tasha Morgan, Assistant County Administrator

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Hillsborough County



**Hillsborough
County Florida**

SOLID WASTE MANAGEMENT

PO Box 1110 Tampa, FL 33601-1110
813-272-5680

October 1, 2019

Karen Moore
Environmental Administrator
Florida Department of Environmental Protection
Division of Waste Management
2600 Blair Stone Road, MS4550
Tallahassee, FL 32399-2400

**BOARD OF COUNTY
COMMISSIONERS**

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Pat Kemp
Lesley "Les" Miller, Jr.
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Kimberly Overman
Mariella Smith
Stacy R. White

COUNTY ADMINISTRATOR

Michael S. Merrill

COUNTY ATTORNEY

Christine M. Beck

INTERNAL AUDITOR

Peggy Caskey

**INFRASTRUCTURE SERVICES
ADMINISTRATOR**

John Lyons

Florida Waste Registration & Recycling Program,

Hillsborough County is submitting this correspondence in response to the Florida Department of Environmental Protection's request for a recycling plan pursuant to *Florida Statutes Section 403.706(2)(d)* in light of the fact the County only achieved a recycling rate of 59% in 2018, which did not meet the State's interim goal of 70%. In 2018, Hillsborough County attained a traditional recycling rate of 44% and received an additional 15% in renewable energy recycling credits contributed from Hillsborough County's Falkenburg Resource Recovery Facility and the City of Tampa's McKay Bay Waste to Energy Facility.

Hillsborough County offers a variety of comprehensive recycling services to approximately 293,000 households within our statutorily defined service area as part of an integrated solid waste management system. Households currently receive once a week curbside collection of single-stream recyclables, once a week curbside collection of yard trash, and twice a week curbside collection of municipal solid waste. There are two waste to energy facilities located within the County which also have metals recovery systems which help contribute to the County's overall recycling rate. The County also has a contract in place for the recycling of yard trash collected curbside and via three yard waste processing facilities operated by the County.

The County also operates five Community Collection Centers and three Household Hazardous Waste Collection sites in order to allow convenient recycling and disposal of materials not collected in the curbside recycling program such as scrap metals, electronics, paint, and bulky items. Four of the Community Collection Centers also offer drop off recycling containers to provide a recycling option for residents who live in multi-family apartments or condos without access to curbside recycling. The curbside and drop off recycling collection programs accept the following targeted materials: newspaper, office paper, mixed paper, paperboard, aluminum and steel cans, glass containers, plastic bottles and containers, cardboard, and cartons.

The County also requests annual recycling tonnage data from the three municipalities of the City of Tampa, City of Plant City, and the City of Temple Terrace and contacts private companies, yard trash processing facilities, and construction and demolition sites located within the County in order to incorporate recycling tonnage data into the County's overall solid waste management report towards achieving the State's 75% recycling goal.

Due to challenges currently facing recycling, Hillsborough County is focused on improving existing recycling programs through implementing public education and outreach strategies designed to lower recycling contamination and ensure residents are informed about the importance of recycling correctly and proper disposal of household hazardous wastes.

In previous years when the recycled commodities markets were strong, Hillsborough County was able to make some revenue from the sale of collected recyclables, however due to the dramatic decline in the recycled commodities market the County is now forced to pay ever increasing costs for recycling processing. In July of 2019, Hillsborough County modified its current recycling processing and marketing contract at the repeated request of our contracted material recovery facility who was purportedly losing approximately \$175,000.00 a month processing recyclables on behalf of the County. The contract modification increased the recycling processing fee per ton from \$60.84 to \$80.00, which will cost the County in excess of \$140,000.00 a month on average for the duration of the processing agreement. The County does not anticipate receiving more favorable processing terms on the open market due to examples of recent recycling processing procurements conducted by other municipalities in Florida agreeing to recycling processing costs in excess of \$95.00 a ton.

Although Hillsborough County and our residents strongly value environmental stewardship and the role that waste reduction and recycling efforts play in achieving this goal, the reality of the current recycling commodities market will continue to require difficult decisions to be made as to the value of implementing any new recycling programs at this time in light of the fact that our residents will already be paying a higher cost to simply maintain the existing programs currently offered by the County. Hillsborough County would welcome efforts by the State Legislature and the Florida Department of Environmental Protection to attract more recycling end markets within the State to help build domestic demand and jobs within the industry and further assistance to municipalities with implementing statewide financial support to maintain and expand recycling programs.

Please feel free to contact me should you have any further questions about the current status of Hillsborough County's recycling programs.

Best Regards,



Travis S. Barnes, MPA, LEED AP

Recycling Coordinator

Public Utilities Department

P: (813) 209-3085

E: BarnesT@HillsboroughCounty.org

W: HCFLGov.net/Recycling

Hillsborough County

332 N. Falkenburg Road, Tampa, FL 33619

Indian River County

INDIAN RIVER COUNTY, FL RECYCLING PROGRAM PLAN September 2019



Submitted to:

Jennifer L. Simmons
**Permitting & Compliance Assistance
Program**
2600 Blair Stone Road
Tallahassee, FL 32399-2400
Jennifer.L.Simmons@dep.state.fl.us

Submitted by:

Indian River County
1325 74th Ave SW
Vero Beach FL 32968

Himanshu H. Mehta, P.E.
Managing Director
Solid Waste Disposal District
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Susan Flak
Recycling Education and Marketing Coordinator
Solid Waste Disposal District
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Section 1

Introduction

This document is submitted in response to the August 12, 2019 memorandum from Jennifer L. Simmons at the Department of Environmental Protection (DEP). As requested in the memorandum, Indian River County (County) did not reach the 70% interim recycling goal in 2018 and is therefore submitting a recycling plan to DEP to provide valuable information that can be incorporated into their strategic plan for the upcoming year. The plan provided herein summarizes the current recycling programs in the County, as well as opportunities and plans to expand our recycling programs as well as how we are addressing single stream contamination which is challenging our overall County recycling rate.

Section 2

Current Recycling Program

2.1 Summary of Recycling Services and Materials

Indian River County did not achieve the 70% recycling goal for 2018; however, our recycling rate increased in the past year, rising from 64% in 2017 to 66% in 2018.

Since October 2015, residential recyclables are collected in a carted single stream recycling program. Every resident was delivered a 64 gal. recycling cart. All recyclable materials are combined into one container and acceptable items include newspaper, office paper, cardboard, aluminum cans, steel cans, glass, and plastics #1-7 (with a few exceptions). The County does not accept Styrofoam, plastic bags/films, bottle caps or shredded paper in our curbside recycling program. All single-stream recyclables are shipped offsite and processed in Fort Pierce, FL at Tropical Recycling.

The County operates five Customer Convenient Centers (CCC) where residents can self-haul waste, yard trash, bulk waste, and recyclables. In addition to the recyclables collected curbside, the County also accepts tires, white goods/metals, household hazardous waste (HHW), expanded polystyrene, and electronic waste at the CCCs and the main landfill.

The various types of recyclables are managed as follows:

- Single-stream recyclables are delivered to the SWDD facility, and then transported and processed through a contract with Tropical Recycling.
- Waste tires received at the landfill and CCCs are stored in the waste tire storage area at the landfill. The County currently contracts with Liberty Tire to remove and process the tires.
- White goods and scrap metal are accepted at the landfill or removed from incoming waste loads. They are stored separately and, once the refrigerant has been removed, marketed to Trademark Metals for processing.
- Expanded polystyrene collected at the landfill and CCCs is processed at the landfill using a foam densifier acquired from RecycleTech through a state-funded innovative grant. Most recently, the condensed polystyrene ingots were sent to Ronson Recycling for recycling purposes.
- Household Hazardous Waste (HHW) & electronics (E-Waste) are accepted at the landfill and CCCs. A private vendor, US Ecology, is contracted to properly consolidate, package, and transfer HHW to a permitted out-of-county facility for recycling and disposal. US Ecology also operates a Small Quantity Generator program for small business waste generated within the County on a fee basis. Businesses are responsible for arranging transport and disposal services with US Ecology directly. A1 Assets is contracted to transfer and recycle the E-Waste.

- Used oil and oil filters are accepted at the landfill and CCCs. The County contracts with Cliff Berry, Inc. to remove and process them.
- Propane Tanks are accepted at the landfill and CCCs. The County contracts with Pargas to remove and process them.

The County and municipalities collect segregated yard trash from residents on a weekly basis. The County contracts with Mr. Mulch to provide yard waste services to create and recycle mulch. Some of this mulch is utilized as a 50/50 mix for landfill cover.

A large portion of Indian River County’s recycling rate is due to the recycling data from various C&D debris companies in the private sector. In contrast, 100% of the C&D material that came to the County landfill was disposed. Clean concrete is segregated from C&D at the landfill where about 75% of the clean concrete is continually stockpiled. The remaining percent is recycled as landfill road base material, which is utilized in and on the active site to facilitate various traffic patterns.

Section 2

Expanding the Recycling Program

2.1 Expanding Multi-family and Commercial Recycling Programs

At this time, the Indian River County Commission does not feel that a mandatory commercial recycling mandate is right for Indian River County. Instead, the County will continue to focus its efforts on visiting multi-family communities and commercial businesses.

We have initiated an extensive educational outreach program to multi-family communities to encourage the residents to recycle and to recycle right. This is accomplished through various community meetings and direct outreach to residents. Residents are given reusable bags to help them transport recyclables from their apartment/condos to the centralized recycling containers.

For commercial businesses, recycling pickup services are part of the open market and haulers are competing for customers. Our goal is to educate commercial business participants of the opportunities to “right size” and the subsequent potential for them to save money in the long run by recycling right. This intense program requires individual contact with each business as they all have their own unique obstacles. This year we have gotten 12 commercial businesses to commit to the recycling program and we continue to reach out to others on a regular basis.

2.2 Expanding School Recycling Programs

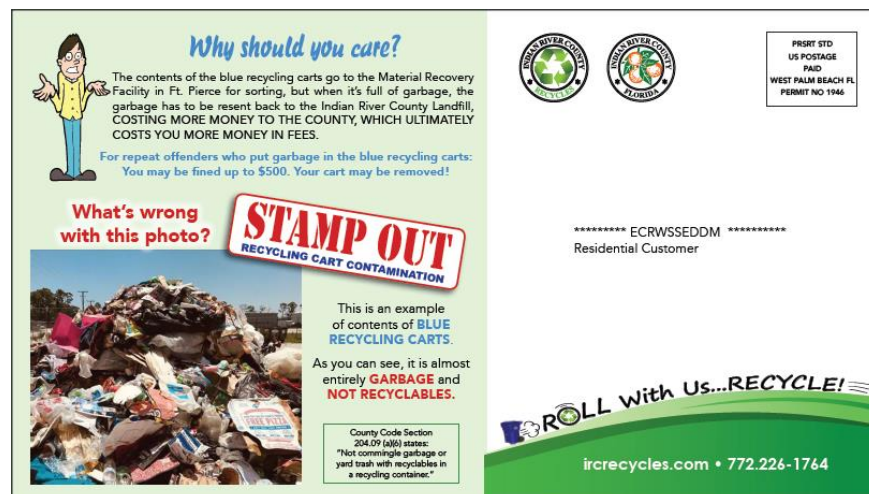
The County and the School District of Indian River County have partnered to establish a unified campus-wide recycling program at all of the schools. There were 18 facilities that were completed through 2018 and we will implement the remaining 7 facilities in October of 2019. The program provides a well-developed plan for staff and students, a robust cafeteria recycling program, and recycling containers in each of the classrooms. In August of 2019, SWDD received a grant of \$2500 from Waste Management with the end goal of establishing a similar recycling program in two of the Charter schools.

2.3 New Education Programs

The importance of education cannot be stressed enough. The purpose of the County's educational efforts are 3-fold: 1) to encourage recycling participation through positive and consistent messaging, 2) to direct residents where to go to get more information, and 3) to minimize contamination by making residents aware of what materials are acceptable and what is not. In addition to traditional print and radio advertisements, the County expanded its outreach efforts to include a poster at a local movie theatre and a 30 second video commercial aired on Comcast TV that would bring recycling information directly into residential homes.

The County's online presence has been amplified by updating the website, sending recycling messages in an online weekly newsletter, adding our events to online calendars, and running pop-up advertisements on the website for the Vero Beach Chamber of Commerce.

Educational efforts have continued this year to target single stream contamination and increase the overall quality and sustainability of the recycling program.



2.4 New Cooking Oil Program

In January 2019 the County expanded recycling efforts by implementing a used cooking oil campaign. Our goal was to divert grease contamination from the 335 lift stations throughout the County. In collaboration with Banyan Biofuels, this initiative was accomplished by providing 55 gallon drums at each of the five CCCs and the Main County Landfill for residents to safely deposit their used cooking oils. In addition, an extensive educational marketing campaign was put in to place to inform residents of the service. Once the oil is picked up by Banyan it is filtered and sold to a local company who makes renewable, sustainable biodiesel fuel.

Be a GREASE BUSTER!

Put GREASE Where It BELONGS!

Did You Know?

- Used cooking oil can clog sewer pipes and pollute our waterways.
- By recycling used cooking oils, area residents can reduce the amount of public dollars spent on cleanups.
- Fuel can be made from used cooking oil
- Your used cooking oil will be made into biodiesel, a renewable, sustainable fuel.

Just look for the symbol!

ROLL With Us...RECYCLE!

For more info visit www.ircrecycles.com or call 770-5112

WANTED: Your Leftover Cooking Oils!

Do your part, it's easy!

YES: Any type of cooking oil is accepted: cooking oils, frying oils, drippings, bacon fat.

NO: MOTOR OIL! Don't mix the oil with other fluids like soap!

*IRC Residents may now bring their household used cooking oil to one of the five Customer Convenience Centers or to the main landfill!
~5 Gallon Limit~

ROLL With Us...RECYCLE!

For more info visit www.ircrecycles.com or call 770-5112

2.5 New Plastic Film Recycling Program

In January of 2019, the Indian River County Solid Waste Disposal District (IRC SWDD) joined the statewide Wrap Action Recycling Program (WRAP) Campaign. The WRAP initiative aims to build greater public awareness and participation in plastic film packaging recycling at grocery stores and other retail locations, as well as reduce the amount of film packaging inappropriately placed in curbside recycling bins. In April of 2019, IRC SWDD placed loose film collection containers at all 5 of the CCCs and the Main County Landfill. We also started a marketing campaign by creating and generating tip cards to be distributed at the CCCs, all public events, and presentations. Marketing also included media outlets and other promotional items. Approximate marketing costs are about \$2,000. Data shows that in the first month over 20 bags or approximately 446 pounds of loose plastic film were collected. Data also shows that between July and August of 2019 approximately 3000 pounds of film was collected. The program has been extremely successful.

RECYCLE empty, clean & dry plastic bags & wraps

at one of the 5 Customer Convenience Centers or the Main Landfill.

PLEASE DO NOT BAG RECYCLABLES.

Plastic bags get entangled in the machinery at the sorting facility.

Thank you for your cooperation!

NOT in Curbside Recycling

Carryout Bags	Newspaper Bags	Product Wrap	Retail Bags	Bubble Wrap
Produce Bags	Bread Bags	Product Overwrap	Dry Cleaning Bags	Case Wrap

**NO Chip Bags • Frozen Food Bags
Rigid Plastics • Food Containers
Packing Peanuts**

ROLL With Us...RECYCLE!

For more info visit www.ircrecycles.com or call 770-5112

Section 4

Conclusion

The Indian River County Board of County Commissioners has stressed that all programs must be economically viable and in the best financial interest of the County. The Board feels that there are still opportunities to raise our recycling rate through traditional recycling methods and Indian River County will not pursue new renewable energy options or non-vegetative composting programs at this time. Instead, the County will continue its efforts to raise the recycling rates by discontinuing the stockpiling of vegetative waste, pursuing options to recycle our C&D material, and focusing on outreach and educational efforts to encourage voluntary participation in the recycling program. With the actions outlined above, we hope to see a continual rise in our overall recycling rate as we reach out to the residential and business sectors to implement recycling programs. Indian River County will continue to strive towards the 75% recycling goal by 2020; however, the economic feasibility of pursuing aggressive recycling options and costly technologies will continue to be a challenging factor in achieving this goal.

Lake County



September 16, 2019

Florida Department of Environmental Protection
Jennifer Simmons, Division of Waste Management
2600 Blainstone Road
Tallahassee, FL 32399-2400

RE: Lake County Recycling Plan 2019

Dear Ms. Simmons,

In response to the Departments August 12, 2019 request, please find attached the Lake County 2019 Recycling plan. It is our understanding that this information will be incorporated into the Department's report due to the legislature prior to the start of the 2020 session.

Please feel free to contact Danielle Spehar, Solid Waste Program Manager at 352-253-1670 or dspehar@lakecountyfl.gov or myself at 352-253-6006 or mhamilton@lakecountyfl.gov.

Sincerely,

Mary Hamilton
Chief of Operations

Attachment
cc: Danielle Spehar, Solid Waste Program Manager

PUBLIC WORKS/ENVIRONMENTAL SERVICES DIVISION
P.O. BOX 7800 • 323 N. SINCLAIR AVE., TAVARES, FL 32778 • P 352.253.6000 • F 352.253.6016
Board of County Commissioners • www.lakecountyfl.gov

TIMOTHY I. SULLIVAN
District 1

SEAN M. PARKS, AICP, QEP
District 2

WENDY R. BREEDEN
District 3

LESLIE CAMPIONE
District 4

JOSH BLAKE
District 5

LAKE COUNTY 2019 RECYCLING PROGRAM PLAN

Lake County is a political subdivision of the State of Florida that is over 938 square miles in area and contains 14 municipalities that are independent of the jurisdiction of the Board of County Commissioners (BCC). Additionally, the Constitutional offices of the School Board, Sheriff, Property Appraiser's & Tax Collector's offices are funded by the BCC, but operate independently.

According to the July 1, 2018 census, the population of Lake County was 356,495. As of August 30, 2019, there were 71,128 units assessed in unincorporated Lake County with an average of 2.53 persons/unit, which equates to a population of 179,954 (representing 50.4% of the total County population).

Historic Summary of services offered by Lake County Solid Waste:

1. Lake County entered into a 25 year commitment with the Waste to Energy (WTE) Facility in 1990, wherein all processable solid waste was required to be delivered for incineration. The County continued a basic recycling program, while meeting the WTE contractual requirements.
2. In 1993, Lake County established mandatory MSW disposal through Exclusive Franchised Haulers and offered recycling collection with 18 gallon bins. The recycling program collected only newsprint, plastic food containers, aluminum cans and clear glass.
3. In 2003, Lake County instituted Universal Collection throughout the unincorporated areas of the County offering weekly curbside collection of household MSW, recycling materials, yard waste along with on-call bulk furniture pick up. Collected recyclable materials consisted of all paper products, cardboard, all plastic containers with a recycling logo, aluminum, steel, tin cans, clear and colored glass containers.
4. In 2010, A Citizens Solid Waste Alternative Funding Task Force was established by the Board of County Commissioners to evaluate existing programs/options and make recommendations for future solid waste operations including; single stream recycling, recycling education, increase reuse of yard waste and mulching.
5. On October 6, 2014, Lake County instituted a once a week, automated curbside collection system with single stream recycling. Every unincorporated County resident was issued two rolling carts with the default size of 95 gallon for garbage and 65 gallon for recycling.

Summary of Materials Recycled:

- All paper / fiber products (junk mail, newsprint, magazines, corrugated cardboard, boxboard)
- All household plastic containers with a recycling symbol #1-7
- Aluminum containers
- Steel cans
- Tin cans
- All clear & colored glass

Analysis of MSW generated by commercial, multifamily and single family sectors:

Lake County only collects data for the unincorporated, residential, single-family units and the new program has not provided enough data for an accurate analysis.

Analysis of any existing recycling programs for commercial and multifamily sectors with participation rates & recycling rates:

This information is not gathered at this time.

Description of implementation of C&D recycling and any planned changes:

The Lake County Landfill Facility is no longer a multi-use facility. As of October 2016, the Class I, Incinerator ash and C&D disposal were placed into intermediate status and no longer accepted material. Yard Waste processing is still conducted with the mulched material hauled off at no cost to the County. This material is used for composting at a private company. The recycling collection of metals & other recyclable materials at intake are processed and/or disposed of according to EPA regulations. The County is currently reviewing its 20 year Master Plan and is pending Board approval before any implementations can be made.

Efforts to encourage yard trash, other organic waste and/or mechanically treated solid waste into compost or mulch for agricultural or other acceptable uses:

As described above, Yard waste is mulched and delivered to a privately operated compost facility.

Strategy (incl. timeframes) for expanding your county's recycling programs:

At this time, there are no plans to expand existing programs.

Discussion of any additional steps, initiatives and any anticipated challenges the county foresees to be critical to achieve the next interim goal, and ultimate statewide recycling goal of 75% by the end of 2020:

The County will look into methods of achieving a higher recycling rate with its Master Plan; however, there are a number of challenging factors that come into play. Including, but not limited to, those listed below:

- It appears the initial recycling rate set by the State Legislators is not an attainable goal considering the current state of the recycling industry and market conditions.
- As the environment of curbside collection has changed to an automated system, this has led to an increased contamination rate. Lake County averages about a 40% contamination rate for curbside recycling.
- The 14 municipalities manage their own waste collection and management program. Achieving a County-wide rate is challenging due to the County's lack of control over the municipalities waste streams as well as the commercial sector.
- The recycling rate for the County is also dependent on the private/commercial industry which is not required to provide information to obtain an accurate recycling rate.
- There are limits as to what is counted for towards our recycling rate and limited processing facilities. The limited facilities results in using the waste-to-energy facility (Covanta).
- There currently is no funding available to provide education for residents or employ a full-time recycling coordinator.

Leon County

Leon County Recycling Program Plan

This report has been prepared for the Florida Department of Environmental Protection on behalf of Leon County, in compliance with Section 403.706(d) of the Florida Statutes. It was submitted on August 12, 2019.

I. Summary of Recycling Services and Materials

Leon County (and the City of Tallahassee) offer single-stream recycling to all residents and businesses. Recyclable materials include paper, cardboard, aluminum cans, steel cans, glass, plastic bottles and containers. Yard waste is collected curbside by the City's and County's collector, Waste Pro, as are bulk items. Yard debris is mulched at the Leon County Solid Waste Facility. Leon County also offers Household Hazardous Waste collection at the Solid Waste Facility, where items such as batteries, light bulbs, electronics, paints, oils, and chemicals are accepted. Leon County also operates four Rural Waste Service Centers in strategic parts of the County. Unincorporated residents may drop off recycling, trash, bulky items, yard debris, and HHW at all rural waste sites. In 2019, the Leon County Board of County Commissioners made access and drop off to the rural waste sites free for unincorporated residents starting October 1st, 2019.

II. Analysis of MSW by sector

In 2018, 83% of the County's recycling tonnage was C&D, 3% was yard debris, and the remaining 14% tonnage was single-stream recycling from commercial and residential. Curbside single-stream tonnage only accounted for 3% of the overall tonnage, where 11% came from commercial recycling.

25% of MSW is residential, and 75% is from the commercial sector.

III. Analysis of Recycling Programs for Commercial and Multi-Family

Recycling is available for all commercial businesses and multi-family residents, in unincorporated Leon County and within the City of Tallahassee. In unincorporated Leon County, all recycling and MSW goes through Waste Pro. Commercial units must pay an additional fee for a recycling bin and service, but it is roughly half the cost of trash disposal. In the City of Tallahassee, the city operates commercial and multi-family recycling. Although the County and City have single-stream recycling, the City provides paper/cardboard-only bins for businesses that request them. The City also provides free single-stream barrels for small businesses. 60% is the estimated residential recycling participation rate for the County (including the City), 5% for multi-family, and 25% for commercial.

IV. Description of C&D Recycling

Currently, there is one main C&D recycling facility in Leon County – Marpan Recycling. Two other smaller recycling facilities, Crowder and Solomon, also work in Leon County. Unfortunately, much of the C&D that is brought to Crowder and Solomon are thrown in a pit, which has significantly affected the County’s recycling rate in the past few years. The only planned changes for the next year are to make more contacts with these recycling facilities as well as other unknown smaller facilities to discuss recycling options and perhaps capture more numbers that have not previously been captured.

V. Description of Yard Debris and Organics Recycling Opportunities

Currently, all unincorporated yard debris is taken to the Leon County Solid Waste Facility and mulched. The majority of the mulch goes to Enviva in Cottondale, FL to be used as boiler fuel, a portion goes to Telogia power for boiler fuel, and a small portion is given back to residents for recycling. Leon County uses this mulch on all County properties that need mulch. Staff has reached out to the City of Tallahassee and other large organizations to see if the mulch can be used more locally, but no interest was expressed. There is still a considerable amount of yard debris that ends up at the transfer station or is disposed of at other non-recycling facilities. The City of Tallahassee last year was considering exploring composting their yard debris along with biosolids but has made no changes yet.

VI. Strategy for Expanding County’s Recycling Programs

In order to reach the statewide 75% recycling goal, and the benchmarks in odd years, the County will need to ramp up commercial recycling in the whole County. This effort will require a partnership and shared vision with the City of Tallahassee, as most commercial businesses are located within City limits. Discussions have begun preliminarily, and recycling staff is working with the GIS department to develop a strategy for reaching out to businesses. The County has begun working on a Green Business Guide to give to unincorporated businesses starting later this year; this will hopefully give businesses the information they need to make reduce waste in their operations.

In 2020, the County’s collection agreement with Waste Pro will end, and the Board of County Commissioners will make the decision whether or not to go out to bid. Staff is discussing the opportunities to offer a more economic option for commercial recycling in the new potential contract.

As C&D recycling makes up a large majority of the County’s recycling tonnage, staff will work on engaging C&D recyclers in better understanding the barriers to recycling. Staff

will also work with the code enforcement department to identify opportunities to educate companies in the County that work in construction and demolition.

V. Discussion of Additional Steps, Challenges, and Strategies

In the past few years, the County has worked diligently on improving the quality and breadth of educational materials to better educate the public on best practices for recycling and waste reduction. A recycling video was created for students of all ages, recycling curriculum was developed for grades 3-5, and various brochures and resources have been created for the general public as well as County employees.

There are several challenges that the County faces in terms of reaching the 75% recycling goal, including that:

- The County does own or operate the landfill where all MSW is sent, so has little control over operations or decisions
- The County does not own or operate the recycling facility, so has little control over operations or decisions
- The County does not own or operate a hauling or collection service, so has little control over operations or decisions
- The County does not have a WTE facility within a couple of hundred miles, nor the capital to invest in such infrastructure
- The City of Tallahassee contains most businesses and residents, and has different recycling goals than the County

In 2019, the Leon County Board of County Commissioners approved the County's Integrated Sustainability Action Plan, which contains various goals and action items in the area of waste reduction. The waste reduction goals and action items are listed below:

- Goal
 - # 7 – 75% recycling goal by 2020
 - # 8 – Increase number of commercial recycling accounts in unincorporated Leon County by 30% by 2030
- Action Item
 - 3A – ensure recycling is available in all County facilities
 - 3B – require recycling at events hosted at Leon County facilities
 - 3C - Analyze a ban on polystyrene at County parks and property
 - 3D – Explore incentives for commercial recycling in 2020 waste collection bid
 - 3E – Explore use of recycled asphalt and concrete in paving and road construction

- 3F – Require adequate space for recycling dumpsters for new commercial and multi-family construction
- 3J – Develop a “Master Recyclers” class or “Recycling 201” seminar for the public to access current, correct information on recycling in Leon County
- 3P – Evaluate opportunities to audit citizen recycling: tag high-contaminant bins, acknowledge knowledgeable recyclers
- 3Q – Explore opportunities to expand composting practice in the community

Leon County has included the 75% recycling rate in its strategic goals and is dedicated to finding the best path to achieve this goal. For further questions, please contact Tessa Schreiner at (850) 606 -5021.

Manatee County



COUNTY RECYCLING PROGRAM PLAN

DATE: September 26, 2019

TO: Jennifer L. Simmons, Waste Reduction and Recycling Section
Florida Department of Environmental Protection (FDEP)

FROM: Christopher Jordan, Recycling and Special Waste Collections Supervisor

SUBJ: **Manatee County 2018 Recycling Program Plan**

This plan is in response to the August 12, 2019 letter from Tim Bahr, P.G., FDEP, requesting the development and submittal of a County Recycling Program Plan from large counties that did not meet the State’s 2018 interim recycling goal.

BACKGROUND

In 2008, the Florida Legislature set a statewide municipal solid waste (MSW) recycling goal of 75% by the year 2020. In 2010, the Legislature further directed that the goal be primarily applied to counties with a population of greater than 100,000. In addition, the Legislature set interim goals for 2012, 2014, 2016, and 2018. Counties that do not reach and maintain these interim goals, including Manatee County (County), based on their annual calendar year recycling rates, are requested to submit Recycling Program Plans to the FDEP.

Table 1 provides the various tiers of the State recycling goal and the County’s reported recycling rate for each year. The County met the 2012 and 2014 State goals but did not achieve the 2016 and 2018 goals. A County Recycling Program Plan was submitted as required by Section 403.706 of the Florida Statutes for 2016, and Manatee County is now submitting this plan for 2018.

Table 1: Florida Recycling Goal and Manatee County Recycling Rate

Year	State Goal	Adjusted Recycling Rate*	Goal Achieved
2012	40% by December 31, 2012	40%	Yes
2013	Same as above	51%	Yes
2014	50% by December 31, 2014	51%	Yes
2015	Same as above	52%	Yes
2016	60% by December 31, 2016	54%	No
2017	Same as above	58%	No
2018	70% by December 31, 2018	63%	No
2020	75% by December 31, 2020	TBD	TBD

* Includes renewable energy recovery recycling credits

This document addresses the seven requirements for the plan specified in the August 12, 2019 FDEP letter and they are detailed below.

1. SUMMARY OF THE SERVICE AND MATERIALS FOR WHICH THE COUNTY OFFERS RECYCLING

Residential Curbside Collection: In October 2016, the County implemented a countywide single stream recycling program aimed to increase residential sector diversion of curbside recyclables from the landfill. Single stream recycling collection began at the beginning of fiscal year (October 1st – September 30th) 2017 and approximately 27,450 tons of residential recyclables were collected curbside that first year, which represented a 48% increase (8,900 tons) over fiscal year (FY) 2016’s dual-stream program residential recyclables tonnage. FY 2018 was the single stream recycling program’s second year, and the quantity of residential recyclables collected curbside remained virtually the same at 27,395 tons.

Education and Outreach (E&O): The County continues to maintain a comprehensive E&O program for all its recycling programs. The County uses an array of outlets to distribute recycling information to residents and businesses. The recycling program employs a Recycling & Special Waste Supervisor and Recycling Program Coordinator, and four Solid Waste Enforcement (SWE) Officers provide support spending approximately 50% of their time on recycling program related matters.

The graphic, **Figure 1**, below provides just one example of educational material targeting residents for the materials accepted in the County’s single stream program.

Figure 1: Single Stream Recycling Education Flyer



The county also maintains an active website for residents to obtain information about recycling programs offered. www.mymanatee.org/recycling

In addition to the County’s curbside single stream program, the County operates a drop-off recycling program and a comprehensive recycling center at the Manatee County Landfill. Waste tires, scrap metal, appliances and yard waste are accepted at the landfill for recycling. The County also provides informational resources to encourage commercial recycling. Additional details regarding these programs and those within the municipalities are provided in the following sections.

2. MSW GENERATION BY SECTOR

As reported in the County’s 2018 Solid Waste and Recycling Annual Report, a total of 1,006,155 tons of MSW waste were generated countywide in 2018. Of that, 391,889 tons were landfilled, 14,070 tons were combusted, and 600,196 tons were recycled. Table 2 details the County’s MSW generation and disposal tonnage by sector.

Table 2: Countywide MSW Generation and Disposal by Sector, 2018 (tons)

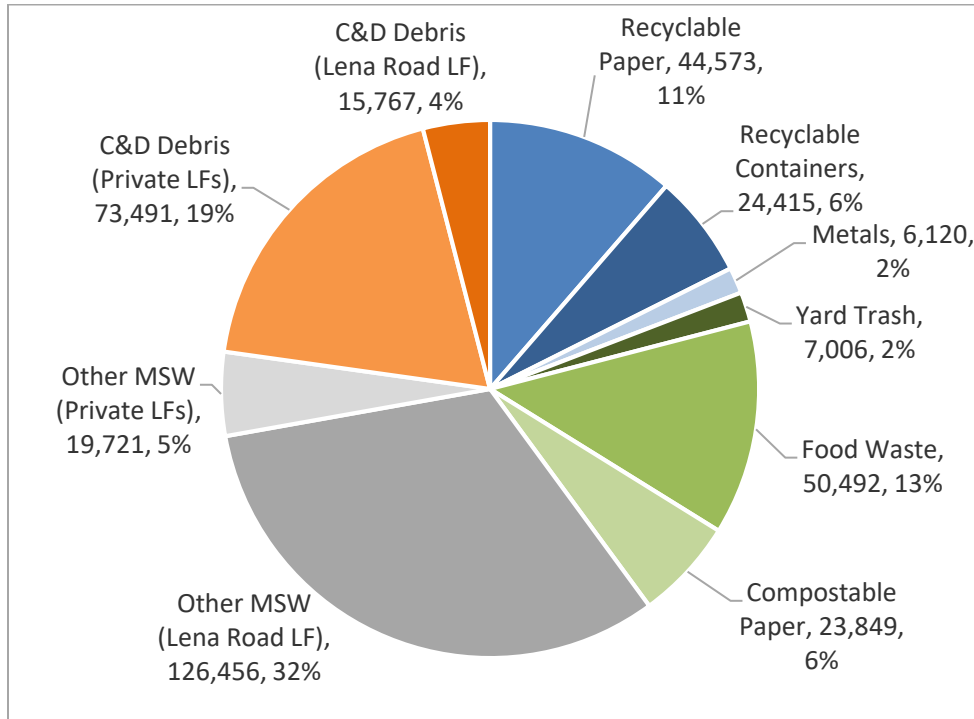
Sector	Generated	Recycled	Disposed
Single-Family	198,051	62,456	132,595
Multi-Family	56,169	15,614	40,555
Commercial	751,935	522,126	229,809
Total	1,006,155	600,196	405,959

Source: FDEP 2018 Solid Waste Management Annual Report – MSW Collected and Recycled by Generator Type

To identify the greatest opportunities to increase recycling, results of the County’s 2018/2019 waste composition study (WCS) were applied to the 2018 disposal tonnage. **Figure 2** on the next page provides the results of this analysis and identifies recycling opportunities by material type. An estimated 19% of the waste disposed in 2018 consisted of recyclable materials and another 21% consisted of compostable materials (i.e., food waste, yard waste, and non-recyclable paper). In addition, 23% of waste disposed was C&D debris. Based on various audits of construction and demolition (C&D) debris loads, more than half of this material is recyclable.

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Figure 2: Estimated Composition of Countywide Waste Landfilled in CY 2018 (% by weight)



Source: This figure was developed based on Manatee County’s 2018 waste quantity report, 2018 data compiled and reported to FDEP, and results of the 2018/2019 waste composition study conducted by Kessler Consulting, Inc. for the County.

3. EXISTING RECYCLING PROGRAMS

Residential Recycling Programs

The County offers single stream recycling collection service to all single-family and multi-family households in the unincorporated areas of the County. Multi-family units may be serviced similarly to curbside single-family homes or they may receive commercial dumpster or compactor service.

The following recycling programs are available to municipal residents.

- Anna Maria Island – single stream recycling program collected in carts.
- Bradenton – dual-stream recycling program collected in bins.
- Bradenton Beach – single stream recycling program collected in carts.
- Holmes Beach – single stream recycling program collected in carts.
- Long Boat Key – single stream recycling program collected in carts.
- Palmetto – single stream recycling program collected in carts.
- Trailer Estates – single stream recycling program collected in carts.

The countywide program and six of the seven municipalities now have single stream recycling collection services for residents while one municipality, City of Bradenton, utilizes a dual-stream program.

Drop-off Recycling Program

The County operates 10 recycling sites where residents can drop-off single stream recyclables. Manatee County Landfill also has a drop-off location for single stream recyclables and a comprehensive recycling center that accepts the following bulky, special or household hazardous waste materials:

- Tires
- Yard Waste
- Scrap Metals
- White Goods
- Electronic Waste
- Household Hazardous Waste
- Batteries
- Textiles

Commercial Recycling

As required by State law, commercial recycling in the County is operated as an open market. The County promotes this program through its County website. County businesses may research and select their recycling vendor. Recycling vendors offer different collection services at different service rates. The County encourages interested businesses to evaluate all vendors and choose a company that provides them the most economical and operationally viable system for their materials, space allotment and proper container size. The website link below provides the direct link to the list of recycling vendors and contact information for businesses.

www.mymanatee.org/departments/utilities/trash_and_recycling/garbage_recycling_faqs

In addition to the common recyclables such as cardboard, mixed paper, bottles, cans, and glass associated with a commercial recycling program, businesses also have the opportunity to recycle the following items through private sector collection initiatives:

- Yard Trash
- Scrap Metals & White Goods
- Tires
- Textiles
- Construction & Demolition Debris
- Food Waste
- Electronic Waste & Batteries
- Used Oil

4. CONSTRUCTION AND DEMOLITION DEBRIS

On a tonnage basis, C&D debris offers one of the greatest opportunities to increase the County’s recycling rate. The quantity of C&D debris generated can fluctuate widely year to year because of residential and commercial growth. In 2018, approximately 89,250 tons of C&D debris were landfilled. Only about 15,750 tons of this were disposed at Manatee County’s Landfill as part of the mixed residential and commercial waste stream; the remaining 73,500 tons went to private landfills.



During the 2018/2019 WCS, Kessler Consulting, Inc. (KCI) conducted visual audits of C&D debris and more than 50% of C&D debris by weight was observed to consist of materials that could potentially be recycled. This includes materials such as untreated wood, concrete, scrap metal, cardboard, select plastics, carpet, asphalt shingles, and rock/gravel/grit.

After submitting the 2016 Recycling Program Plan, Manatee County implemented the C&D debris recycling strategies identified in the plan. County staff actively worked to identify new collection providers and developed new ways to generate awareness. The recycling team researched new

companies through the internet, conferences, and meetings. The 2018 Annual Report shows that tonnage from new companies has grown from the previous year.

5. YARD WASTE AND ORGANICS RECYCLING

The County offers weekly yard waste collection service to all single-family homes in the unincorporated areas of the County to divert yard waste from landfill disposal for recycling. The County currently grinds yard waste, and the contracted vendor removes it as needed for agricultural uses. The County also uses mulch onsite for slope stabilization and applies it to the wet weather area during rain events to maintain access to the tipping area.



In 2018, the mixed residential and commercial waste stream landfilled by the County at Lena Road Landfill contained an estimated 57,800 tons of food waste (17.9%) and 8,075 tons of yard waste (2.5%) based on the 2018/2019 WCS results.

Manatee County implemented the yard waste and organics recycling strategies identified in the 2016 Recycling Program Plan. Staff continues to seek out and identify food waste and compostable materials recovery businesses, educate residents about yard waste collection, and encourage home composting.

6. RECYCLING PROGRAMS

In 2018, the mixed residential and commercial waste stream landfilled by the County contained an estimated 90,100 tons of recyclable paper and containers.



Residential Customers: Through its solid waste franchises, the County has a system in place for collection and processing of single-family and multi-family residential recyclables. The key to capturing additional residential recyclables is encouraging participation in the program through the E&O program and educating residents to recycle the correct materials to reduce contamination and ensure clean and marketable materials.

Commercial Businesses: State law prohibits a local government from awarding any entity the exclusive right to collect commercial recyclables. However, the County's franchise agreements require the franchisees to collect commercial recyclables, on a nonexclusive basis, upon request by the customer. It also sets not-to-exceed service fees for this service.

Manatee County implemented most of the residential and commercial recycling E&O actions identified in the 2016 Recycling Program Plan. One of the most successful actions has been SWE Officers conducting annual dumpster audits to identify commercial customers that are recycling and encouraging others to begin recycling. The audits began in 2018 and were performed for all commercial customers

utilizing dumpsters for their solid waste garbage service. During the first annual audit cycle in 2018, SWE Officers audited approximately 2,500 commercial customers and identified 33% were recycling. The second annual audit cycle has been completed for 2019 and approximately 2,600 commercial customers were audited. The percentage of commercial customers recycling increased to 57%. The 24% increase from the initial audit cycle indicates that the audits were successful in encouraging commercial customers to recycle.

E&O: Additional completed actions include the enhancement of landfill tours to explain the entire solid waste management system and the importance of recycling and waste reduction; and in addition to the previously used media outlets, staff developed a Manatee County Recycling Facebook page and also posts recycling information and videos on the Manatee County Government YouTube Channel.

7. NEXT STEPS AND CHALLENGES

As **Table 1** depicts, the County has been making concerted efforts and progress toward the State's 75% recycling goal by the year 2020 and is currently ranked 9th overall in the State. The County's recycling rates have been increasing over time, which is a result of the planning steps and program enhancements made to recycling programs each fiscal year: such as conversion to single stream recycling, dedicated staff work diligently to identify new recycling opportunities and improve E&O content and delivery, and concerted efforts to identify additional quantities of non-certified recyclable materials.

As noted in **Section 2 and Figure 2**, additional recycling opportunities (traditional recyclables and organics) represented an estimated 58% of waste that was landfilled in 2018 and approximately 40% of all waste generated in the County in 2018. Initiatives the County plans to undertake to strive to recycle more of these materials have been outlined in this plan. However, to achieve the State's 75% recycling goal, the vast majority of these materials would need to be captured.

NEXT STEPS:

Additional strategies to increase **C&D Debris Recycling** are as follows:

- Recognize recycling efforts of companies identified during the annual recycling report process.
- Staff will evaluate providing technical assistance to local building and demolition contractors by holding meetings to discuss the feasibility of source-separating C&D materials at the job site for reuse or recycling. Assistance might include performing job site waste audits that include calculation of potential savings.
- Staff will continue to improve its current list of reuse and recycling outlets for C&D materials (e.g. scrap metal, concrete, cardboard, clean wood, etc.) to make it more user-friendly and/or possibly develop a searchable on-line database.

Additional strategies to increase **Organic Materials Recycling** include the following:

- Staff will continue to work identifying food waste generators who are recycling to gather tonnage information.
- Using the information on the FORCE Website, staff will further promote food donations from businesses and institutions (e.g. K-12 schools) by expanding website information to include a list of organizations that operate food pantries or provide meals at no cost and their food acceptance requirements and seek to try and quantify it. <http://www.floridaforce.org/food-waste-reduction/>
- Using the information on the FORCE Website, staff will evaluate the potential to work with the vegetative and post-consumer vegetative food waste processing facilities located in or around

Manatee County to expand organics recycling. <http://www.floridaforce.org/facilities/>

- Backyard composting promotional efforts may be expanded by establishing composting demonstration sites at local schools or at community gardens.

The following actions are currently in process or anticipated to be performed in FY 2020 as part of the **Residential and Commercial Recycling E&O Program**:

- Staff is currently working to expand commercial recycling content for both the website and print materials.
- Staff continues to expand its participation in events in the community, use of social media, email blasts, and advertising to promote recycling.
- Integrate landfill tour and E&O event requests into the County's recycling website.
- Staff will continue to research State, federal and corporate grants and incentives for funding opportunities to help increase residential and commercial recycling.
- Staff will contact the municipalities in hopes of establishing regularly scheduled meetings to collaborate on recycling and waste reduction programs and E&O messaging.

CHALLENGES:

Key challenges that are anticipated as the County strives to increase our recycling rate are summarized below:

- Ensuring strong markets for existing recyclables and expanding markets for additional commodities is critical. The industry is currently in transition with the down market lasting longer than in years past, but domestic paper mills are expanding, some shuttered mills are restarting, and additional overseas markets are being developed in response to the market disruptions in recent years.
- All counties would benefit if FDEP expanded their role working with Florida's Recycling Business Assistance Center to help attract private industry and investment in the State's recycling infrastructure and markets within Florida. Additionally, if FDEP would devise a method to notify counties when new recycling companies are established, it could help make quantifying additional tonnage more efficient and expand our local recycling vendor list.
- Funding to establish the necessary infrastructure and encourage innovation is probably the greatest challenge. FDEP could help address this by reinstating recycling or innovative grant programs for infrastructure development, innovation, and market development, or helping counties to identify incentivized grant programs offered through other government agencies or private corporations. These grants could help those counties who have not met the goal.
- In an open market for commercial recycling services, the County is challenged to increase commercial recycling participation when services are negotiated by the private hauler. Multiple commercial collection service providers compete to provide recycling collection services and rates can vary greatly. The County's role is to provide educational information to assist commercial businesses and encourage recycling. FDEP has developed general recycling resources, but counties could benefit from the development of commercial recycling-specific materials such as: how-to guides and best management practices, model policy ordinances, and information on how to best negotiate with commercial collection service providers.

Manatee County is pleased to submit our 2018 Plan. Please feel free to contact me if you have any questions.

Marion County



**Marion County
Board of County Commissioners**

Solid Waste

5601 SE 66th St.
Ocala, FL 34480
Phone: 352-671-8465
Fax: 352-671-8491

September 16, 2019

Tim Bahr, P.G.
Florida Department of Environmental Protection
Director, Division of Waste Management
2600 Blair Stone Road
Tallahassee, FL 32399

Re: Request for Development and Submittal of County Recycling Program Plans

Dear Mr. Bahr,

In accordance with the Request for Development and Submittal of the County Recycling Program Plan dated August 12, 2019 please see the attached updated plan from Marion County Office of Environmental Services Solid Waste Division. This updated plan details how the County will work to reach and maintain the ultimate statewide recycling goal of 75% by the end of 2020.

Should you have any questions, please contact Mr. George White or Ms. Lacey Larramore at (352) 671-8465.

Sincerely,

Jody C. Kirkman, P.E.
Environmental Services Director

cc: George White, Solid Waste Operations Manager
Lacey Larramore, Solid Waste Administration Supervisor



Marion County Board of County Commissioners

Solid Waste

5601 SE 66th St.
Ocala, FL 34480
Phone: 352-671-8465
Fax: 352-671-8491

Marion County 2019 Recycling Plan Update

In 2009, Marion County completed a Solid Waste Management Plan which concluded the following:

- Marion County consistently exceeded the 30% recycling goal that had been in effect prior to 2008.
- Marion County would need to consider additional actions if it were to achieve the goal of 75% recycling, enacted by the legislature in 2008.
 - Of these actions the most significant was the need for additional capital improvements at several of the County's Citizen Recycling Centers.

Since the completion of the plan in 2009, Marion County's recycling rate has trended upwards until 2017 when it reached 63 percent and then rate dropped to 37 percent in 2018. The noted increase in the County's recycling rate can be attributed to the following:

- Construction of a single stream recovered materials processing facility that is operated by Waste Pro who processes the materials that are collected from the County's recycling centers.
- Capital improvements to the County's recycling centers.
- Increased community education and other operational adjustments.

After a review of the 2018's recycling numbers, staff noted a drastic decline which required an internal investigation. Staff contacted the Florida Department of Environmental Protection (FDEP) to determine what had caused such a big drop in in the recycling rate. FDEP later confirmed that it was the drop in yard waste processing from 2017 to 2018 and a reduction in the total recycle tonnage due to Marion County's election to no longer accept glass into its material stream. This decision to no longer accept glass was made on December 19, 2017 by the County Commission where they deemed glass to be a contaminate in the waste stream.

Recycling rates are currently calculated by dividing the total tons of material recycled by the total tons of material generated within the County. Marion County surpassed the first two milestone goals of the 2008 legislation. However, it may prove more challenging to achieve the future milestones for a number of reasons, as described below:

1. The mostly rural nature of the County where the Solid Waste Department utilizes eighteen (18) recycling centers spread across the unincorporated Marion County. The recycling centers allow the County's residents access to solid waste and recyclables collection at a low cost, where the distance between homes in this rural setting would make curbside collection of waste and recyclables comparatively more expensive than collection in more densely populated counties. The County's achievement of over 50% recycling over years 2011- 2017 in the absence of mandatory curbside collection is a statement of our effort, the effectiveness of our recycling centers

and the willingness of the County's residents to separate and bring their recyclables to a location where they can be properly managed.

2. Marion County elected not to utilize Waste to Energy/Waste Conversion Technology - during the 2009 preparation of the Solid Waste Management plan, the County was approached by vendors promising low cost conversion of waste into energy. In response, the County then issued a request for proposals from the vendors to demonstrate their capabilities. The County received only three responses, and none were in compliance with the minimum requirements stated in the request for proposals. The County then elected to continue the landfilling of waste until such time the technology becomes proven and cost effective.
3. The Commodities Marketplace - recycling requires not only the separation of materials for purposes of recycling, but the subsequent utilization of the received materials. In 2008, when recycling legislation was drafted, that value of the component commodities was significantly greater than today. At current levels, the collective value of the recovered materials is generally far less than that of the cost of processing these materials in a single stream facility. Marion County is currently required to pay for the processing of recovered materials, as opposed to receiving revenue from the recovered commodities.
4. Changes in what constitutes recycling - the most significant change in what constitutes recycling is the inclusion of disposal of materials into waste to energy plants. Counties relying on waste to energy as the primary means of waste disposal are much more likely to be able to achieve the 75% goal. Additionally, the use of recovered materials for alternative daily landfill cover is now eligible for recycling credits because Marion County's landfill is reaching the end of its life span, this "market" for recovered materials is no longer viable.
5. Construction and Demolition Debris (C&D) Recycling - Marion County does not operate a construction and demolition debris disposal or recycling facility, although there are three privately-owned/operated disposal facilities within the County. Analogous to the 75% recycling goal, these C&D facilities will be required to recycle only when it is economically feasible to do so. As part of the proposed goal, the legislature recognized that achievement of the 75% recycling rate included a significant reliance on the recycling of C&D materials. C&D facilities are also facing challenges with the commodities market.
6. Organics Management - achievement of the 75% goal may also require the segregation of the organic portion of the waste (primarily food waste) from the remainder of the waste stream so that it can be utilized in composting operations though organic waste management currently only practiced to a limited extent around the United States. While the separation of organics could increase Marion Counties recycling rate, Marion County has elected to continue to leave organics in its waste stream until a proven and cost effective method for processing of the materials is found. For the future, Marion County will continue to monitor the efforts of others and pending their success will consider implementation of the program.

How may Marion County approach additional improvement of its recycling rate?

1. Marion County does not have control over commodity pricing, with this in mind Marion County will continue to monitor market conditions and will continue to negotiate with our recycled material processor so that additional materials can be added to the single stream mix if and when

such materials improve in value. Nationally, more efforts like those of the Carton Council to have manufacturers more accountable and responsible for packaging.

2. Marion County will continue its efforts to identify in-county recycling activities and staff will continue to work diligently to identify activities in which material is or can be recovered and reused. These efforts should remain proactive to identify unreported recyclable as it is possible that our recycling rate may be above what is reported. Marion County staff has identified a potential recycling source being the quantity of recycled materials generated by commercial and industrial establishments that is being recycled, but not currently reported. Moving forward staff will reach out to those businesses in an attempt to collect this additional data. Please see exhibit "A" for a list of commercial and industrial businesses we will be contacting for possible recycling credits.
3. Marion County will continue to promote curbside collection of recyclables. Although Marion County has experienced a modest decrease in population, the long term expectation is for population growth. Mandatory curbside collection of both solid waste and recyclables becomes more attractive in urbanized areas where the population density makes it financially feasible.
4. Marion County will be utilizing the transfer facility to export our municipal solid waste once capacity is achieved with the Baseline Landfill. Feasibility of allocation of tipping floor space for the recovery and stockpiling of readily recyclable materials, such as clean cardboard, as it arrives within the facility.
5. Marion County will continue to track the progress in alternative means of waste processing and disposal, including organics management within Alachua County and other counties in the State. If, or when, organics management and/or waste conversion technology is or are proven and financially feasible, Marion County will consider implementation, being cognizant of our disposal agreement with The Heart of Florida Landfill.
6. Marion County will continue to be proactive with educational programs through local schools, organizations, and directly through our citizens. This educational program includes on-site tours of both collection and processing facilities. Additionally, the County will continue its participation in local events by providing recycling collection containers and staffed displays. Marion County has also wrapped two (2) vans in their fleet with recycling messaging and graphics for the general public.

Summary of Services and Materials

- A. Marion County currently offers single stream recycling services at eighteen (18) recycling centers and two (2) drop-off locations in the County. Marion County currently accept in the single stream collection centers:
 - Plastics 1-5 and 7
 - Cardboard
 - Paper
 - Tin Cans
 - Aluminum

Our recycling centers also accept:

- Electronics – recycled through A1 Assets
- Scrap Metal – recycled through Trademark Metals
- White Goods – R-134 refrigerant extracted and recycled through No-Vent, metal recycled through Trademark Metals
- Textiles – recycled
- Batteries – Lead Acid recycled through Trademark Recycling
- Batteries – Rechargeable through Call2Recycle
- Fluorescent and Compact Fluorescent Bulbs – recycled through Lighting Resources
- Used Oil – recycled through Petrotech
- Yard Waste – collected and moved to Baseline Landfill and reduction and recycling through D & G Solutions
- Tires-Global

Marion County supports a Landfill Gas-to-Energy Operation at Baseline Landfill producing electricity from the landfill gas the site produces.

Opportunities to Encourage Recycling of Yard Waste

Marion County currently offers collection of yard waste from the residents of unincorporated areas the eighteen (18) recycling centers. Areas such as the Cities of Ocala, Dunnellon and Belleview, and the Towns of McIntosh and Reddick assess and provide services to their residents. Marion County recycles 100% of the collected yard waste and the yard waste is collected by County trucks and brought to the yard-waste management area at Baseline Landfill Facility. Marion County currently utilizes the contracted services with D&G Solutions for reduction and hauling of processed yard waste. D&G Solutions recycles the processed materials as follows:

- Current efforts yield 25,000 tons of processed yard waste annually.
- Processed material is used as fuel source, commercial mulch and composting.
- Fines from the processing are used at compost operations.

Marion County 2019 Recycling Plan Update

Exhibit A

Commercial and Industrial Businesses in Marion County

- Chewy (card board, metal, plastic)
- DAB Construction (crushed concrete, asphalt millings)
- FedEx (card board, metal, plastic)
- Fuqua (mulching, compost)
- Ag Resource (mulch, compost)
- Art Walker (concrete, asphalt millings)
- Salser Construction (concrete and asphalt millings)
- Conrad Tree Service (mulching and compost)
- Commercial Industrial Corp (asphalt millings)
- Anderson Columbia (asphalt millings)
- Art Walker Construction (asphalt millings)

Martin County



MARTIN COUNTY
BOARD OF COUNTY COMMISSIONERS
UTILITIES & SOLID WASTE DEPARTMENT
PO Box 9000 Stuart, FL 34995-9000

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September 10, 2019

Florida Department of Environmental Protection
Mrs. Jennifer Simmons
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Martin County Recycling Program Plans

Dear Mrs. Simmons:

This letter is in response to the request from The Department of Environmental Protection for counties who did not meet or maintain the goals based on the 2018 70% recycling goal. Included in this letter are the various recycling opportunities and programs that Martin County currently provides its residents and commercial businesses. Also in this letter are issues and challenges that must be overcome to help Florida counties achieve the 75% recycling rate.

Martin County's curbside and commercial garbage and recycling contract is up for renewal in 2020, which Martin County Solid Waste feels will help guide the county toward the 75 % recycling goal calendar for 2010. This new contract will give Martin County the chance to look toward new recycling programs and the opportunity of reducing landfilled materials. Martin County is committed to providing its residents and commercial businesses opportunities to recycle their waste at a cost that is affordable for everyone.

- In Martin County's next waste hauling contract, Martin County will require the contractor who is awarded the bid in 2020 to provide 64 gallon recycling carts to its residents.
- The increased capacity of the recycling carts versus recycling bins that are currently used will enable residents to recycle more.
- The contract will also address contamination issues involving single stream recycling. The awarded contractor will be required to inspect a specified amount of recycling carts per year, depending on the rate of contamination. The contractor will also be required to tag contaminated

recycling carts that will let the resident know why their recycling was not picked up.

- Commercial customers will also have the opportunity to have the County's franchise hauler do a recycling audit to determine their recycling needs, free of charge.

Below is a summary of services that are available to Martin County residents and businesses.

- Single-stream recycling: Includes plastics 1-7, aluminum food and beverage containers, all cardboard products, paper, magazines, telephone books, shredded paper, junk mail, inserts, glass bottles and jars, steel or metal cans, aseptic packaging(milk and juice cartons)
- Commercial and residential garbage disposal.
- Commercial and residential vegetation recycling. Currently all vegetation is being composted.
- Metal recycling.
- Tire recycling.
- Construction and demolition debris recycling.
- Free recycling for businesses and residents at the Martin County Transfer Facility.
- Household Hazardous Waste recycling including electronics recycling.

Martin County's Construction and Demolition recycling program has been in operation since 2007. The contract that was in place with the vendor ended in October 2018. Martin County's recycling rate declined for Construction & Demotion material in 2018 due to these and other extenuating . Martin County recently rebid and awarded the Construction and Demotion recycling processing contract on May 7,2019.

- New contractor will start processing and recycling Construction and Demolition material at Martin County's Transfer Facility site in November 2019.
- The new C&D contractor will begin accepting dry compacted loads of commercial trash that contains large amounts of cardboard from the County's Transfer Facility, reducing the amount of waste that is currently being landfilled.
- The Contractor will also start accepting residential trash for recycling, which is currently being landfilled.

In 2018, the total tonnage submitted to DEP's Re-Trac for recycling that was collected from commercial businesses and residents was 204,147 tons.

- a) Single Family: 75,534 tons collected by participation

Percentage of participation for recycling was 37%

- b) Multi-family: 10,208 tons collected by participation
Percentage of participation for recycling was 5%
- c) Commercial: 118,405 collected by participation
Percentage of participation for recycling was 58%

Below are some of the ongoing challenges for Florida Counties attempting to meet the DEP's 75% recycling goal:

- 1) Cost of transportation of materials. There are not enough local recycling facilities for carpet, mattresses, glass, plastic sheeting or heavy plastics.
- 2) Not enough local manufacturers using recycled products or markets available locally.
- 3) The real possibility of glass not having a market.
- 4) Losing overseas markets for recycling.
- 5) Getting commercial accounts to recycle may improve if Florida would implement a State mandate requiring businesses to recycle.
- 6) Hold small businesses accountable for reporting to DEP, who then would pass the information on to each county for recycling credits. Currently, the method of county staff contacting businesses for this information is unproductive and not easily obtained.
- 7) Have DEP acquire recycling numbers from Corporate business such as Winn Dixie, Publix, BestBuy, Staples, Office Depot, Home Depot (fluorescent bulbs, electronics, batteries, tires, bags and Styrofoam, cardboard and plastics)
- 8) Hurricanes and named storms generate excess garbage and trash that is mixed and not easily sorted for recycling.

If you have any questions, please contact my office at (772) 221-1442.

Sincerely,



Samuel Amerson
Utilities & Solid Waste Director

JP/WP/cb

Okaloosa County



Okaloosa County Public Works



State of Florida

October 7, 2019

Tim Barr, P.G., Director
Division of Waste Management
Florida Department of Environmental Protection
Bob Martinez Center
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: Request for Development and Submittal of County Recycling Program Plans

Dear Sir:

In response to your letter dated August 12, 2019, subject as above, the following is provided:

- Okaloosa County provides single-stream curbside recycling service to about 33,000 residential customers. Materials collected include all paper products, glass containers, plastics 1-7 except Styrofoam, aluminum cans, and steel cans.
- A breakdown of percentages of MSW generated is as follows: single-family 30%; multi-family 9%; and commercial (includes C&D) 61%
- Residential recycling consists of mandatory curbside recycling provided to approximately 33,000 homes as well as accessibility to drop-off recycling to about 16,000 homes and buy-back services to 67,000 homes. 50% of residential units utilize the curbside service; 20% use drop-off locations; and 2% take advantage of buy-back locations. Multi-family recycling is voluntary. Of approximately 1500 units 30% have curbside service. It is estimated that 10% of the multi-family units use drop-off recycling and that 4% use buy-back services. Commercial recycling is on a subscription basis and about 1% of businesses have a recycling program.
- C&D recycling occurs on a voluntary basis where it proves profitable for the private C&D vendors to separate selected commodities for recycling. Historically, the building industry as well as private C&D owners have opposed mandatory recycling due to the potential for increased operational costs due to capital investments and labor required to sort out materials. Unless C&D recycling is mandated in adjacent counties (and the border state of Alabama) then the industry can choose to take it to an out of county or out of state facility where costs may be less expensive. (Currently municipal recycling programs in the Panhandle are struggling due to poor markets for recyclables.)
- Okaloosa County currently operates the yard trash processing operation for materials generated from residential pickup and from commercial landscapers. This material is ground into mulch and used within the inactive landfills for cover and erosion control. The

84 Ready Avenue, Fort Walton Beach, FL 32548
Office (850) 609-6168
Fax (850) 651-7397

County Recycling Office offers back yard composters at a reduced rate as an incentive for residents to compost at home. This effort is supported by the Master Gardeners through the County Extension Office. While the County has experimented with composting via innovative technology grants through FDEP, the County does not have the finances or manpower to add another process into its yard trash operations.

- The County has established a non-exclusive franchise ordinance that will select a pool of qualified vendors to service commercial establishments. Staff will look to establish incentives within the non-exclusive franchise that will encourage recycling. Additionally, a new ordinance also requires the registration of recyclers and construction and demolition debris facilities.
- Without a viable commercial recycling program it will be difficult to approach the State goal of 75% in 2020. A new solid waste contract effective April 1, 2017 included the replacement of 18 gallon recycling bins with 96 gallon roll-carts. It is anticipated that this will boost recycling figures. The County is utilizing a new recycling facility in Escambia County owned and operated by Emerald Coast Utility Authority (ECUA). The addition of the 96 gallon roll-carts for recycling positions the county to transition to 1-1-1 service in the future. Commissioners faced opposition to eliminating 2-1-1 while approving the larger recycling containers.
- In April 2019 ECUA proposed a new agreement for a flat processing rate of \$20 per ton. Okaloosa executed the agreement and sent it to ECUA. In June 2019 ECUA rejected the agreement because the average market value had dropped such that Okaloosa's rate under the existing agreement had risen to \$37 per ton for processing. A week later ECUA provided a new agreement, which Okaloosa was unable to ratify before October 1, 2019. Okaloosa County will hold a workshop on October 10, 2019 to allow for public input on whether to raise rates to accommodate the increased cost of recycling processing, which could be as high as an additional \$480,000 per year/\$51 per ton. (Note: this number is significant since two years ago the County was realizing a rebate of \$10 to \$15 per ton followed by a long period of paying only \$2 per ton for processing.)
- In the interim recyclables will continue to be collected curbside and then sent to Springhill Regional Landfill for partial recycling credit via landfill gas to energy.

Please let me know if you need additional information.

Sincerely,



Jim Reece
Recycling Coordinator

Orange County

Osceola County

Orange County Recycling Program Plan

September 30, 2019

Executive Summary

- On August 12, 2019, Orange County (County) Utilities Solid Waste Division (Solid Waste) was notified by the Florida Department of Environmental Protection (DEP) that it was required to present to the DEP a recycling program plan (Plan) because it had not achieved the state mandated 70 percent recycling goal by 2018. The County was one of 32 large counties (with populations over 100,000) that did not meet the goal. Only four large counties met the goal. The County achieved a 41 percent recycling rate (including landfill gas-to-energy credits) in 2018.
- The County and each municipality independently manage the waste and recycling programs in their jurisdictions.
- The County and its municipalities have had recycling programs in place since 1990, including curbside recycling collection programs that accept– plastic bottles and containers, glass jars and bottles, metal cans, clean cardboard, and clean paper. The County has additional programs that recycle a wide array of materials including yard waste, construction and demolition debris (C&D), electronics, white goods, and tires.
- Almost 3.7 million tons of materials were discarded by Orange County residents, businesses and visitors in 2018. Approximately 1.7 million tons of this material were recycled.
- Multiple private solid waste and recycling collection and processing/disposal companies operate in the County. More than half of the waste and recycling generated in Orange County is managed by private firms that report recycling and disposal activities directly to the DEP.
- In December 2018, the County began a program to recycle select loads of C&D received at the Orange County Landfill.
- The County has a long-standing program that recycles clean yard waste delivered to the Orange County Landfill. In 2018, almost 68,000 tons of yard waste were processed into mulch, and approximately 14,000 tons of this material were composted and distributed free to County residents.
- In 2017, the County discontinued the contract operation of its materials recovery facility (MRF) as the equipment was nearing the end of its usable life. Currently, Solid Waste is working to establish a public-private partnership (P3) to bring new recycling processing capacity to the County. Activities toward this goal include: 1) developing and soliciting a request for proposals (RFP) for a new MRF; 2) implementing and expanding a Recycling Quality Improvement Program to improve the quality of collected recyclables; and 3) strengthening coordination with local-governments by harmonizing recycling messaging and entering into an inter-local agreement for municipalities and the County to partner on the new MRF.

Purpose of this Plan

On August 12, 2019, Solid Waste received a memorandum (Memorandum) from Tim Bahr, P.G., Director of Waste Management for the DEP. The Memorandum was addressed to “Solid Waste Directors of Large Counties (over 100,000 population).” In 2008, the Florida Legislature set a recycling goal for Florida counties of 75 percent by 2020. In 2018 the interim recycling goal was 70 percent. Section 403.706(2)(d) Florida Statutes (F.S.) states that if a county does not achieve an interim recycling goal, the DEP can direct the county to develop a plan to expand its recycling program.

The Memorandum identifies the large counties that did not reach the 70 percent interim goal for 2018, and directs these counties to submit to the DEP a recycling program plan by September 15, 2019. An extension to the deadline was given by DEP due to Hurricane Dorian. Of 36 “large counties” in Florida, 32 (including Orange County) did not meet the 70 percent recycling goal. The County achieved a 41 percent recycling rate as calculated by the DEP in 2018, including credits for landfill gas-to-energy (without energy credits, the “conventional” recycling rate was 36 percent).

As directed in the Memorandum, “at a minimum, the county recycling program plans should include:

- Summary of the services and materials for which you offer recycling such as newspaper, aluminum cans, steel cans, glass, plastic bottles, cardboard, office paper and yard trash;
- Analysis of the percentage of the county’s MSW generated by the commercial, multi-family, and residential single-family sectors;
- Analysis of any existing recycling programs for the commercial and multi-family sectors, including estimated customer participation rates and recycling rates for each of those sectors;
- Description of the county’s implementation, including any planned changes, for your program for recycling construction and demolition debris;
- Description of efforts or opportunities to encourage recycling of yard trash, and other organic materials or mechanically treated solid waste, into compost or mulch that may be made available for agricultural and other acceptable uses;
- Strategy (including general timeframes) for expanding your county’s recycling programs, or for creating new programs if needed, as part of your county’s efforts to achieve the statewide recycling goals set forth in s. 403.706(2), F.S.; and
- Discussion of any additional steps, initiatives and anticipated challenges that are critical to implementing your strategies to achieve the next interim, and ultimate statewide recycling goal of 75% by the end of 2020.”

The Plan described herein meets the seven criteria established above, provides a description of the County’s existing recycling program, and presents steps the County will be undertaking to improve its recycling program.

Waste and Recycling Management in Orange County

The County and its municipalities have long-established and successful residential recycling collection programs. In assessing the entirety of recycling services available in Orange County, it is important to understand that many different entities have a hand in managing waste and recycling from commercial and residential generators in Orange County. There are eleven independent municipalities located within Orange County, and two municipalities that are located within the Reedy Creek Improvement District (associated with Walt Disney World). A list of municipalities and unincorporated County and their respective populations is shown in Table 1. In addition to 1.38 million residents, the County also hosted 75 million visitors in 2018¹.

Table 1. Orange County Estimated Incorporated and Unincorporated Population, 2018

Municipality	Population
City of Apopka	53,489
City of Bay Lake (Reedy Creek Improvement District)	51
City of Belle Isle	7,166
Town of Eatonville	2,301
City of Edgewood	2,977
Lake Buena Vista (Reedy Creek Improvement District)	27
City of Maitland	17,947
Town of Oakland	3,087
City of Ocoee	47,720
City of Orlando	285,173
Town of Windermere	3,509
City of Winter Garden	45,266
City of Winter Park	31,059
Total municipal population	499,772
Unincorporated County	880,873
Total Orange County Population	1,380,645

Source: US Census Bureau, 09/13/19

<https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>

The County and each of the municipalities independently manage their solid waste and recycling programs. Several of the larger municipalities self-perform collection operations – the Cities of Apopka, Orlando, Ocoee and Winter Garden. The County contracts for the collection of solid waste and recyclables from single-family residential units. The County also has a licensing program for the collection of commercial solid waste and recyclables in

¹ VisitOrlando.com, May 2019.

unincorporated areas of the County. Like the County, the remaining municipalities contract for residential waste and recycling collection, and each municipality has its own programs concerning the control of commercial collection of solid waste and recycling.

There are a number of privately-owned and operated transfer stations and disposal facilities within the County, and private companies collect and manage most of the waste and recyclables generated in the County. Because so many different entities have a role in providing services to different residential and commercial customers, the County depends heavily on DEP to track and report disposal and recycling activities that occur within its boundaries.

The County's Recycling Program

The Solid Waste Division provides 96-gallon recycling carts to each of the approximately 220,000 single-family residential units in the unincorporated areas of the County that are part of its collection program. For the purposes of residential collection, the unincorporated area of the County is divided into five collection franchise zones. In addition to the curbside collection program, the County currently operates two drop-off recycling collection locations – at the County Landfill and at the Porter Transfer Station. The materials accepted in the County's recycling program are shown below.

List of Program Recyclable Materials:

- Plastic bottles and containers labeled #1 - #5
- Metal cans (tin, aluminum, steel, and empty aerosol cans)
- Glass bottles and jars
- Cardboard (clean, flattened corrugated boxes)
- Paper (newspapers and advertisements, paper bags, junk mail, magazines and catalogs, office/note paper, phone books, cereal/shoe/drink boxes and milk/juice cartons)

Generally, the municipal residential collection programs collect the same program recyclable materials as the County.

Beyond the collection services described above, the County has historically provided the facilities that received most of Orange County's residential and commercial recyclables for processing. In 1990, the County owned and contract operated Orange County MRF located at the County Landfill (in the eastern portion of the County) and the McCormick Transfer Station (located in the western portion of the County) began operating. Since 2017, the Orange County MRF no longer serves as Central Florida's regional recycling processing hub. It is no longer operated because the processing equipment is near the end of its service life. With the MRF shutdown, the County's processible recyclables received at the MRF and the McCormick Transfer Station are transported to facilities outside of the County for processing. Each municipality makes separate arrangements for its recyclables to be delivered to one of the available receiving locations that include the County's facilities and also Waste Management's McLeod Transfer Station and Waste Connection's Taft Transfer Station.

The lack of local recycling capacity results in undesirable transportation inefficiencies and additional costs, with most collected recyclables currently being shipped to MRFs located from 40 to over 100 miles away. In the recent past, the closed MRF processed more than as 8,000 tons per month from the County, surrounding jurisdictions, and commercial sources. New infrastructure is needed for sustainable, efficient and long-term residential recycling and a new facility could most likely also include institutional/commercial/industrial mixed recycling.

The Mayor's Sustainability and Smart Growth Task Force report offers an important recommendation to "Reduce Solid Waste to extend current life of the landfill through education and improved methods." The final report identifies as a short-term goal for the County to:

"Collaborate with the City of Orlando and other jurisdictions on the upcoming Materials Recovery Facility Request for Proposals with a goal of partnering with a private entity to significantly improve recycling and waste diversion processes and equipment."²

The County has identified the development of a new MRF as critical to supporting recycling in the Central Florida region. Solid Waste, with support of other County Divisions, is working aggressively to implement the Mayor's goal to develop a new MRF, as described in the "County Strategy for Expanding Recycling Programs" section of this Plan.

Additional recycling services provide by the County include:

- Electronics and HHW materials are collected at the Orange County Landfill and the Porter Transfer Station by a contracted private contractor for recycling and proper disposal.
- Waste Tires received at the Orange County Landfill and Transfer Stations are removed and processed off-site by a contractor.
- White goods accepted at the Orange County Landfill are removed from incoming loads and stored separately so that refrigerants can be properly removed. White goods, along with other scrap metal, are removed and processed off-site for recycling.
- In 2019, the County began working with the DEP on the statewide Wrap Recycling Action Program (WRAP) that informs residents how to properly recycle film plastic and keep it out of the recycle stream.

² "Transition Team Report," presented to Mayor-Elect Jerry L. Demings, November 2018, p38.

Waste Generation in Orange County

In Calendar Year 2018, the DEP reported that more than 3.6 million tons of waste and recycling were generated in the County³. The County owns and operates three locations to receive municipal solid waste (MSW) to meet its obligations under F.S. 403.706 “to provide for the operation of solid waste disposal facilities to meet the needs of all incorporated and unincorporated areas of the county.”⁴ The three county-owned and operated facilities are the Orange County Landfill (Class I and Class III landfills and ancillary facilities), the McLeod Road Transfer Station (currently closed for renovations, and scheduled to reopen late 2020), and the Porter Transfer. In addition to County owned facilities, private transfer stations operate in the County that receive and transport MSW and recyclables out of the County for disposal or recycling including facilities operated by Waste Management Inc. of Florida and Waste Connections, Inc. Also, private Class III landfills operate in Orange County including Waste Management’s Vista and Pine Ridge Landfills and the Mid-Florida Materials Landfill.

DEP provided information to the County concerning the quantity of material disposed of at private facilities that report Orange County as its place of origin. A significant amount of waste management and recycling activity that occurs in Orange County is performed by the private companies or independent municipalities. Certain municipalities have arrangements for their collection contractors to deliver solid waste and yard waste out of the County for disposal, and others deliver quantities of solid waste to private facilities for disposal.

Table 2 shows the quantity of solid waste reported as collected in Orange County in 2018. Quantities reported in Table 2 and subsequent tonnage information are rounded to the nearest 1,000 for ease of reporting and because of limited accuracy of the subject data.

Table 2. Tons of Waste Generated and Disposal Locations, 2018

Waste Type	Orange County	Other	Total
Class I	669,000	613,000	1,282,000
Class III	353,000	388,000	741,000
C&D	0	388,000	388,000
Total	1,022,000	1,389,000	2,411,000

Source: County Scale Records and DEP Supplied Information

³ DEP Recycling Workbook and subsequent updates, April 5, 2019.

⁴ F.S. 403.706 Local government solid waste responsibilities. (1) The governing body of a county has the responsibility and power to provide for the operation of solid waste disposal facilities to meet the needs of all incorporated and unincorporated areas of the county.

Table 3 show waste type and disposal location on a percentage basis. It is important to note that only 42 percent of waste reported as generated in Orange County is managed by the County disposal system.

Table 3. Percentage of Waste Generated and Disposal Location, 2018

Waste Type	Orange County	Other	Total
Class I	27.7%	25.4%	53.2%
Class III	14.6%	16.1%	30.7%
C&D	0.0%	16.1%	16.1%
Total	42.4%	57.6%	100.0%

Note: Numbers may not sum correctly due to rounding.

Loads of waste delivered to the Orange County Landfill are tracked as residential or commercial based on account codes and available information provided at the time of delivery. For private companies such information is not available, so deliveries to private landfills and transfer stations are assumed to be commercial waste.

In the County, multi-family waste is regulated and reported as commercial waste⁵, and not tracked separately. Information from the Orange County Property Appraisers website was used to determine multi-family residential units in the incorporated and unincorporated areas of Orange County. Available information shows 50,125 residential condominiums, 4,065 “Multi-Family”, and 134,360 apartment units, for a total of 188,550 multi-family units. The multi-family generation rate of 27 pounds per week⁶ was used to estimate the quantity of multi-family waste included in the commercial waste quantities, for a total of 134,000 tons of multi-family waste generated in 2018. Table 4 shows the quantity of residential, multi-family, and commercial waste generated in Orange County in 2018. Table 5 presents the same information on a percentage basis.

Table 4. Tons of Residential, Multi-family, and Commercial Waste - Orange County, 2018

Waste Type	Residential	Multi-Family	Commercial	Total
Class I	368,000	134,000	780,000	1,282,000
Class III and C&D	18,000	0	1,046,000	1,064,000
Total	386,000	134,000	1,826,000	2,346,000

Source: County Scale Records and DEP Supplied Information

⁵ Orange County Code, Section 32.

⁶ Solid Waste Authority of Palm Beach County 1997 Residential Generation Study, September 10, 1997.

Table 5. Percentage of Residential, Multi-family, and Commercial Waste - Orange County, 2018

Waste Type	Residential	Multi-Family	Commercial	Total
Class I	15.7%	5.7%	33.2%	54.6%
Class III and C&D	0.8%	0.0%	44.6%	45.4%
Total	16.5%	5.7%	77.8%	100.0%

Note: Numbers may not sum correctly due to rounding.

Analysis of Commercial and Multi-Family Recycling Programs

The County has responsibility for managing a residential waste and recycling program for unincorporated County single-family residential units. Commercial waste and recycling (including multi-family as subsets thereof) is managed by the private-sector, pursuant to County Code Chapter 32. Florida Statutes⁷ prohibits local governments from directing recycled materials to a County-designated processing facility. In Orange County, recyclers are very protective of customer and quantity information and treat such information as trade secrets, and are reluctant to report any such information to the County. “Certified Recyclers” do report certain information to the DEP, and the County relies on DEP reporting to obtain the best available information concerning recycling. In 2018, the recycling quantities shown in Table 6 were reported by the County, based on DEP supplied information.

⁷ 403.7046 Regulation of recovered materials. (3) Except as otherwise provided in this section or pursuant to a special act in effect on or before January 1, 1993, a local government may not require a commercial establishment that generates source-separated recovered materials to sell or otherwise convey its recovered materials to the local government or to a facility designated by the local government, nor may the local government restrict such a generator’s right to sell or otherwise convey such recovered materials to any properly certified recovered materials dealer who has satisfied the requirements of this section. A local government may not enact any ordinance that prevents such a dealer from entering into a contract with a commercial establishment to purchase, collect, transport, process, or receive source-separated recovered materials.

Table 6. County Recycling Information, 2018

Materials Type	Collected Tons	DEP Certified Tons	Non- Certified Tons	Recycled Tons Total
Newspaper	68,502	18,588	0	18,588
Glass	62,432	4,466	0	4,466
Aluminum cans	9,395	5,420	207	5,627
Plastic bottles	48,387	8,015	102	8,117
Steel cans	19,915	3,229	1,953	5,182
Corrugated paper	202,155	89,724	18,014	107,737
Office paper	63,140	21,702	6	21,708
Yard trash	224,639	0	75,291	75,291
Other plastics	546,930	18,952	715	19,667
Ferrous metals	187,224	88,823	88,255	177,078
White goods	18,775	0	16,919	16,919
Non-ferrous metals	58,435	18,649	32,961	51,610
Other paper	307,417	54,743	6,363	61,106
Textiles	53,161	3,289	41	3,330
C&D debris	1,315,666	233,315	398,569	631,884
Food	257,549	0	27,859	27,859
Miscellaneous	195,422	0	61,505	61,505
Tires	14,520	0	9,577	9,577
Process fuel	0	0	0	0
Total	3,653,664	568,915	738,337	1,307,251

Source: DEP, with County Input

In Table 6, the Collected Tons column shows a break-out of the material types in the disposed waste stream based on a hypothetical waste stream composition provided by the DEP through its WASTECALC program⁸, the column DEP Certified Tons shows tonnage information submitted to DEP by Certified Recyclers⁹, the column Non-Certified Tons shows supplemental information obtained by Orange County staff from entities that recycle but do not report to the DEP, and the column Recycled Tons Total is a summation of the previous two columns.

As described above, the County depends on the DEP to compile and report information concerning recycling. As shown in Table 6, the materials recycled in the largest volumes are C&D, ferrous metals, and corrugated cardboard. These materials are generated in large quantities in the

⁸ Note that in the summer of 2019, the University of Florida completed a disposed waste composition study for DEP in Orange County that will be used to update WASTECALC and future information submitted by the County.

⁹ “Certified Recyclers” are companies that report recycling information directly to DEP. Such information is treated as trade secrets by the DEP and provided to the County as consolidated data.

commercial/industrial sector, and long-standing collection and recycling markets exist for these materials.

Orange County Code Section 32-163 does prescribe a commercial recycling program for all commercial generators to “separate designated recyclable materials and make them available for recycling.” Orange County has found Section 32-163 to be outdated, principally because no currently active MRF is operating in the County. The County may revisit commercial recycling and related enforcement options as a commercially-viable MRF is established.

County C&D Recycling

In December 2018, a pilot for a C&D recycling program was initiated at the Orange County Landfill. A five-acre area on the paved yard waste processing pad was designated for this purpose. At the scale house, select loads of C&D that are observed to contain a large percentage of recoverable materials are directed to the C&D recycling area. At the area, loads are dumped on the ground and material is sorted into roll-off boxes, walking-floor trailers, or adjacent vegetative material piles. Since implementing this program, approximate diversion statistics are:

- 3,500 customers were diverted to the C&D recycling area
- 150 tons of metal were directed to the scrap area
- 650 tons of clean wood were removed and put in the yard waste area for grinding
- 2 tons of cardboard and paper were sent to the MRF
- 400 cubic yards of concrete were removed and stockpiled for later use on-site

Because of the success of this effort, the C&D recycling program was incorporated into the operating permit renewal issued in 2019 by DEP for the Class III Landfill.

County Yard Waste Recycling

Orange County has a long-standing yard waste recycling and composting program. Under the 2016 collection contract, haulers are required to de-bag yard waste at the curb. Additionally, drivers are instructed to remove any bags or litter from deliveries of material to the yard waste processing area. Loads of clean yard waste delivered to the Orange County Landfill have been able to be processed into virtually litter-free mulch.

Most of the ground mulch produced at the yard waste processing area is used on-site at the landfill as part of daily and intermediate cover, for side-slope stabilization, and for other uses on the landfill. A portion of the ground material is windrowed and composted. The finished compost is made available to customers that come to the Orange County Landfill to collect it and transport it off-site for use. The County intends to continue accepting and processing clean yard waste into mulch for the foreseeable future. Tons of yard waste processed and compost provided to residents is shown in Table 7.

Table 7. Tons of Yard Waste Processed and Composted Annually

Year	Yard Waste	Compost
2014	67,885	13,577
2015	70,807	14,161
2016	61,870	12,374
2017	73,034	14,607
2018	61,959	12,392

Source: County Records

Additionally, the County resolicited for the off-site recycling of yard waste collected by the County’s contract haulers in the western part of Orange County. In its new agreement, the County specified that yard waste collected by the County’s contract haulers and delivered to the new processing facility must be beneficially reused, and that the recycling company must provide specific, regular reports to the County on this recycling activity. It is expected that this improved contract will result in additional yard waste recycling in the County.

County Strategy for Expanding Recycling Programs

The County is undertaking significant activities to improve its recycling efforts. The County is working to attract new recycling capacity to the region, which is expected to support significant increases in residential and commercial recycling (including multi-family). To make this goal a reality, the three interrelated activities are being performed simultaneously. The activities are listed below and explained in the following subsections of the Plan.

- Public-private partnership for a new MRF
- Recycling Quality Improvement Program
- Intergovernmental coordination and inter-local agreements

Public-Private Partnership for a New MRF

Critical to expanding recycling efforts in the County and the region is encouraging the development a new facility that will take in recyclables and sort them into marketable commodities. It is the County’s intention to enter into public-private partnership (P3) for a company(ies) to design, build, own, operate, and finance the new MRF in return for a long-term commitment of recyclable materials from the County and participating municipal partners. The County is undertaking a strategic procurement process that will assure a suitable long-term P3 contract can be entered into. Important data gathering activities are being conducted to assure the most current and best in class ideas can be incorporated into the procurement process delivering a final contract.

Recent activities related to the development of the RFP include:

- The County engaged the services of a consultant to prepare the P3 solicitation.
- May 2019 - MRF Procurement Steering Committee held its kick-off meeting. The MRF Procurement Steering Committee includes representatives from multiple County

divisions including Solid Waste, Procurement, and Management & Budget; the County Attorney's Office; the City of Orlando; and others.

- June 2019 - the County issued its "Request for Information and Participation in a Pre-Procurement Market Sounding Event for Public-Private Partnership for Developing and Implementing a Recovered Materials Processing Facility in Orange County, Florida."
- July 2019 - 22 responses were received from multiple companies interested in supporting the MRF P3 project. These companies offered valuable information about current recycling issues, information on trends affecting the recycling market place, and ideas to help the County conduct an optimal procurement process.
- August 2019 - a Market Sounding Event was held in Orange County to provide potential respondents an opportunity to interact with County staff, their consultants, and other interested parties about the MRF project. More than 90 individuals participated in the event, offering important input and advice to County staff as the procurement documents are being developed.
- Currently, County staff and the consultant team are preparing the draft procurement documents and the MRF P3 draft contract. County staff has also conducted multiple meetings and phone conversations with companies and organizations interested in supporting the MRF project.

Future planned activities include (note, all timeframes presented below are subject to change):

- By first quarter 2020 – complete MRF procurement documentation and release request for proposals (RFP)
- By second quarter 2020 – receive proposals
- By third quarter 2020 – evaluate proposals and make recommendation to the Board of County Commissioners
- By fourth quarter 2020 – award contract
- By first quarter 2021 – begin 24 to 36 month construction project to build new MRF
- By first quarter 2023 or 2024 – begin operation of new MRF

Recycling Quality Improvement Program

Concurrent to procuring a partner to develop a new MRF, the County is undertaking a Recycling Quality Improvement Program (Improvement Program). The goal of the Improvement Program is to reduce the amount of contamination residents place in recycling carts, which will allow collected materials to be processed more efficiently at the MRF (lowering costs) and increase the percentage of recyclables in the input stream (raising value). These changes will help improve the economics of the recycling program. The principal activity the Improvement Program will perform is to provide curbside education to customers concerning their recycling. Field staff will observe recycling cart contents and provide feedback through the use of "Oops Tags" and "Great Job Tags" that will advise residents concerning what should and should not be placed in the recycling cart.

Recent Program activities include:

- Summer 2018 – Conducted initial field observation and tagging of recycling carts using county staff
- March 2019 – County received grant award from The Recycling Partnership (TRP) to enhance development of Program and began working with TRP to develop education and information materials
- April 2019 – County issued RFP for “Recycling Improvement Consulting Services”
- August 2019 – Board of County Commissioners approved recommendation of award of Recycling Improvement Consulting contract

Future planned activities include (note, all timeframes presented below are subject to change):

- Fourth Quarter 2019 – Initiate work effort with Recycling Improvement Consultant in preparation for performing curbside educational activities, initiate use of TRP provided hand-held devices to track field observations and automate curbside data gathering, and initiate large-scale curbside educational activities
- By second quarter 2020 – Complete curbside educational activities for more than 30,000 households
- On-going – Continue curbside educational effort

Intergovernmental Coordination and Inter-Local Agreements

Over the past several years, the County has made efforts to work closely with area local governments to coordinate on recycling and other waste related matters. Collaborating on consistent recycling messaging across jurisdictional boundaries makes sure residents receive consistent messages concerning what can be placed in their recycling carts. In preparing its RFP for a Recycling Improvement Consultant, the County made sure that the contract allows cooperative use of the agreement (piggy-backing), so that smaller municipalities can make use of services such as the field education activities. County staff has initiated and is continuing regular meetings to share educational materials and coordinate on promotional efforts.

One area where intergovernmental cooperation is anticipated to provide benefits is in the procurement of a new MRF agreement. One message County staff has heard consistently as it has conducted MRF research is – the more tons, the lower the processing cost. If a new MRF operator can be assured of a larger quantity of materials, it can construct a facility with optimum economies of scale for the sorting equipment. The County has been communicating with potential municipal partners who are interested in participating in a new MRF project. In conjunction with developing the procurement, the County is preparing an inter-local agreement for local governments that will partner in delivering materials to the new MRF. The timeline for developing and executing inter-local agreements will be in coordination with the procurement process for the new MRF.

Additional Steps, Initiatives, and Challenges

As described in 403.706(2)(a)¹⁰ F.S., Florida counties bear the responsibility for achieving the mandated 75 percent recycling goal established by the Florida legislature. As described throughout this Plan, many entities participate in recycling and waste management in Orange County, which makes it challenging for the County to account for the 75 percent recycling goal.

Conclusion

As described above, the County has laid out an ambitious Plan for recycling in Orange County. We are committed to pursue innovation in recycling processing public outreach; we are working to include other local governments in our recycling planning, and we will continue to collaborate with public and private sector partners to achieve the best recycling solutions for Orange County.

¹⁰ 403.706(2)(a) (2)(a) Each county shall implement a recyclable materials recycling program that shall have a goal of recycling recyclable solid waste by 40 percent by December 31, 2012; 50 percent by December 31, 2014; 60 percent by December 31, 2016; 70 percent by December 31, 2018; and 75 percent by December 31, 2020. Counties and municipalities are encouraged to form cooperative arrangements for implementing recycling programs.

Osceola County Solid Waste

2017/18 updates and plan

Background:

In September of 2013 Osceola County implemented single stream curbside recycling. Although the Solid Waste Department had provided public drop off sites for recycling since the early 90's curbside recycling was never implemented. As in the past the recycling tonnages for this new service is recorded thru the state's certification of recyclers program. The curbside program did in fact impact the counties recycling rate increasing from 8 % to 30 %. However, county staff had to dig for the correct tonnages as the typical avenue of capturing the tonnage thru the certification of recyclers did not reflect the residential or the commercial tonnage. County staff has met with various franchised haulers to gain insight into their reporting policies and it was discovered that the haulers are not making any effort to make certain the county of origin is correctly recorded when tipping at a final processing site. Based on windshield surveys by county staff there is probably a 60 % participation rate among commercial establishments as far as making the service available. Commercial establishments include resorts and hotels.

Confirmation being witnessing a single stream container on site serviced by a commercial approved franchised hauler. Contact is then made with the franchised hauler to determine what site or facility the recyclables are hauled to. It is at that point that questions arise as to the accuracy of the tonnages that are reflected on the states certification of recycler's reports. It appears that the hauling side of the business is not able to make direct hauls from the county of origin only and back to the processing site. It is much more efficient to make a run that includes sites from more than one county. Any attempt to quantify the accurate tonnage from a particular county based on site verification proved fruitless. In addition, route sheets from haulers could not quantify specific volumes as it is all mixed and compacted on one load.

Documenting curbside recycling tonnage proved challenging also. For whatever reason the curbside tonnage simply was not recorded, however after persistence the tonnages were finally documented. It seemed if the county staff wasn't willing to dig for the information, the tonnage simply would go unrecorded.

In fairness it is also difficult to track commercial MSW tonnage. In addition to Osceola county waste streams are hauled to Polk county, Orange county and Lake. It is understood that significant amounts of MSW may not be accounted for in our reporting on Table 1. However, all efforts and methods of collecting data are exhausted each year to the best of our abilities.

Osceola County faces an additional challenge in a huge part of the curbside residential waste stream in the tourist corridor near the attractions. Short term rentals are a huge part of this area. Property and

HOA managers provide 7 day a week garbage collection thru valet services. The challenge is in the area of waste reduction. These areas produce huge volumes of garbage compared to nonshort term rental areas due to 5 and 6 bedroom homes being fully rented on a weekly basis. The typical vacationer consumes more than the traditional occupant. In these same areas where there is no valet 7 day service provided the county faces a challenge with contamination in the single stream cart on recycle day. These loads are quite often rejected at the processing site; therefore no recycling tonnage is recorded.

Summary and Plans:

In summary Osceola County feels the recycling goals set by the state statute may never be met without drastic changes in the reporting methods. However, we also understand that the perfect method may not be out there. Osceola County feels that an opportunity to recycle is being provided to all facets of our community including the cities of Kissimmee and the City of St. Cloud; however we just can't comprehend how the tonnage could ever offset the tremendous amount of MSW that is generated in our tourist corridor. The county will continue to explore options to address the contamination issues. For example a new curbside hauling collection contract is going into effect October of 2019 that also utilizes automated curbside garbage collection to alleviate contamination and litter issues. At this time the county does not plan on implementing a commercial recycling ordinance. The cost may not be economically feasible for some commercial establishments. Also, as pointed out above a lot of the resort/hotel establishments are already participating in recycling efforts. Staff will continue to collect reportable tonnages and increase efforts thru public information flyers, brochures, door hangars and web based educational tools to both encourage recycling and address the contamination issues.

Summary of the services and materials for which you offer recycling such as newspaper, aluminum cans, steel cans, glass, plastic bottles, cardboard, office paper and yard trash:

Single stream curbside recycling: Osceola County has contracted with two vendors to provide single stream curbside recycling to 74,000 single family and multifamily dwellings in unincorporated Osceola County. Residents will be issued a 95 gallon recycling cart and a 95 gallon garbage cart to place their recyclables in. Our partners at the City of Kissimmee and City of St. Cloud also provide single stream curbside recycling. In addition to addressing the single family dwellings the cities are able to place single stream bins at multifamily dwellings and small business offices in strip malls.

12 Public Private Drop off Sites located throughout the county. These sites are designed to accommodate the multi-family, single family, commercial, Mobile home RV parks, single family with large cardboard loads. Sites contain roll off containers with sliding doors accepting the single stream waste stream. Popular for residential waste stream for large portions of cardboard that does not fit in curbside can.

Office Paper Recycling: Over 45 Osceola county government offices located throughout the area are provided with bins for collecting the office paper waste stream. Centrally located in break rooms office paper is collected once a week for transportation to a recycling processing site in south Orange county.

Plastic Bottle and Aluminum Can Recycling: Over 45 county government offices are provided with bins for aluminum cans and plastic bottles. Centrally located in break rooms. Collected by solid waste staff once a week and transported to our drop off sites.

Yard Waste grinding and screening for garden soil: The Bass Road yard waste processing site grinds and screens the vegetative waste collected curbside creating a soil amendment that is given away to the public and delivered to schools and community gardens for use. Upon request soil amendment is transported by solid waste equipment and staff to schools and used to create gardens and an educational opportunity.

Kenansville Public Recycling Drop off Site: The solid waste department provides a manned facility for residents of this rural area accepting recyclables from the residential waste stream, waste tires for processing, yard waste for grinding and household chemical collection center for waste oil, paint, old pesticides electronics and TV tubes.

Waste Tire operations: Tires are accepted at our Bass Road processing site at no charge 6 times a year in an effort to alleviate waste tires being illegally disposed at the side of our roadways.

Public Education campaign: (please see packet included) Web site and flyers and pamphlets are provided to civic groups HOA's and handed out at presentations and community events.

Small Quantity Generator Business Compliance inspection program: By performing business compliance inspections the solid waste department educates and provides guidance to the commercial sector on proper disposal and recycling of their waste stream.

Litter Prevention Program: The solid waste department employs a 4 man litter crew which conducts weekly roadway and waterway litter collection and retrieval. The Keep Osceola County Beautiful Campaign allows for civic clubs, students and neighborhood groups the opportunity to organize and conduct litter clean ups in their neighborhoods. Much of the litter is acceptable as recyclables and is recovered for recycling.

Household Chemical Collection Program : The solid waste department operates three full time public drop off sites for the citizens of unincorporated and incorporated Osceola County. These site except waste oil, waste paint, old pesticides, batteries and various household items . (see flyer included)

Analysis of the percentage of the county's MSW generated by the commercial, multifamily and residential single family sectors.

As mentioned above county staff has challenges with another sector called short term rental multifamily and single family that represents a much greater portion of the MSW generated than typical single family and multifamily. Based on that fact it is believed that the short term

rental community generates commercial type tonnages. Therefore, the obvious answer is that the potential for the greatest recovery of recyclables is from the commercial sector.

Analysis of any existing recycling programs for the commercial and multifamily sectors, including estimated customer participation rates and recycling rates for each of those sectors.

As mentioned above by a windshield survey it appears approximately 60 % of the commercial sector in unincorporated and incorporated Osceola County is participating in some form of recycling provided by a franchised hauler or city government trucks and recycles carts. So it appears to be about a 60% participation rate, however staff does not feel comfortable or have enough information to calculate a recycling rate.

Description of the county's implementation, including any planned changes, for your program for recycling construction and demolition debris.

The county has no plans to implement a construction and demolition debris recycling program in unincorporated Osceola County

Description of efforts or opportunities to encourage recycling of yard trash, and other organic materials or mechanically treated solid waste, into compost or mulch that may be made available for agricultural and other acceptable uses;

The solid waste department partners with the University of Florida Extension services and master gardeners to provide a soil amendment derived from the grinding and screening of the curbside yard waste collected from unincorporated Osceola County and the City of Kissimmee. The amendment is then provided at no charge to our citizens, schools and community gardens. The extension office strives to encourage backyard composting through their community outreach classes making citizens aware of the soil amendment provided by the solid waste department.

Strategy (including general time frames) for expanding your county's recycling programs, or for creating new programs if needed, as part of your county's efforts to achieve the statewide recycling goals set forth in s.403.706(2) F.S. and

At this time the county feels the current single stream curbside recycling program and the extremely high participation rates we experience due to once a week garbage collection are sufficient. We are also experiencing tremendous growth. As mentioned we are implementing a new curbside collection contract in October of 2019 in which we are adding automated garbage collection in 95 gallon containers and allowing citizens to purchase additional garbage containers. We feel this will assist in alleviating some of our contamination issues. The automated garbage collection will also address the litter issues in our storm water ponds.

Discussion of any additional steps, initiatives and any anticipated challenges the county foresees would be critical for implementing your strategies to achieve the next interim recycling goal of 60 percent in 2016, and ultimately statewide goal goal of 75 percent by the end of 2020.

As mentioned above the county has implemented a new collection contract effective October 2019. The county believes this effort will address the current contamination issues with the single stream recycling and litter prevention in our storm water ponds.

Palm Beach County

Upon the Solid Waste Authority of Palm Beach County's (SWA) internal review of the 2018 data submitted for Palm Beach County (County) to the Florida Department of Environmental Protection (FDEP), the SWA found an error in calculating the total tonnages. The SWA will work to improve its data collection and submission process for future years. The SWA's responses below are based on the revised 2018 data and recycling rates while acknowledging that the FDEP will not be revising the County's recycling rates for 2018 published earlier this year.

Per Section 403.706(2)(d), Florida Statutes (F.S.), the FDEP has directed the SWA to develop a plan for how the County will strive to meet the State of Florida's (State) 75% recycling goal by 2020. The SWA is committed to continue and improve all of its existing programs in order to meet the State's 75% recycling goal by 2020.

1. Summary of the services and materials for which you offer recycling such as newspaper, aluminum cans, steel cans, glass, plastic bottles, cardboard, office paper and yard trash;

The SWA employs a dual stream recycling program to manage the recyclables generated by 1.4M County residents. A blue recycle bin is for plastic bottles and container of two gallons or less; food and beverage cans; glass bottles and jars; mild and juice cartons; and drink boxes. A yellow recycle bin is for cardboard; newspaper and inserts; office and school paper; mail; magazines; dry food boxes; paper bags; cardboard paper rolls; and the clean side of pizza boxes. Single family residents receive an 18-gallon blue or yellow recycle bin or 25-gallon can for their blue bin recyclables for curbside collection. Multi-family residents receive community 96-gallon blue and yellow recycle carts for community collection. There are also more than 300 yellow 8-cubic yard dumpsters for residents who have larger cardboard or for those who live in multi-family communities that do not have recycling service. These yellow community cardboard dumpsters are also available to businesses for their cardboard and office paper collection. Each year the SWA processes more than

90,000 tons of blue and yellow bin recyclables. More than 80,000 tons are sold through brokers to mills and factories that will use these commodities as raw materials to make new products.

In addition, the SWA collects yard waste at the curb. Residents are allowed to place 6-cubic yards of yard waste to the curb each week. Tree branches placed at the curb must be cut into pieces that are no more than 6-feet in length and weigh no more than 50-pounds each to facilitate manual loading. Palm fronds can be any length. Land clearing is never collected curbside and includes but is not limited to stumps, dirt, root balls and whole trees.

2. Analysis of the percentage of the county's MSW generated by the commercial, multi-family, and residential single-family sectors;

The SWA does not have access to this information, as many of the materials are mixed by the time they reach the SWA. Commercial MSW is not required to be delivered to the SWA. However, with economic and contractual flow control, the potential risk for commercial waste to leave the SWA's system is very minimal.

3. Analysis of any existing recycling programs for the commercial and multi-family sectors, including estimated customer participation rates and recycling rates for each of those sectors;

In November 2017, a month-long curbside set out rate study for single-family homes was conducted in three different areas of the County, which were broken down into four demographic areas as outlined by Census Data. The highest set out rate for each week per income-specific demographic area was calculated to be:

- Low (Average Income \$13,600-\$53,800) – 40%
- Medium Low (Average Income \$53,801-\$94,000) – 45%
- Medium High (Average Income \$94,001-\$134,100) – 52%
- High (Average Income \$134,101-\$392,900) – 57%

From the overall dataset, the combined set out rate for the highest set out weeks was 54%.

In an effort to increase this set out rate, the SWA has embarked on a direct mail campaign to remind residents what goes in their blue and yellow recycle bins and provides a phone number and website to order new or replacement recycle bins. The SWA has a dedicated recycling field team that conducts waste reviews of commercial properties in an effort to increase recycling. This team is building a commercial property database to be more proactive with businesses on a more routine basis.

4. Description of the county's implementation, including any planned changes, for your program for recycling construction and demolition debris;

As an alternative for disposing of construction and demolition (C&D) debris at a landfill or the SWA's waste-to-energy facilities (WTEs), the SWA administers a permitting program for private solid waste recycling facilities to recycle C&D debris. The SWA also has entered into contracts with C&D recycling facilities located in Martin and Broward counties to further promote the recycling of C&D materials generated within the County. There are no planned changes to this program at this time.

5. Description of efforts or opportunities to encourage recycling of yard trash, and other organic materials or mechanically treated solid waste, into compost or mulch that may be made available for agricultural and other acceptable uses;

The SWA has an ongoing program for permitted yard waste facilities to process yard waste into mulch, so it can be land applied on farm land. The SWA is currently working with two permitted companies to process and convert yard waste delivered to the SWA transfer stations into a mulch-type material for land application.

6. Strategy (including general timeframes) for expanding your county’s recycling programs, or for creating new programs if needed, as part of your county’s efforts to achieve the statewide recycling goals set forth in s. 403.706(2), F.S.; and

There are four initiatives that are under way that may bring in additional recyclables:

- 1) The FDEP recently approved the beneficial reuse of bottom ash from the SWA's two WTE facilities as a blended aggregate in asphalt and concrete applications. The tentative timeline for implementation of this initiative is 2020.
- 2) The SWA is exploring the feasibility of “Advanced Metals Recovery” from WTE ash prior to beneficial ash reuse or final disposal at the Class 1 Landfill. The tentative timeline for implementation of this initiative is 2022.
- 3) In January 2020, a pilot program will begin to test if a larger blue recycling cart will bring in more volume of clean blue bin recyclables. The cart used in this pilot is to be 35-gallons, and have a lid and wheels. This larger cart is able to be tested as the SWA's new collection contract will require a split body, rear load recycle truck that will have a flipper arm. This pilot is an extension of a 2016 pilot project using a 25-gallon can that was manually loaded. The results of this pilot showed a sustained 13% increase in clean blue bin recyclables in the pilot area. Since this pilot's inception, more than 30,000 25-gallon blue recycle cans have been distributed to residents who requested them.
- 4) The SWA is expanding its Recycle Right Event program to standardize recycling at major community events to increase recycling tonnage and decreasing garbage tonnage. Success stories in this program are:
 - a. Boca Raton Bowl
 - i. 2016, recycled 2.4 tons of material
 - ii. 2017, recycled 3.2 tons of material
 - iii. 2018, recycled 3.4 tons of material

- b. Garlic Fest
 - i. 2017 (3-day event), recycled 1.95 tons of material; disposed 5.82 tons of garbage; for a recycling percentage of 25%
 - ii. 2018 (3-day event), recycled 1.97 tons of material; disposed 5.37 tons of garbage; for a recycling percentage of 27%
 - iii. 2019 (2-day event), recycled 1.24 tons of material; disposed 2.32 tons of garbage; for a recycling percentage of 35%
- c. SunFest
 - i. 2018, recycled 16.24 tons of blue bin material; disposed 19.8 tons of garbage; for a recycling percentage of 45%

7. Discussion of any additional steps, initiatives and anticipated challenges that are critical to implementing your strategies to achieve the next interim recycling goal of 70 percent in 2018, and ultimately statewide goal of 75 percent by the end of 2020.

The SWA has met or exceeded the State's 2018 interim benchmark goal of 70% in years 2015 (72%), 2016 (72%), and 2017 (70%). However, in 2018, the State's calculated recycling rate for the County was 65%. As mentioned earlier, this decrease was researched by SWA staff and upon reviewing official FDEP reports and reports submitted to the SWA by private entities, it was found that there was some double counting of landfill tonnage and some volumetric data in cubic yards that was incorrectly coded as tonnage delivered to landfills outside the County. The methodology for evaluating this data and reporting it to the FDEP has been corrected and the same procedure will be adopted for future years. Based on correcting these inaccuracies in the data, the SWA believes its revised recycling rate for 2018 is 72.72%.

In addition, to gain the best possible data in support of the State's recycling goal, the SWA will:

- Continue its dual stream recycling program to capture as much clean recyclable material as possible;

- Continue its waste to energy effort to receive the maximum recycling credit from the state;
- Include the energy recovery from beneficial use of landfill gas in biosolids processing; and
- Include any offsite yard waste recycling programs to help divert yard waste away from final disposal at SWA facilities.

Pasco County

PASCO COUNTY BOCC

Pasco County Recycling Program Plan

**Public Infrastructure Branch
Solid Waste and Resource Recovery Department**



III. Summary of Recycling Services and Materials
I. I. In 2008, the Florida Legislature set a statewide municipal solid waste (MSW) recycling goal of 75% by the year 2020. In 2010, the Legislature further directed that the goal be primarily applied to counties with a population of greater than 100,000 with interim goals as follows:

Calendar Year Interim Recycling Goal

2012 40%

2014 50%

2016 60%

2018 70%

2020 75%

Pasco County's 2018 recycling goal was not met. This report is being submitted to satisfy the requirements of Section 403.706(2)(b), 403.706(2)(d), and 403.706(2)(e) of the Florida Statutes, as follows:

403.706(2)(b): ". . . each county must implement a program for recycling construction and demolition debris"

403.706(2)(d): "If . . . the county, as determined by the department in accordance with applicable rules, has not reached the recycling goals as set forth in paragraph (a), the department may direct the county to develop a plan to expand recycling programs to existing commercial and multifamily dwellings, including, but not limited to, apartment complexes"

403.706(2)(e): ". . . the department shall provide a report to the President of the Senate and the Speaker of the House of Representatives. The report shall identify those additional programs or statutory changes needed to achieve the goals set forth in paragraph (a)." Pasco County's Solid Waste System includes a Waste-to-Energy plant; Class III landfill; white goods recycling; curbside recycling; biosolids processing facility; and Hazardous Waste program.

II. **Summary of Recycling Services and Materials**

Pasco County offers recycling for aluminum cans, metal food cans, mixed paper, cardboard, and plastic containers #1, 2, 3, 4, 5, and 7. These items are collected both curbside and at five manned drop-offs. Single stream curbside recycling is picked up by private, independent trash haulers and brought to a County transfer station before being shipped to a MRF. Residents may drop off a variety of Household Hazardous Waste materials to two County facilities for recycling. White goods are also accepted at two County facilities.

III. Analysis of MSW by Sector

The tons of MSW generated by the various sectors delineated by FDEP terminology are listed in the annual solid waste management report submitted to the FDEP. Pasco’s Solid Waste scale system (PCscales) does not differentiate between commercial and residential MSW unless brought in by roll off or compactor. Almost all rear loaded MSW is residential, but front-loaded can be mixed residential, multifamily residential, and commercial; tonnage type and percent of total MSW for these categories are not determinable with accuracy. As such, percentages below are approximations only.

Single Family Units	29% MSW
Multifamily Units	3% MSW
Commercial Units	68% MSW

Property appraiser data is utilized to determine the number of single-family vs multifamily units, and commercial tonnage is assumed by default to be anything not attributable to residential waste through Pasco County’s scale system.

IV. Analysis of Recycling Programs for Commercial and Multifamily

Citizens living in multifamily units have five County recycling drop-off sites available for personal recycling use, free of charge. The feasibility of a multifamily recycling program will be investigated. Additionally, within the next year Pasco will evaluate opening a satellite drop-off in the southern part of the County. Pasco does not have a County-run commercial recycling system in place. The feasibility of doing so will be investigated. The County Solid Waste ordinance may be modified in calendar year 2019 to encourage commercial recycling.

V. Description of C&D Recycling

Pasco’s Construction and Demolition recycling is executed primarily by two private companies: PAW Materials, located in Pasco, and Coastal Landfill Disposal, located in Clearwater. PAW Materials is planning to open a new facility in Pasco, which will significantly increase C&D recycling tonnage.

VI. Description of Yard Debris and Organics Recycling

Pasco’s Yard Waste recycling is performed by private companies: Bay Mulch, Coastal Landfill Disposal, Consolidated Resource Recovery, and PAW Materials. Additionally, yard waste is used as landfill cover on site.

VII. Strategy for Expanding County’s Recycling Program

Pasco County will be expanding its Waste-to-Energy plant with a fourth combustion unit within the next decade. This expansion will reduce the need for landfilling out-of-county, and will increase recycling credits significantly. In order to increase participation and fulfill the requirements of Florida Statute 403.706, Pasco County is

implementing an increase to curbside recycling pickup frequency in the Solid Waste ordinance.

Curbside recycling pickup is now once-per-week. This change will be fully implemented by early September, 2019. A multi-media advertising campaign has launched in order to promote this change, including advertising on television, radio, newspapers, and social media. In addition, accepted curbside materials have changed to remove glass due to market conditions and contamination. Despite its value to the weight-based 2020 75% recycling goal, glass typically breaks during the collection and sorting process and can reduce the value of paper by cross-contamination, as discussed in the Department's 2017 report to the legislature.

Additionally, a state of the art biosolids facility opened in May, 2018 and will process approximately 50,000 tons of biosolids into class AA Registered Fertilizer.

Finally, ash from the Waste-to-Energy plant has been utilized in several projects as a component of both road base and cement. The ash reuse program will be expanded.

VIII. Discussion of Additional Steps, Challenges, and Strategies

There are several challenges that the County faces in terms of reaching the 75% state recycling goal, including:

- Glass is being phased out from Pasco County's accepted curbside recycling materials, as there are few outlets for reuse and glass is a substantial contributor to recycling contamination. Glass comprises approximately 35% of Pasco County's curbside recycling stream by weight; a deleterious effect on tonnages is expected with its removal, even if participation increases. Quality is emphasized over quantity in current markets. As such, Pasco County's approach is geared towards the principals advocated in Sustainable Materials Management rather than mere tonnage.
- As detailed in the research found in the Department's 2017 report, recycling markets are depressed due to the economic policies of foreign markets.
- Consistent with the conclusions in the Department's 2017 report to the legislature; recycling in Florida, the United States, and the world has changed significantly over the last 10 years. Many of the challenges we currently face with recycling have occurred as a result of changes in collection methods, shifts in the recycling markets and new and lighter weight packaging. These factors make achieving the 75% goal challenging for many municipalities in the current market.

Polk County

10 Environmental Loop South
Winter Haven, FL 33880



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www.polk-county.net

WASTE & RECYCLING DIVISION

September 23, 2019

RECEIVED
Florida Department of Environmental
Protection

SEP 30 2019

Permitting & Compliance
Assistance Program

Jennifer L. Simmons
Florida Department of Environmental Protection
Division of Waste Management
Permitting & Compliance Assistance Program
2600 Blair Stone Road, MS4550
Tallahassee, FL 32399-2400
Jennifer.L.Simmons@dep.state.fl.us

Re: Polk County 2019 Recycling Plan

Dear Ms. Simmons:

This document serves as Polk County's 2019 Recycling plan and as a response to your August 8, 2019 email request.

Polk County Recycling Plan

The Polk County Board of County Commissioners offers residential curbside recycling services to over 142,000 single and multi-family¹ residential units within unincorporated Polk County. This recycling service accepts aluminum cans, steel (tin) cans or containers, cardboard, cereal boxes, cardboard egg cartons, newspaper, uncoated paper, paper products, and most gallon and half-gallon translucent plastic² milk, juice and water jugs. More details on these services are available at <https://www.polkwastewise.net>.

Polk County's 17 municipalities also offer various forms of residential curbside recycling. Recycling in the commercial sector of Polk County is voluntary and handled by individual businesses and private recycling contractors.

According to the Florida Department of Environmental Protection's (FDEP) 2018 Municipal Solid Waste Management Report, Polk County's citizens and businesses diverted almost 400,000 tons of material from the County's municipal solid waste (MSW) stream of 1,233,000 tons; an unadjusted recycling rate of 32%. Your email requested specific information regarding recycling

¹ Facilities with 9 units or fewer. Facilities with greater than 9 units are handled as commercial entities

² No color or clear plastics

in Polk County, specifically as it relates to MSW generated and recycling participation by commercial entities, multifamily and residential single-family sectors. Polk County is working with the University of Florida's Sustainable Materials Management Research Laboratory (SMMRL) to further investigate and update Polk County's recycling data so we can better evaluate future recycling alternatives. This data will be submitted when it is available.

Recycling Program Strategy

Polk County is committed to offer environmentally sound and cost effective recycling collection services to its citizens. The program's goal is to target commodities that can realistically be remanufactured into new packaging or products. Quality plays a central role in Polk's collection program since it has a direct impact on demand from mills and manufacturers. Our focus is on collecting materials that can be compatibly comingled during collection and demand a high market value. This minimizes contamination and results in a cleaner product that is more desirable to manufacturers and processors. It also minimizes double handling and the potential for rejected contaminated materials to enter the environment.

Polk County engaged the University of Florida SMMRL to explore future recycling initiatives that would have the greatest positive environmental impact. So far, one finding allowed the County to identify and collect materials in the curbside collection program that contributed the environmental benefit (greenhouse gas avoidance and energy use savings) such as newspaper; aluminum and steel cans; and corrugated boxes.

The following is a summary of some of the new recycling initiatives that Polk County is considering:

Expanded Commercial and Multi-Family Recycling Program

Section 403.706(2)(d) of the Florida Statutes state that the FDEP may direct counties that have not achieved milestone recycling goals to expand recycling programs to existing commercial and multi-family dwellings, including but not limited to apartment complexes. Polk County will work with the University of Florida SMMRL to examine the feasibility, cost, and environmental benefits of proposing policies targeting mandatory recycling programs to commercial and larger-unit multi-family dwellings (apartment complexes).

Expanded Construction & Demolition Debris (D&DD) and Yard Trash Recycling Programs

Section 403.706(2)(b) of the Florida Statutes state that each county must implement a program for recycling C&DD. Chapter 62-701.730(13)e of the Florida Administrative Code requires the owner or operator of disposal facilities that accept C&DD to "ensure that such materials are processed, to the extent economically feasible, to remove recyclable material prior to disposal."

The Polk County North Central Landfill (NCLF) is the only active government-owned facility in Polk County and it does not operate a dedicated C&DD cell. The county however has several privately owned C&DD facilities that provide many processing and disposal opportunities to private haulers. The C&DD NCLF receives is minimal and staff segregates concrete, rock, tile, roofing shingles and other material from these loads for beneficial reuse. The County is analyzing a proposed policy change to accept these materials at a reduced charge to encourage additional recycling of these materials. In addition to being economical, this type of C&DD recycling has the environmental benefit of reducing the consumption of natural aggregates that are normally used to stabilize roadways.

All yard trash collected at Polk County's NCLF is processed into mulch and made available to citizens for agricultural and landscaping use. The processed mulch is also used at the NCLF for soil stabilization and landfill cover.

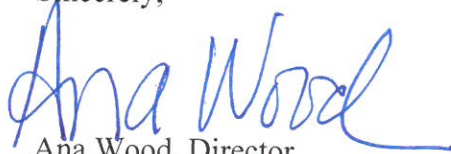
Any further expansion of C&DD or yard trash recycling would likely involve placing new requirements on businesses and/or private C&DD disposal sites to recycle beyond what is currently financially feasible, and would likely require extensive processing (screening and grinding). This processing consumes energy, which diminishes the environmental benefit of recycling these materials. We believe investment in new recycling programs should be focused on materials that produce greater environmental benefits. The University of Florida SMMRL performed an analysis of the environmental impacts associated with increasing C&DD and yard trash recycling-rates. Even if Polk County were to increase C&DD and yard trash recycling rates 71% and 92% (respectively) above current levels, similar to that achieved in San Jose California, greenhouse gas emissions and energy use would only be reduced by 5.4% and 0.8%, respectively.

Glass Container Drop-Off Collection Sites

Glass containers were dropped from Polk County's curbside collection program because glass breakage during collection and sorting contaminates other recyclables and makes color separation of glass (which is necessary to produce a marketable product) very expensive. We are evaluating the feasibility, cost, and environmental benefit of collecting glass separately at drop-off collection sites. Doing so will minimize the costs associated with recycling glass since it will be less contaminated with other materials and more efficient to segregate into each glass color.

I appreciate the opportunity to share Polk County's recycling plan and welcome any comments or suggestions you may offer.

Sincerely,



Ana Wood, Director
Polk County Waste & Recycling Division

Santa Rosa County



**SANTA ROSA COUNTY
ENVIRONMENTAL DEPARTMENT**

6065 Old Bagdad Highway | Milton, Florida 32583

ROGER BLAYLOCK, P.E., County Engineer
rogerb@santarosa.fl.gov

RON HIXSON, Environmental Manager
ronh@santarosa.fl.gov

Santa Rosa County

Recycling Program Plan

Prepared by:

Santa Rosa County

Environmental Department

August 21, 2019

I. SUMMARY OF SERVICES

Santa Rosa County is actively engaged in supporting the requirement of Section 403.706, FS: (62-701.320(7)(h), FAC) by enacting a Solid Waste Franchise Collection Agreement for the unincorporated areas of the County. Beginning in 2011, the County awarded two solid waste collection franchises to Waste Management of Florida and Waste Pro of Florida to provide solid waste collection services in the southern portion of Santa Rosa County. In 2014, the County awarded a third franchise to the Emerald Coast Utilities Authority (ECUA) to provide solid waste collection services in the northern portion of the County. The Solid Waste Franchise Collection Agreements require the franchisee to provide curbside collection of household garbage, recyclables, yard waste and bulk waste.

A primary goal of the Franchise Collection Agreements was to provide a standard level of service county wide that includes curbside collection of recyclables as a means of meeting the state of Florida's recycling goals. The County also provides segregated areas at the County owned and operated Central Landfill for the collection of yard waste, white goods, masonry, household hazardous waste (HHW) and end of life electronics that are recycled or reused. Yard Waste is ground to provide mulch for use in landfill operations as cover and erosion control material. Concrete, bricks, ceramics and similar materials are used to construct temporary roads in the Class I and Class III disposal areas.

Items collected in the county's Solid Waste Residential Franchise Areas:

- Glass; any color
- Newspaper & Inserts
- Magazines & Catalogs
- Junk Mail & Envelopes
- Cardboard
- Phone Books
- Office and School Papers (colored paper)
- Brown Paper Bags (grocery)
- Boxboard (cereal, cake & cracker boxes, etc.)
- Pizza Boxes • Plastic Produce Clamshells
- Plastics No. 1 through 7
- Plastic Milk Jugs, bottles, and containers
- Aluminum Cans & Lids
- Pet Food Cans and Dry Pet Food Bags
- Aluminum Foil Baking Pans
- Balls of Tin Foil; Foil Pie Tins
- Tin and Steel Cans & Lids
- Metal Pots, Pans & Cookie Sheets
- Egg Cartons, cardboard only at this time

II. ANALYSIS BY SECTOR – MSW GENERATION

Santa Rosa County does not differentiate between residential, multifamily, or commercial disposal except for vegetative waste. Vegetative waste includes both residential and commercial while recycling is primarily generated by single family residential units and collected curbside in the Residential Collection Franchise Areas. The county also has a significant number of self-haulers that contribute little to the recycling system; however, a recycling container is provided at the Residential Drop Off Area. The

county does track waste generated outside of Santa Rosa County but again does not differentiate between residential and commercial waste streams.

All weights in tons, rounded to the nearest whole ton.

Fiscal Year	Class I	Class III	Total Class I&III	Recovered Materials	Out of County Waste
2019*	122,526	79,223	201,749	16,167	30,063
2018	137,583	115,259	252,842	30,922	33,967
2017	121,805	131,957	253,762	21,014	2,428
2016	127,206	126,334	253,540	18,708	4,488
2015	160,699	79,667	240,366	17,565	n/a
2014	120,043	51,309	171,352	16,933	n/a
2013	110,637	35,914	146,551	16,134	n/a
2012	110,107	29,785	139,892	17,037	n/a
2011	106,632	24,012	130,644	18,187	n/a

* thru 9/10/19

III. ANALYSIS BY SECTOR – RECOVERED MATERIALS - COMMERCIAL & MULTIFAMILY SECTORS

All weights in tons, rounded to nearest whole ton.

Fiscal Year	White Goods	Waste Tires	Vegetative Waste		Masonry	Recycling
			Residential	Commercial		
2019*	71	40	3,183	5,742	1,722	3,271
2018	74	63	3,594	7,624	2,135	9,670
2017	28	45	3,087	7,040	514	9,938
2016	21	49	3,816	3,862	1,336	10,415
2015	60	51	2,366	2,167	3,696	9,054
2014	5	51	2,559	599	168	8,696
2013	10	41	2,463	211	143	8,168
2012	54	37	1,960	2,705	301	6,685
2011	68	27	303	8,818	3,005	3,005

* thru 9/10/19

IV. CONSTRUCTION AND DEMOLITION DEBRIS RECYCLING

Santa Rosa County accepts concrete, bricks and similar C&DD materials that are source separated at the point of generation and accepts the material at a reduced rate or no charge for reuse in landfill operations. Based on a review of the economics and end markets available in the local area the county has no plans at this time to expand C&DD recycling operations.

The County does accept clean concrete, no wire mesh and with limited rebar, at no charge and recycles the crushed concrete for temporary road base in the Class I and Class III disposal areas. The material is also used to stabilize areas used for equipment storage and vehicle turnaround pads.

Concrete collected and processed in 2018 2,135 Tons
 2019 1,722 Tons (Thru 9/10/19)

V. YARD TRASH RECYCLING

Santa Rosa County accepts yard waste, land clearing and landscaping debris from residential and commercial activities and grinds the material to produce mulch that is used primarily for landfill operations as an alternative cover material but is also available to residents at no charge. The County also accepts yard waste and land clearing debris that is already mulched at no charge.

Vegetative debris accepted and processed in 2018	11,217 Tons
2019	8,925 Tons (Thru 9/10/19)

VI. RECYCLING PROGRAM STRATEGY

Santa Rosa County provides residential curbside recycling collection thru the county’s Solid Waste Collection Franchise Agreements and initially contracted with the Emerald Coast Utilities Authority (ECUA) in Escambia County to transport and process recyclables. In May 2019, ECUA unilaterally cancelled the recycling agreement with the County and since that time all recyclables collected in Santa Rosa County have been deposited in the county’s Central Landfill. Additional information is provided in Section VI, INITIATIVES AND CHALLENGES.

To address contamination in the recycling stream Santa Rosa County is implementing a Recycling Education Program utilizing the following methods:

- Public Notifications from County Public Relations Department
- Printed information in local newspapers
- Online information thru Social Media Platforms
- Information from local broadcasters utilizing services of COX Communications Media
- In person contact with county staff providing printed media during curbside collections.

The County will also utilize landfill personnel to screen incoming loads of recyclables to remove contaminated materials. While this will be a “sledgehammer” approach, using a small front end loader, and a small temporary staff to remove the most obvious contamination items, it should allow the County to identify recycling routes that are heavily contaminated and allow the county to target corrective action to those areas.

VII. INITIATIVES AND CHALLENGES

1. INITIATIVE – SHINGLE RECYCLING

Santa Rosa County contracts out yard waste grinding services for yard waste debris to a commercial company. Staff has requested comments from the grinding company on the possibility of including additional materials to the contract which could include shingles and concrete debris that has rebar and wire mesh. Adding shingles to the grinding contract has the potential to add approximately 760 tons annually that is not landfilled. Staff is also researching the grinding of source separated non-treated lumber used to produce trusses and other wood-based products utilized in the housing industry. Challenges associated with both shingles and non-treated lumber would be the ability of the generator to source separate the materials prior to disposal. Efforts in the past have not been successful due to the cost incurred by the generator or contractor to provide additional containers at the production facility or construction site. The county is currently evaluating alternative means to introduce shingle recycling and reuse.

2. INITIATIVE – CNG PROJECT, LANDFILL GAS TO ENERGY

In 2013 Santa Rosa County voluntarily installed a Landfill Gas Collection and Control System to capture and control landfill emissions. The original plan was to convert the LFG to CNG for use as an alternative fuel for local waste haulers; however, the county was unable to secure commitments from local companies to utilize the produced CNG. Without a viable outlet for the produced CNG the project was postponed indefinitely. In early 2017, Waste Management notified the county of their decision not to renew their Solid Waste Collection Franchise and the Board subsequently awarded the WM franchise area to Waste Pro who has agreed to discuss the use of CNG in their collection fleet. Assuming an agreement can be reached with Waste Pro the county will re-evaluate the feasibility of the CNG project.

3. RECYCLING CHALLENGES

The primary challenge to maintaining a financially sustainable curbside recycling program is the instability in the recycling markets and the low value of recyclables. While contamination certainly plays a major role in the loss of value, the overriding issue is the lack of regional processing facilities.

A major contributor to the contamination issue is the widespread, almost universal belief that everything is recyclable. The main enabler for that belief is the educational system, recycling industry and regulatory agencies, all with good intentions; however, the end results are recycling trucks full of garden hoses, plastic blinds, light bulbs, clothes and just plain garbage.

It's time to get back to basics. We need to shift more of the responsibility and effort to recycle back to residents. We must be very clear on what is recyclable and how to prepare items for recycling, (clean containers, remove labels etc.) and what is not recyclable and why.

OPTIONS

1. Assuming ECUA approves the latest version of their recycling processing agreement the County expects to resume recycling in the November / December time frame. The County has a tentative contract with a local hauler to transport recyclables to ECUA at a cost of \$500 / pull, however, the County will not finalize that agreement until there is a signed processing agreement in place with ECUA.

2. If ECUA does not ratify the agreement or increases the processing fee to a level that is unsustainable to the County, the County will have three possible options:

a. The County could transport its recyclable to the RePower South Facility in Montgomery Alabama. We have had preliminary discussions with RePower South, and they are willing to accept our recyclables with some restrictions, (no glass and possible limitations on plastics and mixed paper). The County would also reduce the materials acceptable for recycling to limited plastics depending on market conditions, metals and clean cardboard. Our transportation cost would also double from \$500 / pull to \$1,000 / pull.

b. The County could restart a very limited processing facility and significantly restrict the materials accepted for recycling to limited plastics, metals and clean cardboard. While there has been considerable discussion on this option it is unlikely to happen primarily due to the cost in equipment and personnel, market restrictions and facility limitations.

c. The third and final option would be for the County to suspend the collection of recyclables until the market conditions improve or another avenue for processing recyclables is available.

VIII. BACKGROUND ON RECYCLING IN SANTA ROSA COUNTY & WHERE WE ARE NOW

Santa Rosa County has faced a number of challenges in past years with regards to recycling. In March of 2012 West Florida Recycling (WFR) convinced the Board of County Commissioners that they could collect, process and market recyclables generated in Santa Rosa County at a lower cost than the county's operation. In March of 2012 the county signed a contract with West Florida to collect and process all recyclables from Santa Rosa County.

Subsequent to that contract the county eliminated recycling positions and auctioned off all county recycling equipment. In March 2014 West Florida Recycling ceased operations and filed for bankruptcy. In or around May 2014, recyclables from the county were transported to Infinitus Renewal Energy Park (IREP) in Montgomery for processing and that continued until IREP Montgomery ceased operations without prior notice in October of 2015.

In both cases, with West Florida Recycling and IREP Montgomery, the county incurred significant expenses in both the transportation and loss of revenue from its recycling operations while accepting recyclables at no tip for disposal in the Class I disposal cell.

In June of 2016 the county contracted with the Emerald Coast Utilities Authority (ECUA) to transport, process and market recyclables collected in Santa Rosa County. In April of 2016 the county instituted a tipping fee for recyclables to offset the cost of recycling and to ensure sufficient revenue to sustain recycling operations if the recycling markets tumble causing a significant increase in recycling expenses. Adding to the county's hesitation in expanding or adding recycling services is the market's persistent instability and China's latest decision to limit the importation of recyclables that could have a devastating effect on the sustainability of recycling markets.

On February 8, 2019, ECUA notified the county that they were moving to terminate the recycling contract and provided the county a new draft recycling agreement. ECUA's proposed recycling agreement would end the requirement for ECUA to transport recyclables for the county and increased processing fees to \$20 per ton, a significant increase from the \$9 per ton the County had been paying. From February 8th thru April 3rd the county discussed various terms of the new agreement with ECUA and met with a representative of ECUA on April 2nd for discussions. On April 22, ECUA unilaterally cancelled the recycling and processing agreement with the county effective April 30, 2019, effectively ending recycling in Santa Rosa County.

On April 25, 2019 the Santa Rosa County Board of County Commissioners approved the new flat rate recyclables processing agreement with ECUA and returned the signed agreement to ECUA for the ratification on May 2, 2019. On June 25, 2019 the ECUA board rejected the agreement approved by the Santa Rosa County BOCC. Subsequent to the rejection, ECUA provided a third, variable rate agreement to the County that the BOCC approved on July 11, 2019 and returned to ECUA on July 19 for ratification. The County anticipates that ECUA will discuss the new variable rate agreement at its September 24 meeting, however, ratification by ECUA is uncertain.

County Staff researched additional facilities to process recyclables and looked at two of the nearest facilities, one in Tallahassee and the other in Montgomery Alabama. The Tallahassee facility is at capacity and will not accept any additional material. If they did the processing fee would be \$90/ton or higher plus transportation cost. The Alabama facility may be possible, but they too have several areas under contract and will only accept limited materials including metals, some plastics and clean cardboard. They do not glass and may restrict other materials depending on market conditions.

The options available to the county at this time would require a subsidy of anywhere from \$300,00 or \$400,000 to over \$1,200,000 to continue providing recycling services.

Santa Rosa County fully supports recycling; however, recycling operations must have a firm foundation that includes local or regional markets, sufficient revenue generation to support operations and flexibility to add or delete material that does not have a positive recycling value. The County will continue to evaluate recycling opportunities as they arise and will initiate action to increase or expand recycling efforts when possible.

UPDATE 10/2/2019

On September 24 the Emerald Coast Utilities Authority approved an Interlocal Agreement with the Santa Rosa County Board of County Commissioners to process recyclables collected in the county. The agreement imposes a current processing fee of \$46/ton and ECUA will be accepting all common recyclables.

In addition, the County has begun disturbing educational materials directly to customer via a can hanger that provides information on what can and cannot be recycled. The County will also be using radio, news publications and social media accounts to provide educational materials.

Attached in Appendix A are copies of the can hangers and magnets while Appendix B is a copy of the SRC interlocal with ECUA.

Questions and comments may be directed to the Santa Rosa County Environmental Office at 850.981.7135, email to Environmental-Dept@santarosa.fl.gov or to the author of the plan cited below.

Respectfully,

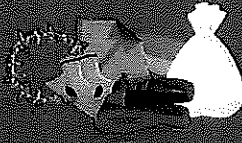


Ronald C. Hixson
Santa Rosa County
Environmental Manager
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6051 Old Bagdad Highway
Milton, FL 32583

Email: ronh@santarosa.fl.gov
Office Phone: 850.981.7143
Cell Phone: 850.232.8773

Appendix A

Don't trash your recycling



Santa Rosa County is contaminating curbside recycling bins with materials that are not meant to be there - mainly plastic bags, tangles like cords and hoses, clothing and greasy pizza boxes.

Let's RETHINK what we recycle and focus on recycling the basics at curbside.

Get back to the basics

Focus on recycling these items in your curbside bin:

Clean cardboard
and paper



Aluminum and
steel cans



Plastic bottles
and jugs



When in doubt throw it out!

For a full list of recycling dos and don'ts, visit ecua.fl.gov/green/recycling

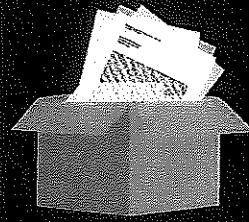




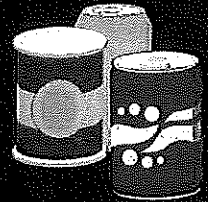
Get back to the basics

Focus on recycling these items in your curbside bin:

**Clean cardboard
and newspaper**



**Aluminum and
steel cans**



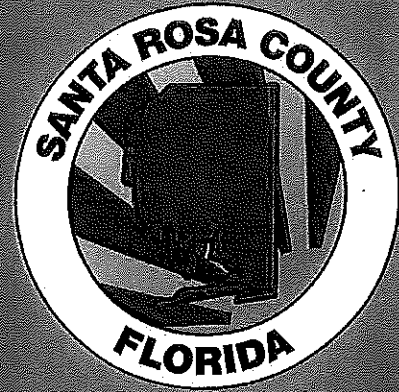
**Plastic bottles
and jugs**



Do not recycle pizza boxes because they can be contaminated with food.

Do not recycle pet food cans because they contain a plastic lining that makes them non-recyclable.

Find more information on recycling in
Santa Rosa County at
www.santarosa.fl.gov/recycle
or call (850) 981-7135



If recycling continues to be contaminated, Santa Rosa County runs the risk of not being able to continue the program.

These items CANNOT be recycled:

Garden hoses

Christmas tree lights

Window blinds

Greasy pizza boxes

Clothing

Bedding, carpet & rugs

Plastic bags

Styrofoam

Pet food cans/bags

Waxy/paper milk cartons

Juice boxes

Aerosol cans

Tin foil/foil pie tins

Find a full list at ecua.fl.gov/green/recycling

When in doubt throw it out!

Appendix B



**SANTA ROSA COUNTY
BOARD OF COMMISSIONERS**

Administrative Offices | 6495 Caroline Street, Suite C | Milton, Florida 32570-4592

SAM PARKER, District 1
ROBERT A. "BOB" COLE, District 2
W. D. "DON" SALTER, District 3
DAVE PIECH, District 4
R. LANE LYNCHARD, District 5

DANIEL J. SCHEBLER, County Administrator
ROY V. ANDREWS, County Attorney
MARK MURRAY, Asst. County Administrator

Received
JUL 22 2019
Shared Services

July 19, 2019

Mr. Randy Rudd
Deputy Executive Director of Shared Services
Emerald Coast Utilities Authority (ECUA)
9255 Sturdevant Street
Pensacola, Florida 32514

Re: Interlocal Agreement for the Acceptance and Processing of Source
Separated Recyclables (SSR)

Dear Mr. Rudd:

Enclosed herewith you will find two (2) originals of the referenced agreement which has been approved and executed by the Santa Rosa County Board of County Commissioners. Please have the appropriate parties sign all originals, retain one for your records and return an original to my office.

If you have any questions, do not hesitate in contacting my office at (850)983-1857.

Sincerely,

Roy V. Andrews
County Attorney

RVA/mba
Enclosures
cc: Roger Blaylock

7/17/19

**INTERLOCAL AGREEMENT FOR THE ACCEPTANCE AND PROCESSING
OF SOURCE SEPARATED RECYCLABLES**

This Interlocal Agreement for the Acceptance and Processing of Source Separated Recyclables (hereinafter "Agreement") is made and entered into as of this ____ day of _____, 2019, by and between the Emerald Coast Utilities Authority, a local governmental body, corporate and politic, which was formed by the Florida Legislature as an independent special district (hereinafter "ECUA") with administrative offices located at 9255 Sturdevant Street, Pensacola, Florida 32514, and Santa Rosa County, Florida, a municipal corporation of the State of Florida (hereinafter "County"), with administrative offices located at 6495 Caroline Street, Milton, Florida 32570 (each at times also being referred to as a "Party" or collectively as "Parties").

WITNESSETH:

WHEREAS Santa Rosa County and ECUA are authorized by Section 163.01, Florida Statutes, to enter into Interlocal Agreements and thereby cooperatively utilize their powers and resources in the most efficient manner possible; WHEREAS Source Separated Recyclables are collected in Santa Rosa County through a curbside recycling collection program operated by Santa Rosa County;

WHEREAS the Source Separated Recyclables collected in Santa Rosa County must be processed and sorted into separate commodities so as to facilitate their resale so that the Recyclable Materials may be recycled and put to beneficial use;

WHEREAS ECUA has a Municipal Recycling Facility (MRF) which is capable of processing Source Separated Recyclables;

WHEREAS Santa Rosa County would like to deliver all of the Source Separated Recyclables collected by Santa Rosa County in its curbside recycling program to the ECUA MRF so that the Source Separated Recyclables may be processed, segregated into recyclable commodities, and put to beneficial use;

WHEREAS the Parties desire to clarify the terms and conditions under which Santa Rosa County may deliver and the ECUA MRF may accept Source Separated Recyclables collected by Santa Rosa County.

NOW THEREFORE in consideration of the mutual promises and covenants contained in this Agreement, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereby agree as follows:

AGREEMENT

1. Recitals. The recitals contained in the preamble to this Agreement are declared to be true and correct and are hereby incorporated into this Agreement.

2. Definitions. As used in this Agreement the following terms shall have the following meanings:

2.1 *Applicable Law* -- shall mean all applicable federal, state and local statutes, codes, ordinances and standards and all applicable rules, regulations, licenses, permits, registrations, approvals, decisions, authorizations, judgments, orders, writs, decrees, directives or other action adopted, issued or taken by a governmental authority.

2.2 *Construction and Demolition Waste or C&D Waste* -- shall mean waste building materials, packaging and rubble resulting from construction, remodeling, repair, or demolition operations on houses, commercial buildings, and other structures, or as otherwise defined from time to time. Such wastes include, but are not limited to, concrete and paving debris, masonry materials, sheet rock, roofing waste, insulation (not including asbestos or asbestos containing materials), scrap metal, wood products, and other similar materials (not including asbestos or asbestos containing materials).

2.3 *ECUA MRF* -- shall refer to the Municipal Recycling Facility designed and constructed by ECUA which is located at the Perdido Landfill at 13009 Beulah Road, Cantonment, Florida 32533.

2.4 *Effective Date* -- shall mean August 1, 2019, and the first day on or after that date on which Santa Rosa County collects Source Separated Recyclables and the ECUA MRF is operating shall be the date the ECUA MRF begins accepting Source Separated Recyclables delivered to it from Santa Rosa County.

2.5 *Garbage* -- shall mean any putrescible animal and/or vegetative waste resulting from the handling, preparation, cooking and consumption of food, including, but not limited to, waste from markets, storage facilities, handling and sale of produce and other food products and further includes the packaging materials and

containers, but excepting such materials that may be serviced by garbage grinders and handled as household sewage.

2.6 *Hazardous Waste* -- shall mean (a) any waste which by reason of its quality, concentration, composition or physical, chemical or infectious characteristics which is defined or regulated as a hazardous waste, toxic substance, hazardous chemical substance or mixture, or asbestos under Applicable Law, as may be amended from time to time, including: (i) the Resource Conservation and Recovery Act of 1976 ("RCRA") and the regulations contained in 40 CFR Parts 260-281, (ii) the Toxic Substances Control Act (15 U.S.C. Sections 2601 *et seq.*) and the regulations contained in 40 CFR Parts 761-766, and (iii) future additional or substitute federal, state or local laws pertaining to the identification, treatment, storage, or disposal of toxic substances, or hazardous wastes; (b) radioactive materials, which are source, special nuclear, or by-product materials, as defined by the Atomic Energy Act of 1954 (42 U.S.C. Section 2011 *et seq.*) and the regulations contained in 10 CFR Part 40; (c) a chemical listed by the United States Environmental Protection Agency in accordance with Section 302(a) or Section 313(c) of the Emergency Planning and Community Right-to-Know Act of 1986, 42 U.S.C.A. § § 11002(a), 110239(c) (Supp. 1993), in each case as the same may be amended, replaced, or superseded; (d) a material or substance which may endanger health or safety, including any material or substance or combination of materials or substances which are explosive, volatile, radioactive, toxic, corrosive, flammable, reactive, an irritant or a strong sensitizer, or which generate pressure through decomposition, heat or other means if such materials or substances may cause injury, illness or harm to humans, domestic animals, livestock or wildlife; (e) a material falling within the definition of Fla. Stat. § 403.703(13); or (f) a material or substance that is treated as a hazardous or toxic waste, substance, or material by any Applicable Law or is otherwise prohibited from being deposited in a municipal solid waste processing facility under Applicable Law. Household Hazardous Waste contained in SSR shall not be considered Hazardous Waste for purposes of this Agreement and shall be accepted at the Facility if such acceptance is in compliance with the requirements of RCRA and the requirements of the MRF. With regard to materials or substances which are not Hazardous Waste as of the Effective Date, if any Applicable

Law is subsequently enacted or amended or any governmental authority thereafter determines that such material or substance is a hazardous or toxic waste, substance or material, then such material or substance shall be considered Hazardous Waste for the purposes of this Agreement from and after the effective date of such enactment or amendment of Applicable Law or governmental authority determination.

2.7 *Municipal Solid Waste or MSW* -- shall mean Garbage, household waste, and commercial solid waste; provided that for the purposes of this Agreement, Municipal Solid Waste shall not include Source Separated Recyclables, C&D Waste, Hazardous Waste, Special Handling Waste, Unacceptable Waste, or scrap tires.

2.8 *Perdido Landfill* -- shall mean the landfill currently operated by Escambia County, Florida which is located at 13009 Beulah Road, Cantonment, Florida 32533.

2.9 *Prohibited Materials* -- shall mean Municipal Solid Waste, C&D Waste, Hazardous Waste, Special Handling Waste, Unacceptable Waste, Yard Waste, scrap tires and any other solid waste or material of any kind that the ECUA MRF is prohibited from accepting pursuant to agreement, Applicable Law, or operational constraints.

2.10 *Recyclables or Recyclable Materials* -- shall mean various recyclable products and packaging designated by ECUA to be accepted at the MRF for processing, including various types of paper (including but not limited to newspaper, junk mail, magazines, office paper, cardboard and paperboard packaging), containers (including but not limited to glass bottles and jars, aluminum and steel cans, and #1 - #7 plastics), and mixed ferrous and non-ferrous metals. The terms Recyclables and Recyclable Materials shall not include Municipal Solid Waste, Construction and Demolition Waste, Hazardous Waste, Special Handling Waste, Unacceptable Waste, styrofoam, or scrap tires. The list of Recyclables may be expanded or contracted from time to time as determined by ECUA and the operator of the ECUA MRF, if any. The County, at its sole discretion, may eliminate such Recyclables or Recyclable Materials that in the County's judgement have little or no value and hinder the County's ability to provide a financially stable recycling system.

2.11 *Rejects* -- shall refer to materials collected along with the Recyclable Materials that are not designated by ECUA to be accepted at the MRF for processing.

2.12 *Residue* -- shall refer to Rejects and Recyclable Materials that are accepted by the operator of the ECUA MRF, processed at the MRF, and not converted to Recovered Materials due to breakage and/or transportation or processing limitations or inefficiencies.

2.13 *Shutdown* -- shall refer to those times in which the operator of the ECUA MRF is unable to receive Source Separated Recyclables for any reason except Force Majeure.

2.14 *Source Separated Recyclables or SSR* -- shall refer to Recyclables which (a) have been diverted or removed from the Municipal Solid Waste prior to collection, (b) are not C&D Waste, Hazardous Waste, Special Handling Waste, Yard Waste, Unacceptable Waste or scrap tires, (c) are not Municipal Solid Waste, and (d) the ECUA MRF is not prohibited from accepting and/or Processing under Applicable Law. The Parties acknowledge, however, that incidental amounts of Rejects may be collected and delivered with Source Separated Recyclables as a normal part of a recycling collection program.

2.15 *Special Handling Waste* -- shall mean any waste or other material that requires the delivery and disposal to be supervised by a government authority, including confiscated drugs and records of a police department or similar governmental authority.

2.16 This paragraph is intentionally left blank.

2.17 *Unacceptable Waste* -- shall mean (a) Hazardous Waste, explosives and ordinance materials, pathological wastes, radioactive materials, lead acid batteries, sewage sludge, highly flammable substances, cesspool or other human wastes, human and animal remains, motor vehicles, farm or other large machinery, construction materials and demolition debris and hazardous refuse addressed by regulations adopted by the United States Environmental Protection Agency ("EPA") pursuant to the Resource Conservation and Recovery Act of 1976, as amended, or other federal or state statutes,

such as, but not limited to, cleaning fluids, hazardous paints, acids, caustics, poisons, radioactive materials, fine powdery earth used to filter cleaning fluid; (b) unless consented to by ECUA, any item of waste exceeding six feet in any one of its dimensions or being in whole or in part a solid mass, the solid mass portion of which has dimensions such that a sphere with a diameter of eight inches could be contained within such solid mass portion; (c) all large household appliances, commonly referred to as "white goods" including refrigerators, stoves, washing machines, drying machines and water heaters; (d) any controlled substances regulated under the Controlled Substances Act, 21 USA 801 *et seq.*, or any equivalent state law; (e) small appliances containing chlorofluorocarbons (CFCs) including air conditioners, water coolers, and dehumidifiers; (f) cathode ray tubes; and (g) all other items of waste which pose a substantial threat to health or safety or the acceptance and disposal of which will cause substantial damage to, or adversely affect the continuous operation of the MRF or be in violation of any Applicable Law. Any substance or material which is determined by the EPA or any other Governmental authority subsequent to the Effective Date hereof to be hazardous, toxic, dangerous, harmful, or otherwise designated as a "waste ban," shall, at the time of such determination, be considered Unacceptable Waste.

2.18 *Yard Waste* -- shall refer to vegetative matter resulting from landscaping maintenance and land clearing operations and includes associated rocks and soils.

3. Term. The initial term of this Agreement shall begin on the Effective Date, as defined in paragraph 2.4, above, and end on September 30, 2021. Provided, however, that the Parties may extend the term of this Agreement upon mutual written agreement.

4. Delivery and Acceptance of Source Separated Recyclables.

a. *Delivery of Source Separated Recyclables to ECUA*. Beginning on the Effective Date and throughout the term of this Agreement, Santa Rosa County will deliver, to the ECUA MRF, all SSR collected within Santa Rosa County.¹

¹The ECUA MRF shall only be obligated to receive SSR at those times and on those days

b. *Right to Reject Loads Containing Excess Rejects.* In the event that SSR delivered to the ECUA MRF contains Rejects in excess of twenty-five percent (25%) by weight, the entire load may be rejected by the operator of the ECUA MRF. In the event that such a rejection occurs, the County shall be liable for a processing fee of \$250 per load plus the disposal costs attributable to that entire rejected load at the Perdido Landfill, at the rates established by Escambia County which are then in effect.² Moreover, in the event that Santa Rosa County SSR has excess Reject contamination on three separate loads within a thirty (30) day calendar period, the ECUA Executive Director or his designee, in his sole discretion, may terminate this Agreement and disqualify Santa Rosa County from further deliveries.

c. *Compensation/Charges to Santa Rosa County.* Santa Rosa County shall be compensated/charged monthly for each ton of SSR processed at the ECUA MRF, in accordance with paragraph 6 of this Agreement, below.

5. Disposal of Residue. The Parties acknowledge and understand that each load of SSR may contain Garbage, Unacceptable Waste, or other Rejects which cannot be recycled and put to beneficial use (collectively hereafter referred to as Residue). Because the SSR received from Santa Rosa County will likely be commingled with SSR generated from other jurisdictions, the Parties acknowledge and understand that it is impossible to therefore segregate the Residue by each entity. Accordingly, all such Residue shall be disposed of at the Perdido Landfill at no charge to Santa Rosa County.

6. Compensation/Charges for Delivered Recyclables. The Parties acknowledge and understand that the market for various Recyclable Materials fluctuates greatly based upon various market conditions. In order to reflect that reality, and make this Agreement viable and mutually beneficial, the Parties agree that the County shall be either compensated or charged for the SSR processed at the ECUA MRF in accordance

in which the ECUA MRF is operating, receiving SSR, and not Shutdown.

²In the event some or all of the load cannot be lawfully disposed of at the Perdido Landfill, Santa Rosa County shall be liable for all disposal costs associated with the disposal selected by the operator of the ECUA MRF.

with the document attached hereto as Exhibit A, which is hereby incorporated by reference as if fully set forth herein, based upon weights measured at the scale house operated by Escambia County at the Perdido Landfill.

7. Billing. ECUA shall send a bill to Santa Rosa County within fifteen (15) days of the end of each month of the calendar year which reflects all charges and credits due to the Parties pursuant to paragraph 6, above. All charges and/or credits shall be paid by the respective Party within forty-five (45) days of the end of each month of the calendar year.

8. Compliance with Law and Procedures. ECUA and Santa Rosa County shall perform their respective obligations under this Agreement in compliance with all Applicable Law. Santa Rosa County shall transport and handle SSR in its control in a safe and workmanlike manner and in full compliance with Applicable Law. ECUA shall further endeavor to maintain throughout the term of this Agreement, all permits, licenses, certificates, and approvals required by Applicable Law for the operation of the ECUA MRF.

9. Staffing at the ECUA MRF. The Parties understand that the ECUA MRF may be operated by either a third party selected by ECUA or by ECUA staff, in ECUA's sole discretion.

10. Title to Source Separated Recyclables. Upon acceptance of a load of SSR (as opposed to a rejection in accordance with paragraph 4.b, above), title to the SSR shall vest with the operator of the ECUA MRF.

11. Santa Rosa County Obligation to Require the Source Separation of Recyclables; Delivery of said SSR; and Tonnage Limit.

a. Collection and Delivery Requirements. Santa Rosa County presently provides for the collection of residential solid waste within its jurisdiction and offers curbside collection of Source Separated Recyclables. Santa Rosa County will haul all SSR that is collected to the ECUA MRF. It is thus the Parties' intent that all SSR controlled and collected by Santa Rosa County will be delivered to the ECUA MRF. However, if prior to delivery to the ECUA MRF Santa Rosa County reasonably identifies one or more loads of SSR to contain excess contamination, as defined in paragraph 4.b,

above, Santa Rosa County shall not be in breach of this Agreement by delivering such contaminated load/s directly to the disposal facility of its choice. Should Santa Rosa County exercise this option, it shall endeavor to educate the public and take such actions it deems necessary or appropriate to improve the quality of its SSR.

The County, at its discretion, may suspend or terminate its recycling program and the collection and transportation of recyclables if the overall cost to the County becomes unacceptable.

b. *Tonnage Limit.* The Parties anticipate approximately 6,000 tons of SSR are generated and collected within the jurisdiction of Santa Rosa County per year. Despite the requirements in paragraphs 4.a and 11.a above that all SSR be delivered to ECUA, Santa Rosa County is limited to delivering 10,000 tons of SSR per year, absent subsequent written agreement between the Parties pursuant to the notice provisions set forth in paragraph 13, below.

12. Events of Default. A Party shall be in default of this Agreement only upon the expiration of thirty (30) days (ten (10) days in the event of failure to pay money) from receipt of written notice of default from the other Party specifying the particulars in which such Party has failed to perform its obligations under this Agreement unless such Party, prior to the expiration of said thirty (30) days (ten (10) days in the event of failure to pay money), has rectified the particulars specified in said notice of default; provided, however, that such Party shall not be deemed to be in default if such failure (except a failure to pay money) cannot be rectified within said thirty (30) day period and such Party is using good faith and commercially reasonable and diligent efforts to rectify the particulars specified in the notice of default.

13. Notices. All notices called for under this Agreement, other than those called for under paragraph 4.b, above, shall be made in writing and delivered by hand, certified mail with return receipt, or overnight courier, as follows:

To _____:

Santa Rosa County

_____ Street

_____, FL 3_____

E-mail: _____
Telephone: _____

To ECUA:

Randy Rudd
Deputy Executive Director of Shared Services
Emerald Coast Utilities Authority
9255 Sturdevant Street
Pensacola, Florida 32514

14. Force Majeure. In the event that performance by the Parties of any of its obligations under this Agreement shall be interrupted, delayed, or prevented by any occurrence not occasioned by the conduct of such Party, whether such occurrence be an act of God or any other occurrence whatsoever beyond the reasonable control of such Party, including a change in environmental law or regulation rendering performance impractical or impossible, then such Party shall be excused from such performance for such period of time as is reasonably necessary after the occurrence to remedy the effects thereof, or until such performance is no longer impractical or impossible.

15. ECUA's Right to Refuse to Accept SSR and Parties Right to Cancel for Convenience. Notwithstanding the provisions of paragraph 4, above, in the event that the operator of the ECUA MRF declares a Shutdown, ECUA and the ECUA MRF shall be under no obligation to accept any SSR from Santa Rosa County through the duration of that Shutdown. Additionally, in the event of a Shutdown, Santa Rosa County may dispose of its SSR as it deems fit for the duration of that Shutdown, and Santa Rosa County is not obligated to reimburse ECUA and/or the operator of the ECUA MRF, if any, for lost revenue associated therewith. Moreover, in the absence of a Shutdown, ECUA, acting through its Executive Director or the Santa Rosa County Board of County Commissioners, may cancel this Agreement for convenience on thirty days written notice notwithstanding the provisions of paragraph 3 above.

16. Records. The Parties acknowledge that this Agreement and any related financial records, audits, reports, plans, correspondence, and other documents may be

subject to disclosure to members of the public pursuant to Chapter 119, Florida Statutes, as amended. In the event a Party fails to abide by the provisions of Chapter 119, Florida Statutes, the other Party shall give written notice of the alleged violation of Chapter 119 and seven (7) calendar days to cure the alleged violation. If the alleged violation has not been cured at the end of that time period, then the party giving such notice may terminate this Agreement for cause. ECUA further agrees to:

a. Keep and maintain public records required by Santa Rosa County to perform services under this Agreement.

b. Upon request from Santa Rosa County custodian of public records, provide Santa Rosa County with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes, or as otherwise provided by law.

c. Ensure that public records that are exempt or confidential from public records disclosure requirements are not disclosed except as authorized by law during the term of this Agreement and following completion of the Agreement if ECUA does not transfer the records to Santa Rosa County.

d. Upon completion of the Agreement, transfer, at no cost, to Santa Rosa County all public records in possession of ECUA or keep and maintain public records required by Santa Rosa County to perform the services under this Agreement. If ECUA transfers all public records to Santa Rosa County upon completion of the Agreement, ECUA shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If ECUA keeps and maintains public records upon completion of the Agreement, ECUA shall meet all applicable requirements for retaining the public records. All records stored electronically must be provided to Santa Rosa County, upon request from Santa Rosa County custodian of public records, in a format that is compatible with the information technology systems of Santa Rosa County.

IF ECUA HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, AS TO ECUA'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT: (850)983-1925,

wandap@santarosa.fl.gov; 6495 Caroline Street, Suite C, Milton, Florida 32570.

17. Assignment. This Agreement or any interest herein, shall not be assigned, transferred, or otherwise encumbered, under any circumstances, by any Party, without the prior written consent of all other Parties.

18. Headings. Headings and subtitles used throughout this Agreement are for the purpose of convenience only, and no heading or subtitle shall modify or be used to interpret the text of any section.

19. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Florida, and the Parties stipulate that venue for any matter which is the subject of this Agreement shall lie in Escambia County, Florida.

20. Dispute Resolution. The Parties agree that in the event of any dispute or claim relating to, arising out of, or interpreting this Agreement arises, all such disputes or claims shall be fully, finally, and exclusively decided by a State court of competent jurisdiction sitting in Escambia County, Florida. Additionally, the Parties knowingly and willingly hereby waive their respective rights to have any such disputes or claims decided by a jury; instead, their sole relief shall be via a bench trial in which the judge alone sits as the finder of fact.

21. Interpretation. For the purpose of this Agreement, the singular includes the plural and the plural shall include the singular. References to statutes or regulations include all statutory or regulatory provisions consolidating, amending, or replacing the statute or regulation referred to. Words not otherwise defined that have well-known technical or industry meanings are used in accordance with such recognized meanings. References to persons include their respective permitted successors and assigns and, in the case of governmental persons, persons succeeding to their respective functions and capacities.

a. If any Party discovers any material discrepancy, deficiency, ambiguity, error, or omission in this Agreement, or is otherwise in doubt as to the meaning of any provision of the Agreement, the Party shall immediately notify all other Parties and request clarification of this Agreement.

b. This Agreement shall not be more strictly construed against any party hereto by reason of the fact that one Party may have drafted or prepared any or all of the terms and provisions hereof.

22. Severability. The invalidity or non-enforceability of any portion or provision of this Agreement shall not affect the validity or enforceability of any other portion or provision. Any invalid or unenforceable portion or provision shall be deemed severed from this Agreement and the balance hereof shall be construed and enforced as if it did not contain such invalid or unenforceable portion or provision.

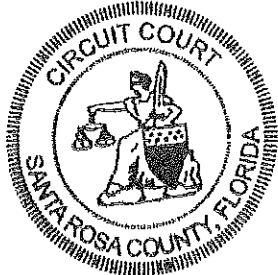
23. Further Documents. The parties shall execute and deliver all documents and perform further actions that may reasonably be necessary to effectuate the provisions of this Agreement.

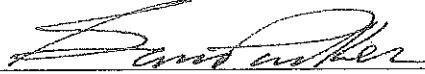
24. No Waiver. The failure of a Party to insist upon the strict performance of the terms and conditions hereof shall not constitute or be construed as a waiver or relinquishment of any other provision or of either Party's right to thereafter enforce the same in accordance with this Agreement.

25. All Prior Agreements Superseded. This document incorporates and includes all prior negotiations, correspondence, conversations, agreements, or understandings applicable to the matters contained herein, and the Parties agree that there are no commitments, agreements, or understandings concerning the subject matter of this Agreement that are not contained in this document. Accordingly, it is agreed that no deviation from the terms hereof shall be predicated upon any prior representations or Agreements whether oral or written. It is further agreed that no modification, amendment, or alteration in the terms and conditions contained herein shall be effective unless contained in a written document executed with the same formality and of equal dignity herewith.

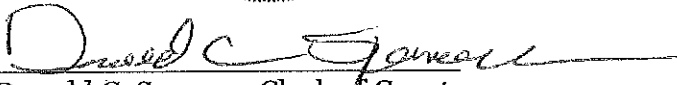
IN WITNESS WHEREOF, the Parties have executed this Agreement, by and through their duly undersigned and authorized representatives, as of the date and year first written above.

Santa Rosa County, Florida, a political subdivision of the State of Florida acting by and through its duly authorized Board



By: 
Sam Parker, Chairman

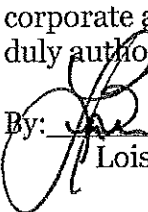
ATTEST:

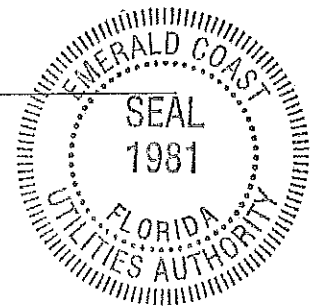
By: 
Donald C. Spencer, Clerk of Court

Approved as to Content:

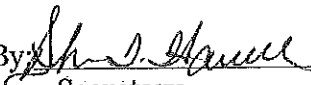
Approved as to Form and Execution:

EMERALD COAST UTILITIES AUTHORITY, a local governmental body, corporate and politic, acting by and through its duly authorized Board.

By: 
Lois Benson, Chairman



ATTEST:

By: 
Secretary

Average Market Value

	\$45.00	\$55.00	\$65.00	\$75.00	\$ 85.00	\$ 95.00	\$105.00	\$115.00	\$125.00	\$135.00	\$145.00
	or less	or less	or less	or less	or less	or less	or less	or less	or less	or less	or less
IMRF Tipping Fee	\$ 56.00	\$ 46.00	\$ 36.00	\$ 26.00	\$ 16.00	\$ 10.00	\$ -	\$ -	\$ -	\$ -	\$ -
Per ton revenue share	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5.00	\$ 10.00	\$ 15.00	\$ 20.00

Sarasota County

Sarasota County Recycling Program Plan 2020

Section 1 – Introduction and Background

This plan is in response to the request on Monday, August 12, 2019 by Mr. Tim Bahr and in compliance with Section 403.706(2)(d), Florida Statutes (F.S.), requiring that all counties not reaching the 70% interim recycling goal submit a recycling plan to the Florida Department of Environmental Protection. As requested, this plan includes a comprehensive summary of recycling services and materials offered, analysis of the county's MSW generated by sector, commercial and multi-family sector participation and recycling rates, C&D recycling, yard waste and organics recycling and usage efforts, discussion of strategies and initiatives to improve recycling, current improvement initiatives and strategies, and a discussion of the challenges to attain and sustain the 75% recycling interim goal for 2020.

Section 2 – Recycling Services and Materials Offered

Residential and commercial recycling is mandatory in unincorporated Sarasota County (County ordinance 2006-001). The County currently offers dual-stream recycling service to residents through a franchise collection agreement with Waste Management. Recycling Program is disseminated to residents and businesses through the "How To" Guide, social media, special events, website information, commercial invoice "reminders", mandatory recycling audits, and the Recycle Coach app. All residents can utilize the free Recycle Coach app to gain pertinent recycling information, such as *What Goes Where*, event notices, and collection schedules.

Materials and disposal tips for recycling include the following:

PLASTICS - CANS - CARTONS - GLASS

- ✓ Aluminum, steel or tin cans
- ✓ Plastic #1-5, and #7
- ✓ Glass bottles and jars (all colors)
- ✓ Milk and juice cartons
- ✓ Drink boxes

Tips for disposal:

- Empty and lightly rinse cans, bottles, jars and replace caps.
- Containers should be one gallon or less in size.
- Coat hangers, dishes, glassware, pans, pots and pane glass goes in the garbage.
- Plastic items marked #6, plastic bags and Styrofoam should be placed in the garbage.

PAPER - MAGAZINES - CARDBOARD - BOXES

- ✓ Cardboard and boxes
- ✓ Magazines, catalogs and phone books
- ✓ Mixed paper (writing/office paper, junk mail, envelopes with windows, brown paper bags)
- ✓ Newspaper
- ✓ Paperboard (cereal boxes without liners, soda boxes, tissue boxes, etc.)

Tips for disposal:

- Flatten all boxes.
- Cut down cardboard into pieces no bigger than 2 feet by 3 feet.
- Remove liner and food from pizza boxes.
- Place food contaminated paper/cardboard products in the garbage.
- Place shredded paper in paper bags only (no plastic)

Listed items that DO NOT BELONG in recycling include:

- Non-recyclable plastic
- Recyclables in plastic bags
- Plastic bags, film/sheeting, flexible film packaging
- Food and liquids
- Paper napkins, plates, cups, and tissues
- Polystyrene Foam
- Yard Waste
- Hoses, holiday lights, hangers

Section 3 – MSW Generation Percentages by Sector in 2018

- Single-family – 632,858 tons collected – 50%
- Multi-family – 111,681 tons collected – 9%
- Commercial – 506,787 tons collected – 41%

Section 4 – Commercial and Multi-family Participation and Recycling Rates

Regarding recycling participation, commercial businesses may contract with the service provider of their choice or may choose an alternative collection method such as self-hauling, piggybacking a larger business, or pooling with other businesses. Sarasota County conducts audits of commercial businesses for compliance with the mandatory recycling ordinance and finds the participation rate to be over 99%. In 2019, Sarasota County began implementing additional waste reduction and recycling strategies as a part of a more comprehensive hazardous materials, solid waste, and recycling audit. Assistance and education is provided on-site and referrals for additional guidance are offered as needed such as The Green Business Partnership.. The Green Business Partnership is open to all businesses in Sarasota County. More than 200 businesses are certified and operate in an environmentally responsible manner.

Multi-family is considered residential in Sarasota County, which makes it difficult to discern multi-family data from the residential data. All commercial and multi-family units are subject to the mandatory recycling ordinance and thus have access to recycling collection containers

Section 5 – C&D Debris Disposal and Recycling Program

The County does not have a franchise hauler for its C&D debris waste stream. Businesses and residents can contract with a hauler of their choice or self-haul to an authorized facility to dispose of or recycle their C&D debris.

The Central County Solid Waste Disposal Complex has a C&D facility on-site where a recycling rate of 50% is required per ordinance and contract agreement. Tonnage-wise, the recycling of C&D material is a major opportunity to increase recycling rates.

There are no planned changes to the program for recycling C&D debris.

Section 6 – Yard Waste and Organics Recycling and Usage Opportunities

Residential and Commercial Yard waste is collected as a separate waste through a franchise agreement with Waste Management. Lawn Maintenance providers may self-haul their yard waste materials. Yard Wastes are collected and processed at the Central County Solid Waste Disposal Complex where it is then processed and ground to be used as landfill daily cover, mulch, and/or given to residents for free as a compost material. Organics are collected as Solid Waste and landfilled which contributes to the landfill gas to energy system.

Section 7 – Strategies and Initiatives to Improve Recycling

Sarasota County is implementing multiple initiatives aimed at dramatically improving recycling. The County is promoting quality recyclable materials through the following education and communication campaigns:

- Single stream transition – The switch to single stream recycling using automated carts is expected to increase recycling rates for single family and multi-family sectors.
 - Residential recycling will be processed by a new single stream processor as of 10/1/19.
 - Automated carts will be delivered to residents from November through December 2019.
 - Carts will include an instructional, in-mold label along with a welcome packet of educational material.
 - The County was awarded a grant through The Recycling Partnership that will fund a portion of the carts and marketing materials.
 - A comprehensive, multi-media, educational campaign will include print, direct mail, internet, social media, radio, and community presentations.
 - Curbside collection of the carts will officially begin on January 6, 2020 by Waste Management, Inc.
 - Post-rollout curbside contamination audits are planned to reduce contamination and improve the recycling quality.
- The County is hosting an America Recycles Day event in November 2019. This fun, educational event is open to the public.
- The County is currently conducting an educational program throughout all county facilities, geared toward employees and custodial staff. County facilities transitioned to single-stream recycling in June 2019, and the key focus of the program is anti-contamination and clean recycling. Every facility is being audited and being presented with educational materials. The County is developing a plan to assist county schools in their efforts to overcome obstacles and increase recycling. The County’s enthusiastic support will help promote excitement in students, parents, and staff.
- The County is developing a program to promote and increase commercial recycling rates, specifically restaurant and bar businesses.

- A multi-family pilot project was performed at a multi-family complex which had great results and will serve as a model for post-transition projects.
- A pre and post transition recycling stream audit will be performed with Kessler Consulting, Inc. and the Recycling Partnership to focus on curbside and processing facility contamination rates. A focus will be on multi-family units.

Section 8 – Existing and Anticipated Challenges

The County faces the following challenges to achieving the 2020 recycling goal of 75%,:

- The County has not been successful at validating tonnages taken to landfills outside of Sarasota County. Reporting facilities have been unresponsive.
- The County does not have control over the diversion operations of private hauling and processing companies.
- The value of C&D materials has not supported the recycling of such materials on a broad scale; therefore, private C&D debris processors take material to their own private landfills which decreases the County's recycling rate.
- With the County's switch to single-stream, contamination will be a challenge. It is anticipated that rejected loads will increase. Education will be a focus and priority to reduce rejected loads and increase quality recyclable materials.
- The value of curbside materials continues to decrease while the cost of processing continues to increase. This creates difficult conversations with policy makers and constituents regarding the value of recycling programs.
- Perpetual press related to the landfilling or cessation of programs creates doubt and negativity among policy makers and constituents.
- Manufactures and packaging industries continue to create less-recyclable materials and are increasing the use of film plastics and pouches.
- A tonnage-based recycling system that favors waste to energy fails to focus on materials that have a higher overall environmental value.

Seminole County

COUNTY RECYCLING PROGRAM PLAN

DATE: September 30, 2019
TO: Jennifer L. Simmons, Permitting & Compliance Assistance Program, Division of Waste Management, Florida Department of Environmental Protection
FROM: Lisa Rubino, Program Coordinator II, Solid Waste Management Division, Seminole County
SUBJ: **Seminole County 2018 Recycling Program Plan**

This plan is in response to the August 12, 2019, letter from Mr. Tim Bahr, P.G., Director of the Division of Waste Management for the Florida Department of Environmental Protection (FDEP), requesting the development and submittal of County Recycling Program Plans from counties with populations greater than 100,000 people and that did not meet the State’s interim recycling goal.

1. BACKGROUND

In 2008, the Florida Legislature set a statewide municipal solid waste (MSW) recycling goal of 75% by the year 2020. In 2010, the Legislature further directed that the goals be primarily applied to counties with a population of greater than 100,000. In addition, the Legislature set interim goals for 2012, 2014, 2016, and 2018. Counties that do not reach and maintain these interim goals, based on their annual calendar year recycling rates, are requested to submit Recycling Program Plans to the FDEP.

Table 1 provides the various tiers of the State’s recycling goal and Seminole County’s (County) reported recycling rate for each year. The County met 2012 State goal, but failed to achieve the 2014, 2016, and 2018 goals of 40% 60% and 70% respectively. Therefore, the County is submitting this County Recycling Program Plan as required by Section 403.706 of Florida Statutes.

Table 1: Florida Recycling Goal and Manatee County Recycle Rate

Year	State Goal	Adjusted Recycling Rate*	Goal Achieved
2012	40% by December 31, 2012	62%	Yes
2013	Same as above	48%	Yes
2014	50% by December 31, 2014	41%	No
2015	Same as above	41%	No
2016	60% by December 31, 2016	34%	No
2017	Same as above	43%	No
2018	70% by December 31, 2018	35%	No
2019	Same as above	TBD	TBD
2020	75% by December 31, 2020	TBD	TBD

*Includes renewable energy recovery recycling credits

This plan addresses the seven requirements specific by the FDEP in the letter from Tim Bahr dated August 12, 2019.

2. SUMMARY OF THE SERVICE AND MATERIALS FOR WHICH THE COUNTY OFFERS RECYCLING

The County offers weekly, curbside, dual stream recycling to residents of the Unincorporated County. The County also operates two drop-off locations that accept recyclables from residents. The following materials are accepted in the dual stream and drop-off programs:

- Paper Bin - newspaper (with inserts), corrugated cardboard, catalogs/magazines, brown paper bags, pasteboard (cereal boxes, empty paper towel and toilet paper rolls, soda boxes, beer boxes, tissue boxes, gift boxes, pizza boxes, and shoe boxes), boxboard, carrier stock, white and colored paper, and telephone books.
- Container Bin - plastic containers #1-#7, glass containers, aluminum cans, steel, and tin cans.

Other recycling programs offered by the County include:

- Used oil recycling - accepted at the County’s Central Transfer Station (CTS) and several private businesses throughout the County.
- Household hazardous waste (HHW) - accepted at the CTS.
- Electronic waste - accepted at the CTS.
- Yard waste - residents in the Unincorporated County have the option of curbside yard waste collection and material is accepted at CTS and landfill.
- Tires - accepted twice per year at no charge during waste tire collections events held at the CTS and landfill and accepted other times at both facilities for \$1.00 per tire.
- Clean Corrugated Cardboard - accepted at the CTS, free of charge.

In addition to the programs listed above, private businesses in the County currently recover the following materials of their own accord:

- Scrap Metals
- White Goods
- Construction & Demolition Debris (C&D)
- Food Waste

Additional details regarding these programs and those within the municipalities are provided in the follow sections.

3. MSW GENERATION BY SECTOR

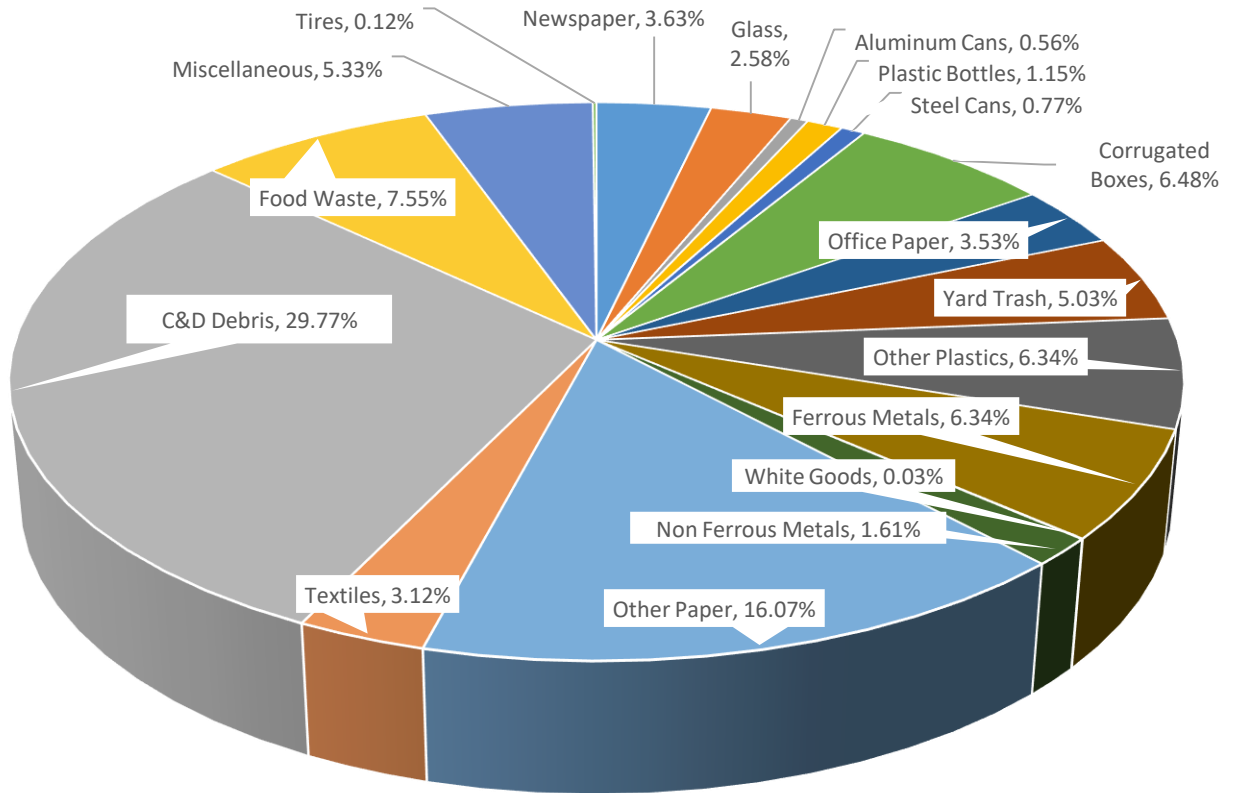
As reported in the County’s 2018 Solid Waste and Recycling Annual Report, a total of 573,440 tons of MSW were generated in 2018. Of that, 187,798 tons were diverted from disposal. The County’s scale house system currently tracks incoming tonnage by commercial and residential sectors. Tonnage data for the multi-family residential sector has been estimated based on the number of multi-family residential units in the County. Table 2 details the County’s MSW generation and disposal tonnage by sector.

Table 2: MSW Generation and Disposal by Sector

Sector	Generated	Recycled	Disposed
Single Family	260,678	116,452	144,226
Multi Family	98,478	40,914	57,564
Commercial	214,284	30,432	183,852
Total	573,440	187,798	385,642

To identify the greatest opportunities to increase recycling, the County utilized FDEP's WasteCalc composition tool to estimate the composition of the County's 2018 disposal tonnage. It should be noted that WasteCalc has not been updated since its creation in 2001; therefore, this data should be utilized cautiously, knowing that it is the best estimate of waste composition available to the County at this time. Figure 1 provides the results of this analysis and identifies recycling opportunities by material type.

Figure 1 Estimated Composition of Waste Landfilled in 2018 (% by weight)



Source: This figure was developed utilizing WasteCalc composition estimates and based on Seminole County's 2018 Solid Waste Management Data. Other Paper and Other Plastics include a percentage of materials that are recoverable such as mixed paper and plastic containers #3-#7 (recyclable) and low grade (compostable).

4. EXISTING RECYCLING PROGRAMS

Curbside Residential Recycling Programs

As stated in Section 1, the County currently offers dual stream recycling to all single-family homes in the Unincorporated County. The County estimates that nearly 77% of single-family households participate in their respective curbside recycling programs. Only a small number of multi-family complexes in the County have recycling programs, but all units have access to County's drop-off facilities.

The following recycling programs are available to municipal residents:

- Altamonte Spring - dual stream recycling program
- Casselberry - dual stream recycling program
- Lake Mary - single recycling program
- Longwood - dual stream recycling program
- Sanford - dual stream recycling program
- Oviedo - single recycling program
- Winter Springs - dual stream recycling program

Drop-off Recycling Program

The County operates two recycling drop-off sites where residents can deliver recyclables. One is at the Seminole County landfill, and the other is at the CTS. Dual stream recyclables are collected at both locations. Used oil, electronics, old corrugated cardboard, tires, and HHW are also accepted at the CTS.

The City of Oviedo also maintains six locations within the City where single stream carts are staged for use by residents. These carts are intended for multi-family households that do not have access to the City's curbside single stream recycling program.

Commercial Recycling

As required by State law, commercial recycling in the County is operated as an open market. County businesses may select their recycling vendor. Vendors offer different services at different rates. The County encourages interested businesses to research all vendors and choose a company that works best for them. The County's website provides a list of recycling vendors and contact information.

In addition to common recyclables such as cardboard, mixed paper, bottles, cans, and glass associated with a dual or single stream recycling program, the commercial sector also actively recovers the following items through private sector initiatives:

- Yard Trash
- Scrap Metals & White Goods
- Tires
- Textiles
- C&D
- Food Waste
- Tires
- Electronic Waste

The County estimates that approximately 22% of its commercial businesses actively participate in one of the available recycling programs.

5. CONSTRUCTION AND DEMOLITION DEBRIS

Based on the County's best estimates and the data provided in Figure 1, C&D debris represents approximately 30% of the waste landfilled in the County. In 2018, approximately 71,000 tons of C&D debris was landfilled. Based on visual audits of C&D debris conducted at other locations and on recycling rates reported by some C&D processing facilities, at least half of C&D debris typically consists of materials that could potentially be recycled. This includes materials such as untreated wood, concrete, scrap metal, cardboard, select plastics, carpet, mattresses, asphalt shingles, and rock/gravel/grit.

It appears that some of the C&D debris generated in Seminole County is delivered to private facilities, the County plans to investigate the following strategies to try to increase recycling of this material:

- Staff will actively seek to identify additional non-certified C&D debris recycling activities to ensure that the County is receiving proper credit for the recovery of C&D debris that is currently unaccounted for and unreported.
- County staff will continue to work with the Florida Department of Transportation and Public Works staff to identify large concrete recyclers and other sources of aggregate materials to seek additional recycling credit.
- County staff will research facilities in neighboring counties and speak with neighboring recycling coordinators to identify potential sources of C&D debris recycling credits.

6. YARD TRASH AND ORGANIC MATERIALS

Segregated yard trash collection is an option available to every household in the County. The County currently grinds yard trash; which, is used as an alternative daily cover for the landfill operations. Recently, staff engaged with a contractor to determine the financial viability of converting yard trash into compost. Additional information is being exchanged between the two entities. It is expected; however, that the County will continue to utilize ground yard trash as alternatively daily cover as it functions as viable alternative to clean dirt, helps to reduce erosion of landfill cover material, and provides relief to other operational challenges within the landfill.

Food waste recovery was limited to only a few large waste generators in the County.

As staff time allows, the following actions related to organic materials recovery are anticipated:

- Staff will continue to track yard waste processing operations to ensure that all ground yard trash sent for alternative daily cover is tracked and credited as recycling.
- Staff will actively seek out and identify additional businesses within the County that are currently recovering food waste and/or other compostable to ensure that all non-certified organic recycling tonnage is being tracked and credited to the County. Staff will first identify organic waste processors, such as Waste Management's Apopka facility, and work to identify feedstock providers within Seminole County.
- Staff may also propose a meeting with Waste Management (a non-exclusive franchised hauler) to determine their interest in expanding food waste recovery in the County to increase organic feedstock for their Apopka facility. County staff will also look to identify other local composting operations and propose similar discussion. If a demand for organic feedstock is found, food waste recycling information could be added to the County's website, including a list of local facilities accepting drop-offs as well as haulers offering organics collection service.

7. RECYCLING PROGRAMS

Through its solid waste franchises, the County has a system in place for collection and processing of single-family recyclables. The key to capturing additional residential recyclables is encouraging participation in the program, both in terms of the number of residents who recycle as well as asking residents to recycle to the maximum extent (i.e. recycle all types of materials accepted in the program).

The following actions are anticipated as staff time allows:

- Staff will focus on education and outreach to ensure that website information is up-to-date and readily available.
- Staff will remain engaged with the regional Beyond 34 group in an effort to generate education and outreach materials that can be applied across the Central Florida area in an effort to reduce public confusion and misunderstanding.
- Staff will coordinate regular meetings with its municipalities to discuss regional and countywide recycling efforts.

State law prohibits a local government from awarding any entity the exclusive right to collect commercial recyclables. However, the County's franchise agreements require the franchisees to offer commercial recycling, on a nonexclusive basis, upon request by the customer. As staff time allows, County staff will:

- Actively seek to identify additional sources of non-certified recycling activities to ensure that the County is receiving proper credit for materials recovery that is currently unaccounted for and unreported. Staff will start with large commercial waste generators and institutions to determine if recycling programs are in place and whether the materials are currently being reported to FDEP.
- Focus on commercial recycling by meeting with commercial haulers to encourage them to actively market recycling services to their customers, as stated in the hauler agreements.
- Educate local businesses about recycling opportunities and promote the value of the environmental impact.
- Provide technical assistance to businesses looking to initiate recycling programs.
- Research ways or find grant funds to help offset recycling program initiation costs for local businesses.

8. NEXT STEPS AND ANTICIPATED CHALLENGES

As no program can capture 100% of the materials targeted, the County faces many challenges in reaching the State's goal, including: a downturn in the commodities market, education and outreach resources, funding, and a lack of a full-time Recycling Coordinator to track and capture the recycling efforts in the County. Some of the County's key challenges are summarized below:

- Funding to establish the necessary infrastructure and to encourage innovation is probably the greatest challenge. The State could help address this issue by reinstating recycling grant programs for infrastructure development, innovation, and market development. In past years the County utilized grants funds to offset education and outreach expenses and purchase items for giveaways and promotions. The County is also in need of a designated Recycling Coordinator that can focus on increasing material diversion and tracking tonnage data.
- Ensuring sufficient County resources to develop and maintain ongoing education and outreach efforts and technical assistance to commercial businesses and institutions is also challenging. The State could assist by developing technical assistance materials such as how-to guides and best management practices, conducting a statewide education and outreach

campaign to promote recycling, developing case studies, conducting demonstration programs, and providing model policy ordinances.

- Tracking C&D and yard trash recovery on a state-level would ensure comparable data for all counties. All counties would benefit from a FDEP program that tracked all C&D debris recovery and yard trash processing activities. For example, many concrete processing facilities do not currently report to the FDEP. If the FDEP identified these facilities, through past county submissions, and developed a method to track tonnage and include the recovery data in the Certified Construction and Demolition Reports, all county solid waste management data would be more transparent and comparable. A similar program and report would be beneficial for yard trash processing facilities.
- Ensuring strong markets for existing recyclables and expanding markets for additional commodities is also critical. Given the closure of overseas markets for some commodities, developing domestic markets is critical. In addition, to continue to expand recycling programs, viable commodity markets are needed for additional materials such as plastics 3-7. Other states have played an active role in attracting businesses that utilize recovered materials through organizations such as North Carolina's Recycling Business Assistance Center (RBAC). Florida's RBAC could be re-established to help attract private industry interest and investment in the State's recycling infrastructure.

St. Johns County

2019 Recycling Plan Update – St. Johns County

The St. Johns County recycling program, administered by the Solid Waste Management Division of Public Works, applies only to the unincorporated areas of the county. Approximately 87,000 single family residences have 35- or 95 gallon recycling carts as part of the mandatory curbside collection program. According to a recent survey, 86% of respondents use curbside recycling each week.

St. Johns County is one of the fastest growing counties in America. Although our residential recycling activity remains strong, the absence of a mandatory commercial requirement has limited any significant increase in the county's overall annual recycling rate. Typically, less than 10% of C&D from the deconstruction and construction wastage of rapid development is being recycled and recycling from condominiums and apartments is lackluster for a number of reasons. On a positive note, yard material collected in the county has been efficiently reused as landfill cover for a number of years.

All paper grades, all metals, glass bottles and jars, plastic bottles, cardboard, yard debris and some textiles can be collected and recycled by any individual or entity in the county. All recycling activities are voluntary.

Going forward, the following measures have been established or are scheduled for the coming year:

- Replacement recycling coordinator position has been advertised.
- Contract consultants continue work on new web site and outreach program details.
- Number of CNG collection vehicles increases annually.
- Two recycling vans now in service.
- Off-site displays at local hardware stores.
- Continued staff-generated articles in print.
- Distribution of recycling and HHW refrigerator magnets.
- Production of "postcard" size recycling card targeting contamination.
- Finish visual survey of commercial recycling containers at condos, apartments and businesses.
- Perform recycling audits for local businesses.
- Expand presentations of new multi-media presentation for PK-K6 schools.
- Include composting in all recycling presentations.
- Contact all homeowners associations to establish social media route for county recycling information.
- Increase number of off-site HHW collection events.
- Set up displays at local public events.
- Establish business publicity-generating incentive program.
- Maintain inventory of current mandatory commercial recycling ordinances and disposal surcharges in Florida counties.

The global trade wars now unfolding have caused disruptions in recycling programs around the world. The loss of export opportunities in Asia markets has debilitated values in certain recycling categories for almost two years. Contractors have demanded drastic price increases, many programs have dropped glass collection, and some jurisdictions have terminated recycling altogether.

Despite these immediate effects, industry groups seem optimistic that current market conditions may improve in the next five years. Significant new industry investment in facilities and technology and newly minted mergers are being made. Governments are targeting recycling contamination, "wishcycling," and expanding recycling opportunities and public-private partnerships. The Chinese are building and operating recycling facilities in the United States.

St. Johns County has a positive recycling outlook and we are committed to provide the public with a wide range of recycling opportunities and support. We have already favorably renegotiated our MSW contracts covering the next five years. Our theme for this year and for the future is "Make Recycling Simple."

St. Lucie County



ST. LUCIE COUNTY RECYCLING PROGRAM PLAN

Prepared By: Rebecca Olson & Ally Berry

Abstract

Section 403.706(2)(d), Florida Statutes states that large counties (population over 100,000) that did not reach and maintain the 70% interim recycling goal in 2018 submit a Recycling Program Plan to FDEP.

September 12, 2019

St. Lucie County Recycling Program Plan

Prepared by: Rebecca Olson and Ally Berry

September 12, 2019

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St. Lucie County Recycling Program Plan

Prepared by: Rebecca Olson and Ally Berry

September 12, 2019

1. Summary of the services and materials for which you offer recycling such as newspaper, aluminum cans, steel cans, glass, plastic bottles, cardboard, office paper and yard trash.

- 1.1. Single stream curbside recycling is available for single-family residences in Unincorporated St. Lucie County, the City of Port St. Lucie and the City of Fort Pierce. Single stream recyclables can be placed in 64-gallon carts for weekly curbside pickup. Haulers bring recyclables to the St. Lucie County Solid Waste Baling & Recycling Facility (Baling & Recycling Facility) for sorting and baling. Baled commodities are then shipped to processing facilities.
- 1.2. Approximately 90% of single-family residents with service available participate in single stream curbside collection.
- 1.3. Single stream recyclables are collected from County office buildings, public schools, participating multi-family units and other participating commercial buildings.
- 1.4. Residents who live in multi-family units, condominiums or apartments without recycling services may bring single stream recyclables to the Recycling Drop-off Station at the Baling & Recycling Facility. Residents of single-family homes also utilize the Drop-off Station when they have large cardboard boxes or simply too many single stream recyclables to fit into their recycling cart on a given week.
- 1.5. Acceptable Single Stream Recyclable Materials:
 - a. Aluminum Beverage Cans, Foil and Trays
 - b. Corrugated Cardboard Boxes
 - c. Empty Aerosol Spray Cans
 - d. Food Cans – Tin & Steel
 - e. Glass Jars and Bottles
 - f. Metal Cookie Sheets
 - g. Metal Pots & Pans and Lids
 - h. Paper Products such as:
 - i. Office Paper
 - ii. Newspaper and Advertisements
 - iii. Envelopes / Mail / Junk Mail

St. Lucie County Recycling Program Plan

Prepared by: Rebecca Olson and Ally Berry

September 12, 2019

- iv. Magazines / Catalogs / Phone Books
 - v. Paperboard Boxes – Examples: Cereal, Pasta, Tissue Boxes
 - i. Plastic Bottles and Jugs (numbers 1-7) such as:
 - i. Beverage Bottles and Jugs
 - ii. Detergent & Fabric Softener Bottles and Jugs
 - iii. Soap & Shampoo Bottles
 - iv. Squeezable Condiment Bottles
 - j. Plastic Food Containers & Tubs (numbers 1-7)
- 1.6. Other Recyclable Items can be brought in to the Baling & Recycling Facility for recycling, as listed below during operating hours. Several materials are accepted from both residents and businesses of St. Lucie County and some can be brought in free of charge.
- a. Construction & Demolition Debris (C&D)
 - b. Electronics (including power cords, wire connectors and cell phones)
 - c. Fluorescent Bulbs
 - d. Lead-Acid Batteries (vehicle batteries)
 - e. Metal Appliances (white goods)
 - f. Scrap Metal
 - g. Propane Tanks
 - h. Rechargeable Batteries
 - i. Tires
 - j. Used Automotive Fluids (motor oil, antifreeze, gasoline)
 - k. Additional household hazardous wastes (HHW) such as fertilizer, pesticides, herbicides, pool/spa chemicals, oil-based paints/stains, solvents, cleaners, polishes, helium balloon tanks, etc.
- 1.7. The City of Port St. Lucie holds two Household Hazardous Waste Collection Day events per year at their Public Works compound to give residents an additional drop-off location besides the Baling & Recycling Facility.

St. Lucie County Recycling Program Plan

Prepared by: Rebecca Olson and Ally Berry

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- 1.8. In 2018 & 2019 the County Solid Waste Division continues to run electronic and print advertising campaigns to encourage recycling while educating the public and new residents about proper single stream recycling to reduce contaminants and dangerous items from being placed in single stream recycling carts. Messaging also includes information about where to recycle items such as electronics, plastic bags, propane tanks and rechargeable batteries.
- 1.9. Solid Waste Division staff regularly updates informative pages on the County's website that are dedicated to single stream recyclables and household hazardous waste.

2. Analysis of the percentage of the county's MSW generated by the commercial, multifamily, and residential single family sectors:

2.1. St. Lucie County's generated MSW is as follows:

- a. Commercial = 31%
- b. Multi-Family = 24%
- c. Single Family Residential = 45%

3. Analysis of any existing recycling programs for the commercial and multifamily sectors, including estimated customer participation rates and recycling rates for each of those sectors:

- 3.1. Approximately 18% of the commercial sector participates in recycling.
- 3.2. Approximately 35% of multi-family units participate in recycling.
- 3.3. Single stream recycling is available for the commercial sector and multi-family units, however space limitations for collection containers are common among these sectors. Extra effort is made by County Solid Waste staff and our hauler to meet with these sectors to encourage recycling programs. Recyclables can be brought to the Baling & Recycling Facility if recycling systems cannot be tailored to fit the space allowed at a complex.
- 3.4. Spotters at the Baling & Recycling Facility remove tires, pieces of metal and wood for recycling from incoming waste brought in by businesses.

St. Lucie County Recycling Program Plan

Prepared by: Rebecca Olson and Ally Berry

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4. Description of the county's implementation, including any planned changes, for your program for recycling construction and demolition debris:

- 4.1. Incoming Construction & Demolition Debris is processed to separate recyclable and reusable materials such as dirt, metal and wood. Dirt is reused as landfill cover. Metal goes out to a recycling facility. Wood is chipped/mulched to be used as landfill cover. This current method will continue.
- 4.2. County staff at the Baling & Recycling Facility have also been mining the existing C & D debris disposal area since 2015 to recover recyclable and reusable material. Mined dirt is reused as landfill cover. Mined metal goes out to a recycling facility. Mined wood is chipped/mulched to be used as landfill cover. This current method will continue.

5. Description of efforts or opportunities to encourage recycling of yard trash, and other organic materials or mechanically treated solid waste, into compost or mulch that may be made available for agricultural and other acceptable uses:

- 5.1. Residents of the City of Port St. Lucie and most residents of Unincorporated St. Lucie County have weekly yard waste pick-up at single family homes. The contracted hauler brings this yard waste to the Baling & Recycling Facility in dedicated loads for processing and it is mixed with soil for landfill cover or mulched and used as road base in the landfill. The City of Fort Pierce collects Yard Waste and Vegetative Debris within their City limits, but does not deliver it to our facility. The County has no authority over how their yard waste is used or disposed and the facilities that receive it have not shared their data with us nor do they report it to FDEP.
- 5.2. Commercial lawn maintenance and tree trimming companies are encouraged to bring their yard debris to our facility where it is mulched and beneficially used as road base or landfill cover. Accounts can be set up for them for easy drop-off and payment.
- 5.3. The County and City of Port St. Lucie encourage residents to compost yard waste and leave grass clipping on the ground when mowing.
- 5.4. The St. Lucie County Environmental Education and Community Outreach Division at the Oxbow Eco-Center and the St. Lucie County University of Florida/Institute of Food and Agricultural Sciences (UF/IFAS) Extension Office often hold educational workshops and events for the public to learn more about recycling, re-purposing, reusing materials, composting, and natural resources. They have information available about composting yard debris/organic materials for home use, Florida yards & neighborhoods, and environmental horticulture.

St. Lucie County Recycling Program Plan

Prepared by: Rebecca Olson and Ally Berry

September 12, 2019

5.5. County Solid Waste staff will continue to seek out additional businesses within the County that recover food waste and cooking oil to use as non-certified recycling credit.

6. Strategy (including general timeframes) for expanding your county's recycling programs, or for creating new programs if needed, as part of your county's efforts to achieve the statewide recycling goals set forth in s. 403.706(2), F.S.:

6.1. In February 2019, Rebecca Olson was hired by the County as Solid Waste Marketing & Quality Control Coordinator.

6.2. In 2019 and 2020, the County Solid Waste Division will continue running local educational print ads, electronic media advertising, and social media posts promoting the following:

- a. Proper single stream recycling.
- b. How to recycle other items that cannot be placed in single stream carts such as plastic bags and wrap, fishing line, rechargeable batteries, electronics and fluorescent lamps.
- c. Other recycling streams as they become available.

6.3. In July 2019, the County joined the Wrap Recycling Action Program (W.R.A.P) campaign. We launched a pilot program for recycling plastic wraps and bags with four location and have plans to implement four additional locations prior to the end of the year.

- a. See attached Plastic Wrap Press Release.

6.4. In July 2019, the County applied for a grant from the Foam Recycling Coalition to implement expanded foam recycling in St. Lucie County. While the grants will be reviewed in 2020, we are currently exploring alternative ways to include foam recycling in our community.

6.5. The County's "\$100 Recycling Challenge" began on August 5, 2019 and will run for 6 weeks with cash give-a-ways (sponsored by our hauler) to promote proper single stream recycling. This program motivates residents to recycle and helps us maintain a low contamination rate.

- a. See attached Recycling Challenge Press Release.

6.6. St. Lucie County public schools have single stream recycling carts and encourage education about recycling. County staff members can speak to classes of students and provide resources to assist teachers with recycling education.

St. Lucie County Recycling Program Plan

Prepared by: Rebecca Olson and Ally Berry
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- 6.7. The St. Lucie County Board of County Commissioners has an in-house recycling program to encourage recycling by all County employees and visitors to County buildings. Single stream recycling carts are easily accessible in hallways of County buildings. This program was expanded in 2018 with additional efforts to encourage employees to take all single stream recyclables to the nearest hallway cart instead of throwing them in their office trash can.
 - 6.8. The County's contracted hauler sent out a notice to businesses not currently recycling that they could reduce their commercial solid waste rate by recycling more of their waste.
 - a. See attached notice, "It's easier than ever for businesses to recycle in St. Lucie County."
 - 6.9. The County Solid Waste Division is seeking a contractor to construct a gasification facility at our site to reach our ultimate goal of reducing the amount of landfilled material while producing a fuel or fuel substitute.
 - 6.10. Fishing line recycling boxes from Berkley Conservation Institute are currently being distributed to five local businesses and marinas by County staff.
 - 6.11. County staff are exploring funding and feasibility options to hold a free tire drop-off day for residents in 2019 or 2020 to reduce blight in some areas and to eliminate breeding grounds for mosquitoes.
 - 6.12. County staff are talking with companies that collect and recycle used cooking oil (vegetable oil) and/or grease (animal fat) to place a collection container at the Baling & Recycling Facility for residents to have a free drop-off location.
- 7. Discussion of any additional steps, initiatives and anticipated challenges that are critical to implementing your strategies to achieve the statewide goal of 75 percent by the end of 2020.**
- 7.1. As discussed in Section 6, in July 2019, we joined the Wrap Recycling Action Program (W.R.A.P) campaign. We launched a pilot program for recycling plastic wraps and bags with four locations and have plans to implement four additional locations prior to the end of the year.
 - 7.2. As discussed in Section 6, in July 2019, we applied for a grant from the Foam Recycling Coalition to implement expanded foam recycling in St. Lucie County. While the grants will be reviewed in 2020, we are looking at alternative ways to include foam recycling in our community.
 - 7.3. One challenge to reaching the recycling goal of 2020, even with the new recycling programs implemented (plastic bags/wrap and fishing line), is that the

St. Lucie County Recycling Program Plan

Prepared by: Rebecca Olson and Ally Berry

September 12, 2019

new material does not have a significant weight so it will not have a noticeable impact on the annual Solid Waste Management Report.

- 7.4. Another challenge of reaching the recycling goal of 2020 is the reduction of the amount of recyclable materials used in packaging of consumable items. Many companies advertise that they continue to reduce the amount of plastic in their plastic bottles to make them thinner and lighter, thus reducing the measurable weight of inbound recyclables.
- 7.5. Packaging of many food products has shifted away from containers made of recyclable plastic, glass and steel to flexible plastic pouches that are not recyclable or reusable.
- 7.6. Products once packaged in glass bottles and jars have continually shifted away from this very heavy measurable recyclable. St. Lucie County continues to collect glass bottles and jars with single stream recyclables. This glass is sorted and crushed to beneficially use as landfill cover material.
- 7.7. Many companies have also eliminated the corrugated cardboard base in multi packs of consumer products, thus completely eliminating a measurable inbound recyclable.
- 7.8. The reduction and elimination of measurable recyclable packaging materials may be beneficial in some way, but is detrimental to the goal of reaching the statewide recycling goal of 75% by the end of 2020 since this reduces the amount and weight of measurable recyclable commodities.
- 7.9. As in 2017 and 2018, we will continue to request recycled tonnages from companies that do not report to FDEP, but it is difficult to obtain this data because private companies typically deem their information proprietary.

Press Releases

St. Lucie County Launches Recycle Sites for Plastic Film, Bags

Post Date: 07/09/2019 7:26 AM

St. Lucie County Solid Waste is launching a pilot program to capture items that do not belong in the single-stream recycling carts.

Through a partnership with the W.R.A.P. Campaign and several other counties throughout Florida, St. Lucie County will have four locations for residents to drop off plastic bags, plastic wrap and film recycling. The goal is to keep plastic bags out of the single-stream carts and provide residents more options to properly dispose of these items other than grocery store drop-offs.

St. Lucie County's pilot locations are:

- St. Lucie County Solid Waste Baling and Recycling Facility, 6120 Glades Cut-Off Road, Fort Pierce;
- FAU's Harbor Branch Oceanographic Institute's Discover Center, 5600 US 1, Fort Pierce;
- The Port St. Lucie Community Center, 2195 SE Airosa Blvd., Port St. Lucie;
- Morningside Branch Library, 2410 SE Morningside Blvd., Port St. Lucie

Plastic bags and other wrap materials are recyclable; however, they can cause damage to the single-stream sorting machines. St. Lucie County will use these pilot sites to collect these materials and properly recycling them.

Items that can go into the W.R.A.P. sites include:

- Plastic shopping bags
- Bread bags
- Bubble wrap
- Clear product wrap such as the wrapping around paper towels or paper plates
- Dry cleaning wraps
- Produce bags
- Drink case wraps
- Pallett and stretch wraps
- Newspaper bags

These sites will not accept six-pack rings or frozen food bags.

For more information about the W.R.A.P. campaign visit: <https://www.plasticfilmrecycling.org>. For more details about St. Lucie County's recycling efforts visit: www.stluciecountyrecycles.com.

Other Florida counties and agencies participating in this pilot program include: Indian River; Leon; Orange; Palm Beach; Seminole; Emerald Coast Utilities Authority; Florid Recycles; Waste Management; the Florida Department of Environmental Protection and the City of Alachua.

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Press Releases

Recycling Right Can Earn Residents \$100 in Unincorporated St. Lucie County

Post Date: 07/22/2019 7:57 AM

St. Lucie County and Waste Pro are once again proving that it pays to recycle right. Starting in August, Waste Pro customers in unincorporated St. Lucie County can win a \$100 cash for properly using their single-stream recycling carts and bragging about it on social media.

In an effort to encourage residents to improve their recycling efforts, Waste Pro is providing the cash to be given out each week to five households in unincorporated St. Lucie County that properly use the 64-gallon, single-stream recycling carts.

Over a six-week period, starting Aug. 5, St. Lucie County's Solid Waste staff will randomly check recycling carts. Those who recycle right will have a hanger tag letting them know that they are eligible for the \$100 cash. If your cart is tagged with a green hanger – take a photograph; tag @StLucieGov with #StLucieCountyRecycles and post it to Facebook, Instagram or Twitter. Staff will scan social media to randomly select five winners each week to receive the \$100. Residents will be notified through social media that they've won and how to obtain their cash.

Households that aren't recycling right will receive a red hanger tag, explaining what they did wrong, so they can try again.

Single-stream recycling carts can be used for everything from pots and pans to empty cans, including cardboard, paper products and metals. Items not accepted include: Pyrex cookware, hoses, Styrofoam, clothing, plastic bags, rubber items, shrink wrap, bottle caps, ceramics, window glass and six-pack rings.

For more information about St. Lucie County's recycling efforts visit www.stluciecountyrecycles.com or call 772-595-9390.

Employees of the St. Lucie County Board of County Commissioners are not eligible to participate in this program. Funding is being provided entirely by Waste Pro.

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772-595-9390

www.stluciecountyrecycles.com

*It's easier than ever for businesses
to recycle in St. Lucie County*

Help reach the State of Florida's
75% recycling goal

Many businesses generate cardboard and paper waste such as mail, shipping boxes and catalogs, which are all recyclable.

For businesses in St. Lucie County not currently recycling, recycle 50% or more of your waste and lower your commercial solid waste service rate by 20%



Representatives are available to audit your commercial waste stream and get you started recycling right

For more information or to schedule a visit from a representative, call **772-595-9390**

Visit www.stluciecountyrecycles.com for St. Lucie County Single Stream guidelines to see what other recyclable waste your business might be producing.



772-595-9390

www.stluciecountyrecycles.com

Volusia County

Volusia County Recycling Program Plan

Current Traditional/Total Recycling Credit Rate:

The overall recycling rate for the County of Volusia in 2018 was 46%.

1. Summary of the services and materials for which you offer recycling such as newspaper, aluminum cans, steel cans, glass, plastic bottles, cardboard, office paper and yard trash;

The county of Volusia currently offers recycling services for a variety of materials both in its curbside collection program as well as in designated drop-off facilities. Materials collected in the curbside recycling bin program include loose paper such as news print, office paper, magazines and junk mail, along with cardboard, clear or tinted glass bottles, aluminum and steel cans, and plastic containers coded #1 or #2. Collection services are provided to all residential structures in the unincorporated area on a weekly basis, and there are no limitations to the volume of household recyclable materials residents may place out in their curbside collection bins. Recycle bins are provided to residents at no charge, and residents have the ability to order an unlimited number of additional containers to better meet the needs of their home recycling efforts. Other materials outside of the standard household recycling bin items that are collected curbside include appliances, tires, and yard waste, which are also collected weekly. Though there are limitations to the number of appliances and tires residents may place out on a weekly basis as well as restrictions on yard waste, the limitations on yard waste were recently relaxed to double the volume that residents may place curbside for collection.

All of the aforementioned items may also be brought to designated drop sites at the Tomoka Landfill and West Volusia Transfer Station. Both locations are open six days per week for residential drop-off, and also provide residents with the ability to bring in household hazardous waste such as paint, oil, gasoline, herbicide, insecticide, automotive fluids, and cleaners, along with batteries, electronics, and fluorescent light tubes for recycling. Additionally, fifteen county operated fire station facilities are equipped with drop-off bins for household recyclables and Public Used Oil Collection Centers (PUOCC) for recycling of residential used motor oil. Other recycling activities that the county participates in on a less regular basis include semi-annual off-site household hazardous waste collection events held in the cities of Debarry, New Smyrna Beach, and Ormond Beach, as well as providing recycling bins to county offices and various county-sponsored events that the Solid Waste Division participates in.

Other factors relevant to the services available in Volusia County, but not provided by the county directly include a number of private landfill and recycling operations, and city-sponsored recycling programs provided by the local municipalities within the borders of Volusia County. Currently, there are fifteen certified and non-certified recycling centers operating within Volusia County where residents and commercial entities alike may take advantage of their recycling services ranging from standard household recycling to other varied services such as electronic, scrap metal, auto, foam, and construction & demolition debris recycling. The Solid Waste Division is in contact with each of them to ensure that all information about their volumes of recycled materials for annual reporting efforts is collected. Each municipality within Volusia County, encompassing fifteen cities and two smaller townships offer curbside residential recycling services for many of the same items that the county collects as well. Currently, the Solid Waste Division holds quarterly meetings with representatives of these municipalities to allow everyone to keep

Volusia County Recycling Program Plan

apprised of the others situations in regards to recycling efforts, and share information related to new residential and commercial recycling initiatives taking place county-wide.

2. Analysis of the percentage of the county’s MSW generated by the commercial, multifamily, and residential single-family sectors;

Data for Collection and Recycling by Generator Type

Residential Single Family

Number of Units	179,857	Percentage of Total MSW Generated	
Collected Tons	726,754.5		45%
Recycled Tons	346,937		22%

Residential Multi-Family

Number of Units	31,653	
Collected Tons	242,251	15%
Recycled Tons	214,067.85	13%

Commercial

Number of Units	19,251	
Collected Tons	646,004	40%
Recycled Tons	177,159.6	11%

Totals

Collected Tons	1,615,010	54%
Recycled Tons	738,165	46%

Breakdown of Municipal Solid Waste Generated By Sector				
	Single Family Sector	Multi-Family Sector	Commercial Sector	Total
Number of Units	179,857	31,653	19,251	230,761
Landfilled MSW	379,818	28,183	468,844	876,845
Recycled MSW	346,937	214,067.85	177,159.60	738,164
Total MSW Generated	726,754.50	242,251	646,004	1,615,010
Percentage of Sector MSW Landfilled	52%	12%	73%	
Percentage of sector MSW Recycled	48%	88%	27%	
Percentage of Total MSW Generated	45%	15%	40%	
Percentage of Total MSW Lanfilled	43%	3%	54%	
Percentage of Total MSW Recycled	47%	29%	24%	

Volusia County Recycling Program Plan

MSW Generated By Sector - Summary of Data:

In 2018, a total of 1,615,010 tons of municipal solid waste were collected in Volusia County. Of those collected tons, 876,845 tons were landfilled, and 738,165 tons were recycled. This gives Volusia county a recycling rate of 46% overall for the calendar year of 2018.

Broken down by generator type, the majority of municipal solid waste and recycling was generated by residential single family units. There are 179,857 single family units, which generated 726,754.5 tons of municipal solid waste, or 45% of the total municipal solid waste generated during the year. Of the waste generated, 379,818 tons (52%) were landfilled, and 346,937 tons (48%) were recycled. This accounts for 43% of the total municipal solid waste landfilled in Volusia County, and 47% of the overall tons recycled. This group contributed the most to the overall municipal solid waste generated and had the greatest volume of recycling diverted.

Multi-family residential units generated the smallest portion of the municipal solid waste stream with 31,653 units generating 242,251 tons of municipal solid waste, or 15% of the municipal solid waste generated during the year. Of the waste generated, 28,123 tons (12%) were landfilled, and 214,067.85 tons (88%) were recycled. This accounts for 3% of the total municipal solid waste landfilled in Volusia County, and 29% of the overall tons recycled.

Lastly, a total of 19,251 commercial units generated 646,004 tons of municipal solid waste, or 40% of the municipal solid waste generated during the year. Of the waste generated, 468,844 tons (73%) were landfilled and 177,159.6 tons (27%) were recycled. This accounts for 54% of the total municipal solid waste landfilled in Volusia County, and 24% of the overall tons recycled.

Proportionally speaking, single family units recycled 48% of the municipal solid waste that they generated which is roughly in line with the county's current overall recycling rate of 46%. Multi-family units had a higher-than-average recycling rate of 88% of the municipal solid waste generated being recycled. Commercial units still remain the lowest contributor both numerically overall and proportionally within their subset with only 24% of the municipal solid waste they've generated being recycled.

3. Analysis of any existing recycling programs for the commercial and multifamily sectors, including estimated customer participation rates and recycling rates for each of those sectors;

Commercial

Number of Units	19,251
Collected Tons	646,004
Recycled Tons	177,160
Scheduled Collection	19,251
Scheduled Participation	779
On-Call Collection	19,251
On-Call Participation	34

Volusia County Recycling Program Plan

Residential Multi-Family

Number of Units	31,653
Average # of Residents Per Unit	2.35
Collected Tons	242,251
Recycled Tons	214,068

Participation & Recycling Rates for Commercial and Multi-Family Sectors - Summary of Data:

Volusia County has a total of 19,251 commercial units which generated 646,004 tons, or 40% of the municipal solid waste generated during the 2018 calendar year.

Multi-family residential units generated the smallest portion of the municipal solid waste stream overall with 31,653 units generating 242,251 tons, or 15% of the municipal solid waste generated during the year.

4. Description of the county's implementation, including any planned changes, for your program for recycling construction and demolition debris;

The Volusia County Solid Waste Division has undertaken some changes in its landfill and transfer station operations to allow for the reuse of select clean construction and demolition materials to be utilized in landfill maintenance and road base repair. By incentivizing commercial and residential landfill customers with reduced disposal rates, they are able to provide clean, un-mixed materials for alternate use and diversion from the landfill. While commercial entities would typically pay a rate of \$28 per ton to dispose of construction and demolition materials at county-operated drop sites, we have now introduced an alternate process that allows them to reduce their cost by following a few simple steps. All they have to do is ensure that roofing materials that they intend to dispose of are clean and separated from other debris types. Once onsite, their load is inspected and these clean materials are dropped in a separate area. Rather than being disposed of with the rest of the debris landfill operators can use it to assist with their day-to-day site maintenance activities. And as a reward for the additional effort taken to separate out this material, their disposal rate is adjusted to a lower rate of \$13 per ton. This is a savings of over 50% as opposed to traditional dump fees, and so far has been successful in helping to increase diversion of some of this material from the landfill.

There are not currently any upcoming planned changes to the county's construction and demolition debris recycling program that is presently running. However, it is worth noting that another of the primary sources of construction and demolition debris recycling is through private sector enterprises operating and construction and demolition material sorting and processing sites in the county. Residential and small business services for the reuse and repurposing of construction and demolition materials also exist on a small scale as well, but their overall contribution to the rate of recycling construction and demolition materials is negligible. A possible future consideration would be partnering with locally operating business that deal with construction and demolition recycling to see if they are able to accommodate other materials.

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5. Description of efforts or opportunities to encourage recycling of yard trash, and other organic materials or mechanically treated solid waste, into compost or mulch that may be made available for agricultural and other acceptable uses;

Yard waste is currently collected on a weekly basis from all residents serviced in Volusia County's unincorporated area. Residents and commercial businesses may also bring yard waste to the Tomoka Farms Road Landfill and West Volusia Transfer station for disposal at a rate of \$23 per ton. All accepted yard waste is mulched and is mixed with dirt and utilized as daily cover. It is also made available to residents at both facilities for their own home use at no charge. This information is advertised on the Volusia County Website, inside of solid waste pamphlets made available to residents at community events, and given verbally during phone calls when residents are seeking information about solid waste services in the area.

To further incentivize residents to use this service, residents disposing of small quantities of yard waste at designated county drop-off facilities are given lower flat rate residential prices of \$4 and \$8 per car load and truck load respectively. Additionally, changes to the collection guidelines in the curbside collection program now allow residents to place out up to four cubic yards of yard waste per week as opposed to the two cubic yards which was allowed previously, effectively doubling the county's ability to collect and recycle residential yard waste.

Limited research is currently being undertaken to see about the feasibility of a possible compost program being introduced on a small scale residential basis in Volusia County as well. Though in the extremely preliminary phases, the potential idea would be to use the residential composting program started recently by the City of Orlando as a model in starting our own program. Through the National US Chamber of Commerce and Beyond 34 Partnership, the City of Orlando was able to secure grants and additional funding for the purchase of residential backyard composting containers for customers of the city's solid waste collection program. As implementing such a program ourselves would also be contingent on receiving funding, and the chamber foundation is now currently focusing its efforts in other areas, this may prove to be difficult. The next step would be to research additional sources of funding such as through one of the curbside bin programs offered by Coca Cola or possibly another state or national foundation. Our county has had success in the past with limited bin grant programs for the purchase of bear-resistant containers. So a logical next step would be to see what other container options we can make available to residents with the goal of waste diversion.

6. Strategy (including general timeframes) for expanding your county's recycling programs, or for creating new programs if needed, as part of your county's efforts to achieve the statewide recycling goals set forth in s. 403.706(2), F.S.;

The county of Volusia will be undertaking a strategic and multi-faceted approach to increase participation in its recycling program over the long term, and improve its overall recycling rate in pursuit of the statewide recycling goals set forth in s. 403.706(2), F.S. This effort will involve several strategies designed to reach out to core groups of stakeholders involved in various roles in

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the recycling process, and bring them into the fold so that all parties involved are on the same page when it comes to achieving this objective. Primary areas of focus will include:

1. Targeted Information Campaigns
2. Increasing Participation Among Single Family Units
3. Contamination Reduction
4. Community Engagement
5. Intra-Municipality Cooperation
6. Continued Support of Multi-Family Recycling Initiatives
7. Encouraging Commercial Participation
8. Improved Accuracy of Reporting
9. Program Expansion – Additional Secondary Programs
10. Staff Research and Education

Targeted Information Campaigns

Knowledge is power when it comes to accomplishing any goal, and increasing the number of people with access to that knowledge is paramount to this endeavor. By providing relevant information to the groups most likely to need it, we not only ensure a basic level of knowledge among a diverse group of key stakeholders, but also increase the likelihood of that knowledge being spread. Simply put, in this context, we need to make sure that all interested parties are aware of this recycling goal, and what they can do to help us attain it.

A general information campaign was launched recently through a mail out to all residential customers serviced by the Volusia County Solid Waste Division for curbside collections. The notice they received provided them with more detailed information about our recycling program, and the material types that we are most focused on receiving in their curbside collection bins. Predictably, after the notice was sent out, customer service staff were flooded with customer inquiries involving the specifics of our recycling program, general terms of service, and additional requests for recycling bins. Other changes made to the dissemination of information about solid waste programs in the county included a general update to all pamphlets and literature the Solid Waste Division makes available to its customers including updated guidelines sheets, informational magnets, and pamphlets related to recycling, hazardous waste disposal, general landfill information, and litter reduction. In addition to generalized mailings of information, targeted efforts have been undertaken to provide information about commercial recycling services and recycle rate reporting to a number of businesses, schools, home owners associations, and multi-family dwellings to ensure that they are informed about what options are available to them regarding recycling in Volusia County. Future possibilities may include the use of social media to reach a broader group.

Increasing Participation among Single Family Units

As previously iterated in the analysis of waste generation among the commercial and residential sectors, single family units not only produce the most municipal solid waste of any sector, but also generate the greatest volume of recycling. As mentioned earlier, through targeted information campaigns, it is possible to reach out to groups like this to help foster a renewed interest in the

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pursuit of recycling, and hopefully improve overall recycling diversion among a large group of residents.

However, this method is not the only means of encouraging residents to participate, and would definitely benefit from supplemental support. Other sources of information and encouragement to residents are provided through information sheets left behind by route drivers and solid waste compliance officers. This group can also be engaged with directly through facility tours, offsite presentations, and community engagement events. All of these activities are currently being undertaken by the personnel of the Solid Waste Division, and our hope and overall goal is to be able to increase the number of residents that our message reaches through these means and others to raise the overall rate of participation in the county's recycling program.

Some possible ways to improve upon our single family sector participation include offsite location visits by Solid Waste Division employees to areas with the lowest levels of participation or the highest levels of contamination, follow up phone calls to all residents phoning into our customer support line, and a targeted mail out of recycling guidelines made after each residential recycle bin request. Other possibilities include extending our promotion of recycling to social media, adoption of a web-based application for use on cellphones and tablets, or holding events specifically sponsored by the Solid Waste Division itself for the purpose of recycling education.

Contamination Reduction

One of the major issues facing many community recycling programs is a high contamination rate in the recycling stream. To tackle this problem, the Volusia County Solid Waste Division has recently adopted a simplified approach to make it easier for residents to understand which items should be placed in their curbside recycle bins, and common mistakes that people make when trying to recycling. This "Back to the Basics" campaign promotes the "Big Five Recyclable Items" including paper, cardboard, aluminum & steel cans, glass bottles, and plastic bottles. By specifically requesting these items and no others be placed in their curbside collection bin, and asking residents to ensure that they are clean before being placed out, it not only helps to educate them, but also to ensure a cleaner and more saleable recycling stream. As mentioned earlier in our targeted information campaigns, a general mailing was provided to all residential Volusia County customers providing this new information. That along with supplemental information on our website, printed materials at educational events and tours, and verbal guidance offered by our customer support staff have really helped residents to understand the process and improve the overall quality of the program.

Community Engagement

The Volusia County Solid Waste Division has always made it a point to reach out to the communities in which we operate to better connect with our residents and help them to understand the finer points of recycling and waste management best practices. This is accomplished by providing residents with a window into what we do on a daily basis, and how our operations work through a combination of tours, offsite educational presentations, and by ensuring a presence at local community sponsored events and activities. Some of these events include quarterly cleanups in Volusia County's state parks, rivers, and beaches, along with residential facing opportunities at special events like the county fair and wildlife and environmental festivals. This has always proved

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successful in the past in capturing the interest of younger residents, and giving older and longtime residents the opportunity to ask questions and expand their knowledge of what our division does.

Recently, efforts have been made to increase our participation in these types of events, and so far these attempts have borne some fruit. In prior years, the Solid Waste Division participated in roughly six to eight community events along with a handful of tours and offsite presentations. With the idea of improving recycling education and gaining a wider audience in the community, we have been actively seeking out additional events and venues to present our information in. Starting this year, we have increase the number community events that we have participated in to a minimum of one event per month. Through researching local events and reaching out to event organizers, our hope is to participate in these and other recurring events on a yearly basis. We have also sought to increase our outreach among school groups and younger audiences through targeted mailings to every school in the Volusia County school district advertising the benefits of recycling and offering educational tours and presentations to interested student populations.

Intra-Municipality Cooperation

In recent years, the Volusia County Solid Waste Division has reached out to local municipalities in the area to get on the same page about where current recycling programs are going, and where we hope to take them in the future in pursuit of the state's overall recycling goal. This started as a quarterly meeting dubbed the "Lunch N' learn" series where the Solid Waste Division invited representatives from all of the local cities to a communal gathering to talk about a range of topics related to their individual recycling programs, and the overall state of recycling in Volusia County. This has had a relative degree of success in getting several of our cities to reach out and share information with each other about operations that could potential impact solid waste and recycling services in the county.

Most recently, our meetings have discussed Volusia County's current overall recycling diversion rate of 46%. Specifically in regards to how much waste is being generated, what we can all do to improve diversion of recyclable materials, and how to share this information with the public in our respective service areas. A common consensus in these meetings was to try and standardize the types of materials accepted as well as to have a shared message as to what materials are recyclable in the county. Though the former task has proven difficult due to one of our cities suspending their program due to financial difficulties, and a handful of others scaling back their program in regards to materials such as glass no longer being accepted, the majority of cities within Volusia County have similar recycling plans in place involving what materials they take and guidelines for collection, the latter task of standardizing our message to the public has not proven as difficult. Recently, the Solid Waste Division has made the designs of all of its informational literature available in digital format to participating cities in the hopes that they will standardize their designs and messages in a similar fashion to ours. This would help to avoid customer confusion, and let residents know that all cities in the county stand united in pursuit of an improved recycling rate and cleaner recycling stream. Several cities graciously accepted this information from us, and intend to put it to use. We hope to see the fruits of their labor within the next few months.

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Continued Support of Multi-Family Recycling Initiatives

Through the implementation of local legislation and ordinances requiring the mandatory participation of multi-family residential units in a recycling program, we have effectively provided a jump-start to recycling in a sector of the population that has historically had the most difficulty in participating in the program. Though successful so far in encouraging multi-family units to provide their residents with the ability to recycle, there is definitely an opportunity to improve overall access to the service. As a result, access to the service can be severely limited on properties with large numbers of residents that only possess a handful of conveniently located containers. In some cases, dozens of residents could be sharing two or three collection bins, meaning that otherwise recyclable material is discarded due to the lack of availability.

In an effort to improve the ratio of bins to residents in multi-family complexes, and universal access to alternative methods of recycling for these residents, the Solid Waste Division has recently undertaken a mailing campaign to apartment complexes, centralized housing units, and other communal living structures to provide them with information about what services are available to them. This includes literature on the availability of commercial recycling in their area, recycle center locations, county drop-off bins, and other waste services available to them. In addition, as a free service available to multi-family residences, the Solid Waste Division has offered to visit local properties to conduct small scale waste audits and to meet with residents to give them a better idea of what recycling services would best suit their needs. This includes making suggestions for container size and placement, and recommending how many containers should be available to residents, and which waste hauler they should be in contact with to modify or expand their existing waste services.

Encouraging Commercial Participation

As the second highest source of municipal solid waste and recycling in Volusia County behind single family residences, commercial units not only make up a significant portion of the waste generated in our county, but also hold the highest potential for improvement to their overall rate of recycling participation. As a result, their inclusion in any planned efforts to expand recycling efforts in Volusia County is important. Much like our efforts in the multi-family sector, the Solid Waste Division has approached the commercial sector in a similar fashion through directed mailing campaigns. Pamphlets and full page advertisements were sent out to numerous commercial enterprises operating within Volusia County that encouraged them to either adopt, or expand on existing recycling programs. As with multi-family buildings, the Solid Waste Division offers no cost waste assessments to help determine a facility's recycling needs.

Improved Accuracy of Reporting

On a similar note to improving commercial sector recycling participation, the Solid Waste Division is also reaching out to local businesses and national chains operating in the area that already possess established recycling programs in an effort to better capture their rates of diversion. This is also accomplished through a mailing campaign to specific businesses that advertise their recycling services to their customers. As a part of the mailing, an information request form is enclosed, along with a template for companies to voluntarily submit the details of their recycling programs and the collected volumes of different material types over the calendar

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year. So far, this effort has reached out to roughly 200 local businesses in requesting an accounting of their recycled volumes, but thus far responses have been limited to a handful of participants returning the requested information. Staff will further expand the pool of businesses in our mail out campaign this coming year with the hopes of increasing the overall response rate. Other possible measures including offering some form of incentive to participating businesses such as an award or some other form of recognition by Volusia County as thanks for their support and participation. With this information, we hope to have a more accurate representation of the true rate of recycling taking place in Volusia County in the future.

Program Expansion – Additional Secondary Programs

Though Volusia County already provides recycling services for household recyclable items, hazardous waste, and electronics, the potential still exists to expand upon it by accepting additional material types, or partnering with other organizations to recycle materials that don't typically fall into the standard recycling stream. One such organization that the Solid Waste Division is looking into is a nationally recognized recycling chain called Terra Cycle. This organization specializes in recycling difficult-to-process materials that residents use regularly and help keep them out of the landfill by having the materials reused, oftentimes by their original manufacturers. Some of the services allow for free mail-in of collected materials simply by acting as a designated drop-off facility. Others are paid options that are charged per shipment. Some of the free materials that are currently under advisement for acceptance in a potential pilot program include Febreze air freshener containers and cartridges, Little Bites snack bags, Arm & Hammer soft packets, P&G soft pouches, and Solo #6 plastic cups. If a pilot program is launched and proves to be successful, it may lead to adoption of disposal bins for these materials at other centralized location, or the addition of more items to the program.

Staff Research and Education

In order to ensure that our residents are educated on the topic of recycling, we must first make sure that members of our staff have a thorough understanding of the subject as well. Aside from simply learning about what materials our program accepts, and knowing the necessary steps for proper disposal, staff will aim to go the extra mile to fully explore the broader recycling field, learn about what other communities are doing, industry best-practices, changes taking place nationally and globally, and ways to improve our own programs. This is accomplished through a combination of attending educational webinars, going to meetings both locally and in other parts of the state, and through on-the-job research into topics of interest in recycling technologies and other related fields.

Through the latter half of 2018 and early 2019, staff members have participated in over a dozen webinars that cover broad range of topics in the field of recycling. Presentations have included such topics as challenges to the recycling industry, education and outreach tools available to local governments, battery recycling, plastic wrap, and construction and demolition debris markets. These webinars were hosted by a number of state and locally sponsored groups such as Friends of Florida, the National Recycling Partnership, the US Department of Energy, Chamber of Commerce, Beyond 34, and Recycle Florida Today. These organizations not only possess resources and information that we at the local level lack, but also make it available to us at no

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charge for the benefit of our employees and residents, and it has proved highly effective in promoting our own education and increasing our knowledge of the recycling field.

Other activities that have proved beneficial to increasing the knowledge base of our staff include the attendance of various meetings across the state aimed at growing our state's rate of recycling, and promoting the sharing of information across municipalities. One such event that our team frequents on a quarterly basis is the Orlando Regional Recycling Meeting held in conjunction with Beyond 34, and the U.S Chamber of Commerce Foundation. This began as a pilot program to increase recycling in the city of Orlando in neighboring Orange County. It brings together multiple representatives from surrounding areas, businesses, charitable organizations, and interested members of the community to keep us all apprised of what is happening in surrounding areas, and teach us about new potential programs and guidelines that could be implemented to help benefit our own local programs. Another similar program that our staff has recently attended was a recycling conference and trade show in Bonita Springs sponsored by Recycle Florida Today, an organization specifically aimed at improving recycling rates in Florida, and keeping local communities apprised of new industry standards, events, and changes in national and international market environments.

Last but not least, our staff is committed to improving our program through research into a variety of topics that will hopefully serve to grow our program, benefit our residents, and greatly improve our environmental impact. In recent months, staff members have sought to further increase our community presence and outreach by researching local school groups, community organizations, and private enterprises that we believe would benefit from education on recycling, and have reached out in the hopes of bringing them to one of our facilities, or visiting them off-site to share what we know on the subject. We have also looked into community events that the Solid Waste Division can participate in to further encourage members of our local communities to support the recycling initiative. Aside from that, we are actively exploring new education opportunities, potential new recycling streams, and additional reuse and recycling opportunities for existing waste streams.

7. Discussion of any additional steps, initiatives and anticipated challenges that are critical to implementing your strategies to achieve the next interim, and ultimate statewide recycling goal of 75% by the end of 2020.

Volusia County Solid Waste recently updated its ten-year master plan and has sought the assistance of consultants and other private entities in order to exhaust all options currently at our disposal to aid in our attempts to reach the state's recycling goal of 75%. Staff has aggressively pursued many opportunities to increase our recycling such as the continued education opportunities mentioned above and utilizing spotters in order to capture all available recyclables. However, as many other counties throughout the state can attest, the task of reaching the 75% goal established by the legislature by the year 2020 will still prove to be difficult to achieve in the foreseeable future. As our county's current recycling rate does not yet include any type of waste-to-energy credits at this time, Volusia County is not able to take advantage of the benefit that it can provide.

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Regardless of whether or not such a system is implemented, our staff plans to continue to further educate our residents on recycling and ourselves about potential strategies that will aid us in our efforts to reach that 75% goal. However, despite our numerous planned efforts, the addition of more recycling streams, and other possible program expansions, our staff still anticipates many challenges to our ability to further raise our overall recycling rate. Difficulties in the domestic and overseas commodity markets, the impacts of tariffs, inflation, and other rising processing costs associated with even basic curbside recycling have definitely proven to be detrimental to the cause. As a result, one of the cities in Volusia County has dropped its recycling program entirely, while others have restricted certain types of materials they accept, which will definitely have a negative impact on future reporting. Though our staff anticipates that the implementation of all programs will result in an increase in recycling, it still remains to be seen whether or not these changes will be enough to satisfy the state's goal.

Despite the efforts of the Volusia County Solid Waste Division, and other community recycling programs, there are still several outside factors that are beyond our control which detract from the overall impact of our plans and severely limit our progress toward the state's 75% recycling goal. These factors include poor market conditions, increased processing costs, and other domestic and international developments that impact the overall state of recycling in the United States. Currently, market conditions for recycled commodities are at a historically low point. Many of the materials common in Volusia County's recycling stream are selling for well below the cost to process them. Some even hold a \$0 or negative value as well, meaning that despite the time and effort taken to separate out this saleable material, the prospects of recouping any of its monetary value are extremely limited. Though the price of ferrous and non-ferrous metals has rebounded slightly over the last year due to an ever-present demand and increased manufacturing of durable goods, other commodities such as paper and OCC are trading between \$0 and \$5 per ton due to the closure of several domestic processing centers and reduced overseas demand. Even PET and HDPE which are staple commodities in the recycling market have seen decreased price and demand in recent days due to increased domestic shale oil production, increased crude oil production overseas, and reduced production costs for virgin materials across the board due to technological advances.

These poor market conditions have negatively impacted many local recycling programs that in past years have relied on the funds generated from the sale of these materials to run their ongoing operations. In the traditional recycling model adopted by many communities during the national recycling boom over a decade ago, cities and counties would contract with a MRF which would process all recyclables in a set geographic area in exchange for the profits generated from their sale. Some communities even adopted a cost-share program that entitled them to a percentage of those profits allowing them to either grow their program, or funnel it into other burgeoning public utilities. When recycling was essentially a self-funded enterprise, it flourished. Now, recent market changes have thrown the standard model out the window. As opposed to a guaranteed profit from material sales, many MRFs are hemorrhaging money to stay afloat because the cost of processing those materials now far exceeds what they hope to bring in from their sale. This has resulted in some MRFs going out of business, others breaking contracts with their municipal hosts, and many renegotiating their renewal terms in their favor. This would serve to guarantee that regardless of whether or not their materials sell, that they are at least paid a basic processing cost to cover their

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expenses. This is the case for Volusia County and our MRF operator; Gel Corporation. Our new processing cost runs \$80 per ton.

In summary, the prospect of attaining the state's 75% recycling goal will prove to be challenging. Though the staff of the Volusia County Solid Waste Division is committed to working with residents, businesses, and local governments throughout the county to share information and improve our overall recycling participation rates as outlined in our ten point proposal, a variety of external factors over which we have little or no control will only serve to hamper our best efforts. Market volatility, increased costs, and lower rates of return in domestic recycling ventures, have had a greater impact not only on recycling operations in Volusia County, but on programs across the state as well. Many municipalities are faced with the stark reality that they are not able to continue to run their recycling programs as they had in the past without making significant changes, cut-backs, and raising operational and customer costs. Volusia County is no exception and has experienced this first hand, as the city of Deltona voted to suspend their curbside recycling program rather than raising residential fees. This development limits the ability to reach the 75% goal. If the downturn in market conditions continues many government entities may have to make tougher choices about how their recycling programs will continue to operate in a landscape of rising costs, high market volatility, and increased pressure at state and local levels to manage reuse and recycling programs more effectively. However, despite these challenges, Volusia County is still actively committed to increasing our recycling rate as much as is economically feasible.

Appendix C

References

Appendix C– References

Florida Statutes

Section 403.706, F.S.

http://www.leg.state.fl.us/statutes/index.cfm?mode=View%20Statutes&SubMenu=1&App_mode=Display_Statute&Search_String=403.706&URL=0400-0499/0403/Sections/0403.706.html

Section 403.7065, F.S.

http://www.leg.state.fl.us/statutes/index.cfm?mode=View%20Statutes&SubMenu=1&App_mode=Display_Statute&Search_String=403.7065&URL=0400-0499/0403/Sections/0403.7065.html

Section 403.7032, F.S.

http://www.leg.state.fl.us/statutes/index.cfm?mode=View%20Statutes&SubMenu=1&App_mode=Display_Statute&Search_String=403.7032&URL=0400-0499/0403/Sections/0403.7032.html

Section 288.021, F.S.

http://www.leg.state.fl.us/statutes/index.cfm?mode=View%20Statutes&SubMenu=1&App_mode=Display_Statute&Search_String=288.021&URL=0200-0299/0288/Sections/0288.021.html

Section 403.707, F.S.

http://www.leg.state.fl.us/statutes/index.cfm?mode=View%20Statutes&SubMenu=1&App_mode=Display_Statute&Search_String=403.707&URL=0400-0499/0403/Sections/0403.707.html

Section 403.715, F.S.

http://www.leg.state.fl.us/statutes/index.cfm?mode=View%20Statutes&SubMenu=1&App_mode=Display_Statute&Search_String=403.715&URL=0400-0499/0403/Sections/0403.715.html

Section 403.714, F.S.

http://www.leg.state.fl.us/statutes/index.cfm?mode=View%20Statutes&SubMenu=1&App_mode=Display_Statute&Search_String=403.714&URL=0400-0499/0403/Sections/0403.714.html

Section 62-709.201, F.A.C.

<https://www.flrules.org/gateway/ChapterHome.asp?Chapter=62-709>

Resources

Re-TRAC

<https://connect.re-trac.com/>

SWIX WasteXchange.org

<http://wastexchange.org/>

Florida Organics Recycling Center for Excellence (FORCE)

www.floridaforce.org

SCrAP Program

<https://erefdn.org/school-cafeteria-waste/>

SWIX Florida Organics Recycling Workshop 1/24/17:

<http://southernwasteinformationexchange.com/florida-organics-recycling-workshop-january-24-2017-proceedings/>

Appendix D
Energy, Climate
Change and
Economic
Security Act of
2008

Appendix D – Energy, Climate Change and Economic Security Act of

2008 403.7032 Recycling.--

(1) The Legislature finds that the failure or inability to economically recover material and energy resources from solid waste results in the unnecessary waste and depletion of our natural resources. As the state continues to grow, so will the potential amount of discarded material that must be treated and disposed of, necessitating the improvement of solid waste collection and disposal. Therefore, the maximum recycling and reuse of such resources are considered high-priority goals of the state.

(2) By the year 2020, the long-term goal for the recycling efforts of state and local governmental entities, private companies and organizations, and the general public is to reduce the amount of recyclable solid waste disposed of in waste management facilities, landfills, or incineration facilities by a statewide average of at least 75 percent. However, any solid waste used for the production of renewable energy shall count toward the long-term recycling goal as set forth in this section.

(3) The Department of Environmental Protection shall develop a comprehensive recycling program that is designed to achieve the percentage under subsection (2) and submit the program to the President of the Senate and the Speaker of the House of Representatives by January 1, 2010. The program may not be implemented until approved by the Legislature. The program must be developed in coordination with input from state and local entities, private businesses, and the public. Under the program, recyclable materials shall include, but are not limited to, metals, paper, glass, plastic, textile, rubber materials, and mulch. Components of the program shall include, but are not limited to:

(a) Programs to identify environmentally preferable purchasing practices to encourage the purchase of recycled, durable, and less toxic goods.

(b) Programs to educate students in grades K-12 in the benefits of, and proper techniques for, recycling.

(c) Programs for statewide recognition of successful recycling efforts by schools, businesses, public groups, and private citizens.

(d) Programs for municipalities and counties to develop and implement efficient recycling efforts to return valuable materials to productive use, conserve energy, and protect natural resources.

(e) Programs by which the department can provide technical assistance to municipalities and counties in support of their recycling efforts.

(f) Programs to educate and train the public in proper recycling efforts.

(g) Evaluation of how financial assistance can best be provided to municipalities and counties in support of their recycling efforts.

(h) Evaluation of why existing waste management and recycling programs in the state have not been better used.

(5) The Department of Environmental Protection shall create the Recycling Business Assistance Center by December 1, 2010. In carrying out its duties under this subsection, the department shall consult with state agency personnel appointed to serve as economic development liaisons under s. 288.021 and seek technical assistance from Enterprise Florida, Inc., to ensure the Recycling Business Assistance Center is positioned to succeed. The purpose of the center shall be to serve as the mechanism for coordination among state agencies and the private sector in order to coordinate policy and overall strategic planning for developing new markets and expanding and enhancing existing markets for recyclable materials in this state, other states, and foreign countries. The duties of the center must include, at a minimum:

(a) Identifying and developing new markets and expanding and enhancing existing markets for recyclable materials.

(b) Pursuing expanded end uses for recycled materials.

(c) Targeting materials for concentrated market development efforts.

- (d) Developing proposals for new incentives for market development, particularly focusing on targeted materials.
- (e) Providing guidance on issues such as permitting, finance options for recycling market development, site location, research and development, grant program criteria for recycled materials markets, recycling markets education and information, and minimum content.
- (f) Coordinating the efforts of various governmental entities having market development responsibilities in order to optimize supply and demand for recyclable materials.
- (g) Evaluating source-reduced products as they relate to state procurement policy. The evaluation shall include, but is not limited to, the environmental and economic impact of source-reduced product purchases to the state. For the purposes of this paragraph, the term “source-reduced” means any method, process, product, or technology that significantly or substantially reduces the volume or weight of a product while providing, at a minimum, equivalent or generally similar performance and service to and for the users of such materials.
- (h) Providing evaluation of solid waste management grants, pursuant to s. 403.7095, to reduce the flow of solid waste to disposal facilities and encourage the sustainable recovery of materials from Florida’s waste stream.
- (i) Providing below-market financing for companies that manufacture products from recycled materials or convert recyclable materials into raw materials for use in manufacturing pursuant to the Florida Recycling Loan Program as administered by the Florida First Capital Finance Corporation.
- (j) Maintaining a continuously updated online directory listing the public and private entities that collect, transport, broker, process, or remanufacture recyclable materials in the state.
- (k) Providing information on the availability and benefits of using recycled materials to private entities and industries in the state.
- (l) Distributing any materials prepared in implementing this subsection to the public, private entities, industries, governmental entities, or other organizations upon request.
- (m) Coordinating with the Department of Economic Opportunity and its partners to provide job placement and job training services to job seekers through the state’s workforce services programs.