

To: Stephen Massey, RCC Chair

FR: Michael Carleton, Arredondo, Zepeda & Brunz LLC

RE: Waste disposal rates in NCTCOG Region for 2017

Waste Disposal Update for NCTCOG

Mr. Massey, I appreciated the opportunity to talk with the RCC at the last meeting regarding the region's solid waste disposal capacity and disposal patterns. The data presented was from TCEQ's Annual Waste Reports. The latest of these reports was just presented yesterday to the Municipal Solid Waste and Recovery Advisory Committee (MSWRAC). The report confirmed the data that was presented to you at the last meeting regarding 2016 waste disposal quantities in the region. For TCEQ fiscal year 2016, it was reported that a total of 10.5 million tons of waste were disposed of in the NCTCOG region. This includes waste disposed of at Type I (msw) and Type (IV) landfills. ***This represented a significant 10% year to year increase over 2015.***

AZ&B has recently evaluated quarterly reports submitted to the TCEQ by landfill operators. For the fiscal year 2017, it appears that waste disposal quantities continued to increase, but by a much smaller amount (Table 1 and Figure 1). ***The estimated quantity for 2017 is 10.7 million tons. This is only a 1.1% increase*** – the estimated population increase for 2017 was approximately 1.7%. This means that the per capita waste generation rate dropped a small amount in 2017 on a per capita basis (from 8.14 pcd to 8.09 pcd). For comparison basis, the San Antonio area had a waste disposal rate of 6.3 pcd. The reported state-wide pcd for 2016 was 6.83 pcd.

Comparison Analysis

Key findings include the following. For the four regions, between the years 2017 and 2016, the total amount of waste disposed decreased by 200,000 tons from 24.5 million tons to 24.3 million tons.

The H-GAC region waste disposal quantities actually decreased during 2017, but this is all pre-Harvey data. To evaluate the impact of this event, it will be necessary to not only evaluate H-GAC landfills, but landfills in surrounding regions. Prior to Harvey, the region had approximately 400 million cubic yards of capacity. A report prepared by the US General Accountability Office reported that Hurricane Katrina generated a total of 100 million cubic yards of debris.

The CAPCOG region did experience a 10% decrease in waste disposal quantities for 2016, but tons disposal quantities dropped by 8.8% in 2017. AACOG, which has the lowest per capita generation rate, increased tons disposed by 5% in 2017.

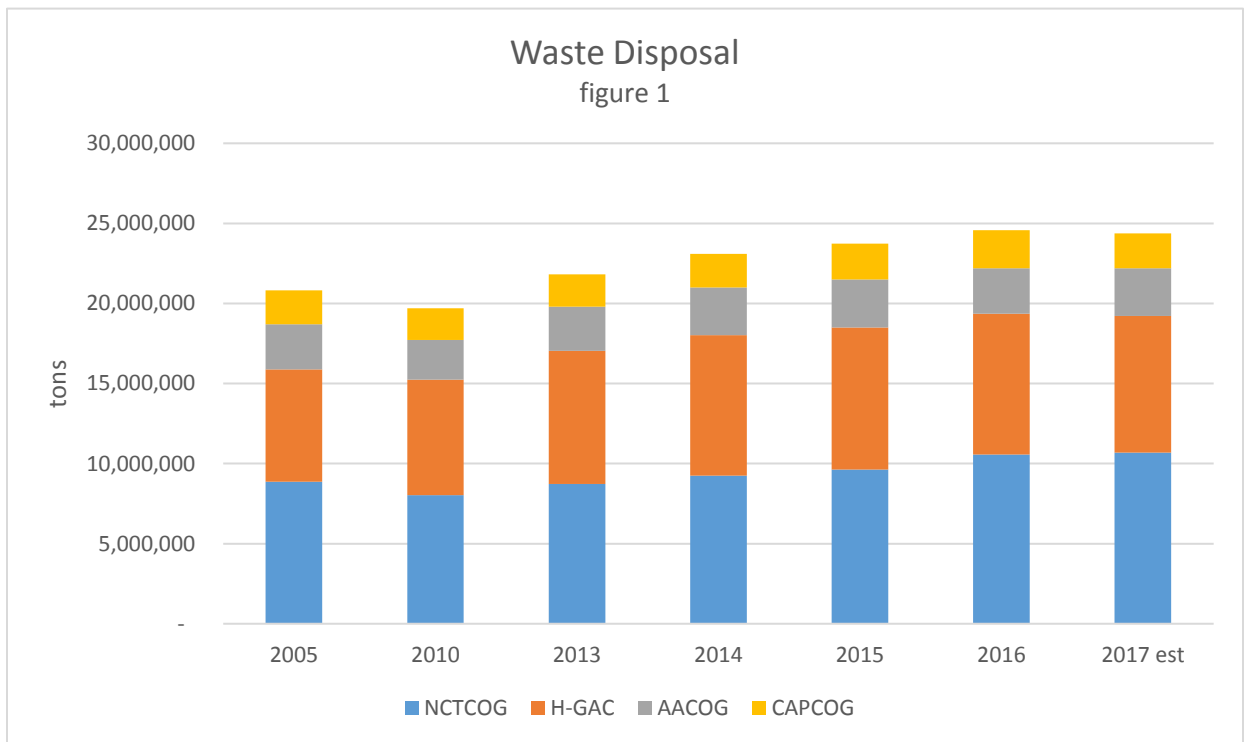
Regional Capacity

Regional capacity for NCTCOG Region is reported as 383 million tons in the TCEQ Annual Report for 2016. After 2017 utilization of capacity, current capacity is approximately 373 million tons. Permit applications are being developed or reviewed for City of Denton and Camelot Landfill.

Table 1 Annual Waste Disposal Quantities

	NCTCOG	H-GAC	AACOG	CAPCOG	Total
2005	8,872,866	7,002,206	2,832,342	2,105,233	20,812,647
2010	8,020,289	7,214,143	2,487,982	1,986,713	19,709,127
2013	8,731,473	8,301,839	2,772,824	2,018,747	21,824,883
2014	9,244,591	8,780,322	2,965,578	2,104,062	23,094,553
2015	9,630,258	8,870,635	3,004,359	2,233,526	23,738,778
2016	10,576,139	8,778,507	2,835,511	2,376,481	24,566,638
2017 est	10,695,824	8,514,506	2,988,957	2,185,116	24,384,404
17-16	119,685	(264,001)	153,447	(191,365)	(182,234)
% 17 -16	1.12%	-3.10%	5.13%	-8.76%	-0.75%
2017 tons of capacity	383	339	168	73.4**	

*2017 are estimates as cubic yard reports are adjusted based on 2016 conversion rate
Does not include recently permitted, but not built 130 Environmental



Per Capita Disposal Rates

The composite waste generation rates for the regions showed a decrease for the first time in several years. The AACOG region has the lowest generation rate on a pounds per capita basis (6.3 pcd), while the NCTCOG has at the highest (8.09 pcd). It should be noted that large quantities of waste from San Antonio is transferred to the Austin area.

Table 2– Disposal Rates Per Capita-Day (pcd)

Year	NCTCOG	H-GAC	AACOG	CAPCOG	Composite
2005	8.54	7.11	7.70	6.08	7.77
2010	6.72	6.49	6.06	6.07	6.46
2013	7.04	7.00	6.35	6.08	6.77
2014	7.34	7.22	6.65	6.05	7.02
2015	7.53	7.15	6.60	6.25	7.07
2016	8.14	6.92	6.10	7.31	7.16
2017 est	8.09	6.57	6.30	7.03	6.96

Waste Disposal and the Economy

One of the key factors in the increased disposal of municipal solid waste in each of the regions is the strong economy. Texas' \$1.5 trillion GDP represents 9% percent of the total US GDP of \$16.3 trillion. The four regions identified above represent over 70% of the state's GDP. GDP data is generated by the US Bureau of Economic Analysis (BEA). Table 3 presents GDP in comparison to GDP values. A number of factors come into play regarding these disposal rates including the types of businesses in a region; cost of disposal; and public sector programs focused on reducing these rates. A more in-depth analysis of the AACOG's region would be an interesting evaluation to determine how they went from close to 40 tons per million \$GDP in 2005 to 26 tons per million \$GDP in 2016.

Table 3 GDP (\$Billions) in the four regions (chained 1999 values)

Year	NCTCOG	H-GAC	CAPCOG	AACOG	Total
2005	328	319	72	73	792
2010	359	373	77	87	896
2013	412	425	90	104	1,031
2014	432	435	95	111	1,073
2015	457	456	101	119	1,133
2016	471	442	109	126	1,148

Source: US Bureau of Economic Analysis (Oct 2017)

Table 4 – Tons / Million \$ GDP

Year	NCTCOG	H-GAC	AACOG	CAPCOG	Composite
2005	27	22	39	29	26
2010	22	19	32	23	22
2013	21	20	31	19	21
2014	21	20	31	19	22
2015	21	19	30	19	21
2016	22	20	26	19	21

