SANTA FE SOLID WASTE MANAGEMENT AGENCY
CITY OF SANTA FE AND SANTA FE COUNTY

Solid Waste Assessment & Management Study
County Section

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leidos

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Santa Fe Solid Waste Management Agency
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Section 1
COST OF SERVICE AND FUNDING OPTIONS

The purpose of the Cost of Service and Funding Options analysis was to determine the total cost of refuse and recycling services provided by the County, equitably distribute the cost to customers, identify possible funding and revenue sources, and design rates to safeguard the financial integrity of the utility. The total cost of providing services includes costs associated with operations and maintenance (O&M), debt service (if any) and cash capital outlays.

This section provides a discussion of the methodology utilized to conduct the analysis, the cost of providing services as determined by the analysis, and recommended rates to be adopted for refuse drop-off services. Various policy issues are also identified and discussed in Section 1.8 of this report section.

1.1 Current Solid Waste Operations

The County currently provides refuse and recycling drop-off services at seven citizen convenience centers and exclusively recycling drop-off services at one CCC. The convenience centers have also been referred to as "transfer stations" but for consistency, the term citizen convenience center (CCC) is used throughout this report.

The County's CCCs collect an average of 10,084 tons of refuse and 2,284 tons of recyclable materials a year.[1] Recycling represents 18.5 percent of the CCC annual volume collected.

1.2 Current Rates and Funding Sources

The County has the following rates in place for refuse services at the CCCs. Recycling material can be dropped-off at any CCC at no cost.

[1] Based on a historical average of two years, January 2011 to December 2012

Table 1-1
Current Refuse Rates

	Rate	Quantity Sold (FY 2013)	Approximate Volume/ Weight per Permit
Residential Customers			
1 Trip Permit	$15.00	515	4 CY or 800 lbs
24 Trip Permit	75.00	3,680	96 CY or 19,200 lbs
24 Trip Permit – Senior	70.00	1,426	96 CY or 19,200 lbs
24 Trip Permit – Low Income	65.00	161	96 CY or 19,200 lbs
5 Bag Tags	5.00	1,031	0.17 CY or 33 lbs
Commercial Customers			
5 Trip Permit	$100.00	3	20 CY or 4,000 lbs
10 Trip Permit	140.00	3	40 CY or 8,000 lbs
Commercial Billable Accounts			
Per Ton	$50.00	-	2,000 lbs
Per Pound	0.03	-	1 lbs

The County's refuse and recycling operation is also funded by the Environmental Gross Receipts Tax and an annual County General Fund Transfer. The sources of revenue for the refuse and recycling operation are summarized below in Table 1-2 for fiscal year (FY) 2014.

Table 1-2
Funding Sources

	FY 2014	Percentage Breakdown
Annual Actual Costs	$2,538,589	
Funding Source		
Revenue from Permit Sales	$399,885	15.7%
Environmental Gross Receipts Tax	650,000	25.6%
General Fund Transfer	$1,488,704	58.7%
Total Funding	$2,538,589	100%

1.3 Development of Cost of Service

A historical period of two years was reviewed for the purpose of estimating the future operating and capital costs for the County. The total of annual operating and capital costs constitutes the "cost of service". Leidos compared the FY 2013 and FY 2014 budgets with the actuals for FY 2011 and FY 2012. Based on this comparison, the FY 2014 budget appears to be a reasonable estimate of the expenses associated with the operations of the County.

1.3.1 Test Year

Leidos made various adjustments to the FY 2014 budget in order to establish a "Test Year" for the five-year financial forecast. A "Test Year" is a common term in rate studies that refers to an adjusted fiscal year budget that is used as a basis for establishing rates. The "Test Year" should be representative of "typical" conditions, with adjustments for any unusual or one-time expenses. Further, any projected non-recurring expenses or revenues were identified and reflected in the financial forecast, as appropriate. The FY 2014 budget, adjustments and resulting "Test Year" are shown in Appendix A, Schedule 1.

1.3.2 Inflation Factors

The Test Year cost of service was used as the basis for the five-year financial forecast. The majority of expenses were operations and maintenance (O&M) related costs. Therefore, the inflation assumptions were based on historical averages as follows:

- Salaries increase at 3.00 percent per year
- Benefits increase at 3.00 percent per year
- Insurance costs increase at 5.00 percent per year
- Fuel costs increase at 3.00 percent per year
- Equipment costs increase at 2.00 percent per year
- Disposal costs increase at 2.00 percent per year
- Other general operating costs increase at 2.00 percent per year.

1.3.3 Capital Repair and Replacement

Capital repair and replacement is included in the cost of service under the heading "Vehicle Expenses", line item "Vehicle Replacement Cost" (Appendix A, Schedule 1, page 1 of 2). These costs were estimated for the financial forecast to require an average of approximately $240,265 annually for refuse equipment replacement. These funds are to ensure the dependability and efficiency of facilities and vehicles. Leidos would like to stress the importance of ensuring the County's assets remain in good working condition in order to prevent equipment failures and expensive emergency repairs.

Appendix A, Schedule 2 provides additional detail on the equipment replacement schedule for the five-year forecast.

1.4 Cost of Service Forecast

Based on the Test Year, and inflation factors detailed above, Leidos developed the cost of service forecast for the County. Table 1-3 shows the County's cost of service for the five-year forecast. The detailed five-year forecast for the County is provided in Appendix A, Schedule 3.

Table 1-3
Cost of Service Forecast

	Year 1 FY 2014	Year 2 FY 2015	Year 3 FY 2016	Year 4 FY 2017	Year 5 FY 2018
Salaries and Wages	$722,860	$744,546	$766,882	$789,889	$813,585
Employee Benefits	414,345	426,775	439,579	452,766	466,349
Travel	4,550	4,656	4,765	4,876	4,990
Vehicle Expenses	432,932	451,811	462,760	473,985	490,390
Maintenance	216,500	220,830	225,247	229,752	234,347
Contract Services	505,842	515,814	525,984	536,358	546,940
Supplies	71,700	73,134	74,597	76,089	77,610
Operating Costs	38,900	39,678	40,472	41,281	42,107
Other Operating Costs	84,409	87,576	90,900	94,389	98,052
Insurance & Deductibles	46,550	48,878	51,321	53,887	56,582
Solid Waste Cost of Service	$2,538,589	$2,613,698	$2,682,506	$2,753,271	$2,830,950

1.4.1 Cost of Service by Cost Category

Leidos worked with County staff to develop cost centers that will reflect the variety of services provided by the County's refuse and recycling operation. Identifying cost centers allows Leidos and the County to better understand the cost of operating each aspect of the County's refuse and recycling operation. The cost centers identified are as follows:

- Administration
- Education and Outreach
- Adopt A Road
- Eldorado
  - Refuse
  - Recycling
- Jacona
  - Refuse
  - Recycling
- La Cienega
  - Refuse
  - Recycling
- Nambe
  - Refuse
  - Recycling
- Rancho Viejo

  - Recycling
- San Marcos
  - Refuse
  - Recycling
- Stanley
  - Refuse
  - Recycling
- Tesuque
  - Refuse
  - Recycling
- Refuse and Recyclables Hauling
- Disposal

Leidos allocated the County's annual costs to the twenty (20) cost centers listed above. A detailed list of the allocation factors utilized for each County expense is listed in Appendix A, Schedule 4.

1.4.2 Allocating Common Costs to Each CCC

Certain cost categories provide a "benefit" to all of the CCCs and these costs need to be allocated to each CCC in an equitable manner. These overarching cost categories include: Administration, Education and Outreach, Adopt-a-Road, Refuse and Recyclables Hauling and Disposal. Leidos has allocated these costs to the different convenience centers based on the following methodologies:

- **Administration, Education and Outreach, and Adopt-a-Road.** These costs were allocated equally to each convenience center, regardless of tonnage handled. This is based on the assumption that, on average, all citizen convenience centers require an equal amount of attention from administrative personnel, education and outreach efforts and adopt-a-road support services. These administrative costs are then distributed to refuse and recycling activities at each citizen convenience center based on the volume of tonnage collected at each convenience center. Additional detail on the allocation of administration, education and outreach, and adopt-a-road is provided in Appendix A, Schedule 5.
- **Refuse and Recyclables Hauling.** The hauling costs are associated with the cost to transfer material from the citizen convenience centers to the Buckman Road Recycling and Transfer Station (BuRRT) and the Caja del Rio Landfill (Landfill). The hauling costs have been distributed to each CCC activity based on the number "pulls" for refuse and recycling from each CCC, as shown in Appendix A, Schedule 5. A "pull" is the process of one truck removing one load of refuse or recyclables from a CCC. This is intended to more accurately distribute the hauling cost to refuse and recycling activities at each CCC.
- **Disposal.** Disposal of refuse at the Caja del Rio Landfill currently costs $40 per ton. The projected cost of disposal is based on the assumption that the disposal cost

at the landfill will increase annually at 2.0 percent per year, resulting in the annual disposal cost shown in Appendix A, Schedule 5. The annual disposal cost is distributed to the refuse cost center at each convenience center based on historical refuse tonnage volumes at each convenience center. Save for glass, the County is not charged to drop-off recyclables at BuRRT. Glass drop-off currently costs $15.75 per ton.

After distributing these cost categories to the CCCs using the methodology described in prior pages, the full cost of operating each convenience center for refuse and recycling services is, shown in Table 1-4.

Table 1-4
Cost of Service by Citizen Convenience Center

	Year 1 FY 2014	Year 2 FY 2015	Year 3 FY 2016	Year 4 FY 2017	Year 5 FY 2018
Eldorado					
O&M Costs	$246,303	$256,238	$263,100	$270,172	$279,419
Administration	49,925	51,263	52,606	53,985	55,421
Hauling	19,149	19,765	20,299	20,849	21,473
Disposal	93,482	95,351	97,258	99,204	101,188
Refuse Subtotal	$408,859	$422,618	$433,264	$444,210	$457,501
O&M Costs	$99,798	$102,975	$105,995	$109,108	$112,463
Administration	19,178	19,692	20,208	20,738	21,290
Hauling	53,662	55,389	56,886	58,427	60,175
Recyclables Subtotal	$172,639	$178,057	$183,090	$188,273	$193,927
Eldorado Subtotal	$581,497	$600,675	$616,353	$632,483	$651,428
Jacona					
O&M Costs	$229,667	$237,204	$243,370	$249,722	$257,191
Administration	56,393	57,905	59,421	60,979	62,601
Hauling	78,714	81,248	83,444	85,704	88,268
Disposal	132,734	135,388	138,096	140,858	143,675
Refuse Subtotal	$497,508	$511,745	$524,332	$537,263	$551,735
O&M Costs	$68,042	$70,171	$72,080	$74,048	$76,243
Administration	12,710	13,051	13,393	13,744	14,109
Hauling	25,582	26,406	27,119	27,854	28,687
Recyclables Subtotal	$106,334	$109,628	$112,592	$115,645	$119,040
Jacona Subtotal	$603,842	$621,373	$636,923	$652,908	$670,775
La Cienega					
O&M Costs	$117,564	$121,133	$124,745	$128,467	$132,339
Administration	64,316	66,040	67,769	69,546	71,396
Hauling	53,813	55,545	57,047	58,592	60,344
Disposal	84,861	86,559	88,290	90,056	91,857
Refuse Subtotal	$320,554	$329,277	$337,851	$346,661	$355,937
O&M Costs	$39,658	$40,829	$42,037	$43,282	$44,566
Administration	4,787	4,916	5,045	5,177	5,314
Hauling	11,883	12,265	12,597	12,938	13,325
Recyclables Subtotal	$56,328	$58,010	$59,679	$61,397	$63,206
La Cienega Subtotal	$376,882	$387,287	$397,530	$408,058	$419,143

	Year 1 FY 2014	Year 2 FY 2015	Year 3 FY 2016	Year 4 FY 2017	Year 5 FY 2018
Nambe					
O&M Costs	$60,209	$62,062	$63,948	$65,892	$67,910
Administration	64,370	66,096	67,827	69,606	71,457
Hauling	17,938	18,515	19,016	19,531	20,115
Disposal	23,174	23,637	24,110	24,592	25,084
Refuse Subtotal	$165,691	$170,311	$174,901	$179,620	$184,566
O&M Costs	$27,906	$28,726	$29,571	$30,443	$31,343
Administration	4,733	4,860	4,987	5,118	5,254
Hauling	3,860	3,984	4,092	4,203	4,329
Recyclables Subtotal	$36,499	$37,570	$38,650	$39,764	$40,925
Nambe Subtotal	$202,190	$207,880	$213,551	$219,384	$225,491
Rancho Viejo					
O&M Costs	$18,563	$19,103	$19,661	$20,236	$20,831
Administration	69,103	70,956	72,814	74,723	76,711
Hauling	12,186	12,578	12,918	13,268	13,664
Rancho Viejo Subtotal	$99,852	$102,637	$105,393	$108,227	$111,206
San Marcos					
O&M Costs	$54,923	$56,617	$58,298	$60,031	$61,855
Administration	57,720	59,268	60,820	62,415	64,075
Hauling	22,630	23,359	23,990	24,640	25,377
Disposal	30,160	30,763	31,378	32,006	32,646
Refuse Subtotal	$165,433	$170,007	$174,487	$179,092	$183,953
O&M Costs	$44,974	$46,305	$47,677	$49,092	$50,550
Administration	11,383	11,688	11,994	12,308	12,636
Hauling	12,715	13,125	13,479	13,844	14,259
Recyclables Subtotal	$69,072	$71,118	$73,151	$75,245	$77,445
San Marcos Subtotal	$234,506	$241,124	$247,638	$254,336	$261,397
Stanley					
O&M Costs	$61,748	$63,682	$65,570	$67,516	$69,583
Administration	60,916	62,550	64,188	65,871	67,623
Hauling	15,289	15,781	16,207	16,646	17,144
Disposal	23,722	24,196	24,680	25,174	25,677
Refuse Subtotal	$161,674	$166,208	$170,645	$175,207	$180,027
O&M Costs	$36,304	$37,376	$38,480	$39,620	$40,794
Administration	8,187	8,406	8,626	8,853	9,088
Hauling	4,844	5,000	5,135	5,274	5,432
Recyclables Subtotal	$49,335	$50,782	$52,242	$53,746	$55,314
Stanley Subtotal	$211,009	$216,990	$222,887	$228,953	$235,341
Tesuque					
O&M Costs	$59,831	$61,901	$63,754	$65,666	$67,801
Administration	53,856	55,300	56,748	58,236	59,785
Hauling	27,323	28,202	28,965	29,749	30,639
Disposal	15,235	15,539	15,850	16,167	16,491
Refuse Subtotal	$156,244	$160,942	$165,317	$169,819	$174,716
O&M Costs	$47,404	$48,898	$50,337	$51,821	$53,410
Administration	15,247	15,656	16,066	16,487	16,926
Hauling	9,915	10,234	10,511	10,795	11,118
Recyclables Subtotal	$72,566	$74,788	$76,914	$79,104	$81,454
Tesuque Subtotal	$228,811	$235,731	$242,231	$248,922	$256,170
Total Cost of Service	$2,538,589	$2,613,698	$2,682,506	$2,753,271	$2,830,950

Table 1-5 provides a summary of the costs for the CCCs (summarized from Table 1-4) by the major cost categories. For instance, Table 1-5 shows that the County spends over $400,000 annually in tipping fees. In addition, it can be seen that collectively, over $360,000 is spent annually on the hauling of refuse ($234,856) and recyclables ($134,647). That is why it is essential that the County is optimizing its loads of refuse and recyclables so as to minimize this cost.

Table 1-5
Citizen Convenience Center Cost Summary

	Year 1 FY 2014	Year 2 FY 2015	Year 3 FY 2016	Year 4 FY 2017	Year 5 FY 2018
O&M Costs	$830,245	$ 858,837	$ 882,787	$ 907,468	$ 936,099
Administration	407,496	418,421	429,379	440,637	452,358
Hauling	234,856	242,416	248,968	255,710	263,360
Disposal	403,367	411,434	419,663	428,056	436,617
Refuse Subtotal	$1,875,964	$1,931,108	$1,980,797	$ 2,031,871	$2,088,434
O&M Costs	$ 382,650	$394,384	$405,839	$417,650	$430,200
Administration	145,328	149,225	153,133	157,148	161,328
Hauling	134,647	138,981	142,737	146,603	150,988
Recyclables Subtotal	$662,625	$682,589	$701,709	$721,400	$742,516
Total Cost of Service	$2,538,589	$2,613,698	$2,682,506	$2,753,271	$2,830,950

In Table 1-6, Leidos has provided a cost per ton for refuse and recyclable material at each Citizen Convenience Center.

Table 1-6
Cost of Service per Ton by Citizen Convenience Center

CCC	Annual Cost	Annual Tonnage	Cost per Ton
Refuse			
Eldorado	$408,859	2,337	$174.95
Jacona	497,508	3,318	149.94
La Cienega	320,554	2,122	151.06
Nambe	165,691	579	286.17
San Marcos	165,433	754	219.41
Stanley	161,674	593	272.64
Tesuque	156,244	381	410.09
Recycling			
Eldorado	$172,639	898	$192.25
Jacona	106,334	748	142.16
La Cienega	56,328	158	356.51
Nambe	36,499	43	848.81
Rancho Viejo	99,852	102	978.94
San Marcos	69,072	149	463.57
Stanley	49,335	80	616.69
Tesuque	72,566	108	671.91

As noted in Table 1-6, since the majority of costs associated with operating a CCC are "fixed costs" that do not vary with the amount of materials received (refuse or recyclables), those CCCs with the lowest tonnages being collected have the highest cost per ton. For instance, the highest cost per ton CCC to collect refuse is Tesuque at $410 per ton since they take the lowest amount of tonnage on annual basis of any of the CCCs. For recyclables, the two highest cost CCCs are Nambe (which only collects 43 tons per year of recyclables), and Rancho Viejo. Rancho Viejo has a high cost per ton because none of its fixed costs gets allocated to refuse related activities, since this CCC only accepts recyclables, resulting in a higher fixed cost, due to less tonnage (recyclables only).

1.5 Funding Options and Forecast

Table 1-7 provides a summary of the projected recovery of the cost of service if the current rates remain unchanged and the system experiences no growth in customers or tonnage over the five-year forecast. The County is projected to continue to be unable to fund the operation with revenue from rates alone (i.e. permit fees, bag tags), and will need to continue to support the operation with funding from the County General Fund and the Environmental Gross Receipts Tax.

Table 1-7
Funding Needs Based on Current Permit Rates

	Year 1 FY 2014	Year 2 FY 2015	Year 3 FY 2106	Year 4 FY 2017	Year 5 FY 2018	Year 5 Percentage Breakdown
Refuse						
Permit Revenue	$399,885	$399,885	$399,885	$399,885	$399,885	14.1%
Environmental Gross Receipts Tax	650,000	650,000	650,000	650,000	650,000	23.0%
General Fund Transfer	$1,488,704	$1,563,813	$1,632,621	$1,703,386	$1,781,065	62.9%
Cost of Service/Funding Need	2,538,589	2,613,698	2,682,506	2,753,271	2,830,950	100.0%

If permit fees are not adjusted, the County is forecasted to require an increase in the funding of solid waste services from the General Fund from $1,488,704 in FY 2014 to $1,781,065 by FY 2018, or an increase of nearly $300,000.

Property-based Solid Waste Assessment as an Alternative Funding Source

An alternative funding option is an annual or quarterly solid waste assessment on all properties in the unincorporated County. Some counties within New Mexico currently utilize such a funding mechanism (San Miguel, Torrance and Lincoln Counties – for more information on their assessment methodology refer to Appendix B, Figure B-1). However, if the "solid waste assessment" allows unlimited refuse disposal, such an assessment does not encourage recycling and is inconsistent with a "pay-as-you-throw" approach to pricing (i.e. the more refuse a citizen disposes of, the more he/she pays). Torrance County provides an assessment approach that limits how much refuse they will accept for the quarterly assessment. Once that amount is exceeded, the customer must pay an additional fee (a "hybrid" pay-as-you-throw) approach.

Conceivably, a solid waste assessment could provide the needed funding in place of both the permit fees and using the General Fund. Hypothetically, if Santa Fe County were to implement an annual solid waste assessment to recover the entire cost of operating its CCC program, the assessment would need to recover approximately $1.9 million per year.[2] This assumes that all of the County's Environmental GRT funds (currently $650,000 per year) would continue to be utilized for solid waste operations. This fee would then be assessed on those properties in the County (32,653), less those properties currently paying for curbside refuse and/or recyclables collection (approximately 6,500). This would result in an annual solid waste assessment of $72.[3] In this scenario there would be no permit fee, unless the County wanted to implement a program similar to Torrance County where "large disposers" of refuse pay the assessment and a fee for loads that exceed the weekly amount allowed by the County under the terms of their annual solid waste assessment. It should also be noted that if the County moves forward with contracting with private waste haulers to provide contractual refuse and recycling services in certain portions of the County, the number of homes that pay the assessment would decrease, as more residents in the County would subscribe for curbside collection services, resulting in the $72 assessment needing to be increased.[4] See "Section 4, County Contracting" for more information on this topic.

There are pros and cons to both approaches (permit fees and use of the General Fund versus an assessment), and a third approach as a "hybrid" which is effectively what Santa Fe County currently has through the permit fee structure coupled with the funding by the Environmental Gross Receipts Tax and County General Fund. The advantages of a permit fee is it clearly shows the citizen that the more refuse they dispose of the more they will pay in permit fees (based on our modifications to the County's permit fee structure as discussed in the next section). This, in turn, creates an incentive for citizens to recycle. With a solid waste assessment, there is also an equity or fairness issue for those citizens that don't generate much waste but are paying the same for the assessment as everyone else. The advantage of an annual solid waste assessment is that it ensures revenue stability by eliminating a potential revenue shortfall, versus with a permit fee revenue source that is subject to potential revenue shortfalls if people buy fewer permits than is expected.

1.6 Proposed Refuse Permit Rates for Consideration

Leidos developed the two rate scenarios (Tables 1-8 and 1-9) listed on the following pages based on the financial forecast as described in the prior pages of this section, as well as by taking into consideration the current demographics of the customer base, and how the CCCs are used by the citizens of Santa Fe County. Citizen collection center programs are rarely funded exclusively through rates. Due to the lack of density of customers per square mile and the high transportation costs (because of the

[2] FY 2014 budget $2,538,589 - $650,000 (Environmental GRT) = $1,888,589.
[3] $1,888,589 / (32,653-6,500) = $72.21
[4] The $72 assessment, based on the FY 2014 budget also does not reflect that the cost of providing solid waste services will increase over the next five years, as shown in Table 1-6.

distances required to haul the refuse and recyclables) solid waste services typically need to be supported by additional local government funding sources beyond the revenue obtained from permit fees. In the case of Santa Fe County, the General Fund and the Environmental GRT provide that funding support. The two refuse rate scenarios proposed for consideration in this section will still require funding support from those two existing sources. As part of our analysis, Leidos forecast the "maximum" potential number of visits made by citizens based on the type of permit sold. The maximum amount of visits that citizens could have made to the CCCs is approximately 126,000 times during the course of the year. If a refuse rate were to recover 100% of the cost of the County's solid waste and recycling budget ($2,538,589 for FY 2014), the average fee charged a citizen would be approximately $20 per trip.[5] A fee of this magnitude would potentially create a significant financial hardship on many citizens, and would lead to an increase in illegal dumping of waste, and other behaviors that are counter-productive to keeping Santa Fe County beautiful.

Leidos is recommending that the rate structure be modified to provide greater pricing options to the citizens as described on the following page (i.e. more options to purchase a permit that better matches the disposal frequency needs of the customer). Based on citizen input County staff has received and feedback from Commissioners, Leidos is also recommending that the permits not expire. However, with this change in the variety of permits available at different prices and the change to no expiration date (meaning citizens will not need to purchase new permits each fiscal year), the actual number of differently priced permits that will be sold each year is unknown. These changes, therefore, create the potential for a greater degree of revenue instability – particularly in the first few years when the County is gaining familiarity with how citizens are responding to the new rate reschedule. As much as practicable, therefore he revenue forecast on the following page is based on conservative assumptions with regard to what percentage of each type of permit will be sold.

1.6.1 Permits

Residential permits are presently offered for one trip or 24 trips. Commercial permits are offered as five trip or ten trip permits. Leidos recommends the County transition to offering the same 1, 6, 12 and 24 trip permits for both residential and commercial customers (i.e. eliminate the existing separate commercial permit system).[6] As noted above, we also recommend that the permits not expire, as they currently due at the end of the fiscal year. By allowing residential and commercial customers to have a wider selection of permits to purchase, the customer will be able to better select a permit that matches their disposal need. It is also reasonable to expect that there will be less permit sharing among County residents, both because customers can purchase the permit size that best matches their needs and the fact that with a permit that doesn't expire, there is no potential for "wasted punches" on a permit. In addition, this should

[5] $2,538,589 / 126,000 trips= $20.15 per trip

[6] There does not need to be a different permit for residential or commercial customers, as is currently the case. Both customers are disposing of similar types of refuse. In addition, very few commercial permits are even issued. The County should move toward issuing a "standard permit" that is used by both residential and commercial customers.

also assist in reducing the number of calls received at the County by citizens that are not pleased that their 24 trip permit has expired at the end of the fiscal year when there are still remaining punches or "trips" on the permit.

Table 1-7 shows the first scenario, which assumes the expansion of permit options with regard to the number of trips per permit (1, 6, 12 and 24). It also assumes that the proposed rate increases that were passed by Resolution 2010-5 for the 24 trip permit and were "frozen" until this study was completed, would be "unfrozen" and increased by $10 per year beginning in FY15. The suggested rates for the new 6 and 12 trip permits were developed in relationship to the cost of the 24 trip permit.

Table 1-8
Current Rates if the Commission's Originally Adopted Rate (Resolution 2010-5) for 24 Trip Permit is Restored (Option A)

	Current Rate	Year 1 FY 2014	Year 2 FY 2015	Year 3 FY 2106	Year 4 FY 2017	Year 5 FY 2018	Cost Per Trip Year 5
1 Trip Permit	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00
6 Trip Permit	n/a	30.00	40.00	50.00	60.00	60.00	10.00
12 Trip Permit	n/a	50.00	60.00	70.00	80.00	80.00	6.67
24 Trip Permit	75.00	75.00	85.00	95.00	105.00	105.00	4.38
24 Trip Senior Citizen/Low Income	70.00	70.00	75.00	85.00	95.00	95.00	3.96
5 Bag Tags	5.00	5.00	5.00	6.00	6.00	7.00	1.40

Note: The suggested rates for the new 6 and 12 trip permits were developed in relationship to the cost of the 24 trip permit.

If the County desires to increase the percentage of revenue generated through the permit fees to say 30 percent of the cost of operating the solid waste CCC system by FY 2018 (FY 2018 budget is projected at $2,830,950), the permit fees will need to rise significantly, with the rates for the 6, 12 and 24 permits needing to more than double. The following table assumes a more aggressive rate design increase with the goal of recovering by FY 2018 approximately 30 percent of the cost of operating the CCCs through the permit revenue.

Table 1-9
Proposed Rates to Achieve 30% Recovery of the Cost of Service by FY 2018 through Permit Revenue (Option B)

	Current Rate	Year 1 FY 2014	Year 2 FY 2015	Year 3 FY 2106	Year 4 FY 2017	Year 5 FY 2018	Cost Per Trip Year 5
1 Trip Permit	$15.00	$15.00	$16.00	$17.00	$18.00	$19.00	$19.00
6 Trip Permit	n/a	30.00	40.00	53.00	71.00	95.00	15.83
12 Trip Permit	n/a	50.00	65.00	85.00	111.00	145.00	12.08
24 Trip Permit	75.00	80.00	98.00	120.00	147.00	180.00	7.50
24 Trip Senior Citizen/Low Income	70.00	70.00	88.00	110.00	137.00	170.00	7.08
5 Bag Tags	5.00	5.00	6.00	7.00	8.00	9.00	1.80

1.6.2 Bag Tags

Bag tags are offered to allow customers to bring small amounts of material to the CCC. Leidos has provided the proposed rates for the two rate scenarios in CCC bag tags in Tables 1-8 and 1-9.

1.6.3 Senior and Low Income Discounted Rates

The County provides service to senior and low income customers at a discounted rate. Leidos recommends the County transition the 24 trip senior and low income rate to a standard rate for both senior and low income customers that is $10 less than the rate for "typical" customers. Leidos' experience is that the same rate is typically provided to both types of customers. Tables 1-8 and 1-9 illustrate the proposed rates for senior and low income customers under the two different scenarios.

The proposed rates shown create rate parity between the senior and low income rates. Currently, a senior/low income discount is offered only on the 24 trip permit. The County will need to decide whether they want to offer the discount on the 6 and 12 permits, or only the 24 trip permit. Leidos would recommend the discount only be offered on the 24 trip permit.

1.7 Projected Revenue Recovery

The rates proposed by Leidos in this section of the report are projected to generate the revenue listed in Tables 1-10 and 1-11 over the next five years.

Table 1-10 shows that with the "unfrozen" rates implemented there is a modest increase, on a percentage basis, from 13% to 17% of the CCC costs being recovered by permit revenue.

Table 1-10
Proposed Revenue Generated by Rates in Table 1-8

	Year 1 FY 2014	Year 2 FY 2015	Year 3 FY 2016	Year 4 FY 2017	Year 5 FY 2018
Revenue Requirement	$ 2,538,589	$ 2,613,698	$ 2,682,506	$ 2,753,271	$ 2,830,950
1 Trip Permit	$ 6,225	$ 6,225	$ 6,225	$ 6,225	$ 6,225
6 Trip Permit	16,101	21,468	26,835	32,202	32,202
12 Trip Permit	107,340	128,808	150,276	171,744	171,744
24 Trip Permit	141,750	160,650	179,550	198,450	198,450
24 Trip Senior Citizen/Low Income	51,578	59,513	67,448	75,383	75,383
5 Bag Tags	5,155	5,155	6,186	6,186	7,217
	$ 328,149	$ 381,819	$ 436,520	$ 490,190	$ 491,221
% Rate Recovered	13%	15%	16%	18%	17%

Table 1-11 shows that the revenues generated by the user fees in Table 1-9 would generate over $850,000 by FY 2018.

Table 1-11
Proposed Revenue Generated by Rates Designed to Achieve 30% Recovery of Cost of Service

	Year 1 FY 2014	Year 2 FY 2015	Year 3 FY 2016	Year 4 FY 2017	Year 5 FY 2018
Revenue Requirement	$ 2,538,589	$ 2,613,698	$ 2,682,506	$ 2,753,271	$ 2,830,950
1 Trip Permit	$ 6,225	$ 6,640	$ 7,055	$ 7,470	$ 7,885
6 Trip Permit	16,101	21,468	28,445	38,106	50,987
12 Trip Permit	107,340	139,542	182,478	238,295	311,286
24 Trip Permit	151,200	185,220	226,800	277,830	340,200
24 Trip Senior Citizen/Low Income	55,545	69,828	87,285	108,710	134,895
5 Bag Tags	5,155	6,186	7,217	8,248	9,279
	$ 341,566	$ 428,884	$ 539,280	$ 678,658	$ 854,532
% Rate Recovered	13%	16%	20%	25%	30%

1.8 Recommendations

Leidos has provided comments on some key policy issues and recommendations for consideration by the Board of Commissioners. These observations are based on Leidos' experience with cost of service and rate design studies as well as Leidos' experience in dealing with economic and financial planning issues for rural county collection systems.

- **Create rate parity between senior and low income rates** – There is no cost of service reason to have a variance between senior citizen rates and low income rates. Leidos recommends the County implement one discounted rate for senior citizens and low income customers.
- **Eliminate the $.03 per pound rate** – In discussions with County staff, this rate is not used. In Leidos' solid waste experience, we have not seen a rate offered in this manner. The elimination of this rate will not in any manner adversely impact the refuse services provided by the County.
- **Educate citizens about the County's CCC program** – It is important for the long-term success of the County's rural CCC system to be viewed by County citizens as a service. When County citizens understand that the County is providing a service to citizens, and there is a corresponding cost for those services, there will be a greater understanding by citizens of the need to increase operational efficiency and the need to raise rates in a gradual and equitable manner to fund the County's citizen collection center program as it is presently provided.
- **Monitor, monthly, the purchase of permits, by type –** It is critical once the new permit structure is implemented to track the number of permits sold by month, by type of permit (1, 6, 12 and 24 trip, bags, and senior citizen/low income permits). This will allow the County to track its revenue and better understand the types of permits being purchased by its citizens. Ideally, the County would also track the monthly usage of the permits (i.e. how quickly are the 6, 12 and 24 trip permits being used up). This will help determine how quickly the various permits will be purchased again. Both types of tracking, permit purchases and usage rates will also assist the County as they work on future rate increases for the different types of permits to know the amount of revenue that the rate increase will generate, by type of permit.
- **Recommend a 30% recovery of costs through permit fees.** Leidos would recommend that the permit fees be increased to recover 30% of the operating and capital costs for the CCCs by FY 2018. The rates as shown in Table 1-9 would achieve this goal. The remaining 70% of costs would be recovered through the Environmental Gross Receipts Tax and the General Fund. This amount of a rate increase will strike a balance between the "direct users" of the CCCs paying for a portion of operating the CCCs with the remaining costs being financed by both users and non-users of the CCCs via the Environmental GRT and General Fund transfer. Generating greater revenue from permit fees is consistent with a Board-adopted policy in Resolution 2011-15 (adopting the 2010 Solid Waste Management Plan). It also partially addresses the question, "What opportunities

exist for the program to be self-sufficient…?" noted in Resolution 2012-52 (establishing the Solid Waste Task Force.)

Appendix A
COST OF SERVICE AND FUNDING OPTIONS

This appendix includes schedules for Section 1, Cost of Service and Funding Options.

- Schedule 1 | Test Year
- Schedule 2 | Capital Replacement and Improvements
- Schedule 3 | Revenue Requirement
- Schedule 4 | Allocation
- Schedule 5 | Common Costs, Refuse Recyclables Hauling Costs, Disposal Costs

	GMBA Line Item	Line Item Name	Actual FY 2011	Actual FY 2012	Budgeted FY 2013	Budgeted FY 2014	Adjustments	Test Year	Notes
1	***Salaries and Wages***								
2	10-22	Permanent Employees	737,365	624,671	726,378	771,697	(90,497)	681,200	A
3	10-24	Temporary Positions	4,172	19,527	-		19,000	19,000	B
4	10-25	Overtime	10,928	36,588	22,660	22,660		22,660	
5	10-90	Other Wages			3,565			-	
6	***Total Salaries & Wages***		752,465	680,786	752,603	794,357		722,860	
7									
8	***Employee Benefits***								
9	20-01	FICA-Regular	43,087	38,917	46,662	49,250		49,250	
10	20-02	FICA-Medicare	10,077	9,102	10,913	11,518		11,518	
11	20-03	Retirement Contributions	137,744	116,104	142,392	155,420		155,420	
12	20-05	Health Care	109,471	93,242	130,111	182,502		182,502	
13	20-06	Retirement Health Care	12,338	11,721	14,981	15,434		15,434	
14	20-08	Workers Comp - Assessment	318	196	221	221		221	
15	***Total Employee Benefits***		313,036	269,282	345,280	414,345		414,345	
16									
17	***Travel***								
18	30-01	I/S Mileage & Fares		189	-	1,500		1,500	
19	30-03	I/S Meals & Lodging	-	528	2,500	5,250	(2,200)	3,050	
20	***Total Travel***			717	2,500	6,750		4,550	
21									
22	***Vehicle Expenses***								
23	35-01	Vehicle Fuel	137,281	134,517	226,660	182,000		182,000	
24	35-02	Vehicle Oil			-			-	
25	35-03	Vehicle Maintenance			-			-	
26		Vehicle Replacement Cost					240,265	240,265	F
27	***Total Vehicle Expense***		137,281	134,517	226,660	182,000		422,265	
28									
29	***Maintained***								
30	40-01	Maint Bldgs/ Structures	9,399	5,477	15,000	15,000		15,000	
31	40-02	Maintenance Contracts	1,037			182,500		182,500	
32	40-03	Grounds/ Roadways		512	12,000	12,000		12,000	
33	40-05	Furniture/ Fixtures						-	
34	40-06	Maintenance Equipment	103,290	138,474	180,000			-	
35	40-07	Maintenance Supplies	143	805	1,500	3,000		3,000	
36	40-09	Maintenance Service			500	500		500	
37	40-10	Pest Control	1,878	1,117	3,000	3,500		3,500	
38	***Total Maintenance***		115,746	146,385	212,000	216,500		216,500	
39									
40	***Contract Services***								
41	50-03	Contractual Professional Services	-	4,047	-		403,367	403,367	C
42	50-90	Services	497,309	469,704	648,500		80,000	80,000	D
43		Greenwaste Disposal					15,193	15,193	C
44		Glass Disposal					7,283	7,283	C
45	***Total Contract Services***		497,309	473,751	648,500	-		505,842	
46									
47	***Supplies***								
48	60-01	Non-Consumable Supplies	202			50,000		50,000	
49	60-02	Safety Supplies	3,445	3,507	4,000	5,000		5,000	
50	60-03	Uniform Expenses	3,412	1,240	6,900	6,900		6,900	
51	60-07	Operational Supplies		952	1,200	9,800		9,800	
52	60-08	Field Supplies	3,454	2,745	6,000			-	
53	60-12	Food Provisions			-			-	
54	60-90	Other Supplies	598	937	-			-	
55	***Total Supplies***		11,111	9,381	18,100	71,700		71,700	
56									
57	***Operating Costs***								
58	70-01	Equipment/ Machinery	-	-	1,900	2,500		2,500	
59	70-02	Rent of Land/ Buildings	50						
60	70-03	Telephone	713	465	-	1,600		1,600	
61	70-04	Electricity	10,687	10,499	9,100	9,500		9,500	
62	70-05	Gas & Heating Cost	2,601	3,472	4,000	5,000		5,000	
63	70-07	Water	1,055	801	1,500	2,500		2,500	
64	70-13	Liability & Insurance	49,977						
65	70-33	Seminars & Workshops	800	725	2,550	1,500		1,500	
66	70-36	Postage & Mail Services	1,512	1,590	5,800	5,800		5,800	
67	70-37	Advertising	15,433	5,548	9,500	9,000		9,000	

County of Santa Fe, NM
Cost of Service
Schedule 1 - Test Year

	GMBA Line Item	Line Item Name	Actual FY 2011	Actual FY 2012	Budgeted FY 2013	Budgeted FY 2014	Adjustments	Test Year	Notes
68	70-39	Subscriptions and Dues	180	180	800	1,500		1,500	
69	70-40	Medical Services	-	-	600			-	
70	70-90	Miscellaneous	158	106					
71	***Total Other Operating Costs***		83,166	23,386	35,750	38,900		38,900	
72									
73	***Other Operating Cost***								
74	75-01	Brokerage & Policy Fees		195	334	1,787		1,787	
75	75-02	Workers Comp - Premiums		8,169					
76	75-04	Property Insurance Prem.		2,081	4,315	25,786		25,786	
77	75-08	Pollution Insurance		33,486	29,836	36,836		36,836	
78	75-14	Property Insurance Deductibles		2,267					
79		Jacona Site Improvement					20,000	20,000	E
80	***Total Other Operating Cost***		-	46,198	34,485	64,409		84,409	
81									
82	***Insurance & Deductibles***								
83	80-03	Equipment & Machinery			43,631		43,631	43,631	B
84	80-09	Vehicles		279,681	357,235			-	F
85	80-15	Computers & Peripherals		-				-	
86	80-95	Inventory Exempt Computers		1,150				-	
87	80-99	Capital Pkg - Inv Exempt		3,188	2,650		2,919	2,919	B
88	***Total Insurance & Deductibles***		-	284,019	403,516	-		46,550	
89									
90	**Total Expenses**		**1,910,113**	**2,068,423**	**2,679,394**	**1,788,961**		**2,527,921**	
91									
92	**Revenue**								
93		Solid Waste - Residential			335,000			-	
94		Solid Waste - Roll-off Fees			3,750			-	
95		Solid Waste - Gov't			41,472			-	
96		Solid Waste - Small Comm			1,200			-	
97		24 Trip	420,160	330,225		276,000	(276,000)	-	G
98		1 Trip	11,535	17,595		7,725	(7,725)	-	G
99		Senior	70	68,880			-	-	G
100		Low Income	4,080	7,735			-	-	G
101		Bag Tag	6,545	9,920		5,155	(5,155)	-	G
102		Small Commercial - 5	1,100	640		103,100	(103,100)	-	G
103		Small Commercial - 10		720		420	(420)	-	G
104	***Total Revenues***		443,490	435,715	381,422	392,400		-	
105									
106	**Cost of Service**		**1,466,623**	**1,632,708**	**2,297,972**	**1,396,561**		**2,527,921**	

Page Reference
Vehicles | Personnel | Inputs

NOTES:

A Based on County's current personnel list and salaries.
B Adjusted to reflect historical cost incurred by County Operations in FY 2011 and FY 2012.
C Based on discussions with County staff, reflects annual disposal cost.
D Contractual cost of closed landfill.
E Represents the capital investment of moving and enhancing the Jacona CCC, ($1 million/50 years = $20,000 per year).
F Moved annual vehicle replacement cost from the Insurance & Deductibles subheading to the Vehicles Expenses subheading
G Calculated based on historical permits sold, future permits projected and solid waste permit rates outlined in the County ordinance.

County of Santa Fe, NM
Cost of Service
Schedule 2 - Capital Replacement and Improvements

	License No	Year	Vehicle No.	Make	Model	Assigned Driver	Purpose	Annual Maintenance	Annual Fuel	Capital Cost	Useful Life	Annual Replacement Cost	Impact Year
1		2012	611-1	Caterpillar	Loader U-611-1	Staff	CAT Wheeled Loader	15,000	$ 1,138	$ 150,000	15	$ 10,000	2014
2	G84761	2012	673	International	Rolloff 673	Danny Zamora	Transport MSW & Recy.	19,000	20,475	150,000	10	15,000	2014
3	G58304	2004	677	Sterling	Rolloff 677	Richard Lopez	Transport MSW & Recy.	19,000	26,281	-	-	-	2014
4	G47655	2000	676	Freightliner	Rolloff 676	Jeff Spillers	Replaced by Unit 679	19,000	10,010	-	-	-	2014
5	G49242	2002	672	Freightliner	Transport 672	Staff	Transport MSW & Recy.	10,000	9,614	150,000	9	16,667	2014
6	G58420	1996	675	Freightliner	Transport 675	Staff	Transport MSW & Recy.	10,000	6,825	150,000	9	16,667	2014
7	G65481	1997	678	Freightliner	Transport 678	Staff	Transport MSW & Recy.	15,000	6,825	150,000	9	16,667	2014
8	G62954	2005	670	Sterling	Rolloff 670	Staff	Replaced by Unit 673	15,000	20,475	-	-	-	2014
9	G68680	2007	671	Volvo	Rollofff 671	Staff	Transport MSW & Recy.	15,000	3,795	-	-	-	2014
10	G68007	2006	674	Sterling	Rollofff 674	Staff	Replaced by Unit 669	15,000	20,475	-	-	-	2014
11	G57755	2004	526	Chevy Silverado	P-U526	Les Francisco	Staff Transport.	2,500	6,825	-	-	-	2014
12	G67963	2008	527	Dodge Ram	P-U 527	Olivar Barela	Staff Transport.	2,500	455	23,000	8	2,875	2014
13	G72369	2008	524	Ford F-150	P-U 524	Rudy Anaya	Recycling Truck	2,500	4,323	23,000	8	2,875	2014
14	G61147	2005	523	Ford Explorer	SUV 523	Joe Martinez	Compliance vehicle	2,500	4,050	23,000	8	2,875	2014
15		2011	621	Caterpillar	Backhoe 621	Eldorado TS	Transfer Station Equip.	10,000	4,117	23,000	8	2,875	2014
16		2003	628	Caterpillar	Backhoe 628	La Cienega TS	Transfer Station Equip.	5,000	719	68,000	15	4,533	2014
17		2003	629	Caterpillar	Backhoe 629	Jacona TS	Transfer Station Equip.	10,000	596	68,000	15	4,533	2014
18		1998	622	John Deere	Backhoe 622	Nambe TS	Transfer Station Equip.	10,000	1,879	-	15	-	2014
19		1996	623	Case	Backhoe 623	Stanley TS	Transfer Station Equip.	10,000	2,075	68,000	15	4,533	2014
20		2005	618	John Deere	Loader 618	Jacona TS	Transfer Station Equip.	15,000	519	150,000	15	10,000	2014
21		2010		Rolloff USA	Compactor	Stanley TS	Transfer Station Equip.	5,000	3,258	20,000	10	2,000	2014
22		2003	710-2	Rocky Mtn.	Compactor 710-2	La Cienega TS	Transfer Station Equip.	5,000	-	20,000	20	1,000	2014
23		2003	709	Rocky Mtn.	Compactor 709	Nambe TS	Transfer Station Equip.	5,000	273	20,000	20	1,000	2014
24		2003	710-1	Rocky Mtn.	Compactor 710-1	San Marcos TS	Transfer Station Equip.	5,000	182	20,000	20	1,000	2014
25		1997	633	Stenco	WF Trailer 633	Eldorado TS	Transfer Station Equip.	2,000		75,500	7	10,786	2014
26		2007	682	Stenco	WF Trailer 682	Eldorado TS	Transfer Station Equip.	2,000		75,500	15	5,033	2014
27		1999	685	McClain	WF Trailer 685	Eldorado TS	Transfer Station Equip.	2,000		75,500	15	5,033	2014
28		2012	622-1	Caterpillar	Backhoe U622-1	San Marcos TS	Transfer Station Equip.	2,000		68,000	15	4,533	2014
29	G85473	2012	679	International	Rolloff U 679	Jeff Spillers	Transport MSW & Recy.	10,000		150,000	10	15,000	2014
30		2013	669	Caterpillar	Rolloff U 669	Richard Lopez	Transfer Station Equip.	10,000	10,010	150,000	10	15,000	2014
31	G 866632	2013	522	Chevy Silverado	P-U Unit 522	Les Francisco	Public Works	2,500	20,475	23,000	10	2,300	2014
32		2004	714-2	Lincoln	Welder 714-2		Mobile Equip. Unit 525			3,500	8	438	2014
33		2003	714	Millller	Welder 714	Eldorado TS	Transfer Station Equip.			3,500	15	233	2014
34		2004	714-2	Lincoln	Welder 714-2	Dominic Martinez	Mobile Equip. Unit 526			3,500	15	233	2014
35		2014		Recycling Bins (6)		Jacona TS	Jacona Recycle		-	33,000	15	2,200	2014
36		2014		Loader		Jacona TS	Jacona TS	15,000		150,000	10	15,000	2014
37				Compactor Receivers (3)		Stanley, LaCienega	Stanley, LaCienega, Nambe	500		24,000	10	2,400	2014
38				40 yd containers OT(8)		MSW All Centers	MSW All Centers			48,000	10	4,800	2018
39				30 yd containers OT (4)		MSW All Centers	MSW All Centers			20,000	10	2,000	2015
40				30 yd Mixed recyclable containers(4)		Recycling All Cente	Recycling All Centers			22,000	10	2,200	2015
41				Recycling Compactors (2)		Eldorado TS	Eldorado TS	500		40,000	10	4,000	2015
42				Remaining Containers at CCC		All Centers	All Centers			189,500	20	9,475	2014
43				Stenco	WF Trailer (3)	Jacona TS	Jacona TS	6,000		225,000	10	22,500	2014
44				Freightliner	Tractor Transport (3)	Jacona TS	Jacona TS	40,000		30,000	15	2,000	2014
				Jacona Improvement						1,000,000	50	20,000	2014
								$ 334,500	$ 185,667	$ 3,685,500		$ 260,265	

County of Santa Fe, NM
Cost of Service
Schedule 2 - Capital Replacement and Improvements

	License No	Year	Vehicle No.	Make	Model	Cost Category: Administration: Administration	Administration: Education and Outreach	Administration: Adopt A Road	Collection Centers: Eldorado: Solid Waste	Eldorado: Recyclables	Jacona: Solid Waste	Jacona: Recyclables	La Cienega: Solid Waste	La Cienega: Recyclables
1		2012	611-1	Caterpillar	Loader U-611-1	0%	0%	0%	100%	0%	0%	0%	0%	0%
2	G84761	2012	673	International	Rolloff 673	0%	0%	0%	0%	0%	0%	0%	0%	0%
3	G58304	2004	677	Sterling	Rolloff 677	0%	0%	0%	0%	0%	0%	0%	0%	0%
4	G47655	2000	676	Freightliner	Rolloff 676	0%	0%	0%	0%	0%	0%	0%	0%	0%
5	G49242	2002	672	Freightliner	Transport 672	0%	0%	0%	100%	0%	0%	0%	0%	0%
6	G58420	1996	675	Freightliner	Transport 675	0%	0%	0%	100%	0%	0%	0%	0%	0%
7	G65481	1997	678	Freightliner	Transport 678	0%	0%	0%	100%	0%	0%	0%	0%	0%
8	G62954	2005	670	Sterling	Rolloff 670	0%	0%	0%	0%	0%	0%	0%	0%	0%
9	G68680	2007	671	Volvo	Rollofff 671	0%	0%	0%	0%	0%	0%	0%	0%	0%
10	G68007	2006	674	Sterling	Rollofff 674	0%	0%	0%	0%	0%	0%	0%	0%	0%
11	G57755	2004	526	Chevy Silverado	P-U526	100%	0%	0%	0%	0%	0%	0%	0%	0%
12	G67963	2008	527	Dodge Ram	P-U 527	100%	0%	0%	0%	0%	0%	0%	0%	0%
13	G72369	2008	524	Ford F-150	P-U 524	0%	0%	0%	0%	0%	0%	0%	0%	0%
14	G61147	2005	523	Ford Explorer	SUV 523	0%	100%	0%	0%	0%	0%	0%	0%	0%
15		2011	621	Caterpillar	Backhoe 621	0%	0%	0%	77%	23%	0%	0%	0%	0%
16		2003	628	Caterpillar	Backhoe 628	0%	0%	0%	0%	0%	0%	0%	0%	0%
17		2003	629	Caterpillar	Backhoe 629	0%	0%	0%	0%	0%	0%	0%	0%	0%
18		1998	622	John Deere	Backhoe 622	0%	0%	0%	0%	0%	0%	0%	0%	0%
19		1996	623	Case	Backhoe 623	0%	0%	0%	0%	0%	0%	0%	0%	0%
20		2005	618	John Deere	Loader 618	0%	0%	0%	0%	0%	0%	0%	0%	0%
21		2010		Rolloff USA	Compactor	0%	0%	0%	0%	0%	0%	0%	0%	0%
22		2003	710-2	Rocky Mtn.	Compactor 710-2	0%	0%	0%	0%	0%	0%	0%	100%	0%
23		2003	709	Rocky Mtn.	Compactor 709	0%	0%	0%	0%	0%	0%	0%	0%	0%
24		2003	710-1	Rocky Mtn.	Compactor 710-1	0%	0%	0%	0%	0%	0%	0%	0%	0%
25		1997	633	Stenco	WF Trailer 633	0%	0%	0%	100%	0%	0%	0%	0%	0%
26		2007	682	Stenco	WF Trailer 682	0%	0%	0%	100%	0%	0%	0%	0%	0%
27		1999	685	McClain	WF Trailer 685	0%	0%	0%	100%	0%	0%	0%	0%	0%
28		2012	622-1	Caterpillar	Backhoe U622-1	0%	0%	0%	0%	0%	0%	0%	0%	0%
29	G85473	2012	679	International	Rolloff U 679	0%	0%	0%	0%	0%	0%	0%	0%	0%
30		2013	669	Caterpillar	Rolloff U 669	0%	0%	0%	0%	0%	0%	0%	0%	0%
31	G 866632	2013	522	Chevy Silverado	P-U Unit 522	100%	0%	0%	0%	0%	0%	0%	0%	0%
32		2004	714-2	Lincoln	Welder 714-2	100%	0%	0%	0%	0%	0%	0%	0%	0%
33		2003	714	Millller	Welder 714	100%	0%	0%	0%	0%	0%	0%	0%	0%
34		2004	714-2	Lincoln	Welder 714-2	100%	0%	0%	0%	0%	0%	0%	0%	0%
35		2014		Recycling Bins (6)		0%	0%	0%	0%	0%	0%	100%	0%	0%
36		2014		Loader		0%	0%	0%	0%	0%	0%	0%	0%	0%
37				Compactor Receivers (3)		0%	0%	0%	0%	0%	0%	0%	25%	0%
38				40 yd containers OT(8)		0%	0%	0%	0%	0%	0%	0%	0%	0%
39				30 yd containers OT (4)		0%	0%	0%	0%	0%	0%	0%	0%	0%
40				30 yd Mixed recyclable containers(4)		0%	0%	0%	26%	74%	0%	0%	0%	0%
41				Recycling Compactors (2)		0%	0%	0%	0%	100%	0%	0%	0%	0%
42				Remaining Containers at CCC		0%	0%	0%	0%	0%	0%	0%	0%	0%
43				Stenco	WF Trailer (3)	0%	0%	0%	0%	0%	100%	0%	0%	0%
44				Freightliner	Tractor Transport (3)	0%	0%	0%	0%	0%	100%	0%	0%	0%
				Jacona Improvement		0%	0%	0%	0%	0%	75%	25%	0%	0%

County of Santa Fe, NM
Cost of Service
Schedule 2 - Capital Replacement and Improvements

	License No	Year	Vehicle No.	Make	Model	Cost Category										
						Collection Centers										
						Nambe		Rancho Viejo	San Marcos		Stanley		Tesuque		R&R Hauling	Disposal
						Solid Waste	Recyclables	Recyclables	Solid Waste	Recyclables	Solid Waste	Recyclables	Solid Waste	Recyclables		
1		2012	611-1	Caterpillar	Loader U-611-1	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2	G84761	2012	673	International	Rolloff 673	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%
3	G58304	2004	677	Sterling	Rolloff 677	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%
4	G47655	2000	676	Freightliner	Rolloff 676	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%
5	G49242	2002	672	Freightliner	Transport 672	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
6	G58420	1996	675	Freightliner	Transport 675	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
7	G65481	1997	678	Freightliner	Transport 678	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
8	G62954	2005	670	Sterling	Rolloff 670	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%
9	G68680	2007	671	Volvo	Rollofff 671	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%
10	G68007	2006	674	Sterling	Rollofff 674	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%
11	G57755	2004	526	Chevy Silverado	P-U526	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
12	G67963	2008	527	Dodge Ram	P-U 527	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
13	G72369	2008	524	Ford F-150	P-U 524	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%
14	G61147	2005	523	Ford Explorer	SUV 523	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
15		2011	621	Caterpillar	Backhoe 621	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
16		2003	628	Caterpillar	Backhoe 628	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
17		2003	629	Caterpillar	Backhoe 629	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
18		1998	622	John Deere	Backhoe 622	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
19		1996	623	Case	Backhoe 623	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
20		2005	618	John Deere	Loader 618	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
21		2010		Rolloff USA	Compactor	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%
22		2003	710-2	Rocky Mtn.	Compactor 710-2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
23		2003	709	Rocky Mtn.	Compactor 709	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
24		2003	710-1	Rocky Mtn.	Compactor 710-1	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
25		1997	633	Stenco	WF Trailer 633	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
26		2007	682	Stenco	WF Trailer 682	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
27		1999	685	McClain	WF Trailer 685	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
28		2012	622-1	Caterpillar	Backhoe U622-1	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
29	G85473	2012	679	International	Rolloff U 679	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%
30		2013	669	Caterpillar	Rolloff U 669	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%
31	G 866632	2013	522	Chevy Silverado	P-U Unit 522	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
32		2004	714-2	Lincoln	Welder 714-2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
33		2003	714	Millller	Welder 714	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
34		2004	714-2	Lincoln	Welder 714-2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
35		2014		Recycling Bins (6)		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
36		2014		Loader		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
37				Compactor Receivers (3)		25%	0%	0%	25%	0%	25%	0%	0%	0%	0%	0%
38				40 yd containers OT(8)		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
39				30 yd containers OT (4)		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
40				30 yd Mixed recyclable containers(4)		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
41				Recycling Compactors (2)		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
42				Remaining Containers at CCC		0%	0%	0%	0%	0%	0%	0%	73%	27%	0%	0%
43				Stenco	WF Trailer (3)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
44				Freightliner	Tractor Transport (3)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
				Jacona Improvement		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

	GMBA Line Item	Line Item Name	Test Year	Inflation Factor	Year 1 FY 2014	Year 2 FY 2015	Year 3 FY 2016	Year 4 FY 2017	Year 5 FY 2018
1	***Salaries and Wages***								
2	10-22	Permanent Employees	$ 681,200	Salaries	$ 681,200	$ 701,636	$ 722,685	$ 744,366	$ 766,697
3	10-24	Temporary Positions	19,000	Salaries	19,000	19,570	20,157	20,762	21,385
4	10-25	Overtime	22,660	Salaries	22,660	23,340	24,040	24,761	25,504
5	10-90	Other Wages	-	Salaries	-	-	-	-	-
6	***Total Salaries & Wages***		$ 722,860		$ 722,860	$ 744,546	$ 766,882	$ 789,889	$ 813,585
7									
8	***Employee Benefits***								
9	20-01	FICA-Regular	$ 49,250	Benefits	$ 49,250	$ 50,728	$ 52,249	$ 53,817	$ 55,431
10	20-02	FICA-Medicare	11,518	Benefits	11,518	11,864	12,219	12,586	12,964
11	20-03	Retirement Contributions	155,420	Benefits	155,420	160,083	164,885	169,832	174,927
12	20-05	Health Care	182,502	Benefits	182,502	187,977	193,616	199,425	205,408
13	20-06	Retirement Health Care	15,434	Benefits	15,434	15,897	16,374	16,865	17,371
14	20-08	Workers Comp - Assessment	221	Benefits	221	228	234	241	249
15	***Total Employee Benefits***		$ 414,345		$ 414,345	$ 426,775	$ 439,579	$ 452,766	$ 466,349
16									
17	***Travel***								
18	30-01	I/S Mileage & Fares	$ 1,500	Fuel	$ 1,500	$ 1,545	$ 1,591	$ 1,639	$ 1,688
19	30-03	I/S Meals & Lodging	3,050	General	3,050	3,111	3,173	3,237	3,301
20	***Total Travel***		$ 4,550		$ 4,550	$ 4,656	$ 4,765	$ 4,876	$ 4,990
21									
22	***Vehicle Expenses***								
23	35-01	Vehicle Fuel	$ 182,000	Fuel	$ 185,667	$ 191,237	$ 196,974	$ 202,884	$ 208,970
24	35-02	Vehicle Oil	-	Fuel	-	-	-	-	-
25	35-03	Vehicle Maintenance	-	General	-	-	-	-	-
26	0	Vehicle Replacement Cost	240,265	Equipment	247,265	260,574	265,786	271,101	281,419
27	***Total Vehicle Expense***		$ 422,265		$ 432,932	$ 451,811	$ 462,760	$ 473,985	$ 490,390
28									
29	***Maintenance***								
30	40-01	Maint Bldgs/ Structures	$ 15,000	General	$ 15,000	$ 15,300	$ 15,606	$ 15,918	$ 16,236
31	40-02	Maintenance Contracts	182,500	General	$ 182,500	$ 186,150	$ 189,873	$ 193,670	$ 197,544
32	40-03	Grounds/ Roadways	12,000	General	12,000	12,240	12,485	12,734	12,989
33	40-05	Furniture/ Fixtures	-	General	-	-	-	-	-
34	40-06	Maintenance Equipment	-	General	-	-	-	-	-
35	40-07	Maintenance Supplies	3,000	General	3,000	3,060	3,121	3,184	3,247
36	40-09	Maintenance Service	500	General	500	510	520	531	541
37	40-10	Pest Control	3,500	General	3,500	3,570	3,641	3,714	3,789
38	***Total Maintenance***		$ 216,500		$ 216,500	$ 220,830	$ 225,247	$ 229,752	$ 234,347
39									
40	***Contract Services***								
41	50-03	Contractual Professional Services	$ 403,367	Disposal	$ 403,367	$ 411,434	$ 419,663	$ 428,056	$ 436,617
42	50-90	Services	80,000	General	80,000	81,600	83,232	84,897	86,595
43	0	Greenwaste Disposal	15,193	Disposal	15,193	15,497	15,807	16,123	16,445
44	0	Glass Disposal	7,283	Disposal	7,283	7,283	7,283	7,283	7,283
45	***Total Contract Services***		$ 505,842		$ 505,842	$ 515,814	$ 525,984	$ 536,358	$ 546,940
46									
47	***Supplies***								
48	60-01	Non-Consumable Supplies	$ 50,000	General	$ 50,000	$ 51,000	$ 52,020	$ 53,060	$ 54,122
49	60-02	Safety Supplies	5,000	General	5,000	5,100	5,202	5,306	5,412
50	60-03	Uniform Expenses	6,900	General	6,900	7,038	7,179	7,322	7,469
51	60-07	Operational Supplies	9,800	General	9,800	9,996	10,196	10,400	10,608
52	60-08	Field Supplies	-	General	-	-	-	-	-
53	60-12	Food Provisions	-	General	-	-	-	-	-
54	60-90	Other Supplies	-	General	-	-	-	-	-
55	***Total Supplies***		$ 71,700		$ 71,700	$ 73,134	$ 74,597	$ 76,089	$ 77,610
56									
57	***Operating Costs***								
58	70-01	Equipment/ Machinery	$ 2,500	Equipment	$ 2,500	$ 2,550	$ 2,601	$ 2,653	$ 2,706
59	70-02	Rent of Land/ Buildings	-	General	-	-	-	-	-
60	70-03	Telephone	1,600	General	1,600	1,632	1,665	1,698	1,732
61	70-04	Electricity	9,500	General	9,500	9,690	9,884	10,081	10,283
62	70-05	Gas & Heating Cost	5,000	General	5,000	5,100	5,202	5,306	5,412
63	70-07	Water	2,500	General	2,500	2,550	2,601	2,653	2,706
64	70-13	Liability & Insurance	-	General	-	-	-	-	-
65	70-33	Seminars & Workshops	1,500	General	1,500	1,530	1,561	1,592	1,624
66	70-36	Postage & Mail Services	5,800	General	5,800	5,916	6,034	6,155	6,278
67	70-37	Advertising	9,000	General	9,000	9,180	9,364	9,551	9,742
68	70-39	Subscriptions and Dues	1,500	General	1,500	1,530	1,561	1,592	1,624
69	70-40	Medical Services	-	General	-	-	-	-	-

	GMBA Line Item	Line Item Name	Test Year	Inflation Factor	Year 1 FY 2014	Year 2 FY 2015	Year 3 FY 2016	Year 4 FY 2017	Year 5 FY 2018
70	70-90	Miscellaneous	-	General	-	-	-	-	-
71	***Total Operating Costs***		$ 38,900		$ 38,900	$ 39,678	$ 40,472	$ 41,281	$ 42,107
72									
73	***Other Operating Cost***								
74	75-01	Brokerage & Policy Fees	$ 1,787	General	$ 1,787	$ 1,823	$ 1,859	$ 1,896	$ 1,934
75	75-02	Workers Comp - Premiums	-	Benefits	-	-	-	-	-
76	75-04	Property Insurance Prem.	25,786	Insurance	25,786	27,075	28,429	29,851	31,343
77	75-08	Pollution Insurance	36,836	Insurance	36,836	38,678	40,612	42,642	44,774
78	75-14	Property Insurance Deductibles	-	Insurance	-	-	-	-	-
79	0	Jacona Site Improvement	20,000	None	20,000	20,000	20,000	20,000	20,000
80	***Total Other Operating Cost***		$ 84,409		$ 84,409	$ 87,576	$ 90,900	$ 94,389	$ 98,052
81									
82	***Insurance & Deductibles***								
83	80-03	Equipment & Machinery	$ 43,631	Insurance	$ 43,631	$ 45,813	$ 48,103	$ 50,508	$ 53,034
84	80-09	Vehicles	-	Equipment	-	-	-	-	-
85	80-15	Computers & Peripherals	-	Insurance	-	-	-	-	-
86	80-95	Inventory Exempt Computers	-	Insurance	-	-	-	-	-
87	80-99	Capital Pkg - Inv Exempt	2,919	Insurance	2,919	3,065	3,218	3,379	3,548
88	***Total Insurance & Deductibles***		$ 46,550		$ 46,550	$ 48,878	$ 51,321	$ 53,887	$ 56,582
89									
90	**Total Expenses**		**$ 2,527,921**		**$ 2,538,589**	**$ 2,613,698**	**$ 2,682,506**	**$ 2,753,271**	**$ 2,830,950**
91									
92	**Revenue**								
93	0	Solid Waste - Residential	$ -	None	$ -	$ -	$ -	$ -	$ -
94	0	Solid Waste - Roll-off Fees	-	None	-	-	-	-	-
95	0	Solid Waste - Gov't	-	None	-	-	-	-	-
96	0	Solid Waste - Small Comm	-	None	-	-	-	-	-
97	0	24 Trip	-	None	-	-	-	-	-
98	0	1 Trip	-	None	-	-	-	-	-
99	0	Senior	-	None	-	-	-	-	-
100	0	Low Income	-	None	-	-	-	-	-
101	0	Bag Tag	-	None	-	-	-	-	-
102	0	Small Commercial - 5	-	None	-	-	-	-	-
103	0	Small Commercial - 10	-	None	-	-	-	-	-
104	***Total Revenues***		$ -		$ -	$ -	$ -	$ -	$ -
105									
106	**Cost of Service**		**$ 2,527,921**		**$ 2,538,589**	**$ 2,613,698**	**$ 2,682,506**	**$ 2,753,271**	**$ 2,830,950**

Inputs Tab
Vehicles Tab

County of Santa Fe, NM
Cost of Service
Schedule 4 - Allocation

		Cost Category								
		Administration			Collection Centers					
					Eldorado		Jacona		La Cienega	
	Allocation Factor	Administration	Education and Outreach	Adopt A Road	Solid Waste	Recyclables	Solid Waste	Recyclables	Solid Waste	Recyclables
1	Administration	100%	0%	0%	0%	0%	0%	0%	0%	0%
2	Education and Outreach	0%	100%	0%	0%	0%	0%	0%	0%	0%
3	Adopt A Road	0%	0%	100%	0%	0%	0%	0%	0%	0%
4	Disposal	0%	0%	0%	0%	0%	0%	0%	0%	0%
5	Equipment	3%	1%	0%	40%	3%	19%	3%	1%	0%
6	Equipment Maintenance	3%	1%	0%	24%	1%	18%	0%	2%	0%
7	Personnel	17%	6%	5%	5%	5%	7%	3%	7%	3%
8	Collection Center Tonnage	0%	0%	0%	19%	7%	27%	6%	17%	1%
9	Collection Center Pulls	0%	0%	0%	5%	15%	21%	7%	15%	3%
10	Solid Waste	0%	0%	0%	14%	0%	14%	0%	14%	0%
11	Recycling	0%	0%	0%	0%	13%	0%	13%	0%	13%
12	Equally to Collection Centers	0%	0%	0%	6%	6%	6%	6%	6%	6%
13	Long-hauling	0%	0%	0%	0%	0%	0%	0%	0%	0%
14	Jacona Site	0%	0%	0%	0%	0%	75%	25%	0%	0%

County of Santa Fe, NM
Cost of Service
Schedule 4 - Allocation

	Allocation Factor	Cost Category										
		Collection Centers									R&R Hauling	Disposal
		Nambe		Rancho Viejo	San Marcos		Stanley		Tesuque			
		Solid Waste	Recyclables	Recyclables	Solid Waste	Recyclables	Solid Waste	Recyclables	Solid Waste	Recyclables		
1	Administration	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2	Education and Outreach	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
3	Adopt A Road	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
4	Disposal	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
5	Equipment	0%	0%	0%	1%	0%	1%	0%	3%	1%	23%	0%
6	Equipment Maintenance	0%	0%	0%	2%	0%	2%	0%	0%	0%	47%	0%
7	Personnel	4%	2%	1%	4%	3%	4%	2%	4%	2%	17%	0%
8	Collection Center Tonnage	5%	0%	0%	1%	6%	1%	5%	1%	3%	1%	0%
9	Collection Center Pulls	5%	1%	0%	3%	6%	3%	4%	1%	7%	3%	0%
10	Solid Waste	14%	0%	0%	14%	0%	14%	0%	14%	0%	0%	0%
11	Recycling	0%	13%	13%	0%	13%	0%	13%	0%	13%	0%	0%
12	Equally to Collection Centers	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	0%
13	Long-hauling	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
14	Jacona Site	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

	Year 1 2014	Year 2 2015	Year 3 2016	Year 4 2017	Year 5 2018
Common					
Administration	$ 422,319	$ 433,154	$ 444,030	$ 455,194	$ 466,795
Education and Outreach	78,015	80,432	82,806	85,251	87,836
Adopt A Road	52,490	54,060	55,676	57,341	59,055
Common Subtotal	$ 552,824	$ 567,646	$ 582,512	$ 597,785	$ 613,686
Number of Collection Centers	8				
Allocation of Common					
Eldorado	$ 69,103	$ 70,956	$ 72,814	$ 74,723	$ 76,711
Jacona	69,103	70,956	72,814	74,723	76,711
La Cienega	69,103	70,956	72,814	74,723	76,711
Nambe	69,103	70,956	72,814	74,723	76,711
Rancho Viejo	69,103	70,956	72,814	74,723	76,711
San Marcos	69,103	70,956	72,814	74,723	76,711
Stanley	69,103	70,956	72,814	74,723	76,711
Tesuque	69,103	70,956	72,814	74,723	76,711
Total	$ 552,824	$ 567,646	$ 582,512	$ 597,785	$ 613,686
Allocation to Collection Center Operation					
Tonnage					
Eldorado					
Refuse	2,337	2,337	2,337	2,337	2,337
Recyclables	898	898	898	898	898
Jacona					
Refuse	3,318	3,318	3,318	3,318	3,318
Recyclables	748	748	748	748	748
La Cienega					
Refuse	2,122	2,122	2,122	2,122	2,122
Recyclables	158	158	158	158	158
Nambe					
Refuse	579	579	579	579	579
Recyclables	43	43	43	43	43
Rancho Viejo					
Refuse	102	102	102	102	102
San Marcos					
Refuse	754	754	754	754	754
Recyclables	149	149	149	149	149
Stanley					
Refuse	593	593	593	593	593
Recyclables	80	80	80	80	80
Tesuque					
Refuse	381	381	381	381	381
Recyclables	108	108	108	108	108
Subtotal	12,368	12,368	12,368	12,368	12,368

	Year 1 2014	Year 2 2015	Year 3 2016	Year 4 2017	Year 5 2018
Allocation to Collection Center Services					
Eldorado					
Refuse	$ 49,925	$ 51,263	$ 52,606	$ 53,985	$ 55,421
Recyclables	19,178	19,692	20,208	20,738	21,290
Jacona					
Refuse	$ 56,393	$ 57,905	$ 59,421	$ 60,979	$ 62,601
Recyclables	12,710	13,051	13,393	13,744	14,109
La Cienega					
Refuse	$ 64,316	$ 66,040	$ 67,769	$ 69,546	$ 71,396
Recyclables	4,787	4,916	5,045	5,177	5,314
Nambe					
Refuse	$ 64,370	$ 66,096	$ 67,827	$ 69,606	$ 71,457
Recyclables	4,733	4,860	4,987	5,118	5,254
Rancho Viejo					
Recyclables	$ 69,103	$ 70,956	$ 72,814	$ 74,723	$ 76,711
San Marcos					
Refuse	$ 57,720	$ 59,268	$ 60,820	$ 62,415	$ 64,075
Recyclables	11,383	11,688	11,994	12,308	12,636
Stanley					
Refuse	$ 60,916	$ 62,550	$ 64,188	$ 65,871	$ 67,623
Recyclables	8,187	8,406	8,626	8,853	9,088
Tesuque					
Refuse	$ 53,856	$ 55,300	$ 56,748	$ 58,236	$ 59,785
Recyclables	15,247	15,656	16,066	16,487	16,926
Subtotal	$ 552,824	$ 567,646	$ 582,512	$ 597,785	$ 613,686

	Year 1 2014	Year 2 2015	Year 3 2016	Year 4 2017	Year 5 2018
R&R Hauling	$ 369,503	$ 381,397	$ 391,705	$ 402,312	$ 414,348
Pulls per Collection Center					
Eldorado					
Refuse	127	127	127	127	127
Recyclables	355	355	355	355	355
Jacona					
Refuse	520	520	520	520	520
Recyclables	169	169	169	169	169
La Cienega					
Refuse	356	356	356	356	356
Recyclables	79	79	79	79	79
Nambe					
Refuse	119	119	119	119	119
Recyclables	26	26	26	26	26
Rancho Viejo					
Refuse	81	81	81	81	81
San Marcos					
Refuse	150	150	150	150	150
Recyclables	84	84	84	84	84
Stanley					
Refuse	101	101	101	101	101
Recyclables	32	32	32	32	32
Tesuque					
Refuse	181	181	181	181	181
Recyclables	66	66	66	66	66
Total Annual Pulls	2,441	2,441	2,441	2,441	2,441

	Year 1 2014	Year 2 2015	Year 3 2016	Year 4 2017	Year 5 2018
Allocation to Collection Center Operation					
Eldorado					
Refuse	$ 19,149	$ 19,765	$ 20,299	$ 20,849	$ 21,473
Recyclables	53,662	55,389	56,886	58,427	60,175
Jacona					
Refuse	$ 78,714	$ 81,248	$ 83,444	$ 85,704	$ 88,268
Recyclables	25,582	26,406	27,119	27,854	28,687
La Cienega					
Refuse	$ 53,813	$ 55,545	$ 57,047	$ 58,592	$ 60,344
Recyclables	11,883	12,265	12,597	12,938	13,325
Nambe					
Refuse	$ 17,938	$ 18,515	$ 19,016	$ 19,531	$ 20,115
Recyclables	3,860	3,984	4,092	4,203	4,329
Rancho Viejo					
Recyclables	$ 12,186	$ 12,578	$ 12,918	$ 13,268	$ 13,664
San Marcos					
Refuse	$ 22,630	$ 23,359	$ 23,990	$ 24,640	$ 25,377
Recyclables	12,715	13,125	13,479	13,844	14,259
Stanley					
Refuse	$ 15,289	$ 15,781	$ 16,207	$ 16,646	$ 17,144
Recyclables	4,844	5,000	5,135	5,274	5,432
Tesuque					
Refuse	$ 27,323	$ 28,202	$ 28,965	$ 29,749	$ 30,639
Recyclables	9,915	10,234	10,511	10,795	11,118
Subtotal	$ 369,503	$ 381,397	$ 391,705	$ 402,312	$ 414,348

	Year 1 2014	Year 2 2015	Year 3 2016	Year 4 2017	Year 5 2018
Disposal Cost	$ 403,367	$ 411,434	$ 419,663	$ 428,056	$ 436,617
Tonnage	10,084	10,084	10,084	10,084	10,084
Disposal Cost per Ton	$ 40.00	$ 40.80	$ 41.62	$ 42.45	$ 43.30
Disposal Cost per Collection Center					
Eldorado	$ 93,482	$ 95,351	$ 97,258	$ 99,204	$ 101,188
Jacona	132,734	135,388	138,096	140,858	143,675
La Cienega	84,861	86,559	88,290	90,056	91,857
Nambe	23,174	23,637	24,110	24,592	25,084
Rancho Viejo	-	-	-	-	-
San Marcos	30,160	30,763	31,378	32,006	32,646
Stanley	23,722	24,196	24,680	25,174	25,677
Tesuque	15,235	15,539	15,850	16,167	16,491
Total Annual Disposal Cost	$ 403,367	$ 411,434	$ 419,663	$ 428,056	$ 436,617

Section 2
OPERATIONAL ASSESSMENT OF COUNTY CCCs

Santa Fe County (County) operates eight Citizen Convenience Centers (CCC) within the County.[1] The refuse collected at the CCCs is hauled to the Caja del Rio Landfill (Landfill), and the recyclables are hauled to the Buckman Road Recycling and Transfer Station (BuRRT). Both the Landfill and BURRT are operated by the Santa Fe Solid Waste Management Agency (SFSWMA, or Agency). The Agency is governed by a Board of Directors, referred to as the Joint Powers Board (JPB, the Board). The JPB has three seats for the City and three seats for the County. The Agency is owned equally by both the City and the County.

The purpose of this section of the report is to review and evaluate the County's refuse and recycling operations. In particular, the following aspects of the County's operation were analyzed:

- Facility configuration and condition
- Equipment
- Staffing
- Refuse and recyclables hauling
- Safety issues
- Operating efficiency
- Benchmarking

Oftentimes during the course of these types of operational analyses, Leidos will be asked how many CCCs should a county have? This is a rather subjective question as the size of the county (square miles) can vary dramatically and has a direct impact on the number of CCCs within a county; population density is another key variable in determining the number of CCCs; level of service provided by hauling companies within the county will impact the number of CCCs; and finally the financial "affluence" of the county has a major impact on what fiscal constraints may or may not limit the funding of additional CCCs. With that said, we have found that oftentimes counties will have anywhere from 3 to 8 CCCs located throughout the county. That has proven to be the case in studies done by Leidos within Arizona, New Mexico, Texas and elsewhere. A survey conducted by Leidos of CCCs in New Mexico (as shown in Appendix B, Figure B-1 shows that of the eight counties surveyed in New Mexico only one had more than 8 – San Miguel County has 10.)

It is important while reviewing this section of the report to remember that the County's Citizen Convenience Centers benefit from increased economies of scale, as the County's refuse budget is comprised of primarily fixed costs. Therefore, as a

[1] CCCs are oftentimes referred to as transfer stations within Santa Fe County, but for purposes of this study, and to be consistent with terminology used in the solid waste industry, we will refer to these facilities as Citizen Convenience Centers.

citizen collection center collects a greater volume of material, that center has the ability to achieve a lower cost per ton. This is especially critical with regard to recyclables as each ton that is diverted from the Landfill avoids a tipping fee and has the potential to generate revenue for the County/Agency partnership through the successful marketing of these materials to end-users.

2.1 Facility Configuration and Condition

The refuse and recycling operation for the County is tasked with providing disposal, recycling and diversion services to rural, sparsely populated areas. Figure 2-1, on the following page, provides a map illustrating the population densities of the County, and the current locations for the County's eight Citizen Convenience Centers. (A larger map of the service area is provided in Appendix B, Figure B-2.)

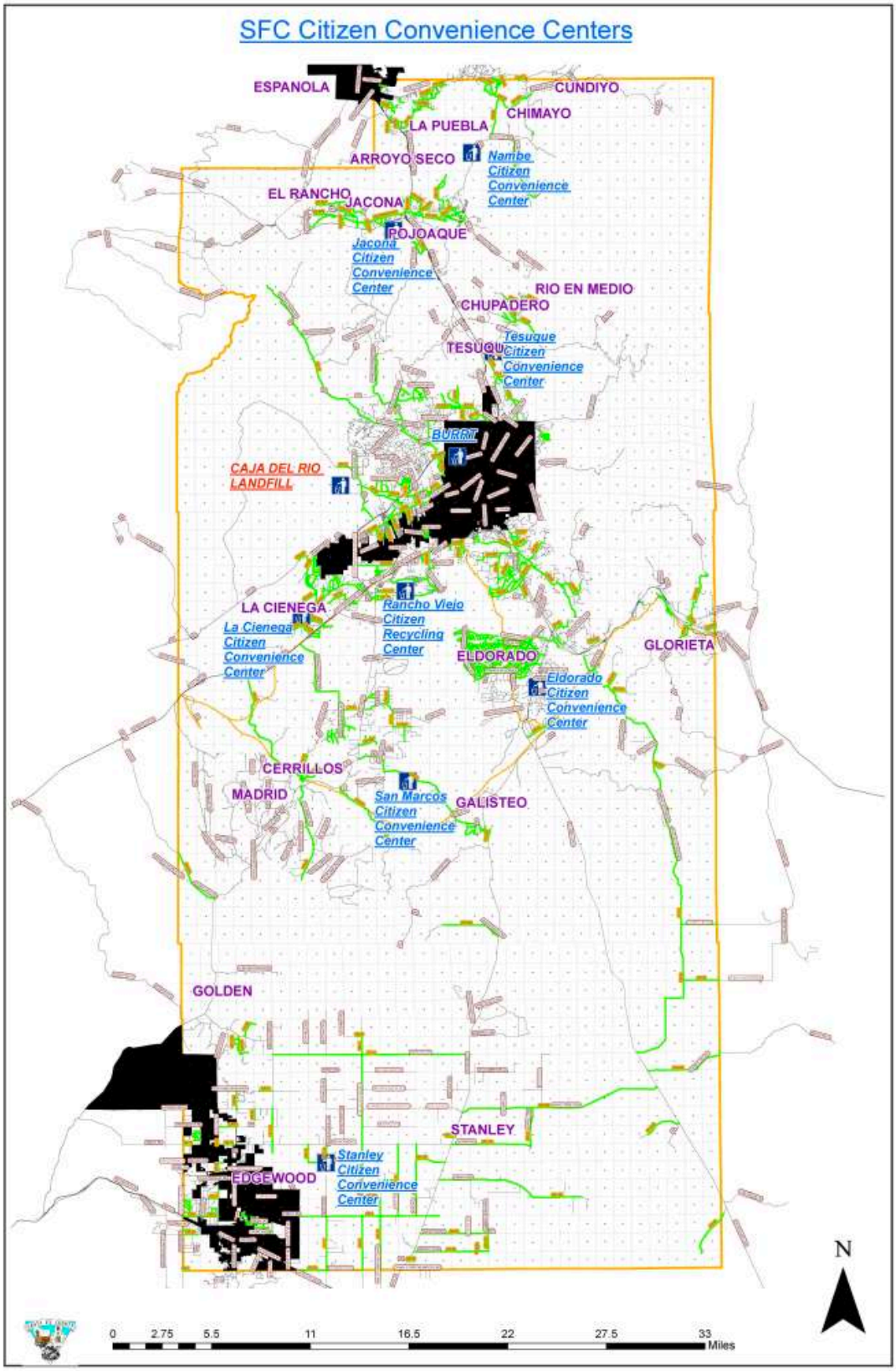


Figure 2-1. County CCC Locations

2.1.1 Description of Current Citizen Convenience Centers

The County operates seven staffed CCCs and one unstaffed CCC. Table 2-1 provides a summary of the operating hours and materials accepted at each CCC.

Table 2-1
Citizen Convenience Centers Operations

CCC	Days of Operation	Hours of Operation	Distance from Landfill	Distance from Recycling Facility	Collects Refuse	Collects Recycling (2)	Collects Other Materials (3)
Eldorado	Wed - Sun	8:00 am – 5:00 pm	26 miles	31 miles	X	X	X
Jacona	Wed - Sun	8:00 am – 5:00 pm	27 miles	22 miles	X	X	
La Cienega	Wed - Sun	8:00 am – 5:00 pm	14 miles	19 miles	X	X	
Nambe	Wed, Fri- Sun	8:00 am – 5:00 pm [1]	31 miles	26 miles	X	X	X
Rancho Viejo	Fri - Sat	8:30 am – 4:30 pm	N/A	10 miles		X	
San Marcos	Wed, Fri- Sun	8:00 am – 5:00 pm	23 miles	28 miles	X	X	X
Stanley	Wed - Sun	8:00 am – 5:00 pm	62 miles	67 miles	X	X	X
Tesuque	Wed, Fri - Sun	8:00 am – 5:00 pm [1]	16 miles	11 miles	X	X	

1 The Citizen Collection Center is closed from 12:00 pm (noon) – 1:00 pm
2 Recycling includes: mixed paper, cardboard, aluminum containers, tin and plastic
3 Other materials include: oil, paint, antifreeze, light bulbs and batteries

Currently the Tesuque and Jacona CCCs are located on Pueblo land; however, the County is currently in the process of moving the Jacona center to County land, which Leidos discusses in greater detail in Section 2.8.1. The Nambe CCC is located on Bureau of Land Management (BLM) land. All other CCCs are located on County land.

The CCCs vary in levels of infrastructure, ranging from open-air spaces with open-top roll-off containers to enclosed facilities. The majority of CCCs are open-air facilities, with only Eldorado and Stanley centers being enclosed.

At the open-top facilities customers may drop materials into open-top roll-offs (where the site has been graded) or they utilize metal stairs next to open-top roll-off containers to place material into the roll-off containers. Leidos has provided an example of a roll-off container in Figure 2-2 on the following page.

Figure 2-2. Roll of Container

Eldorado and Stanley include covered, graded drop-off areas where refuse material is unloaded onto a tipping floor. Recyclables are collected at the Eldorado and Stanley centers in closed-top and open-top roll-off containers located outside the enclosed facility.

Figure 2-3. Eldorado Citizen Convenience Center

Figure 2-4. Jacona Citizen Convenience Center

Figure 2-5. La Cienega Citizen Convenience Center

Figure 2-6. Nambe Citizen Convenience Center

Figure 2-7. San Marcos Citizen Convenience Center

Figure 2-8. Stanley Citizen Convenience Center

Figure 2-9. Tesuque Citizen Convenience Center

The majority of the recycling containers maintained at the CCCs are open-top roll-off containers. The County maintains compacting containers at the following sites listed in Table 2-2 on the following page.

Table 2-2
Compacting Roll-off Containers

Center	Compactors – Roll-off		
	Refuse	OCC [1]	Mixed Recyclables [2]
Eldorado	-	1 [3]	1 [3]
Jacona	-	-	-
La Cienega	1	-	-
Nambe	1	-	-
Rancho Viejo	-	-	-
San Marcos	1	-	-
Stanley	1	-	-
Tesuque	-	-	-
Total	4	1	1

[1] Old corrugated containers (OCC) is cardboard material
[2] Mixed recyclables consist of the following items; mixed paper, aluminum cans, tin, plastic containers
[3] Recycling compacting units have been approved to be purchased and installed at Eldorado; and are expected to be in operation by July 2014. However, they are currently not in operation.

Table 2-3, on the following page, provides a detailed list of the containers currently at each of the CCCs.

Table 2-3
Citizen Convenience Center Containers

Citizen Convenience Center	Number of Containers	Total CY of Capacity	Refuse			Recycling								Reuse Area
						Mixed Recyclables [1]	Cardboard	Glass	Tires	Scrap Metal	Green Waste		Oil & Antifreeze	
			Open-Top	Compactor	Transfer Trailer	Enclosed	Open-Top	Open-Top	Open-Top	Open-Top	Open-Top	Collection Area		
Eldorado	10	570 CY			(3) 110 CY	(2) 35 CY	(2) 30 CY	30 CY	40 CY	40 CY		X	X	X
Jacona	10	375 CY	(5) 40 CY			35 CY	30 CY	30 CY	40 CY	40 CY		X		
La Cienega	8	295 CY	(2) 40 CY	40 CY		35 CY	30 CY	30 CY	40 CY	40 CY				
Nambe	8	295 CY	(2) 40 CY	40 CY		35 CY	30 CY	30 CY	40 CY	40 CY			X	
Rancho Viejo	3	95 CY				35 CY	30 CY	30 CY						
San Marcos	8	295 CY	(2) 40 CY	40 CY		35 CY	30 CY	30 CY	40 CY	40 CY			X	
Stanley	8	295 CY	40 CY	40 CY		35 CY	30 CY	30 CY	40 CY	40 CY	40 CY		X	
Tesuque	6	195 CY	(2) 30 CY			35 CY	30 CY	30 CY	40 CY					
Total	61	2,415 CY												

[1] Mixed recyclables consist of mixed paper, aluminum cans, tin and plastic containers

2.1.2 Current Convenience Center Material

Recyclables are source separated and collected in roll-off containers. Recyclable materials are hauled and processed at the Buckman Road Recycling and Transfer Station facility, which is operated by the Santa Fe Solid Waste Management Agency. All refuse collected at the County's CCCs in roll-off containers is hauled and disposed of at the Caja del Rio Landfill. Each CCC collects varying volumes of material due to their location in the County and surrounding population, as shown in Table 2-4.

Table 2-4
Citizen Convenience Center Tonnage

CCC	Refuse		Recycling [1]		Percent of Material Collected Recyclable
	Calendar Year 2011	Calendar Year 2012	Calendar Year 2011	Calendar Year 2012	
Eldorado	2,397	2,277	896	900	27% - 28%
Jacona	3,111	3,526	975	521 [2]	24% - 13%
La Cienega	2,212	2,032	183	133	8% - 6%
Nambe	639	520	40	46	6% - 8%
Rancho Viejo	N/A	N/A	100	104	100%
San Marcos	769	739	146	152	16% - 17%
Stanley	577	610	78	81	12%
Tesuque	383	379	104	111	21% - 23%
Total	10,086	10,082	2,522	2,047	20% - 17%

1 Recycling volumes include recyclable commodities and diverted green waste.
2 The decrease in recyclables in 2012 was due to BuRRT being unable to accept green waste for a period of time therefore the green waste was hauled to the Landfill.

Figure 2-10 provides a graphic representation of the refuse collected at each CCC and Figure 2-11 provides a graphic representation of the recycling at each CCC, illustrating the commodity trends from 2011 to 2012.

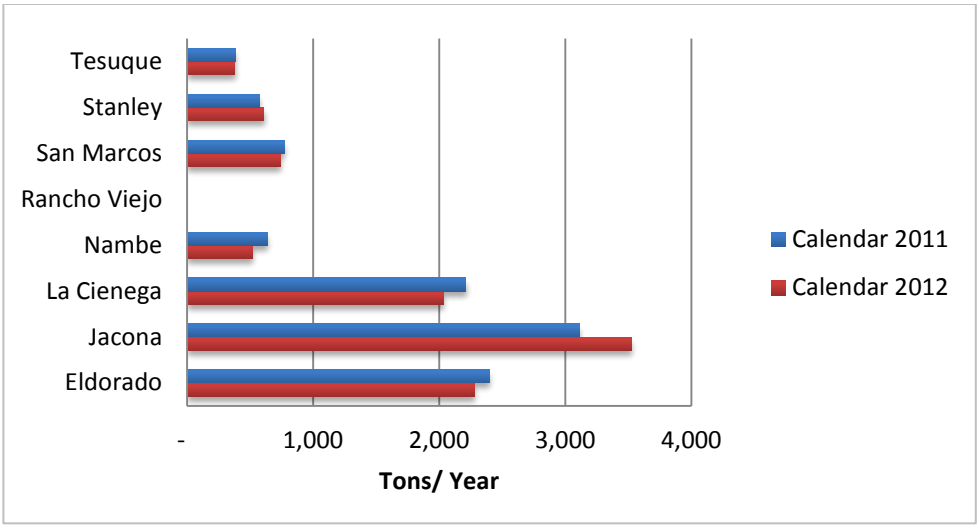


Figure 2-10. Convenience Center Refuse from 2011 to 2012

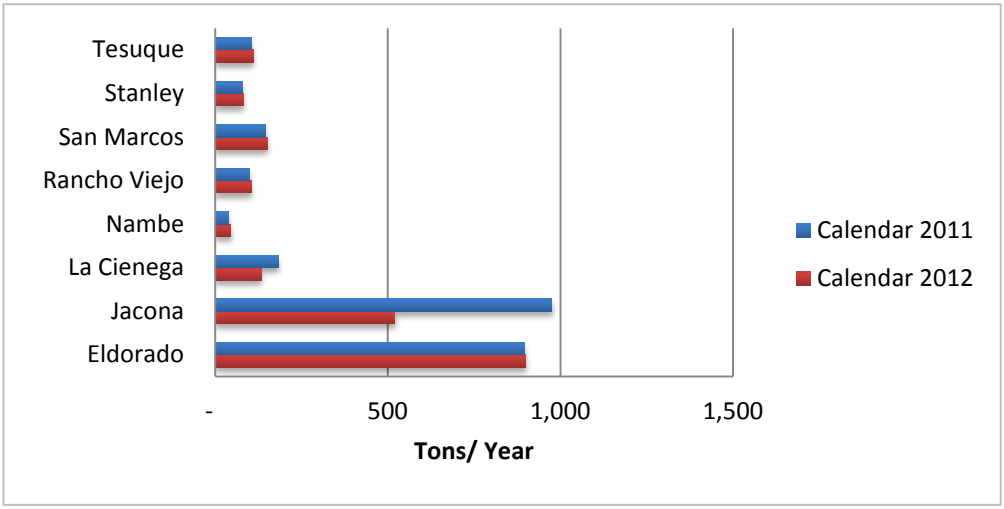


Figure 2-11. Convenience Center Recycling from 2011 to 2012

As shown in Figure 2-10 the refuse collected at the Citizen Convenience Centers has remained relatively stable during calendars years 2011 and 2012, showing a slight decrease in tonnage at some centers. The decrease in recyclables at Jacona in 2012 was due to BuRRT being unable to accept green waste for a period of time and therefore green waste was disposed of at the Landfill. Overall, the County recycling collected at the CCCs has reflected no significant change over the 2011 and 2012 calendar years.

Three CCCs currently collect green waste material. Eldorado, Jacona and Stanley. The green waste is collected in a designated green waste area on site or in an open-top roll-off container. The County transports the green waste material to BuRRT where the material is mulched by the Agency. The Stanley center is 67 miles from the

BuRRT facility, which is significantly farther from BuRRT than the Eldorado and Jacona sites, which are 31 and 22 miles, respectively. Due to the increased distance from Stanley to the BURRT location, Leidos would like to emphasize the importance of stockpiling brush material at the Stanley CCC before hauling the material, ensuring a full green waste load is transferred from the Stanley CCC.

In addition to traditional single-stream materials and green waste, the County also collects items such as:

- Tires – All CCCs collect tires, with the exception of Ranch Viejo. The tires are hauled to BuRRT where the Agency manages the processing of all County tire materials.
- Oil and Antifreeze – Four CCCs collect oil in 500 gallon double contained tanks and antifreeze in 55 gallon containers; Eldorado, Nambe, San Marcos and Stanley. The oil and antifreeze collected at these CCCs is collected by Mesa Environmental, a regional processor. The County is not responsible for transporting the oil and antifreeze material.
- Appliances – All CCCs collect appliances from County residents, with the exception of Ranch Viejo and Tesuque, which are then hauled by the County to Capital Scrap, a local scrap metal processor.

  In previous years the County collected compact fluorescent bulbs and fluorescent tube lights as part of the County's household hazardous waste (HHW) collection program on a limited basis. Based on recent direction from the Joint Powers Board (JPB) the County is working to integrate e-waste into the County collection program. Leidos recommends that the County continue to accept the existing HHW materials being collected, such as: dry paint, oil, antifreeze and batteries (not car batteries)[2]. Leidos has provided a high level outline of how to safely collect the HHW materials in the County's collection program in Appendix B, Figure B-3. To balance the request for additional services with the associated costs of providing those services, Leidos would recommend that the County consider the expansion of e-waste services occur only at the four CCCs where HHW is currently being collected (Eldorado, Nambe, San Marcos, and Stanley). The County should also consider the feasibility of continuing to offer fluorescent bulb recycling at the four CCCs where HHW is currently collected. When the new Jacona CCC is on-line, e-waste should be collected at this site, due to it being one of the highest volume CCCs. In an effort to promote reuse in the County, the Eldorado center has a reuse area where citizens can bring materials that can be reused and/or repurposed by other County citizens.

2.2 Equipment

Five primary pieces of equipment are in use at the Citizen Convenience Centers:

[2] Wet paint can be taken to BuRRT. Car batteries can be taken to private establishments (car part stores, car dealers, etc.).

- Backhoe – Used as a load tamper for managing waste and loading trailers on the tipping floor and/or roll-off containers at the CCC
- Front Loader – Used for managing waste and loading trailers on the tipping floor
- Transfer Trailer and Cab – Used for hauling waste to the Caja del Rio Landfill and green waste to BuRRT
- Roll-off Compactor – Used for high volume commodities to maximize the volume collected in each roll-off container at the CCC
- Roll-off Trucks – Used to transport roll-off containers to BuRRT and the Caja del Rio Landfill

Leidos has provided pictures of the equipment the County maintains in Figure 2-12 and in Figure 2-13.

Figure 2-12. Front Loader and Backhoe

Figure 2-13. Transfer Trailer and Roll-off Truck

The County does not currently keep historical information on equipment maintenance cost on a unit basis. Leidos recommends that the County begin to track the equipment maintenance cost by unit going forward. Having equipment maintenance data by vehicle enables County staff to identify the appropriate useful life of equipment, based on the typical 'wear and tear' of the equipment.

2.2.1 Transfer Trailers

Utilizing transfer trailers to transport material, the County is able to transport a higher volume material more efficiently. The Eldorado location has a graded facility which allows refuse and green waste material to be top-loaded into the transfer trailer, tamped down with a backhoe and hauled to the BuRRT facility or Landfill.

Currently the County plans to build a new, full-service Jacona CCC which will include a graded facility allowing refuse and green waste material to be hauled from the new Jacona CCC with transfer trailers. The County has three walking floor trailers and three transfer trailer cabs for the Eldorado center, and is planning on purchasing three additional walking floor trailers and transfer trailer cabs for the new Jacona CCC. Based on Leidos' analysis of the material flow and daily number of pulls required from Eldorado and Jacona, Leidos recommends the County reduce the three planned transfer trailer and transfer trailer cabs to two, and transition one Eldorado transfer trailer and transfer trailer cab to a back-up transfer trailer unit status. This configuration will place two walking floor transfer trailers and two transfer trailer cabs at each center (Eldorado and Jacona), and have a shared back-up transfer trailer and transfer trailer cab that can be used at Eldorado or Jacona as needed.

2.3 Staffing

The Citizen Convenience Centers maintain varying levels of staff based on the size of the centers and the annual volume of material received at each location. Table 2-5 provides a summary of the County's current CCC staffing levels.

Table 2-5
Current Personnel (FTE)

Position	Current Operation
Refuse Manager	1
Adopt a Road Coordinator	1
Compliance Officer	1
Superintendent	1
Transportation Foreman	1
Maintenance Foreman	1
Driver	3
Operator	2
Caretaker	11
Total Staff	22

The Transportation Foreman and Drivers operate the roll-off trucks and transfer trailers. Operators supervise the CCC operations to ensure daily operations are run effectively. All CCCs are manned by Caretakers, with the exception of Ranch Viejo, to manage the customer traffic and material flow.

Table 2-6 identifies the staffing level at each CCC.

Table 2-6
Current Citizen Convenience Center Staffing Level

Citizen Convenience Center	Caretakers	Operators	Average Annual Tonnage
Eldorado	2.00	0.27	3,235
Jacona	2.00	0.27	4,066
La Cienega	2.00	0.27	2,279
Nambe	1.00	0.27	622
Rancho Viejo	-	0.27	102
San Marcos	1.00	0.27	903
Stanley	1.00	0.27	673
Tesuque	1.00	0.27	489
Rover Position [1]	0.50	-	N/A
Total	10.50 [2]	2.00	12,368

[1] Two part-time caretaker positions are used on an as needed basis to manage full-time caretaker leave, sick days and vacancies. The positions are assigned to CCC locations on a daily basis.
[2] One part-time Caretaker position is currently vacant.

A key operational finding and recommendation in this report section is the potential closure of the Nambe and Tesuque locations. If these locations are closed in the future, this will result in two less Caretaker positions, bringing the total County Caretakers to 8.5. The personnel and cost savings realized from these reductions could total approximately $112,000. The costs are summarized in Table 2-7 and discussed in Section 2.8.2.

Table 2-7
Operational Savings from Site Closure

Costs Components	Annual Cost (FY 2014)		
	Nambe	Tesuque	Total
Personnel			
Salary	$22,588	$22,588	$45,116
Employee Benefits	8,584	8,584	17,168
Equipment			
Replacement Cost	834	13,167	14,001
Equipment Maintenance	87	-	87
Equipment Fuel	10,953	16,163	27,116
Operating Expenses	3,552	5,114	8,666
Total Annual Savings	$46,598	$65,616	$112,214

2.4 Refuse and Recyclables Hauling

A collection center operation is comprised of primarily fixed costs (i.e. equipment, staffing, general operations and maintenance costs). The two variable aspects of the collection center operation are the disposal costs and the hauling costs. The County can minimize disposal costs by encouraging recycling and waste reduction. Hauling costs can be minimized by achieving the highest material compaction per load, and minimizing the number of trips needed to transport material from the CCCs to the Landfill or BuRRT. Leidos has provided an analysis of the County's current hauling operation in this section.

Hauling operations utilize a mixed fleet of roll-off trucks and walking floor transfer trailers. Based on the vehicle configuration and commodity the vehicle is carrying, the vehicle payload can vary significantly. Leidos utilized EPA weight to volume factors to calculate average payloads for the various combinations of commodity, which are shown in Table 2-8.

Table 2-8
Average Industry Standard Payload (tons) [1]

Commodity	Vehicle		
	Roll-off Truck – Uncompacted	Roll-off Truck – Compacted [2]	Transfer Trailer [2]
OCC	1.5	3.0	
Mixed Recyclables	2.1	4.3	
Glass	9.0	13.5	
Tires	3.4	5.1	
Green waste	5.0	10.0	20.0 [3]
Appliances/ Scrap Metal	2.3	3.5	
Refuse	4.0	8.0	20.0 [3]

[1] Industry standard payloads are based on the EPA volume to weight conversion factors
[2] Leidos has assumed a 2:1 compaction ratio, with the exception of glass, tires and appliances/scrap metal which assumed at 1.5:1 compaction ratio.
[3] Leidos does not recommend hauling more than 20 to 22 tons per load, due to department of transportation payload limits.

Currently the County utilizes roll-off containers to collect the majority of the material at CCCs. Select commodities are collected with compacting units at certain CCCs, allowing a greater volume of material to be transported per pull.

The Eldorado center utilizes three walking floor transfer trailers to transport green waste and refuse material to the Landfill and BuRRT. Transfer trailers can transport a larger payload per pull based on the increased vehicle capacity. In Leidos' experience most public agencies and private companies hauling waste are limited to a maximum legal gross vehicle weight of 80,000 pounds (40 tons) and therefore utilize tractor and trailer equipment that can achieve payloads in the 20 to 22 ton range.

Leidos has evaluated the County's average payload per pull, for each commodity collected, and compared the County's performance to the average industry standard in Table 2-9.

Table 2-9
Average Payload Comparison to Industry Standard (tons)

Commodity	Roll-off Truck (uncompacted)		Transfer Trailer	
	County	Industry	County	Industry
OCC	1.0	1.5		
Mixed Recyclables	1.4	2.1		
Glass	5.5 [1]	9.0		
Tires	3.8	3.4		
Green waste	N/A [2]	5.0	N/A [2]	20.0
Appliances/ Scrap Metal	5.9	2.3		
Refuse	5.0	4.0	18.5	20.0

[1] There were discussions with County staff on the capability of some of the equipment to haul heavier loads of glass. We would recommend some sampling of full roll-offs be conducted to determine the capability to haul loads closer to 9 tons. Typically, roll-off trucks should be capable of loads of this size.

[2] This number is not available as green waste loads are pulled in both roll-off and transfer trailers without the type of vehicle being distinguished at the scalehouse. Therefore, Leidos would recommend going forward the type of vehicle be tracked to determine the efficiency of the loads being hauled versus the metrics in Table 2-9.

As shown in Table 2-9, for most commodities, the County is doing an effective job of maximizing the amount of material that can be transported per load. There are particular commodities where the County may be able to increase the material transported per load, such as: OCC (cardboard), mixed recyclables, glass, and green waste. Leidos recommends the County implement the following operational changes to increase the amount of material per pull for these four commodities:

- OCC (cardboard) – Ensure that all cardboard boxes have been broken down by customers before being placed into the collection container. Caretakers can work to inform customers that cardboard material must be flattened and broken down before being deposited in the collection containers. Additionally, the County should include signage next to OCC collection containers asking customers to break down and flatten cardboard boxes.
- Mixed Recyclables (mixed paper, aluminum cans, steel cans, plastic) – The collection of mixed recyclables can vary greatly based on the composition of the material collected, as plastic containers typically weigh significantly less than aluminum and steel containers. Due to an inconsistent commodity composition and "plastic memory" it is difficult to achieve a competitive or consistent weight per pull. Therefore, the use of compactors at the higher volume CCCs for this material should be considered.
- Glass – Leidos recommends the County monitor glass CCC pulls to ensure that containers are full before transporting the material and check their weight to compare versus the stated benchmark in Table 2-9.
- Green Waste Collected in Transfer Trailers – Brush is transported primarily with transfer trailers at the Eldorado center. The Eldorado site has a backhoe on site that

can be utilized to tamp down the green waste load to ensure the maximum amount of green waste is collected per pull.

Table 2-10 provides a summary of the current payload achieved by each CCC for the respective recycled commodities accepted at each location.

Table 2-10
Current Payload per Pull (Tons)

	Collection Center								Avg.
	Eldorado	Jacona	La Cienega	Nambe	Rancho Viejo	San Marcos	Stanley	Tesuque [2]	
Commodity									
OCC	1.13	1.01	1.12	1.07	0.56	0.82	1.40	0.67	0.97
Mixed Recyclables	1.75	1.20	1.53	1.13	1.18	1.37	1.45	1.44	1.38
Glass	6.56	4.93	4.08	6.13	4.16	5.31	7.33	5.26	5.47
Tires	3.02	3.72	3.21	3.97	-	2.90	5.21	-	3.80
Green Waste	5.75 [1]	9.82	-	-	-	-	3.81	-	4.78
Appliances/ Scrap Metal	6.93	5.76	6.65	4.92	-	4.63	6.53	-	5.90
Refuse	18.47 [1]	6.38	5.97	4.89	-	5.04	5.87	2.11	5.04

[1] Material is transferred with transfer trailers, with significantly greater capacity than roll-off containers. It is not atypical to have three times the weight transferred in a transfer trailer, versus a 40 cubic yard roll-off container.

[2] If Tesuque is retained, Leidos would recommend a backhoe be obtained for this CCC to assist in tamping down the waste. As noted by their 2.11 ton average payload versus the average of 5.04 tons, they are significantly under the norm.

Based on the analysis provided above, in Table 2-10, Rancho Viejo, San Marcos and Tesuque are consistently operating at a below average payload, compared to the other County CCCs. Leidos recommends that the County monitor the container capacity used for these three centers, and assess the container collection schedule at each site, making sure each container is full prior to it being pulled.

The County currently plans to utilize walking floor transfer trailers at the new Jacona site for refuse and green waste; which will allow the County to further maximize the volume of material transported per pull from the Jacona center. As discussed earlier, it is important for the County to ensure that green waste hauled in transfer trailers is tamped down to ensure that the maximum amount of material is transported with each load.

Based on Leidos' analysis of the County's hauling operation, the County will not be able to decrease the hauling fleet by improving compaction. There will however be incremental cost savings by increasing compaction per load, by decreasing fuel use and minimizing wear and tear on hauling equipment. Based on the number of pulls per year (approximately 2,400) and the average cost of $150 per pull, if 30 percent of costs are variable (fuel, overtime, "wear and tear" on vehicles), every pull "avoided" will result in a "real" savings of $45 per pull. While not a huge number, it represents a

savings, and more importantly, postpones the need to hire additional personnel or replace equipment earlier than necessary. That is where the real savings occurs.

2.5 Safety Issues

The current drop-off access to the roll-off containers at the CCC sites is a movable metal stepladder on wheels, as shown in Figure 2-14. The use of this unfixed ladder by the public is a safety concern as customers could easily fall off the ladder or incur injury while carrying materials up the stairs or lifting material into a roll-off container.

Figure 2-14. Roll-off drop-off Accessibility

As an alternative to the current operational practice of directing customers to use stepladders to access the roll-off containers, Leidos recommends the County install permanent ramps to access the containers. Utilizing ramps will enable all customers to easily access the containers, and minimize customer risk of injury in transporting materials to the roll-off container drop-off point. It is important to ensure that sufficient fall protection is in place (i.e. railings) when designing the ramps, safeguarding customers from accidentally falling into the open-top roll-off containers.

2.6 Operating Efficiency

There are a limited number of variables that can be optimized in a drop-off collection operation; however, there are certain measurements that can be evaluated and optimized to ensure the County is maximizing its resources. These metrics include;

- **Evaluate the transition of waste hauling operations to a ten-hour workday –** As discussed in Section 2.4, there are operational improvements that can be made in the waste hauling operation by working towards greater payloads per pull for certain commodities, through tamping down transfer trailer and roll-off loads, ensuring all cardboard has been broken down before collection, and utilizing compacting units on roll-off containers that collect high volumes of material weekly. The County currently employs three drivers and one transportation foreman to transport material from the CCCs to BuRRT and the Landfill. County

drivers average 2.45 pulls per day. Assuming 45 minutes of travel time to and from the CCCs to the tipping site (BuRRT or Landfill), this allows the driver approximately one hour to collect the roll-off container, or load the transfer trailer. In Leidos' experience, 30 to 45 minutes is typical for wait and load time of a transfer trailer; however for roll-off collection Leidos would expect 10 to 15 minutes for collection of the container. Based on Leidos' analysis if the County was able to achieve a 45 minute transfer trailer load time and 15 minute roll-off collection, due to the average 45 minute drive time between the CCCs there is not sufficient time for drivers to collect an additional container.

Leidos evaluated the potential of achieving greater efficiency if the County operated the hauling operation on a ten-hour workday, four days a week. Table 2-11 provides a comparison of the County's current hauling operation, utilizing an eight-hour work day, versus a ten-hour work day.

Table 2-11
Hauling Operation Workday Sensitivity

	8 hour work day	10 hour work day
Hours/ Day	8 hours	10 hours
Minutes/ Day	480 minutes	600 minutes
Non-collection time	90 minutes	90 minutes
Collection and Disposal Time	390 minutes	510 minutes
Time/ Pull		
Transfer Trailer	145 minutes	145 minutes
Roll-off	115 minutes	115 minutes
Possible Pulls/ Driver/ Day		
Transfer Trailer	2.69 pulls	3.52 pulls
Roll-off	3.39 pulls	4.43 pulls
Possible Pulls/ Driver/ Week		
Transfer Trailer	13.45 pulls	14.07 pulls
Roll-off	16.96 pulls	17.74 pulls

The County's transportation operation is achieving the maximum amount of pulls per driver, based on time constraints and work schedule. As shown in Table 2-11 the County can marginally improve the operational efficiency of the hauling operation by transitioning County Drivers to a ten-hour workday. Although a ten-hour workday would improve daily hauling efficiency, there would not be a significant cost savings, as the improved operational efficiency will not result in reduced staffing or equipment.

- **Optimize the proper type of containers and the proper number of containers at each CCC.** Each CCC is different. For instance, as shown in Table 2-4, 27 percent of the materials collected at the Eldorado CCC are recyclables versus at Nambe only 7 percent of the materials are recyclables. In addition, Eldorado collects approximately 4 times the tonnage of Nambe. Therefore it is critical that

the right type of containers (recycling roll-offs versus refuse roll-offs, compacting units where practical, etc.) and the proper number of each type is available at each CCC to make sure the operation runs smoothly to avoid overtime for drivers, overflows of containers, etc. Leidos has provided an example of evaluating the container distribution at Eldorado in Table 2-12.

Table 2-12
Eldorado CCC
Matching Capacity of Containers versus Demand by Citizens (1)

Commodity	Container Size	Pulls per Week	CY Weekly Capacity [1]	%
OCC	30 CY	2 x wk	60 CY	10%
Mixed Recyclables	35 CY	3 x wk	70 CY	18%
Glass	30 CY	Every other week	30 CY	3%
Tires	40 CY	On-call	40 CY	7%
Green Waste [2]	N/A	Every other week	N/A	-
Appliances/ Scrap Metal	40 CY	Every other week	40 CY	7%
Refuse	110 CY	2 x wk	330 CY	56%

[1] Required cubic yards of weekly capacity is calculated by the following formula: Container size (CY) x Collection Frequency (pulls per week). CY Weekly Capacity reflects the number of containers at the CCC.

[2] Green waste is collected at Eldorado in a green waste collection area, that does not have a limited cubic yard capacity.

Based on the available cubic yards of capacity, by container type available for each commodity collected at the Eldorado CCC, it appears that the Eldorado CCC has effectively distributed its available capacity based on the volume of material Eldorado currently receives.

- **Improve Customer Accessibility and Experience** –To encourage citizens to bring recycling and refuse material to the County's CCCs, it is imperative to ensure that the center is easily accessible to the County citizens and the center is aesthetically pleasing and easy to navigate. Leidos recommends the County implement uniform CCC signage throughout the County and include more graphics.

  In line with increasing the uniformity between the County's CCCs, Leidos recommends the County paint all of the center's refuse roll-off containers a uniform color and a different uniform color for all of the recycling related roll-offs. Painting the containers will improve the aesthetics of the centers for a minimal cost and also help provide visual cues as to which containers are for recycling and which are for refuse.

  Currently each container or collection area is identified with a sign, stating the commodity collected at that location. The majority of the current signage is simple and does not provide descriptive text about what materials should and should not

be placed in the containers. Some signage gives more detailed description on the commodities accepted and materials that should not be placed in each container. Examples of the current signs are shown in Figure 2-15.

Figure 2-15. Citizen Convenience Center Signage

Leidos recommends that the County move away from text only signage and begin to utilize signage with graphics in the CCC signs. Including more colorful and graphically based signage will improve the aesthetics of the sites and reduce contamination and customer confusion. Due to the low level of contamination currently experienced by the County this change in signage is not an immediate need. Leidos has provided examples of graphically based signage from other drop-off facilities in Figure 2-16.

Figure 2-16. Examples of Drop-off Facility Signage

The current signage at the eight CCCs vary by site. To streamline signage and minimize confusion among County customers, Leidos recommends the County implement consistent signage at all eight stations. Utilizing uniform signage provides benefits in cost savings when developing and ordering signage and streamlines public education, minimizing customer confusion. The pictures above were taken at BuRRT and are examples of signage on the roll-off dumpsters that provide brief descriptions of the materials and pictures of the "acceptable" materials. Leidos would recommend standard signs for all of the CCCs recycling operations be developed that are modeled after signage at the BuRRT drop-off site.

In addition to signage indicating the proper materials to be placed in each container, it is additionally important to ensure proper signage is placed on roads surrounding the CCC to direct customers to the location. The County's CCC locations are in rural areas and may require additional signage to ensure customers are able to easily locate the site. Additional examples of signage are provided in Appendix B, Figure B-4.

- **Increase Recycled Material and Diverted Material** – Encouraging recycling and material diversion benefits the County's operation by decreasing the amount of refuse tonnage disposed, and correspondingly the operation's annual refuse disposal cost. Currently, the Agency accepts recyclable and organic materials from the County. While the County is charged a fee for glass ($15.75 per ton) and yard waste ($21.00 per ton) it is still less than the Agency's tipping fee of $40 per ton. Leidos recommends that the County encourage diversion, to minimize disposal costs and increase the County's recycling rate. It should be noted that Santa Fe County Ordinance No. 2010-5, Section 7 (A) states that recyclables shall be separated at the County's CCCs.
- **Re-emphasize Public Education and Outreach** – It is important for the financial integrity of the County's CCC program to optimize its customer flow and hence its revenue. However the CCCs can only reach a high level of efficiency by collecting a significant volume of material (both refuse and recyclables). Ensuring that County residents are knowledgeable of the services being provided and aware of the locations where these services are offered is a significant aspect of developing a

healthy drop-off program. This is consistent with Principal C in the Comprehensive Solid Waste Management Plan developed in 2010 by the Agency:

> *Principle C "The system should maintain an ongoing, multi-faceted promotion/education effort in the City and County that uses diverse messages and communication media to inform a variety of audiences about waste disposal and diversion"*

Currently the County provides the following information on the County's website:

- Hours of Operation
- Materials Accepted
- Location of CCCs
- Permit Information
- County Contact Information

Developing and implementing a thorough public education strategy requires identifying the specific needs of the community. The basic process to develop a public education campaign includes the following key steps:

- Gather a Team
- Establish Clear Goals
- Identify and Profile the Target Audience
- Develop the Message
- Select the Education Approach
- Develop a Feedback Loop
- Evaluate the Program

- **Modify the Rate Structure** – Currently the County utilizes a rate structure based on the number of visits to the CCCs. Residential customers can purchase a one trip permit or a 24 trip permit to dispose of refuse at a CCC accepting refuse. Commercial customers can purchase a five trip permit or a ten trip permit to dispose of refuse at a CCC accepting refuse. The County also provides bag tags to accommodate customers with smaller loads. Customers are permitted to drop-off recyclables free of charge and without a CCC permit. All CCC permits must be purchased at the County building or via U.S. mail, requiring refuse customers to plan ahead and purchase permits before bringing material to a CCC.

  Leidos recommends the County modify the rate structure in several ways. First, Leidos would recommend that the County do away with the Commercial customer permit since very few of them are sold (less than 100 per year) and purchasing of the standard "Residential permit" will meet the need of these individuals.[3] Second, Leidos would recommend a greater variety of trip permits be issued. Presently, the

[3] In fact, this permit should just be called a "Permit". Most of the small businesses that bring their waste (general contractors, etc.) are typically using a Residential permit anyhow.

County only sells Residential one trip and 24 trip permits. We would recommend that 1, 6, 12 and 24 trip permits be issued. This will allow citizens to purchase a permit that better meets their disposal needs. This should also minimize the complaints by some customers that the permit is only good for one year. Pricing of the permits is discussed in "Section 1 Cost of Service" of this report. Additionally, to increase County residents proactively purchasing permits, Leidos recommends the County invest in an outreach program that will send mailers to all County residents encouraging them to pre-purchase CCC permits or bag tags via the U.S. mail. This type of mailer can be sent out annually, biannually or quarterly.

2.7 Benchmarking

In order to thoroughly assess the County's drop-off centers, Leidos compared the County's program to similar programs in other counties within New Mexico. A detailed table of those counties surveyed is provided in Appendix B, Figure B-1 The following counties were chosen for benchmarking:

- Dona Ana
- San Miguel
- Lincoln
- Los Alamos
- Sandoval
- Torrance
- Rio Arriba

The majority of the counties selected border Santa Fe County or are located in near proximity.

Key criteria for evaluating refuse and recycling drop-off centers include;

- Hours of operation – Drop-off centers vary from 24-hour facilities to specific hours of operation on certain days.[4]
- Type of materials accepted – CCCs throughout the United States include a wide variety of materials in their collection program.
- Pricing – some counties recover their fee entirely through the general fund (either a specific assessment for all residents, or through an appropriation), others will charge a user fee, while others will choose a "hybrid" approach – part user fee/permit, part general fund financed.
- Type of facility – Some facilities will be "state of the art" – fully enclosed facilities with HHW services, while others may consist of two, 40 cubic yard roll-off containers enclosed within a fenced area.

Table 2-13 shows summary information for the recycling drop-off collection programs in each of these counties, while Figure B-1 in Appendix B provides a more detailed description of each of these counties' CCC programs.

[4] Levels of contamination in recycling drop-off programs vary, but unstaffed CCCs typically experience the highest level of contamination, including not only refuse, but e-waste, batteries, and other HHW related items.

Table 2-13
Summary of County Drop-Off Collection Programs

County	Population	Square Miles	No. of CCCs	Square Miles/CCC	Population/Square Mile
Santa Fe	146,375	1,911	8	239	76.60
Dona Ana	200,000	3,815	8	477	52.42
Sandoval	131,561	3,714	3	1,238	35.42
San Miguel	7,580	1,288	10	129	3.65
Torrance	16,021	3,346	8	418	1.34
Lincoln	21,000	4,831	5	966	4.35
Rio Arriba	40,318	5,896	7	842	6.84
Los Alamos	18,159	109	3	36	166.60

One of the things Leidos noticed in compiling the data in Table 2-13 is that the number of CCCs per square mile is relatively high for Santa Fe County (at one CCC per 239 square miles) when compared to the other counties listed in the table. This statistic confirms that it merits consideration that some of the CCCs that are underutilized be consolidated with nearby CCCs.

2.7.1 Comparison of Operating Hours

Table 2-14 summarizes the operating hours for the County CCCs and the benchmarked counties. As shown in Table 2-14, many of the benchmark programs have limited operating hours, similar to the County, in order to have an attendant on-site to monitor customers and ensure proper use of the facility.

Table 2-14
Operating Hours for CCCs

Location	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Santa Fe County							
Eldorado	Closed	Closed	8:00 am – 5:00 pm	8:00 am – 5:00 pm	8:00 am – 5:00 pm	8:00 am – 5:00 pm	8:00 am – 5:00 pm
Jacona	Closed	Closed	8:00 am – 5:00 pm	8:00 am – 5:00 pm	8:00 am – 5:00 pm	8:00 am – 5:00 pm	8:00 am – 5:00 pm
La Cienega	Closed	Closed	8:00 am – 5:00 pm	8:00 am – 5:00 pm	8:00 am – 5:00 pm	8:00 am – 5:00 pm	8:00 am – 5:00 pm
Nambe	Closed	Closed	8:00 am – 5:00 pm [1]	Closed	8:00 am – 5:00 pm [1]	8:00 am – 5:00 pm [1]	8:00 am – 5:00 pm [1]
Rancho Viejo	Closed	Closed	Closed	Closed	8:30 am – 4:30 pm	8:30 am – 4:30 pm	Closed
San Marcos	Closed	Closed	8:00 am – 5:00 pm	Closed	8:00 am – 5:00 pm	8:00 am – 5:00 pm	8:00 am – 5:00 pm
Stanley	Closed	Closed	8:00 am – 5:00 pm	8:00 am – 5:00 pm	8:00 am – 5:00 pm	8:00 am – 5:00 pm	8:00 am – 5:00 pm

Location	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Tesuque	Closed	Closed	8:00 am – 5:00 pm [1]	Closed	8:00 am – 5:00 pm [1]	8:00 am – 5:00 pm [1]	8:00 am – 5:00 pm [1]
Dona Ana							
All 8 CCCs	7:30 am – 5:30 pm	7:30 am – 5:30 pm	7:30 am – 5:30 pm	7:30 am – 5:30 pm	7:30 am – 5:30 pm	Closed	Closed
Sandoval							
All 3 CCCs	Closed	Closed	8:00 am – 4:00 pm	Closed	Closed	8:00 am – 4:00 pm	Closed
San Miguel							
All 10 CCCs	Closed	8:00 am – 12:00 pm	8:00 am – 12:00 pm	8:00 am – 12:00 pm	8:00 am – 12:00 pm	8:00 am – 12:00 pm	Closed
Torrance							
Duran (2nd and 4th Sat. of each month)	Closed	Closed	Closed	Closed	Closed	8:00 – 12:00 pm	Closed
Punta De Agua	Closed	Closed	Closed	7:00 am – 3:00 pm	Closed	Closed	8:00 am – 4:00 pm
Tajique	Closed	7:00 am – 3:00 pm	Closed	Closed	9:00 am – 5:00 pm	8:00 am – 4:00 pm	Closed
Northern	7:00 am – 3:00 pm	9:00 am – 5:00 pm	9:00 am – 5:00 pm	9:00 am – 5:00 pm	9:00 am – 5:00 pm	8:00 am – 4:00 pm	Closed
Southern	Closed	Closed	7:00 am – 3:00 pm	Closed	Closed	8:00 am – 4:00 pm	Closed
Indian Hills	Closed	7:00 am – 3:00 pm	Closed	9:00 am – 5:00 pm	Closed	8:00 am – 4:00 pm	Closed
Hills-N-Valley	Closed	Closed	7:00 am – 3:00 pm	Closed	9:00 am – 5:00 pm	8:00 am – 4:00 pm	Closed
Central	Closed	7:00 am – 3:00 pm	Closed	9:00 am – 5:00 pm	Closed	8:00 am – 4:00 pm	Closed
Lincoln							
Carrizozo (3rd Sat. of each month)	Closed	Closed	Closed	Closed	Closed	9:00 am – 12:00 pm	Closed
Capitan	Closed	Closed	4:00 pm – 6:00 pm	Closed	Closed	Closed	Closed
Corona	All Day	All Day	All Day	All Day	All Day	All Day	All Day
Greentree	8:00 am – 4:00 pm	8:00 am – 4:00 pm	8:00 am – 4:00 pm	8:00 am – 4:00 pm	8:00 am – 4:00 pm	2nd Sat (Apr. – Sept): 8:00 am – 12:00 pm	

Location	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Lincoln (1st Sat. of each month during Apr. – Sept.)	Closed	Closed	Closed	Closed	Closed	9:00 am – 2:00 pm	
Rio Arriba	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Los Alamos							
White Rock (May 1 – Oct. 1)	8:00 am – 12:00 pm; 1:00 pm – 6:00pm	Closed	Closed	Closed	8:00 am – 12:00 pm; 1:00 pm – 6:00pm	8:00 am – 12:00 pm; 1:00 pm – 6:00pm	8:00 am – 12:00 pm; 1:00 pm – 6:00pm
White Rock (Oct. 2 – Apr. 30)	8:00 am – 12:00 pm; 1:00 pm – 6:00pm	8:00 am – 12:00 pm; 1:00 pm – 6:00pm	Closed	Closed	8:00 am – 12:00 pm; 1:00 pm – 6:00pm	8:00 am – 12:00 pm; 1:00 pm – 6:00pm	8:00 am – 12:00 pm; 1:00 pm – 6:00pm
Sullivan Field	All Day	All Day	All Day	All Day	All Day	All Day	All Day
Eco-Station	9:00 am – 3:30 pm	9:00 am – 3:30 pm	9:00 am – 3:30 pm	9:00 am – 3:30 pm	9:00 am – 3:30 pm	9:00 am – 3:30 pm	9:00 am – 3:30 pm

[1] Citizen Convenience Center is closed from 12:00 pm (noon) – 1:00 pm

In compiling the hours of operation it was documented that all of Santa Fe County's manned CCCs are open 32 to 45 hours per week. However, if the reader examines the comprehensive listing of CCCs in other counties (Table 2-14), while some of the counties have their CCCs open 40 hours per week, many of the CCCs are open considerably less than that. Again, this finding helps to support that some CCCs within Santa Fe County perhaps don't need to be open as many hours as they currently are operating (such as San Marcos and Stanley).

2.8 Recommendations

Using the analysis discussed in this report section Leidos has developed recommendations for the County's CCCs, which are presented below.

2.8.1 Overall System-wide Recommendations

1. Optimize payloads to meet or exceed industry standard.

As discussed in Section 2.4, the County is doing a good job in maximizing its loads prior to hauling them to the Landfill or BuRRT. However, they should be able to realize some marginal improvement in the payloads of certain material loads, such as OCC, mixed recyclables, glass and potentially green waste. The optimal payload of each load can differ based on the vehicle configuration and the material being transported. Leidos has provided optimal payloads for the different commodity types and vehicle configurations in Table 2-7.

2. Cancel the purchase of one walking floor transfer trailer and one transfer trailer cab.

The County has three walking floor trailers and three transfer trailer cabs for the Eldorado center, and is planning on purchasing three additional walking floor trailers and transfer trailer cabs for the new Jacona center. Based on Leidos' analysis of the material flow and daily number of pulls required from Eldorado and Jacona, Leidos recommends the County purchase only two trailers and two cabs, and transition one Eldorado transfer trailer and transfer trailer cab to a back-up transfer trailer unit status. This configuration will place two walking floor transfer trailers and two transfer trailer cabs at each center (Eldorado and Jacona), and have a shared back-up transfer trailer and transfer trailer cab that can be used at Eldorado or Jacona as needed.

3. Expand HHW materials collected at specific CCC locations.

In previous years the County collected compact fluorescent bulbs and fluorescent tube lights as part of the County's household hazardous waste (HHW) collection program on a limited basis. Based on recent direction from the Joint Powers Board (JPB) the County is working to integrate e-waste into the County collection program. Leidos recommends that the County continue to accept the existing HHW materials being collected, such as: dry paint, oil, antifreeze and batteries (not car batteries)[5]. To balance the request for additional services with the associated costs of providing those services, Leidos would recommend that the County consider the expansion of e-waste services occur only at the four CCCs where HHW is currently being collected (Eldorado, Nambe, San Marcos, and Stanley). The County should also consider the feasibility of continuing to offer fluorescent bulb recycling at the four CCCs where HHW is currently collected. When the new Jacona CCC is on-line, e-waste should be collected at this site, due to it being one of the highest volume CCCs.

All staff that handle HHW materials should go through training on how to accept and pack material to be safely transported. Leidos has provided additional information with regard to the proper handling of certain types of HHW materials in Appendix B, Figure B-3.

4. Close or relocate all CCCs currently on Pueblo land.

The Jacona and Tesuque centers are located on Pueblo land. Operating citizen convenience centers on Pueblo land can be challenging as the County has no rights to the land the centers are located on, or the area immediately around the center (i.e. roads). Leidos recommends the County close or relocate the centers currently on Pueblo land. The County is in the process of relocating the Jacona center to County land. Leidos recommends the County move forward with the Jacona relocation and also consider closing the Tesuque center. Section 2.8.2 provides more detailed discussion on the Jacona and Tesuque CCCs.

[5] Wet paint can be taken to BuRRT. Car batteries can be taken to private establishments (car part stores, car dealers, etc.).

5. Develop and implement operational metrics to measure efficiency.

Recordkeeping of operational metrics is essential to evaluating the operation and identifying areas for improvement. Leidos recommends the County develop a database that records the following metrics:

- Equipment maintenance cost by vehicle
- Equipment fuel cost by vehicle
- Customer traffic at each collection center, by day and by hour
- Number of pulls from each CCC
- Volume of material collected by commodity from each CCC
- Number of pulls per day by roll-off or transfer trailer

The County can utilize this internal database to measure the CCC's operational efficiency and identify operational areas of improvement (i.e. high traffic flow at specific locations, vehicles incurring above average maintenance costs, variations in material levels and flows at CCCs, etc.).

Leidos also recommends the County develop a long term equipment replacement schedule, to ensure that equipment is being replaced once the equipment maintenance cost begin to escalate as the vehicle reaches the end of its' useful life.

6. Improve customer accessibility to drop-off areas.

The current drop-off access to the roll-off containers at the CCC sites is a movable metal stepladder on wheels. The use of this unfixed ladder by the public is a safety concern as customers could easily fall off the ladder or incur injury carrying materials up the stairs and lifting material into a roll-off container.

As an alternative to the current operational practice of directing customers to use stepladders to access the roll-off containers, Leidos recommends the County install permanent ramps to access the containers. It is important to ensure that sufficient fall protection is in place (i.e. railings) when designing the ramps, safeguarding customers from accidentally falling into the open-top roll-off containers.

7. Improve CCC signage.

The current signage at the eight CCCs vary by site. To streamline signage and minimize confusion among County customers, Leidos recommends the County implement consistent signage at all eight centers. BuRRT has examples of good signage at its recyclables drop-off area and Leidos recommends that the eight CCCs model their signage after that.

In addition to signage indicating the proper materials to be placed in each container, it is also important to ensure proper signage is placed on roads surrounding the CCC to direct customers to the location. The County's CCC locations are in rural areas and may require additional signage to ensure customers are able to easily locate the site.

8. Paint all containers.

Leidos recommends the County paint all of the center's refuse roll-off containers a uniform color and a different uniform color for all of the recycling related roll-offs. Painting the containers will improve the aesthetics of the centers for a minimal cost and also help provide visual cues as to which containers are for recycling and which are for refuse.

9. Modify the rate structure.

Leidos recommends the County modify the rate structure in several ways. First, Leidos would recommend that the County do away with the Commercial customer permit since very few of them are sold (less than 100 per year) and purchasing of the standard "Residential permit" will meet the need of these individuals.[6] Second, Leidos would recommend a greater variety of trip permits be issued. Presently, the County only sells Residential one trip and 24 trip permits. We would recommend that 1, 6, 12 and 24 trip permits be issued and they not expire. This will allow citizens to purchase a permit that better meets their disposal needs. This should also minimize the complaints by some customers that the permit is only good for one year. Pricing of the permits is discussed in Section 1, Cost of Service and Funding Options of this report.

2.8.2 Citizen Convenience Center Specific Recommendations

Eldorado

1. Optimize trailer and roll-off truck payloads.

OCC and mixed recyclable material is currently collected in 40 CY roll-off containers. For OCC material, a greater level of compaction can be achieved by breaking down boxes or utilizing a compacting unit to accommodate a larger volume of OCC per load. The County has the opportunity to decrease the OCC pulls at the Eldorado center by introducing compacting units for OCC and mixed recyclables. If the County is able to realize a 2:1 compaction ratio, the Eldorado center can reduce its annual OCC pulls from 98 pulls to 49 pulls and its annual mixed recyclable pulls from 161 to 80. A compacting unit and the receiving box cost $28,000 each. To implement compaction containers for Eldorado's OCC and mixed recyclable material the cost will be approximately $56,000.

Green waste and refuse material is currently transported primarily with transfer trailers. Leidos recommends the County utilize a backhoe, trackhoe or excavator to maximize the transfer trailer compaction in each load. It is inherently difficult to achieve a high level of compaction with green waste loads as the material is bulky and difficult compact; however the use of equipment to tamp down loads will increase material compaction.

[6] In fact, this permit should just be called a "Permit". Most of the small businesses that bring their waste (general contractors, etc.) are typically using a Residential permit anyhow.

Jacona

1. Relocate current Jacona CCC to a new location.

The County currently plans to relocate the Jacona CCC and increase the site capacity at the new location. The existing Jacona CCC is on Pueblo land, leaving the County limited rights to the CCC's land. Leidos would recommend the relocation of the Jacona CCC be made a high priority for the County.

Nambe

1. Consider closing Nambe CCC once the new Jacona CCC is open.

Nambe CCC currently accepts a marginal amount of the material annually collected, managing 6 percent of all CCC annual refuse material collected in the County, and 2 percent of all CCC recycling within the County. The Nambe CCC is located within close proximity to the proposed new Jacona CCC location. Once the new Jacona CCC is open Leidos recommends the County consider closing the Nambe CCC. Based on the cost of service analysis in Section 1 of this report, Leidos has identified an annual operational cost savings of $46,598 from closing the Nambe CCC.

San Marcos

1. Consider Reducing Days or Hours of Operation.

The San Marcos center currently collects a healthy volume of material annually; however, the center collects a significantly smaller volume of material than the larger CCCs (i.e. Eldorado, Jacona and La Cienega). Leidos recommends the County consider reducing the days and/or hours the San Marcos center is open to accept material. Leidos recommends the County record the customer traffic for a four month period and identify the days, or hours the center experiences the least amount of customer traffic. Using this data the County can determine if the San Marcos operating days and/or hours can be reduced. This change will likely result in only marginal cost savings to the County ($10,000 to $30,000), but will allow the County to better utilize the employee stationed at the San Marcos CCC at other CCCs.

Stanley

1. Consider Reducing Days or Hours of Operation.

The Stanley center is operated for 45 hours a week. This station is important to the County's CCC operation as it serves a large area in the southern portion of the County; however, it collects a small volume of the CCC's annual volume of material collected. Leidos recommends the County consider reducing Stanley's operating days and/or hours. To determine the most appropriate days, or hours to reduce from the center's current operating schedule, Leidos recommends the County record the customer traffic for a four month period and identify the days, or hours the center experiences the least amount of customer traffic. This change

will not result in huge savings ($10,000 to $30,000), but will allow the County to better utilize the employee stationed at the Stanley CCC at other CCCs.

Tesuque

1. Consider closure of center.

Tesuque currently receives the least amount of tonnage of all the County's CCCs, excluding the Rancho Viejo recycling center. In addition to being the lowest volume center, Tesuque is located on Pueblo land. The County has no rights to the Pueblo land, which can create operational challenges regarding access to the Tesuque location. Leidos recommends the County consider closing the Tesuque location and redirect the current customers to the Jacona CCC or BuRRT for recycling and disposal needs once the new Jacona CCC site is operational. As part of this recommendation an agreement would need to be established between the County and SFSWMA regarding permits used at BuRRT. Based on the cost analysis completed in Section 1, Cost of Service and Funding Options of this report, Leidos has identified an annual operational cost savings of $65,616 from closing the Tesuque center.

A summary of the recommendations is presented on the following page as part of Table 2-15. As noted below, the recommendations, if implemented, should allow the County to realize a one-time savings of $150,000 in addition to an annual savings of $132,214 to $172,214 per year.

Table 2-15
Summary of Recommendations

Key Finding and Recommendations	Location	Benefit	Priority Level	Implementation Time Frame
Develop and implement operational metrics to measure efficiency.	All CCCs	Improved operation	High	Now – 6 months
Improve customer accessibility to drop-off areas.	All CCCs	Improved operation, improved site safety	High	Now – 1 year
Optimize payloads to meet or exceed industry standard.	All CCCs	Increased efficiency	High	Now – 1 year
Modify rate structure.	All CCCs	Improved clarity, equality and cost recovery	High	Now – 1 year
Cancel purchase of one walking floor transfer trailer and one transfer trailer cab.	Eldorado and Jacona	Save $150,000	High	Now
Consider reducing days or hours of operation.	San Marcos	Save $10,000 - $30,000	High	Now – 1 year
Consider reducing days or hours of operation.	Stanley	Save $10,000 - $30,000	High	Now – 1 year
Close or relocate all CCCs currently on Pueblo land.	Jacona and Tesuque	Improved operation	High	Now – 2 years
Relocate current center to new site.	Jacona	Increased capacity and improved operation	High	Now – 2 years
Improve CCC signage.	All CCCs	Improved operation, less contamination	Medium	Now – 1 year
Expand HHW materials collected at specific CCC locations.	Eldorado and Jacona	Added service, capture more material	Medium	6 months – 1 year
Consider closure of center.	Nambe	Save $46,598	Medium	After opening of new Jacona center
Consider closure of center.	Tesuque	Save $65,616	Medium	After opening of new Jacona center
Paint all containers. Refuse – one color Recycling – one color	All CCCs	Improved perception, less contamination	Medium	In next 12 months
	Potential Cost Savings: One Time: $150,000 Annual: $132,214 - $172,214			

Appendix B
OPERATIONAL ASSESSMENT: SUPPLEMENTAL INFORMATION

This Appendix includes figures, text and schedules from Section 2 of this report.

Figure B-1
Survey of New Mexico Counties Citizen Convenience Centers (CCC)

County	Population	Square Miles	Citizen Convenience Centers (CCC)	Square Miles/CCC	Population per Square Mile	Population per Convenience Center	Materials Accepted	Hours of Operation	Pricing	Configuration	Additional Information	Follow Up
Santa Fe	146,375	1,911	8	239	76.60	18,297	Residential Refuse Recyclables - Plastics, aluminum, tin, paper, cardboard, glass, tires, scrap metal, green waste, oil	Eldorado, Jacona, La Cienega, Stanley: Wed-Sun 8:00 am - 5:00 pm Nambe, San Marcos, Tesuque: Wed, Fri-Sun 8:00 am - 5:00 pm Rancho Viejo: Fri - Sat 8:30 am - 4:30 pm	Residential Customers: 1 Trip Permit: $15.00 24 Trip Permit: $75.00 24 Trip Permit (Senior): $70.00 24 Trip Permit (Low Income): $65.00 5 Bag Tags: $5.00 Commercial Customers: 5 Trip Permit: $100.00 10 Trip Permit: $140.00 Commercial Billable Accounts: Per Ton: $50.00	Eldorado: (3) 100 CY transfer trailers for refuse; (2) 35 CY closed containers for recyclables; (3) 30 CY, (2) 40 CY open top containers for other recyclable material Jacona: (5) 40 CY for refuse; (1) 35 CY closed container for recyclables; (2) 30 CY, (2) 40 CY open top containers for other recyclable material La Cienga, Nambe, San Marcos: (2) 40 CY open tops, (1) 40 CY compactor for refuse; (1) 35 CY closed container for recyclables; (2) 30 CY, (2) 40 CY open top containers for other recyclable material Rancho Viejo: (1) 35 CY closed container for recyclables; (2) 30 CY open tops for other recyclable material Stanley: (1) 40 CY open top, (1) 40 CY compactor for refuse; (1) 35 CY closed container for recyclables; (2) 30 CY, (3) 40 CY open tops for other recyclable material Tesuque: (2) 30 CY open tops for refuse; (1) 35 CY closed container for recyclables; (2) 30 CY, (1) 40 CY open tops for other recyclable material	N/A	

County	Population	Square Miles	Citizen Convenience Centers (CCC)	Square Miles/CCC	Population per Square Mile	Population per Convenience Center	Materials Accepted	Hours of Operation	Pricing	Configuration	Additional Information	Follow Up
Dona Ana	200,000	3,815	8	477	52.42	25,000	Residential Refuse Single Stream Recyclables Yard Waste Household Hazardous Waste (must be under five pounds) - batteries, oil, paint, antifreeze, and pesticides	Mon - Fri: 7:30 am - 5:30 pm	Punch card system with a minimum fee of $4.00 for up to 200 lbs of material; truck loads are $8.00 or two punches; Trailers are $12 or three punches. All recycling, HHW, and yard waste may be disposed of free of charge. Customer is required to purchase cards at other county facility prior to coming to location. No cash is handled at facilities, however punch cards may be purchased online or at several other locations. All fees are paid to the County, and the Authority is paid for tonnage and a flat fee for management.	Mesquite, La Mesa, Hill: Top Load into a semi-truck La Union: 40 CY roll-off boxes Hatch: Compactor Unit plus 40 CY roll-off box Garfield, Butterfield, Anthony: Top load into 40 CY roll-off box	SCSWA is beginning to design new facilities that will solve the punch card issue and also the commercial HHW issue by equipping these facilities with a gate system and designing them to receive commercial and residential vehicles. The County also maintains 4 recycling centers.	
Sandoval	131,561	3,714	3	1,238	35.42	43,854	Residential Refuse Construction Debris Yard Waste	Wed, Sat: 8:00 am - 4:00 pm	All transactions are cash only; Fees charged at the collection center are as follow: $0.50 per bag up to 4 bags; Pick-Up size load (level bed): $4.75 Pick-Up size cab or above: $9.50	All facilities maintain (2) 40 CY open top bins and (1) 40 CY open top for bulk items. Cuba, Pena Blanca: 18 CY recycling trailers that collect cardboard, mixed paper, plastic, aluminum, and tin.	Jemez Valley Recycling center resides next to Canon Collection Center and collects cardboard, mixed paper, plastic, aluminum, tin, and some scrap metal. Please note that the County maintains a total of 4 recycling centers.	
San Miguel	7,580	1,288	10	129	3.65	758	Residential Refuse Yard Waste	Tues - Sat: 8:00 am - 12:00 pm **Most convenience centers (with the exception of Pecos and Rociada) are actually open 24/7; citizens are able to walk under gate and dispose of trash in open top container.	Each Household is charged a fee of $14.90 per month; this fee is a tax assessment that occurs on a quarterly basis. No additional fee is assessed at the convenience center unless yard waste is being disposed: This fee is $9 per cubic yard, and is calculated by multiplying the following dimensions: (Width X Height X Length)/27. These tickets are billed to the customers at the end of each month; the Billing Clerk at each of the convenience centers produces monthly invoices for each customer.	Most convenience centers are configured in an L shape, where there is (1) 40 CY open top container & then (1) compactor for the receiving container. Citizens can drive up to the open top and dump waste themselves. Pecos: (4) 40 CY open top containers, and 1 compactor for the receiving container. Please note that there is room for 2 compactors, however only one is currently in operation. Bernal: (2) 40 CY open top containers, and no compactors.	N/A	

County	Population	Square Miles	Citizen Convenience Centers (CCC)	Square Miles/CCC	Population per Square Mile	Population per Convenience Center	Materials Accepted	Hours of Operation	Pricing	Configuration	Additional Information	Follow Up
Torrance	16,021	3,346	8	418	1.34	2,003	Residential Refuse Construction Debris Recyclables - Weeds/Brush, White Goods, Tires, Metal Household Hazardous Waste - Batteries, Waste Oil, Anti-Freeze E-Waste *Northern & Southern Collection Centers also accept branches Paint & Thinners and other recyclable Items will be accepted in future*	Duran: 2nd & 4th Saturday of every month, 8:00 am - 12:00 pm Punta De Agua: Thurs 7:00 am - 3:00 pm, Sun 8:00 am - 4:00 pm Tajique: Tues 7:00 am - 3:00 pm, Fri 9:00 am - 5:00 pm, Sat 8:00 am - 4:00 pm Northern: Mon 7:00 am - 3:00 pm, Tues - Fri 9:00 am - 5:00 pm, Sat 8:00 am - 4:00 pm Southern: Wed 7:00 am - 3:00 pm, Sat 8:00 am - 4:00 pm Indian Hills: Tues 7:00 am - 3:00 pm, Thurs 9:00 am - 5:00 pm, Sat 8:00 am - 4:00 pm Hills-N-Valley: Wed 7:00 am - 3:00 pm, Fri 9:00 am - 5:00 pm, Sat 8:00 am - 4:00 pm Central: Tues 7:00 am - 3:00 pm, Thurs 9:00 am - 5:00 pm, Sat 8:00 am - 4:00 pm	A solid waste management fee is assessed, billed and collected quarterly. The fee is $13.45 per month and entitles each customer to bring up to one level pickup load to any of the 8 manned collection stations each week. The bill is a 2-part postcard, which the customer sends one part back with payment, and keeps the other half as a payment stub to verify to the station attendant that he has an account. Excess loads are inclusive of a pickup load above the side rails, or a trailer load, and are billed at a rate of $5 per cubic yard. This is calculated using the following formula: (L X W X H)/27. No cash is taken at the stations, rather excess fees are added to the customer's account and billed out each month.	Stations are equipped with compactor roll off containers and 30 & 40 CY open-top containers for bulky items, metal tires, and OCC. 5 stations have ramp access to roll offs, others have stairs 4 stations have cathedral top segregated recycling roll offs	N/A	

County	Population	Square Miles	Citizen Convenience Centers (CCC)	Square Miles/CCC	Population per Square Mile	Population per Convenience Center	Materials Accepted	Hours of Operation	Pricing	Configuration	Additional Information	Follow Up
Lincoln	21,000	4,831	5	966	4.35	4,200	Carrizozo, Lincoln, Capitan CCC: Residential Refuse Bulky Waste Metal Corona CCC: Residential Refuse Bulky Waste Recyclables - Cardboard, 1 & 2 plastic, bundled newspaper Greentree Direct Haul: Residential Refuse Bulky Waste Recyclables - Cardboard, 1 & 2 plastic, bundled newspaper Household Hazardous Waste (HHW) **HHW is considered to be any hazardous waste (i.e., drain-o, pesticides, etc) that must have an absorbing agent (i.e., sand, cat litter, or paper towels) applied to it in order to absorb the liquid; this material is then thrown into their regular trash.	Carrizozo: 3rd Sat of every month, 9:00 am - 12:00 pm Capitan: Every Wed, 4:00 pm - 6:00 pm Corona: Daily, 24/7 Greentree Direct Haul: Mon - Fri, 8:00 am - 4:00 pm Additional Seasonal Hours: April - September, second Saturday 8:00 am - 12:00 pm Lincoln: April - September, first Saturday of month 9:00 am - 2:00 pm	Fees assessed by the County (GSWA), please note this is not a tax assessment: Residents utilizing poly-carts: $74.31 per quarter Residents not utilizing poly-carts: $71.16 per quarter Convenience Center Fees ((width, X length X height)/27) Miscellaneous waste (i.e., bulk, C&D, MSW) - $20 per cubic yard Cardboard: $7 per cubic yard Green Waste: $8 per cubic yard For all waste brought into the convenience center, citizens pay cash; commercial accounts can set a charge account that is billed monthly.	In general, most convenience centers have at least (1) 40 & one 30 CY roll-off container Corona: (2) compactors for refuse, (1) 30 CY roll-off for refuse, (1) 30 CY roll-off for recyclables, (1) 20 CY for paper, 3-4 compactors for cardboard Greentree: 40 CY & 30 CY roll-off containers, for a total of 9 roll-offs at the dock	In addition to these collection centers, the County manages about 17 "direct hauls", which provides free disposal to residents for municipal solid waste only. These locations maintain 34 CY compactors, which remain unmanned, and are open 24/7.	

County	Population	Square Miles	Citizen Convenience Centers (CCC)	Square Miles/CCC	Population per Square Mile	Population per Convenience Center	Materials Accepted	Hours of Operation	Pricing	Configuration	Additional Information	Follow Up
Rio Arriba	40,318	5,896	7	842	6.84	5,760	N/A	N/A	$188 annual fee - 8 punch card (1 CY of waste per punch), to dispose in CCC.	N/A	The County currently maintains one registered recycling facility.	Pricing
Los Alamos	18,159	109	3	36	166.60	6,053	White Rock: Residential waste Recyclables - brush, cardboard, paper, mixed recycling Sullivan Field: Recyclables - phonebooks, cardboard, mixed recycling Eco-Station: Recyclables - Brush, metal, concrete, asphalt, tires, appliances, mixed recycling, cardboard, books HHW E-waste *Eco Station offers free mulch, manure, and glass cullet*	White Rock Overlook: May 1 - Oct 1: Fri - Mon 8:00 am - 12:00 pm, 1:00 pm - 6:00 pm Oct 2 - Apr 30: Fri - Tue 8:00 am - 12:00 pm, 1:00 pm - 6:00 pm Sullivan Field: 24/7 Recycling Services at Eco Station: Mon - Sun 9:00 am - 3:30 pm	Residential Solid Waste Service: $18.15/month After using 12 free loads, residential loads will be billed at the following rate: $10 for pick-up truck or trailer, and $5 for car *Loads must be residential waste only, not large loads of demolition	N/A	10 Outdoor Recycling bins are located throughout Los Alamos.	Clarify if tax assessment or monthly bill; HHW

Figure B-2. County Population Density and CCC Locations

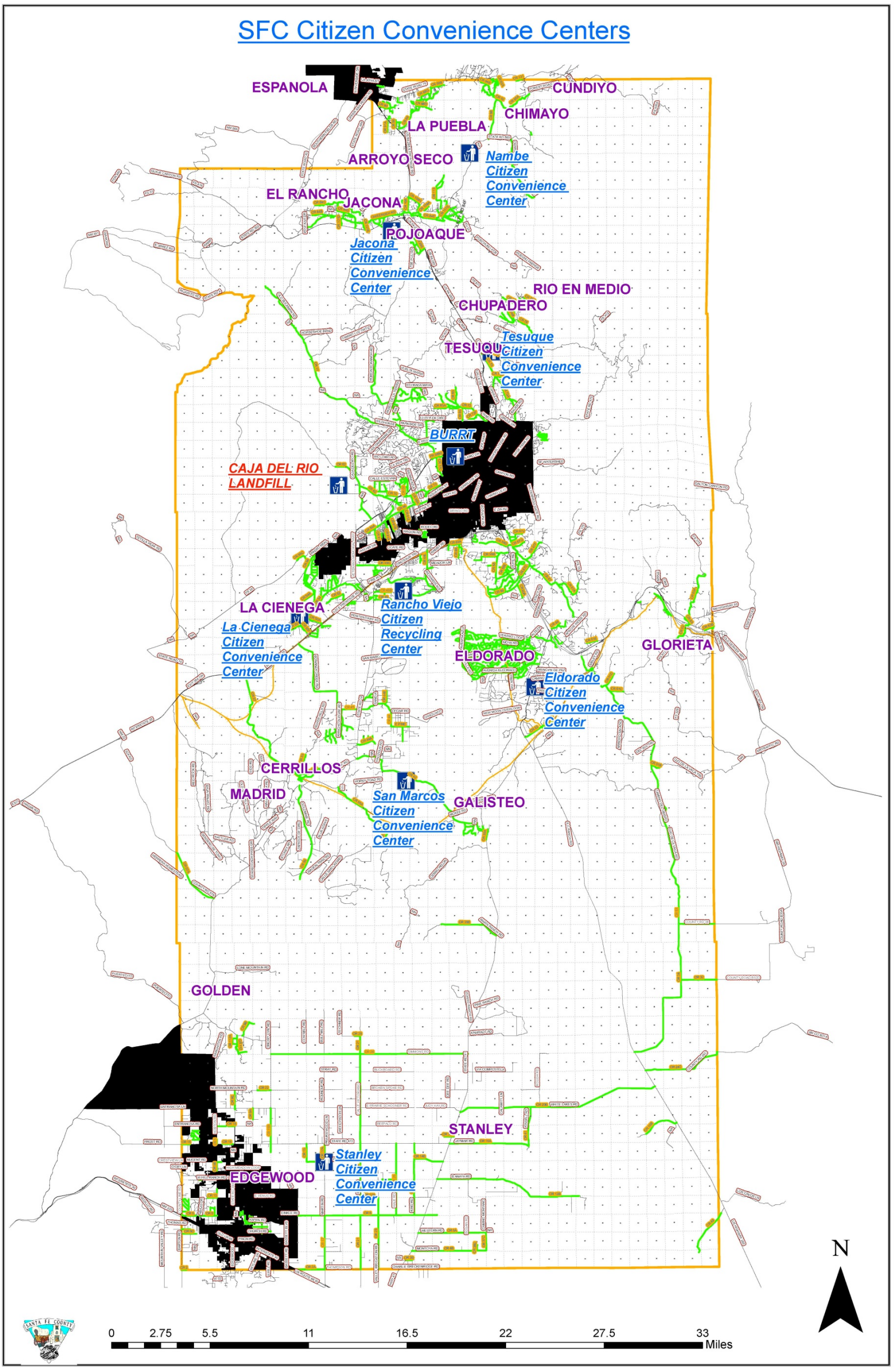


Figure B-3. Collection of HHW Materials

- Paint – Most paints are either latex or oil-based. Oil-based paints can damage groundwater supplies unless precautions are taken. The County can collect paint and provide the paint free of charge to County citizens for reuse, or collect paint in 55 gallon barrels. Latex paint and oil paint should be collected in separate barrels, and then transported to a paint processor that will screen and reuse the paint. Latex paints can also have a bulking agent (i.e. cat litter or sand) added to it, it will then harden and can be safely placed in a refuse roll-off container.
- Light bulbs – Recycling light bulbs prevents the release of mercury into the environment, caused from the breaking of a light bulbs. Light bulbs should be handled in a manner to prevent breakage. Light bulb collection can involve boxes containing whole lamps or the County can utilize a drum top crusher (DTC) device to reduce the volume of the light bulbs. A drum top crusher is designed to fit on top of a 55 gallon drum in order to prevent the release of mercury vapors while crushing the fluorescent light bulbs in the drum below.
- Batteries – Multiple batter types can be accepted. Leidos recommends that the CCC accept rechargeable and non-rechargeable batteries. A clamshell container is designed for the collection of batteries at the drop-off facility, shown in the picture below. Leidos recommends the City collect rechargeable and non-rechargeable batteries in separate clamshell containers. All rechargeable batteries must be wrapped before being placed in the clamshell as unwrapped rechargeable batteries create a fire hazard due to the potential for rechargeable battery terminals to meet and cause a short circuit. The County will need to develop and post signage explaining the requirement that rechargeable batteries must be wrapped in plastic or have their terminals taped.

Clamshell Battery Drop-off

Leidos recommends the CCC not accept lead acid batteries (car batteries). Lead acid battery collection programs are well established and have one of the highest recovery rates in the industry. The CCC should not accept lead acid batteries from a safety perspective due to the high risk of the material type. The County can inform customers of recycling options for car batteries (i.e. auto stores, local mechanics, etc.)

- E-waste – The industry standard in electronics collections is hand-to-hand receipt of the materials, this ensures the integrity of the cathode ray tubes (CRT) and television tubes. The CCC should only accept e-waste when the center is manned and personnel is available to accept and process e-waste properly.

  E-waste material should be stored and transported in such a way as to reduce breakage. Upon receipt of the electronic material, it should be placed on a pallet on a slip sheet, face down. Monitors should be palletized with monitors. Other electronics should be palletized according to proper vendor specifications. All pallets should be shrink wrapped before storage. The e-waste material should then be stored in an enclosed area until there is sufficient e-waste to transport the material to BuRRT.

  CRTs and TVs are made of leaded glass with a lead reflective lining. When broken, lead dust can be released into the atmosphere. There are some interpretations by the Resource Conservatory and Recovery Act (RCRA) that would designate a broken CRT as hazardous waste. However, the Environmental Protection Agency (EPA) is currently not regulating used and broken CRTs as hazardous waste as long as the following conditions are met:

  - CRT containers are clearly labeled regarding contents;
  - CRTs are safely transported in containers designated to minimize releases;
  - CRTs are stored in a building or container designed to minimize releases; and
  - CRTs are stored on site less than one year before recycling.

Figure B-4. Recycling Signage Examples


DRAGOON TRANSFER STATION
OPERATING HOURS:
TUESDAY 8:00AM - 1:00PM
THURSDAY 8:00AM - 1:00PM
SATURDAY 8:00AM -2:00PM

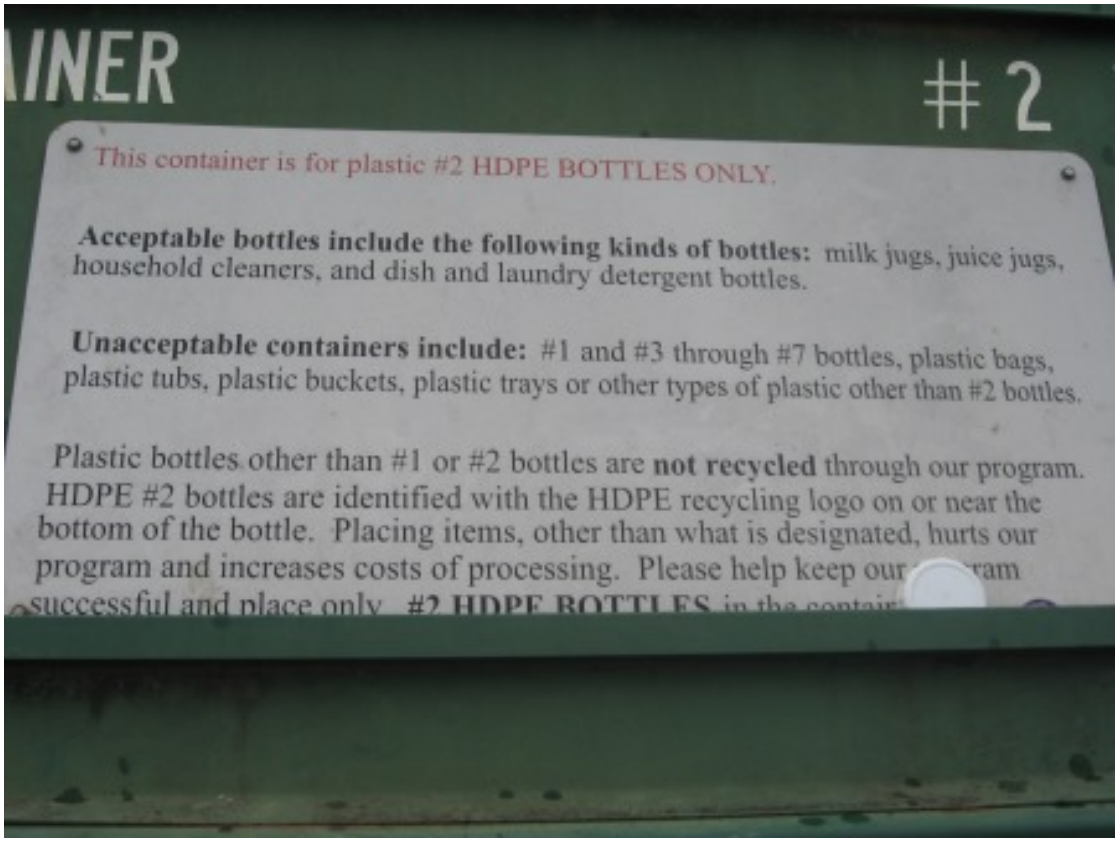

TVs and Monitors
UP


PLEASE DO NOT
LEAVE ITEMS
OUTSIDE FENCE


Mixed Paper
Recycle Here


Fayetteville E-Waste
Recycling Program
STAND CLEAR
WHEN TAILGATE
IS OPENED


BOTTLES
STEEL
CANS


INER
2
This container is for plastic #2 HDPE BOTTLES ONLY.
Acceptable bottles include the following kinds of bottles: milk jugs, juice jugs, household cleaners, and dish and laundry detergent bottles.
Unacceptable containers include: #1 and #3 through #7 bottles, plastic bags, plastic tubs, plastic buckets, plastic trays or other types of plastic other than #2 bottles.
Plastic bottles other than #1 or #2 bottles are not recycled through our program. HDPE #2 bottles are identified with the HDPE recycling logo on or near the bottom of the bottle. Placing items, other than what is designated, hurts our program and increases costs of processing. Please help keep our
successful and place only #2 HDPE BOTTLES


This container is for plastic #1 PET BOTTLES ONLY.
Acceptable bottles include the following kinds of bottles: soft drinks, water, juice, mouthwash, salad dressings and ketchup bottles.
Unacceptable items include the following kinds of items: #2 through #7 bottles, plastic bags, plastic tubs, plastic buckets, plastic trays or other types of plastic other than #1 bottles.
Plastic bottles other than #1 or #2 bottles are not recycled through our program. PET#1 bottles are identified with the PET recycling logo on or near the bottom of the bottle. Placing items, other than what is designated, hurts our program and increases costs of processing. Please help keep our program successful and place only #1 PET BOTTLES in the container.


WE ACCEPT
BULK HOUSEHOLD WASTE
(NO GARBAGE)
FURNITURE
APPLIANCES
(NO FREON)
IRON & STEEL
TIRES (LIMIT 4)
CAR & LIGHT TRUCK
VEHICLE BATTERIES
USED MOTOR OIL
WE DO NOT ACCEPT
COMMERCIAL WASTE
HAZARDOUS WASTE
MEDICAL WASTE
HOUSEHOLD TRASH
LIQUIDS OF ANY KIND
PAINT
PESTICIDES
FERTILIZER
FREON OR ANYTHING CONTAINING FREON
FUEL AND FUEL CONTAINERS
(GAS, PROPANE, BUTANE, ETC.)
CLOSED CONTAINERS
ASBESTOS
RADIOACTIVE MATERIAL

Section 3
WASTESHED ANALYSIS
(County Service Levels and Material Flow)

3.1 Introduction

This section describes the analysis undertaken to estimate where refuse and recyclables that are generated by commercial and residential customers in unincorporated areas of Santa Fe County (unincorporated County) are delivered for disposal and recycling.[1]

To gain an understanding of the flow of refuse, Leidos reviewed New Mexico Bureau of Solid Waste Management (NMBSWM) reports, Santa Fe Solid Waste Management Agency (SFSWMA) records, and County records. We also contacted and interviewed private solid waste haulers operating in the unincorporated County and waste management facilities located in areas surrounding Santa Fe County. To assure the confidentially of sensitive business information provided by solid waste haulers, information related to private solid waste haulers is only presented in an aggregated form in this report.

3.2 Private Solid Waste Haulers

Refuse from residential sources may be delivered to a County operated citizen convenience center (CCC), collected by a residential solid waste hauling company (solid waste hauler), or managed in another manner as described below.

Private solid waste haulers in the unincorporated County compete in an open, unregulated market. Waste collection companies contract with individual residences in most of the unincorporated County, and in certain areas homeowners associations contract for collection in entire neighborhoods. Solid waste haulers in the unincorporated County were contacted and asked to provide information concerning the number of customers they serve, the services they provide, and the quantity of refuse they collect. Not all solid waste haulers provided information, and some solid waste haulers provided more complete information than others. Where necessary, information from secondary sources (e.g., SFSWMA scale records) was used to flesh out our understanding of residential refuse flow in the unincorporated County. The methodology used to contact and obtain information from haulers is provided in Appendix C.

Some of the major solid waste haulers identified as providing residential collection services in the unincorporated County are:

[1] For the purposes of this analysis the "unincorporated County" includes all residences and businesses in the unincorporated areas of Santa Fe County and the portions of the City of Edgewood and Town of Espanola located in Santa Fe County.

- Waste Management Inc.
- MCT Waste Inc.
- East Mountain Disposal
- Ibarra's Trash Service

Based on solid waste hauler self-reported data, it is estimated that private solid waste haulers provide service to approximately 6,000 to 6,500 households out of approximately 32,650 households in the unincorporated County.[2] Haulers report collecting approximately 14,000 to 15,500 tons of refuse and recyclables annually. Refuse collection services are generally provided once each week and residential recycling is offered by some solid waste haulers for an additional fee. Certain solid waste haulers reported delivering refuse to landfill disposal and recycling locations outside of Santa Fe County for disposal and recycling.

3.3 County Citizen Convenience Centers

A description of the County's CCCs is provided in "Section 2, Operational Assessment of County CCCs." SFSWMA reported that approximately 14,000 tons of residential refuse and recyclables were delivered by the County to the Caja del Rio Landfill (Landfill) and Buckman Road Recycling and Transfer Station (BuRRT) in calendar year (CY) 2012 [3,4].

3.4 Analysis of Waste Flow In The Unincorporated County

The methodology developed to analyze the waste flow within Santa Fe County considered available data in the order described in the following paragraphs. First, the NMSWB annual New Mexico Solid Waste Report (Solid Waste Report) describing statewide recycling and disposal activities was analyzed. To develop an understanding of the quantity of refuse and recyclables generated in Santa Fe County and where they are delivered for disposal and recycling, Leidos' analysis used the Solid Waste Report as the starting-point. Such data is typically used as a starting-point in waste flow analyses because it presents the best understanding of overall solid waste management activities because statewide information will "smooth-out" data anomalies caused by waste moving between local jurisdictions within the state.

Second, SFSWMA information for transactions at the Landfill and the BuRRT, including customer counts, material quantities, and types of refuse delivered, provided additional important input into this analysis. Third, information provided by the County concerning its CCC operations was then considered in this analysis. Finally, information reported by solid waste haulers was used to adjust the quantities of refuse and recyclables reported by the other sources.

In the Solid Waste Report, the phrase "municipal solid waste" is used to describe the quantity of refuse and recyclables disposed or recycled in the state annually. In the

[2] Values are estimated after annexation of residential areas by the City of Santa Fe.
[3] Because of differences in timing and record keeping, there may be discrepancies between County reported tonnage and SFSWMA reported tonnage.
[4] CY 2012 is the most recent available full-year's data.

Solid Waste Report "municipal solid waste" does not include construction and demolition debris (C&D), brush, tires or other waste types. The analysis in Section 3.4 is limited to refuse and recyclables, only, so that a comparison can be made between statewide refuse and recyclable quantities reported in the Solid Waste Report and locally reported refuse and recyclable quantities for Santa Fe County. The analysis in Sections 3.4.1 through 3.4.3 is intended to reconcile the actual quantity of refuse and recyclables generated in Santa Fe County with the quantity of refuse (i.e. putrescible waste) and recyclables that would be expected based on statewide averages from the Solid Waste Report. Further analysis is performed in Section 3.5 where quantities of C&D, brush, tires, and other waste, are added to the refuse and recyclable quantities (as quantified in Section 3.4) shown in Table 3-3.

3.4.1 Expected Waste Generation Quantities

As the first step in the analysis, Leidos used available statewide data reported in the Solid Waste Report to develop an estimate of the amount of refuse and recyclables each resident in New Mexico generates annually. As shown in Table 3-1, the statewide average commercial and residential refuse and recyclables generated per capita per year is 0.95 tons.

Table 3-1
New Mexico Solid Waste Tonnage Per Capita

	NM State
Tons of Refuse and Recyclables (called "Solid Waste Generation" in NMSWB annual report) [1]	1,953,643
Population [2]	2,059,179
Refuse and Recyclables Per Capita (Tons per Person per Year)	0.95

[1] NM State data was collected from the 2010 New Mexico Solid Waste Report prepared by the New Mexico Solid Waste Bureau (page 8). http://www.nmenv.state.nm.us/swb/AnnualReportsandForms.htm

[2] 2010 population was collected from the U.S. Census Bureau http://quickfacts.census.gov/qfd/states/35000.html

Second, when the generation rate of 0.95 tons per capita is applied to City and unincorporated County population estimates, the expected annual refuse and recyclable amounts shown in Table 3-2 are projected.

Table 3-2
Expected Annual Solid Waste and Recyclables Generation

	City of Santa Fe	Unincorporated County	Total
Population [1]	69,204	77,171	146,375
Refuse and Recyclables Per Capita [2] (Tons per Person per Year)	0.95	0.95	0.95
Estimated Waste Generation (Tons)	65,657	73,216	138,873

[1] 2012 population estimates were collected from the U.S. Census Bureau *http://quickfacts.census.gov/qfd/states/35000.html*
[2] For reference, see Table 3-1

3.4.2 Analysis of Available Collection and Disposal Data

In the third step of the analysis, SFSWMA scale data for the Landfill and BuRRT was combined with information obtained from other sources (e.g., CCC data and solid waste hauler surveys) to produce an estimate of the quantities of refuse and recyclables disposed or recycled from sources in Santa Fe County as shown in Table 3-3, on the following page. It is important to note, that Table 3-3 does not present all waste types generated in Santa Fe County, rather only the material types (i.e. refuse and recyclables) that directly compare to "municipal solid waste" in the Solid Waste Report.[5]

It is important to note that the lack of sound, verifiable data from solid waste haulers meant that Leidos needed to make estimates and adjustments to address certain data gaps concerning the quantities of refuse and recyclables managed by private haulers. Additionally, estimates were made to allocate certain waste quantities between the City and County where definitive waste generation location information was not available. While there may be some uncertainty in the allocation of self-haul waste between the City and the County because of data limitations, the allocations do not have a material impact on the analysis and findings in this section.

[5] Table 3-3 only shows refuse and recyclables, it does not include C&D, brush, tires, and other waste.

Table 3-3
Refuse and Recyclables Collected in Santa Fe County and Disposed/Recycled at SFSWMA Facilities or Other Locations, CY 2012

Material Type/ Delivered By	City of Santa Fe (Tons)	Unincorporated County (Tons)	Total (Tons)
Refuse [1]			
Residential Refuse			
Government [2]	24,411	12,725	37,136
Private Solid Waste Haulers [3, 4]	-	13,553	13,553
Self-Haul [3, 5]	5,573	6,214	11,787
Sub Total Residential Refuse	29,983	32,492	62,475
Commercial Refuse			
Government [2]	35,330	211	35,541
Private Solid Waste Haulers [3, 4]	-	19,412	19,412
Self-Haul [3, 5]	154	172	326
Subtotal Commercial Refuse	35,484	19,794	55,278
Total Refuse	65,467	52,286	117,753
Recycling [6]			
Government [2]	5,302	1,333	6,635
Private Solid Waste Haulers [3, 4]	-	912	912
Self-Haul [3, 5]	49	55	105
Scrap Metals and Appliances [7]	NA	155	155
Sub Total Recycling	5,352	2,455	7,807
Total Refuse and Recyclables Disposed or Recycled	70,819	54,741	125,560

[1] Based on scale data provided by SFSWMA for Landfill and BuRRT.
[2] Government means waste delivered by City or County (including waste from citizen convenience centers)
[3] For BuRRT materials, some quantities were allocated based on 2012 City and County population estimates.
[4] Includes data provided by interviews with private haulers and delivered to facilities outside of Santa Fe County.
[5] Self-Haul means waste delivered to a SFSWMA facility by a person that does not pay by account.
[6] Based on scale data provided by SFSWMA at BuRRT.
[7] Based on 2012 data from citizen convenience centers provided by County.

3.4.3 Comparison of Expected Waste Generation To Available Disposal Data

Table 3-4 compares the expected generation amounts of refuse and recyclables from Table 3-1 with the actual amounts collected and disposed or recycled in Table 3-3.

Table 3-4
Refuse and Recyclables Collected in Santa Fe County and Disposed at the Landfill or Other Locations, CY 2012

	City of Santa Fe (Tons)	Unincorporated County (Tons)	Total (Tons)
Expected Refuse & Recyclables (Tons per Year)	65,657	73,216	138,873
Actual Refuse & Recyclables (Tons per Year)	70,819	54,741	125,560
Difference between Expected and Actual (Tons per Year)	5,162	(18,475)	(13,313)
% difference	7.8%	-25.3%	-9.6%
Actual Tons of Refuse & Recyclables per Person per Year	1.02	0.71	0.86

Table 3-4 shows that more refuse and recyclables are generated per capita in the City (1.02 tons per person per year) than the unincorporated County (0.71 tons per person per year). This difference can be primarily attributed to the significant concentration of commercial waste generating activity in the City.

In this analysis, Leidos was able to account for 125,560 tons of refuse and recyclables generated in the incorporated and unincorporated areas of Santa Fe County in 2012. Multiplying the statewide average of 0.95 tons per person by the population of Santa Fe County results in an estimate of 138,873 tons of waste generated in 2012. The difference between the actual amount generated and the predicted generation amount is 13,313 tons, or about 9.6 percent. This difference may reflect that residents and businesses in Santa Fe County actually generate less refuse and recyclables per capita than the state average, or this difference may be caused by a number of other factors including refuse being delivered to locations outside of Santa Fe County (in additional to what we identified in our survey of private haulers). Again, it should be noted that the lack of sound, verifiable data from solid waste haulers meant that Leidos needed to make estimates and adjustments to address certain data gaps concerning the quantities of refuse and recyclables managed by private haulers. Additionally, estimates were made to allocate certain waste quantities between the City and County where definitive waste generation location information was not available.

3.5 Santa Fe County Waste and Recyclable Material Quantities

3.5.1 Detailed Presentation of Waste and Recyclable Quantities

Table 3-5 compiles all available waste tonnage information for Santa Fe County (i.e., the waste types C&D, brush, and other[6] are added to refuse and recyclables shown in Table 3-3). Where possible, material quantities have been identified as being generated in the City or County. Where the generation location of material cannot reasonably be identified, only the total quantity of waste is shown in Table 3-5. The designation "NA" is used for quantities that are not allocated.

Table 3-5
All Waste/Recyclables Types Generated in Santa Fe County and Reported Disposed At SFSWMA Facilities or Other Locations

Material Type/ Delivered by	City (Tons)	County (Tons)	Total (Tons)
Refuse [1]			
Residential Refuse			
Government [2]	24,411	12,725	37,136
Solid Waste Haulers [3, 4]	-	13,553	13,553
Self-Haul [3, 5]	5,573	6,214	11,787
Subtotal Residential Refuse	29,983	32,492	62,475
Commercial Refuse			
Government [2]	35,330	211	35,541
Solid Waste Haulers [3, 4]	-	19,412	19,412
Self-Haul [3, 5]	154	172	326
Subtotal Commercial Refuse	35,484	19,794	55,278
Total Refuse	65,467	52,286	117,753
Recycling [7]			
Government [2]	5,302	1,333	6,635
Solid Waste Haulers [3, 4]	-	912	912
Self-Haul [3, 5]	49	55	105
Scrap Metals and Appliances [8]	NA	155	155
Total Recycling	5,352	2,455	7,807
Brush [7]			
Government	186	503	689
Other [9]	NA	NA	5,706
Brush [5][7]			6,395

(Continued)

[6] "Other" waste includes: tires, sweeper waste, and wastewater treatment plan sludge.

Material Type/ Delivered by	City (Tons)	County (Tons)	Total (Tons)
Construction & Demolition [1]			
Government	4,050	52	4,102
Solid Waste Haulers [9]	NA	NA	21,491
Self-Haul [9]	NA	NA	4,810
BuRRT Transfer Station [9]	NA	NA	4,126
Total Construction & Demolition			34,528
Other Waste [1, 9, 10]			
Government	NA	NA	3,894
Solid Waste Haulers	NA	NA	30
Self-Haul	NA	NA	11
BuRRT Transfer Station	NA	NA	156
Total Other Waste			4,091
Santa Fe County Total Waste			170,574

[1] Based on scale data provided by SFSWMA for Landfil and BuRRT.
[2] Government means waste delivered by City or County (including refuse and recyclables from CCCs)
[3] For BuRRT materials, some quantities were allocated.
[4] Includes data provided by interviews with private haulers and delivered to facilities outside of Santa Fe County.
[5] Self-Haul means waste delivered to a SFSWMA by a person that does not pay by account.
[6] Waste allocated based on 2012 population estimates.
[7] Based on scale data provided by SFSWMA at BuRRT.
[8] Based on 2012 data from citizen convenience centers provided by County.
[9] SFSWMA scale data did not provided an origin of the waste.
[10] Other waste includes: tires, sweeper waste, and wastewater treatment plan sludge.

3.5.2 Observations of Refuse and Recycle Material Quantities

Based on the information shown in Table 3-5 and considering other information presented in this report, Leidos provides the following important observations:

- **Citizen Convenience Centers are an important part of the County's solid waste management system.** More than 33,000 tons of refuse and recyclables are disposed or recycled from unincorporated County customers. On an average annual basis, this represents more than one ton from each residential unit is disposed or recycled at either SFSWMA facilities or facilities outside of Santa Fe County.

  There are more than 32,000 residential units in the unincorporated County, and solid waste haulers report only providing curbside service to between 6,000 and 6,500 of them[7], so it appears that up to 26,000[8] residential units require the services of the CCCs to properly dispose of their refuse and recyclables. Based on the number of permits sold by the County, approximately 127,000 trips to the citizen convenience centers are purchased annually, equating to 4.9 trips per household.

[7] See Section 3.2.
[8] Calculation: 32,000 residential units minus 6,000 (low estimate) equals 26,000 residential units (high estimate).

Based on Leidos' analysis, the convenience centers manage approximately 26 percent of the refuse and recyclables in the unincorporated County.

- **Solid waste haulers manage a significant portion of the residential refuse and recyclables in the unincorporated County.** Approximately 41 percent[9] of residential refuse and recyclable tons are managed by solid waste haulers, and the remainder is either delivered to a citizen convenience center or self-hauled by residents to the Landfill or BuRRT. Of course, the lack of definitive data from all private solid waste haulers in the County does mean that there is some subjectivity in this estimate.
- **There is limited recycling in the unincorporated County.** Based on the gathered data and assuming all reported recyclables are from residential sources, approximately 7.0 percent[10] of residential refuse and recyclables is diverted from landfill (not including brush and yard waste) or approximately 8.3 percent[11] of residential refuse and recyclables is diverted from landfill (including brush and yard waste).

3.6 Initial Findings and Recommendations

3.6.1 Findings

- Some private solid waste haulers were forthcoming in reporting information concerning the number of customers served and amounts collected, while others were reluctant to do so.
- Where certain private haulers self-reported certain information and it does not match SFSWMA disposal records shows that even where information is freely provided it may not be accurate because of a lack of specificity in responding to inquiries or lack of accurate data management by the hauler.
- Because of the lack of sound, verifiable data from solid waste haulers, Leidos needed to make estimates and adjustments to address certain data gaps concerning the quantities of refuse and recyclables managed by private haulers.
- Certain solid waste haulers reported collecting refuse in Santa Fe County and disposing it outside of the County.
- Understanding where refuse and recyclables are generated and where they are disposed and recycled is difficult because private solid waste haulers are not required to report collection and disposal activities to the County or State.
- In the analysis, approximately 90 percent of the refuse and recyclables expected to be generated in Santa Fe County (based on statewide generation rates) was

[9] Calculation: 13,553 tons collected by private haulers divided by 32,492 total residential tons in County equals 41.7%
[10] Calculation: 2,455 tons total recycling divided by (2,455 tons recycling plus 32,492 tons residential refuse) equals 7.02%
[11] Calculation: (2,455 tons total recycling plus 503 tons brush) divided by (2,455 tons recycling plus 32,492 tons residential refuse plus 503 tons brush) equals 8.34%

identified. The approximately 10 percent discrepancy can be attributed to a number of factors including: 1) limited amounts of industrial and commercial activity in the Santa Fe area compared to other metropolitan areas of the state (result in the actual generation rate in Santa Fe being less than the statewide rate); 2) haulers transporting refuse out of the County for disposal; and 3) residents in the unincorporated areas bringing refuse to work and disposing of it as commercial refuse in Santa Fe or Albuquerque.

- Acknowledging the potential for refuse and recyclables to be taken out of the County for disposal or recycling, based on available data, it appears that per capita disposal rates are higher in the City (1.02 tons per person per year) compared to the unincorporated County (0.71 tons per person per year). This difference is consistent with the realization that greater amounts of commercial refuse is generated in the City.

3.6.2 Recommendations

- **Consider implementing a solid waste management system in the unincorporated County.** As described in "Section 4, County Contracting," Leidos recommends that the County consider implementing a solid waste management system in the unincorporated County. Such a system will enhance the County's ability to gather data concerning solid waste management in the unincorporated County. Additionally, depending on how such a system is implemented, it would likely increase the recycling rate in the unincorporated County.
- **Develop a comprehensive data management system**. Leidos recommends that the County, City, and SFSWMA develop a comprehensive data management system. Such a system could be based on a comprehensive, web-based system, that would allow all three entities to seamlessly access and monitor information on the generation, flow, and disposal of refuse and recyclables in Santa Fe County.

Appendix C
DATA GATHERING

This Appendix includes our approach to gathering data and the data request letter that was transmitted to solid waste haulers.

Approach to Data Gathering

In an effort to gain an understanding of refuse and recyclables quantities generated in Santa Fe County and where such materials are disposed or recycled, Leidos undertook the following activities.

1. An initial list of haulers known to operate in Santa Fe County was identified. This list was augmented with data available for the NMBSWM.[1] The list of identified haulers is shown in Table C-1.
2. Each identified hauler was sent a letter, signed by the Santa Fe County Public Works Director advising them of the solid waste project and requesting their support of the project.
3. Follow-up contact was made by Leidos' subconsultant Justin Stockdale. Because Mr. Stockdale was located in Santa Fe County, he made an effort to arrange face-to-face meetings with haulers. Not all haulers were able to meet with Mr. Stockdale. While some haulers were forthcoming with information, others were not.
4. In an effort to promote communication, Leidos prepared and executed confidentiality agreements with certain haulers assuring that gathered information would not be released to the County or the public, except in aggregated form.
5. As a follow-up to Mr. Stockdale's efforts, Leidos staff attempted to contact waste haulers by telephone and e-mail to gather additional and clarifying information. Haulers provided limited information in response to these inquiries. In some circumstances, Leidos was unable to reach identified haulers (e.g., because phone messages were not returned). In other cases, contact was made but information requested from the hauler was not available or was not provided.
6. Information requested from the haulers included services provided, numbers of customers served (for both commercial and residential), tonnage collected (by material type), areas served, and prices charged. As has been previously stated hauler responses ranged from not wanting to provide information, to offering to provide information and not following up, to offering information. Because of sensitivities concerning confidential information, hauler responses are only presented in aggregate form.

[1] NMBSWM, "Commercial and Special Waste Haulers, Report run on June 3, 2013."

7. Information obtained from all sources was compiled and used to prepare the wasteshed analysis presented in the report. Table C-1 shows the haulers identified from various sources, if contact was made, and if Leidos was able to obtain any kind of information from the company.

Table C-1
Haulers Contacted for Wasteshed Study

Company	Able to Make Contact	Information Obtained From
Capital Scrap Metals	Yes	No
East Mountain Disposal	Yes	Yes
Enviroworks LLC	No	No
Gallegos Trucking	Yes	Yes
Green Production Resources	No	No
Ibarra's Trash Services	Yes	Yes
J-n-L Trucking	No	No
MCT/High Mesa	Yes	Yes
NM Waste Services	Yes	No
Ortega and Cruz	No	No
Road Runner Waste	Yes	No
Santa Fe Waste Services	Yes	Yes
Waste Management Inc.	Yes	Yes
Western Disposal	Yes	No

8. In addition to the haulers identified in Table C-1, Leidos contacted refuse and recycling facilities in neighboring counties in an attempt to identify the types and quantities of waste that these facilities accept from Santa Fe County. Certain facilities indicated that they do not accept materials from Santa Fe County, or that they do not account for the location where materials are received from. Many facilities did not return inquiries made by phone or e-mail. The facilities contacted were identified from the NMBSWM "List of New Mexico Solid Waste Facilities by County." The number of facilities contacted in neighboring counties are as follows:
    a. Bernalillo County – 24 facilities
    b. Los Alamos County – three facilities
    c. San Miguel County – five facilities
    d. Sandoval County – two facilities
    e. Rio Arriba County – 11 facilities

Letter Provided to Haulers

May 1, 2013

Mr. Frank Santiago
WMI
2021 Girard SE, Suite 275
Albuquerque, NM 87106

Mr. Frank Santiago,
As you may be aware, the City and County of Santa Fe along with the Santa Fe Solid Waste Management Agency (SFSWMA) are undertaking a broad analysis of ways to improve the Santa Fe region's solid waste system and infrastructure. Recently, the three entities retained SAIC, a solid waste consulting firm, to conduct a comprehensive solid waste management assessment. As part of this effort, Santa Fe County is exploring various methods to bring comprehensive solid waste and recycling collection services directly to households in the unincorporated County, including evaluating options for the franchising of solid waste collection. For your information, attached is SAIC's scope of services for the County-portion of the study.

While we know that there are several existing collection services in some areas, the County desires to gain a better understanding of the refuse and recycling collection services that exist as it considers future County-wide solid waste management options. To achieve this goal the County is asking for your assistance. In order for the consultant, SAIC, to provide viable alternatives for the County's consideration, a thorough understanding of current solid waste services in the County is essential.

SAIC or Justin Stockdale (SAIC's subconsultant) will be contacting you within the next few weeks with a request for information related to your current activities in Santa Fe County. SAIC has a long standing practice of maintaining the confidentiality of sensitive business information. To this end, SAIC can guarantee that any information you provide will not only be kept confidential (for the use of SAIC only), but will not be shared with the County or other parties, whether related to this project or otherwise.

All information will remain strictly confidential as the information provided will be aggregated with all other haulers, processors and generators surveyed in Santa Fe County. The purpose of surveying haulers, processors and generators is to understand the volume of materials that are generated by County residents and commercial entities and the collection services provided by the private sector.

For purposes of this study all data will be aggregated prior to providing the data to any of the entities (City, County and SFSWMA).

102 Grant Avenue · P.O. Box 276 · Santa Fe, New Mexico 87504-0276 · 505-986-6200 · FAX: 505-995-2740 www.santafecounty.org

SAIC will provide all companies a written statement of confidentiality to further support their commitment to your business and the confidentiality of the information provided (Sample attached).

Santa Fe County sincerely appreciates your commitment to providing safe and efficient solid waste services to the residents of the County and hopes you will support our efforts to gain a better understanding of the private sector's solid waste services in the County as we consider effective solid waste and recycling strategies going forward. Craig O'Hare, with the County Public Works Department, is the Project Manager for the County's portion of the SAIC study. In addition to communicating with the SAIC representative that will be contacting you, feel free to contact Craig directly (cohare@santafecountynm.gov, 505-992-3044), should you have any questions, concerns or helpful ideas about the study.

Sincerely,

Adam Leigland
Santa Fe County Public Works Director

Attach: Scope of Services, Sample Confidentiality Agreement

102 Grant Avenue · P.O. Box 276 · Santa Fe, New Mexico 87504-0276 · 505-986-6200 · FAX: 505-995-2740 www.santafecounty.org

Section 4
SOLID WASTE MANAGEMENT SYSTEM

4.1 Introduction and Background

Santa Fe County (County) is considering managing solid waste county-wide, including the waste collected by private haulers. As a result, the County is considering developing a system to manage the collection of solid waste by private haulers within certain areas of its jurisdiction. This section of the report provides direction concerning the issues that must be considered in implementing such a system. The following sections present an outline of the steps the County can undertake to implement a solid waste management system. The actual implementation of such a system is beyond the scope of this Solid Waste Assessment and Management Study. The following steps may be undertaken by the County using its own resources, or it may engage the services of a qualified consultant to assist in addressing some or all of the effort required.

4.1.1 Solid Waste Management in the County

The County Solid Waste Division collects and transports refuse and recyclables that are self-hauled by citizens to seven convenience centers, also referred to as transfer stations. In unincorporated areas of the County, private haulers collect refuse from residential and commercial customers on a "free market – subscription" basis in County unincorporated areas. There are no designated territories or contractual arrangements with the private haulers set up by the County. In contrast, the City of Santa Fe's (City) Solid Waste Division collects all residential and commercial trash in the City.[1, 2]

4.1.2 About Solid Waste Collection Contracts or Licenses

In many areas across the country, local governments use contracts or licensing systems to manage solid waste collection conducted by private haulers in their jurisdictions. Under contract or licensing systems, a company (or companies) is given the right to provide solid waste services in the County. Based on a local government's solid waste policies and goals, the company may be required to: 1) deliver waste to specific disposal or recycling facilities; 2) report tonnage managed; 3) provide recycling services; and 4) report customer or other operational data to the County. The company may also be required to pay the local government an "administration fee" as part of the contract arrangement. Such an approach is often called private hauler "franchising." In this report, the phrase "solid waste management system" is, instead, used to convey the broader solid waste management objectives that are achieved by such an approach.

[1] Comprehensive Solid Waste Management Plan
[2] Construction and demolition debris may be collected by private solid waste haulers in the City.

It is recommended that the County pursue such an arrangement for residential solid waste management in certain identified areas of the County. At a later date, the County can consider whether it wants to establish a similar management system for commercial solid waste. In this report, Residential Solid Waste Collection Contracts (Residential Contracts) are suggested to be awarded to firms that would be the sole provider of service in specific designated areas. Under this proposal, the Residential Contracts and possible future Commercial Licenses, along with an enabling ordinance and rules, would make up the County's private sector solid waste management system.

Some of the expected benefits and challenges associated with implementing a solid waste collection management system are listed in Table 4-1.

Table 4-1
Benefits and Challenges of Implementing a
Solid Waste Collection Management System

Benefits	Challenges
• Protect public health, safety, and welfare • Offer affordable solid waste service to customers • Generally, due to economies of scale, customers cost for service under collection contracts may be less than equivalent services under open markets[1] • Control solid waste collection activities and assure minimum service standards are met • Increase recycling participation and waste diversion rates • Revenue recovery (with adoption of an administration fee) to address heavy truck impacts to County infrastructure (i.e., wear and tear of roadways) and to support solid waste programs	• Development and implementation of a management system • Increased administration to manage franchising • Enforcement of franchising • Private sector hauler reaction

[1] With the implementation of a residential solid waste management system, granting one service provider an exclusive Residential Contract to serve a defined area, the price for the services provided is generally less than in a situation where multiple service providers operate overlapping routes providing the same services. Of course, if the Residential Contract requires a higher level of service than currently provided (i.e., add recycling collection where it was not provided before), the price may increase.

4.1.3 Using Solid Waste Collection Permits as a Data Gathering Tool

Beyond the County's convenience center activities, fully understanding private hauler solid waste management activities in the unincorporated County is difficult because of the lack of data concerning where waste is generated, who transports it, where it is managed ,and how much is disposed or recycled. To aid in gathering data, some counties across the country have incorporated solid waste data reporting requirements in their solid waste ordinances. To assure reporting requirements are met, the solid waste haulers are required to periodically (e.g., quarterly or annually) report the quantity of waste and recyclables collected and the destinations to which they are delivered. This report identifies three possible residential collection areas where a Residential Contract would authorize a single private hauler to serve a given collection area. Solid waste data reporting requirements are customarily included in such

contracts. However, in addition to the three collection areas, the County could consider establishing reporting requirements for all solid waste collection in the County.

A limited permitting system that would require all private haulers, whether in the three collection areas or not, to report certain data to the County would be similar to the Commercial Licensing system discussed below. An important distinction about the permit is that it would apply to all waste collection activities countywide.

Permit systems, Commercial Licenses, and Residential Contracts are all tools available to the County in implementing a solid waste management system. The County should assess each of these tools as it considers how best to implement a solid waste management system. Implementing permits, licenses, or contracts each places a burden on the County and the affected solid waste haulers. The benefit gained by implementing the selected solid waste management system should align with effort required by the County and haulers to implement the system.

4.1.4 Examples of Solid Waste Management Systems in New Mexico

Bernalillo County

Bernalillo County has established a solid waste management system that requires all residential units in the unincorporated areas of the county to use county contracted solid waste collection haulers. Three hauler collection areas have been defined by the county, and certain areas in the "east mountains" are exempt from the requirement to use the contract solid waste hauler. One hauler provides solid waste collection and recycling collection in all three areas. Under the county's system, the contractor bills the resident directly for the service provided. The hauler stated that the hauler collects residents on behalf of Bernalillo County, and hands over the collected fees to the County. The County then pays the hauler for services provided, and the County keeps an administrative fee. The hauler bills each resident $16.20 per month. The County pays the hauler $11.60 per household per month and retains the difference.

The county code governing solid waste management (Bernalillo County Code Chapter 70) requires solid waste to be "collected, conveyed and disposed of by the county or its authorized contractors." Actual producers of solid waste may haul their own waste for disposal. The code authorizes the county manager to implement a licensing requirement and licensing fee for haulers that transport solid waste and authorizes the board of county commissioners to designate areas of the county for the phase in of mandatory solid waste collection service. The haulers are not required to deliver waste to any particular landfill for disposal of solid waste.

Taos County

Two solid waste haulers have entered into non-exclusive franchise agreements authorizing the haulers to collect residential and commercial solid waste in unincorporated areas of Taos County. The franchise agreements require that the hauler pay the county a franchise fee, establish BCC review and approval of rates and

rate structure, require reporting of customers and waste volumes, and require collected waste to be delivered to the Taos Regional Landfill. The franchise agreements also establish certain performance standards that include minimum insurance requirements, and requirements for the haulers to address customer complaints.

The franchise agreements have a term of four years, renewable for an additional four-year term. The franchise agreements do not create designated service areas, and the two haulers compete countywide. The larger hauler is reported to have approximately 95 percent market share. The county charges each hauler a franchise fee based on a percentage of gross revenues collected. The larger firm pays a franchise fee of 8 percent and the smaller firm pays a fee of 4 percent. The franchise fee shows up as a separate line item on the individual invoice. Curbside rates charged to customers range from $20.72-36.96/month (depending on the housing density in the area). Garbage is collected in 90 gallon containers, no recycling service is provided curbside.

4.1.5 Regulatory Background

In New Mexico, counties are granted the authority to "establish, maintain, manage and supervise a system of storage, collection and disposal of all refuse."[3] The County has adopted solid waste management ordinances that establish and define the County's solid waste management system, most recently as Ordinance 2010-5, adopted June 8, 2010 (the Solid Waste Ordinance). Ordinance 2010-5 generally defines a solid waste management system organized around the County operating a series of solid waste citizen convenience centers (also known as solid waste transfer stations).

On May 28, 2013, the Solid Waste Ordinance was amended (Solid Waste Ordinance Amendments) to establish mandatory roadside collection districts and to establish procedures for roadside solid waste collection. While these amendments are related specifically to areas of the County that were and will be annexed into the City of Santa Fe, there are important parallels between the Solid Waste Ordinance Amendments and steps the County will need to consider in implementing a solid waste collection contract.

In December 2013, the County adopted the Sustainable Land Development Code SLDC). Section 7.20 of the SLDC addresses certain solid waste management related matters. In particular, 70.20.2.1 requires that "All developments within SDA-1 shall be served by County curbside collection as prescribed by separate ordinance, if applicable, or shall utilize a solid waste collection service." Further 70.20.2.2 states that "All subdivisions within SDA-2 or SDA-3 and all non-residential multifamily and manufactured home communities shall be served by County curbside collection and recycling as prescribed by separate ordinance, if applicable, or if inapplicable utilize one of the following: 1) a solid waste collection service; or 2) the nearest existing sanitary landfill or transfer station." It appears that the SLDC and the solid waste management system proposed in this report are compatible, but the County should assure alignment of the SLDC and any new solid waste ordinance that is created.

[3] NSMA 1978, Section 4-56-1

4.1.6 Planning Background

In December 2010, a Comprehensive Solid Waste Management Plan (Solid Waste Plan) was finalized for the City, County, and Santa Fe Solid Waste Management Agency (Agency), and it was adopted by the Board of County Commissioners (BCC) on February 22, 2011.[4] Two recommendations related to implementing a solid waste collection control system in the County are identified in the Solid Waste Plan. The two recommendations are listed below:

- **Recommendation # 12** – Explore the feasibility of establishing franchises or permits for private haulers in County unincorporated areas.
- **Recommendation # 13** – Evaluate requiring that residential, commercial, and institutional generators receive collection services for trash and recyclables in County unincorporated areas.

In 2010, the County adopted the Santa Fe County Sustainable Growth Management Plan (Growth Management Plan).[5] The Growth Management Plan identifies Sustainable Development Areas (SDA) in the County where growth is occurring and where future growth should be directed. The designation SDA-1 is assigned to areas contiguous to the City that anticipate higher growth rates and denser development and SDA-2 is assigned to areas where more moderate development density are planned. SDA-1 and SDA-2 are the optimum areas for implementing a solid waste collection management system.

On February 12, 2013, the County's Solid Waste Task Force (Task Force) made a presentation to the BCC entitled "Solid Waste Task Force Report and Short-Term Recommendations." In the presentation, the BCC accepted a number of the Task Force's recommendations, including "[Proceeding] with and [funding] the County-wide solid waste study." One of the tasks in this study is a "Franchising Assessment: Develop options to more actively manage SW in the unincorporated County, including franchising of private haulers."

At the August 27, 2013 BCC meeting, Leidos made a presentation to the BCC concerning solid waste contracting and discussed the different approaches and considerations for implementing such contracts. Matters that were discussed and direction was received from the BCC at the meeting to continue with investigating the possibility of implementing a solid waste management system and report back to the BCC with findings. The directions provided by the BCC concerning possible approaches to implementing a solid waste management system are incorporated into this report.

[4] County Resolution No. 2011-16
[5] County Resolutions 2010-210 and 2010-225

4.2 Tasks and Timing Considerations

Figure 4-1 shows the process steps and a relative timeline for implementing a solid waste management system in the County. Key elements to consider in the timeline are described below. It should be realized that the presented timeline may need to be adjusted in response to feedback received from the BCC, private haulers, or residents or in response to unforeseen occurrences.

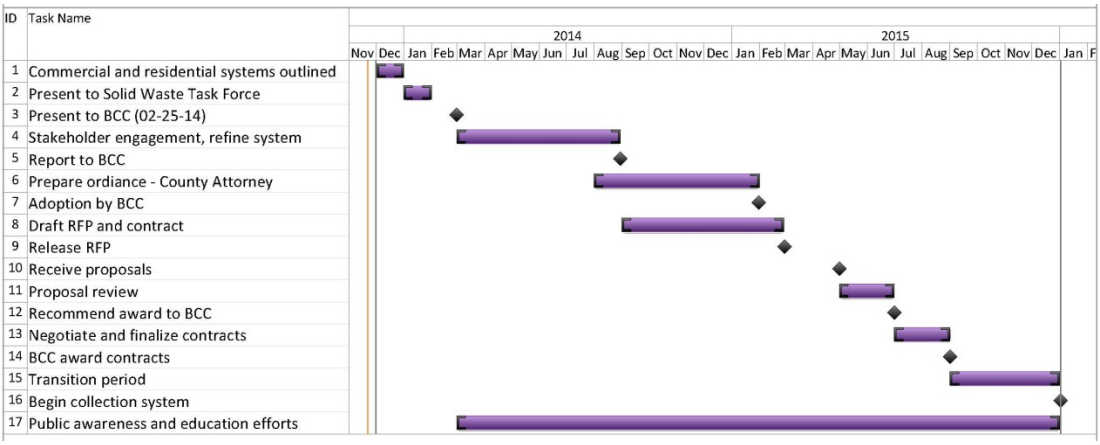


Figure 4-1. Key Tasks and Implementation Timeline

As shown in Figure 4-1, the following steps may be taken to develop and implement a solid waste management system.

Step 1. Investigate and outline the proposed solid waste management system as directed by the BCC (the results are presented in this report).

Step 2. Present this report and the proposed solid waste management system to the County Solid Waste Task Force for feedback and input.

Step 3. Present to the BCC the information in this report outlining the approach to developing a countywide solid waste management system, convey the input from the Solid Waste Task Force, and request authorization to proceed with implementation.

Step 4. If the BCC authorizes implementation, County staff should undertake efforts to engage stakeholders that may be affected by the solid waste management system to obtain their feedback. Feedback could be solicited from affected homeowners and homeowners associations by conducting a series of public meetings to discuss the proposed system. Also, County staff could have discussions with solid waste haulers concerning their interest and ideas for the solid waste collection contract and the procurement process prior to initiating the formal solicitation.

Step 5. Staff should report back to the BCC concerning public comments receive and request BCC authorization for the County Attorney to update the solid waste ordinance to implement the solid waste management system.

Step 6. County Attorney would draft the necessary revisions to the solid waste ordinance, if directed by the BCC.

Step 7. Upon completion of ordinance development by the County Attorney's office, it would be presented to the BBC for adoption.

Step 8. If directed to do so by the BCC, concurrent to preparing the update to the solid waste ordinance, staff should develop a draft request for proposal (RFP) and contract with the assistance of the County Attorney, and/or other appropriate outside assistance.

Step 9. Upon completion of the RFP and contract, the procurement should be released for solicitation. It is customary to conduct a pre-proposal meeting to offer potential proposers an opportunity to address any questions they have concerning the formal procurement or draft contract.

Step 10. After a period of time, approximately 60 to 90 days, proposals from interested solid waste hauling firms should be submitted to the County.

Step 11. Upon receipt of the proposals, staff should evaluate the submitted proposal. Section 4.8, below, provides an outline of potential review criteria.

Step 12. After careful evaluation of the submitted proposals, the ranked proposals should be presented to the BCC for preliminary award in order for the BCC to authorize staff to negotiate any outstanding terms or conditions as appropriate with the selected vendors.

Step 13. Following BCC direction, staff should conduct negotiations to finalize any outstanding issues with the selected vendors. While including the draft agreements in the RFP should eliminate the need for significant contract negotiations, time should be allotted for the selected contractors to provide all required information (e.g., insurance certificates) before the BCC awards the contracts.

Step 14. Staff should bring the final contracts back to the BCC for final award to the selected haulers.

Step 15. The transition period provides a number of months for the selected vendors to obtain and put into service appropriate resources and to transition customers to new service providers, if necessary.

Step 16. Begin operations under the contracts.

Step 17. Throughout the planning and implementation process, the County should undertake efforts to advise citizens of the new solid waste management systems and its benefits. The public awareness efforts can include public meetings, a promotional campaign, advertising, outreach at fiestas and public events, etc.

Obviously, significant County staff time will be required to undertake the tasks outlined in Steps 1 through 17. Once the program is in place, however, the administrative demands on County staff are greatly reduced (discussed in Section 4.9).

4.3 Service Level Criteria

An important consideration in implementing a solid waste collection management system is the services that residential solid waste collection service providers

(Residential Contractors or Contractor) and commercial solid waste collection service providers (Commercial Licensees or Licensee) are expected to provide. The work effort expected from these service providers are defined in the following sections.

4.3.1 Service Levels for Residential Collection Service

For residential solid waste collection service, it is recommended that three separate Residential Contracts will be awarded. Each Residential Contract would be awarded to a firm to provide collection service in one of three discrete service areas. The service level criteria suggested to be incorporated into the Residential Contracts are listed in Table 4-2.

Table 4-2
Residential Solid Waste Collection Service Levels

Service Level Criteria	Approach
Residential Solid Waste Collection Contract	Residential collection in designated areas of unincorporated County can only be performed by firms under contract with the County
Exclusive Service Area	One service provider will be granted a contract for a service area. If residents choose to have collection service, they must contract with the area's Residential Contractor
Non-Mandatory Collection	Residents are not required to have roadside collection (i.e. they may continue to self-haul to transfer stations)
Contract Term	Contracts typically are awarded for a period that would allow a contractor to amortize the cost of equipment, generally five to seven years, with contract extensions if both parties agree
Contract Award Process	Request for Proposal
Service Areas	As defined by County - three initial areas identified in this report
Contractor Service Area Limitation	No provider shall be awarded more than two of the three identified service areas
Service Provider to Contract Directly with Customer	Contractor shall contract directly with the resident for service and be responsible for billing resident
Garbage Collection	Once per week
Garbage Containers	Carts provided by collector, size 96 gallons with smaller alternatives available. It is possible to promote a "pay as you throw" approach by establishing different prices for different sizes of containers (e.g., a lower price for a smaller container)
Recyclables Collection	At minimum once every other week.
Recyclables Containers	96 gallon carts with smaller alternatives available, or bins
Recyclables Collected	List of collected materials to be consistent with BuRRT acceptance criteria
Bulky Waste Collection	On-call billed per pickup
Yard Waste Collection	On-call billed per pickup
Waste Excluded from Collection	Tires, hazardous, or special waste

Service Level Criteria	Approach
Waste Segregation Required	Garbage, recyclables, bulk waste, and yard waste must each be collected separately and shall not be commingled with each other
Service Price	To be determined by competitive procurement
Spillage and Litter	Must be cleaned up immediately with report to County
Complaints	Contractor to maintain a call center during collection hours and make monthly reports to County
Property Damage	Contractor responsible for repairs and must make monthly report to County. In the event of a dispute, County may make repairs and bill contractor
Missed Collection	Must be collected within 24-hours
Insurance Requirements	Determined by County
Collection Equipment	Equipment shall not be more than seven years old without written consent of County. Equipment shall be maintained in good repair. Equipment may be removed from service area if repeated violations of spillage and litter
Equipment Marking	All containers and equipment shall be marked with contractors name and contact number
Reports to County	1. Customer list (additions and deletions each month) 2. Complaints and resolution 3. Quantity of material collected and disposed/recycled
Disposal/Recycling Facilities	All collected material to be delivered to Caja Landfill or BuRRT
Hours and Days of Collection	Monday through Friday 7 am to 6 pm
Holiday Collection	No collection required on New Year's Day, Thanksgiving Day, and Christmas Day. Waste not collected on designated holiday shall be collected on the following Saturday.
Notification	Customers must be notified annually of rates, service level, and any pending rate changes
Non-Collection Procedures	If unacceptable waste is left at the curb, the contractor must leave a tag notifying the resident of the problem
Contractor's Recourse for Non-Payment	Contractor shall be allowed to remove containers from customer's site with notification to County
County Contract Administration Fee	To be determined

4.3.2 Service Levels for Commercial Collection

Once the County has decided if it wants to implement a residential solid waste management system, it may then want to address commercial solid waste collection. In the event that the County decides to initiate a commercial solid waste collection management system, this section provides an outline for implementing such a system.

As described in Section 4.1.3, the County could implement a limited permit system to facilitate data gathering concerning certain solid waste management activities in unincorporated Santa Fe County.

If a commercial solid waste collection management system is implemented, it is suggested that multiple firms be awarded Commercial Licenses. In this scenario, all of the Commercial Licensees would be allowed to provide services throughout a County designated commercial solid waste service area. The Commercial Licenses would establish a minimum level of service each firm will be required to provide in return for the privilege of being able to compete for commercial solid waste customers.

Table 4-3
Service Levels for Commercial Collection

Service Level Criteria	Approach
Commercial Solid Waste Collection License	Commercial solid waste collection in designated areas of unincorporated Santa Fe County can only be performed by firms awarded a Commercial License by the County
Non-Exclusive Service Area	Licensed firms will be authorized to collect waste Countywide
Non-Mandatory Collection	Customers are not required to contract for collection
License Term	To be determined
License Award Process	Request for Proposal process with multiple licenses awarded to top qualifying firms as determined by the County
Service Areas	As defined by County
Contractor Service Area Limitation	Licensed firms may compete for customers countywide
Service Provider to Contract Directly with Customer	Licensee shall contract directly with the business for service and be responsible for billing the customer
Garbage Collection	Minimum service level is once per week for garbage
Garbage Containers	Carts or dumpsters as negotiated between Licensee and customer
Recyclables Collection	Must make recycling available to all customers
Recyclables Containers	Carts or dumpsters as negotiated between Licensee and customer
Recyclables Collected	Negotiated between Licensee and customer
Bulky Waste Collection	Negotiated between Licensee and customer
Yard Waste Collection	Negotiated between Licensee and customer
Waste Excluded from Collection	Tires, hazardous, or special waste
Waste Segregation Required	Garbage, recyclables, bulk waste, and yard waste must each be collected separately and shall not be commingled with each other
Service Price	To be determined between Licensee and customer
Spillage and Litter	Must be cleaned up immediately with report to County
Complaints	Contractor to maintain a call center during collection hours and make monthly reports to County
Property Damage	Contractor responsible for repairs and must make monthly report to County. In the event of a dispute, County may make repairs and bill contractor
Missed Collection	Must be collected within 24-hours
Insurance Requirements	Determined by County
Collection Equipment	Equipment shall be maintained in good repair. Equipment may be removed from service area if repeated violations of spillage and litter

Service Level Criteria	Approach
Equipment Marking	All containers and equipment shall be marked with contractors name and contact number
Reports to County	1. Customer count (additions and deletions each month) 2. Complaints and resolution 3. Quantity of material collected and disposed/recycled
Disposal/Recycling Facilities	All collected solid waste material to be delivered to Caja Landfill, recycling is open market
Hours and Days of Collection	Monday through Sunday 4 am to 6 pm
Holiday Collection	To be determined between Licensee and customer
Notification	Customers must be notified annually of rates, service level, and any pending rate changes
Non-Collection Procedures	To be determined between Licensee and customer
Contractor's Recourse for Non-Payment	Contractor shall be allowed to remove containers from customer's site with notification to County
County Contract Administration Fee	To be determined

4.4 Collection Service Areas

As described above, the SDAs designated in the Growth Management Plan identify areas in the County where growth is occurring and where future growth should be directed. Areas designated SDA-1 and SDA-2 that are contiguous or in close proximity to the City present relatively densely populated areas that can provide optimum solid waste collection service areas.

4.4.1 Residential Solid Waste Collection Service Areas

County geographic information system (GIS) maps were analyzed in the development of residential solid waste collection service areas. As described earlier in the report, three service areas for residential waste collection are recommended. Approximately 15,700 residential dwelling units are located in SDA-1 and SDA-2 contiguous or in close proximity to the City. As shown in Table 4-4, three possible service areas with approximately the same number of residential units could be created. The three residential service areas designated North Service Area, Southeast Service Area, and Southwest Service Area are shown in Figures 4-4. Based on information presented in "Section 3Wasteshed Analysis," Leidos estimates that private solid waste haulers serve between 6,000 to 6,500 residences in the unincorporated County and collect approximately 14,000 to 15,500 tons of refuse and recyclables annually. Based on information gathered during the solid waste hauler interviews (see Section 4.10), the County may want to consider creating a fourth service area that targets allowing smaller solid waste hauling companies to compete for a franchise service area.

Table 4-4
Number of Housing Units

Residential Service Area	Total
North Service Area	5,011
Southeast Service Area	5,729
Southwest Service Area	5,006
Total	15,746

Source: County GIS Data

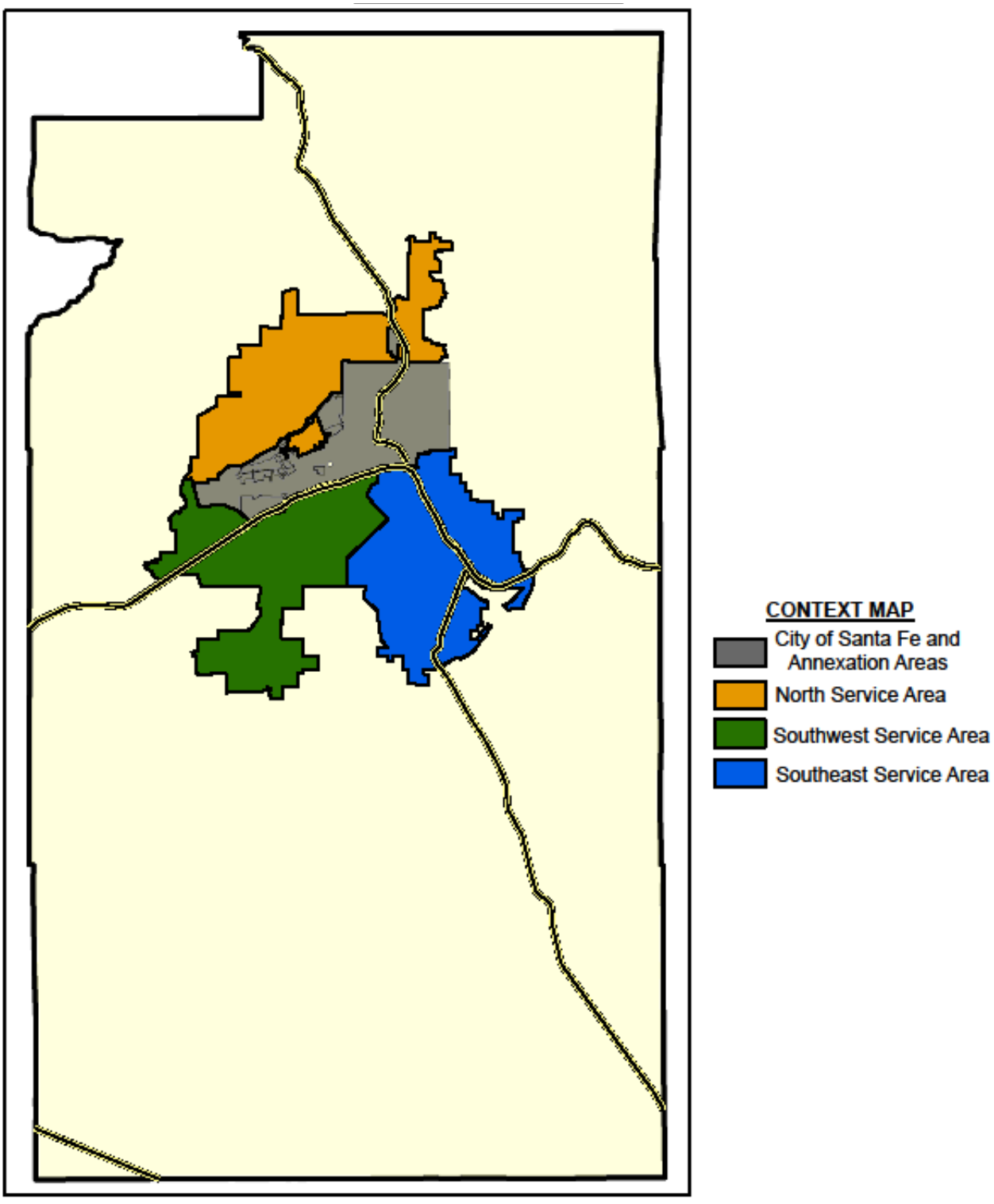


Figure 4-2. Residential Solid Waste Collection Service Areas

4.4.2 Commercial Service Area

The single commercial solid waste collection service area is proposed to overlay all three residential service areas combined. The Commercial Service Area shown in Figure 4-3 encompasses approximately 340 businesses properties (including commercial and industrial properties).[6]

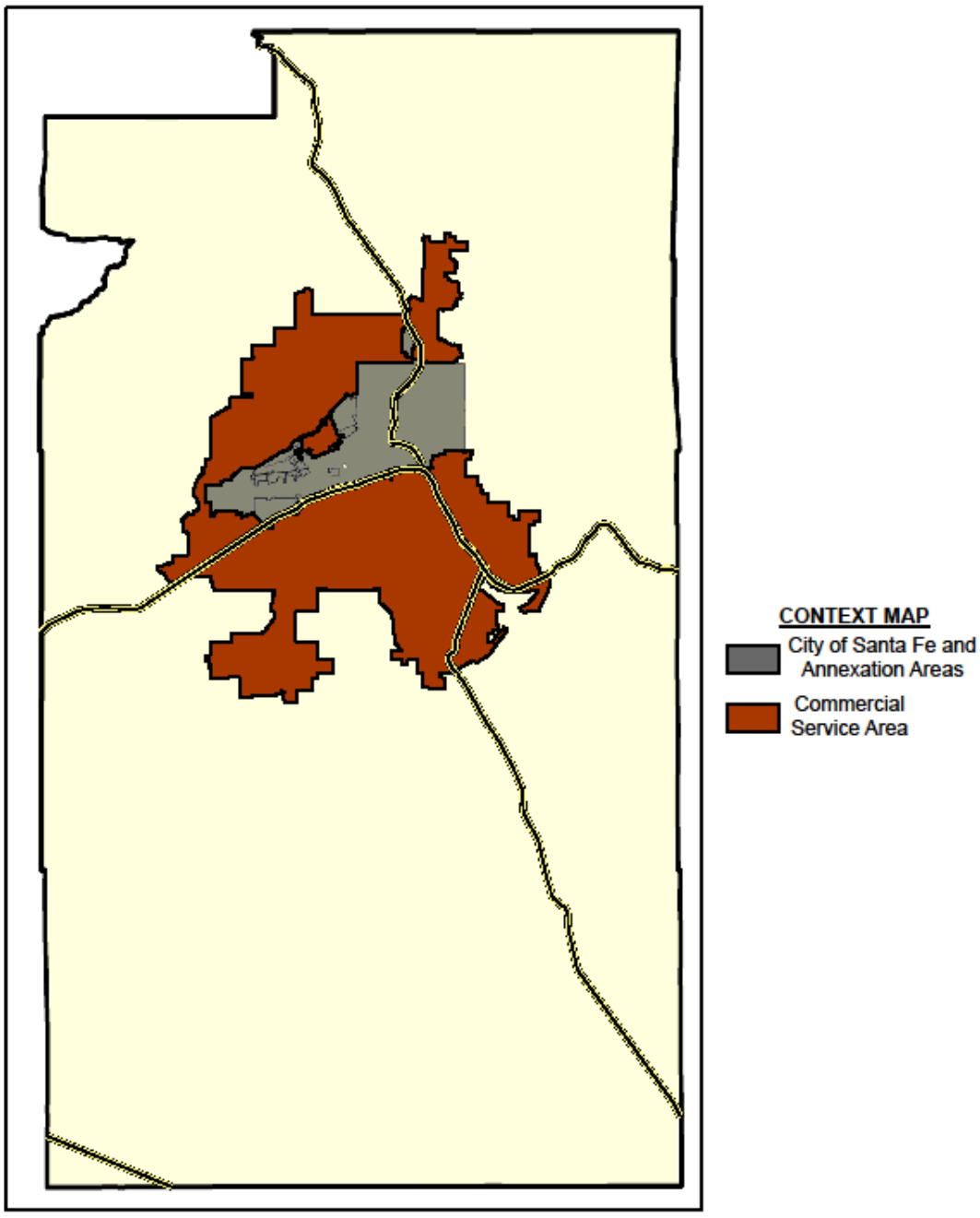


Figure 4-3. Commercial Service Area

[6] Based on County GIS data.

4.5 Solid Waste Ordinance Revisions

As described in Section 1, the County amended its Solid Waste Ordinance in May 2013 to address mandatory residential solid waste collection in areas of the unincorporated County that were or will be annexed into the City. To implement the Residential Contracts and Commercial Licenses the County would need to further update the Solid Waste Ordinance.[7] Key elements that must be included in a revised Solid Waste Ordinance to implement the new solid waste system are listed in Table 4-5.

Table 4-5
Elements of Solid Waste Ordinance Requiring Revision

Issues to Address
Update definitions to include new terms used in Residential Contracts and Commercial Licenses
Authorize BCC to police and regulate persons generating, collecting, and transporting waste in the unincorporated County
Authorize BCC to create and modify residential and commercial solid waste collection service areas
Create solid waste collection service areas
Authorize BCC to grant Residential Contracts and Commercial Licenses
Require solid waste collectors to have Residential Contracts and Commercial Licenses to provide service and their define rights and responsibilities
Require residents and businesses to contract for collection service only with Residential Contractors and Commercial Licensees
Authorize BCC to set, charge, and collect solid waste related fees
Establish that Residential Contractors and Commercial Licensees may be required to post bonds or letters of credit as established by the BCC (to assure conformance with agreements and assure payment of any assessed penalties)
Authorize BCC to set rates for residential solid waste collection service
Identify authorized disposal site(s) and residential recycling site(s)
Other issues may be addressed as determined by the County Attorney

[7] It is expected that the County Attorney will be responsible for the final development of any legal documents developed for the County. The outline of terms reflects Leidos' experience providing technical support in developing solid waste collection procurement documents.

4.6 Outline of Contract/License Terms

The Residential Contracts and Commercial Licenses would need to include additional language beyond the service level criteria developed above. The information in Tables 4-6 and 4-7 presents generic lists of the sections that could be included in the final agreements.[8]

4.6.1 Residential Contract Terms

Sections that may be incorporated into Residential Contracts are provided in Table 4-6.

Table 4-6
Outline of Residential Contract Terms

Section	Title	Description
TOC	Table of Contents	
Intro.	Recitals	Whereas clauses providing background for agreement
1	Definitions	Listing of all defined terms used in the contract
2	Contract	Describe the rights granted under the contract (e.g., exclusive right to collect residential solid waste), along with the limitations of the contract
3	Contract Term	Define the time period of the contract and any renewals
4	Service Area	Define the service area granted under the contract and describe how adjustments will be made to the service area, if any
5	Contractor's Obligations Prior to the Commencement Date	Require Contractor to provide a transition plan and identify transition period deadlines
6	General Scope of Contractor's Duties	General description of Contractors responsibilities
7	Contractor's Specific Collection Services	Detailed description of the scope of work to be performed by the Contractor. Need to be sure to identify any special collection circumstances that may exist (e.g., alley collection, small roadways, etc.)
8	Hours and Days of Collection Service	Define dates and time collection is allowed, identify any holidays
9	Schedules and Routes for Collection Service	Require hauler to provide information on how routes will be operated in the service area
10	The Customer List	Requirement for the Contractor to periodically provide a list of customers served to the County
11	Proper Collection Procedures	Describe Contractor's collection requirements

[8] It is expected that the County Attorney will be responsible for the final development of any legal documents developed for the County. The outline of terms reflects Leidos' experience providing technical support in developing solid waste collection procurement documents.

Section	Title	Description
12	Restriction On collection of Mixed Loads	Describe any materials that must be collected separately (e.g., requirement that recyclables may not be collected with garbage)
13	Non-Collection Procedures	Describe procedure the Contractor must follow if waste is left at the curb because it is not acceptable
14	Procedures for Missed Collection	Procedures Contractor must follow if waste is not collected as scheduled
15	Protection of Private Property	Describe Contractors responsibility to repair private property damages
16	Contractor's Access to Streets and Collection Containers	Grant Contractor right to access County streets to provide collection service
17	The County's Designated Facility	List the facilities where Contractors are allowed to deliver collected materials (e.g., Caja Landfill and BuRRT)
18	Spillage and Litter	Require Contractor to clean up spills and litter it causes
19	Exempt Waste	List wastes that are not required to be picked up
20	Contractor's Safety Program	Require each hauler to have a safety program
21	Contractor's Collection Plan	Require hauler to have a written collection plan
22	Ownership of Solid Waste and Recyclable Materials	Define that ownership of materials transfers from customer to hauler at time of collection
23	Set Out Procedures for Customers	Describe how customers shall prepare waste for collection. This will be different for resident, commercial, recycling, etc.
24	Collection Containers	Describe the types of collection containers to be used, who owns the containers, how they are distributed, etc.
25	Contractor's Vehicles and Collection Equipment	Requirements for the operation and maintenance of equipment to be operated by Contractor. Describe any required markings, cleanliness, etc. Describe if County wants to inspect vehicles periodically
26	Contractor's Personnel	Requirements for experience of management, training requirements, identification of points of contact, how employees should conduct themselves, minimum attire, any labor law restrictions and requirements
27	Contractor's Office	Require local office
28	Customer Relations and Handling Customer Complaints	Describe how customer complaints will be handled, local phone number, and dispute resolution
29	Contractor Relationship with County	Describe access County should have to Contractor's contacts, define County Manager as responsible official for contract management, County's right to inspect Contractor's operations and records

Section	Title	Description
30	Contract for Collection Service	Contractor will contract directly with customers for service. Describe the contract that Contractor must enter into with customers served, County has right to review and approve contract used to assure conformance with this contract, state terms for Contractor to bill customers, describe frequency of invoicing and whether invoicing is in advance or arrears, define circumstances for terminating service
31	Record Keeping and Reporting	List what reports the Contractor must make to the County and reporting frequency (e.g., monthly report listing customer served and amount invoice, customers added and terminated each month, quantities collected, recycled and disposed, complaints, property damage), explicitly state County's right to audit hauler's records
32	Public Notices and Educational Services	Identify what notices need to be provided to residents and when (e.g., commencement of service notification, annual notice of rates to customers, notices to new customers, notices required for changing collection days, holiday collection) and any educational
33	Contractor's Collection Service to County	Optional: Include any services to county that Contractor shall provide (e.g., service to County facilities or transfer stations)
34	Contractor's Emergency Service	Optional: Include any disaster recovery services that Contractor may provide to the County upon notice by County
35	Rates for Contractor's Service	All rates must be uniform to customers, refer to Contractor's proposed rates, describe rate increases (e.g., CPI or percent of CPI, fuel increase, adjustments to disposal rates) identify components of proposers rates (collection versus disposal), adjustments for change in law, if extraordinary rate adjustments can be requested
36	Payments to the County	Fee paid to County for administering the contract, and any other amounts due to the County (e.g., "Each Agreement Year, the Contractor shall pay to the County the sum of _____, which shall compensate the County for the administrative and other services provided by the County in connection with this Agreement")
37	Recycling Revenues	Contractor shall receive all recycling revenue, if any
38	Tipping Fees	Contractor responsible for paying all tipping fees
39	Administrative Charges	List of penalties that may be assessed to Contractor for failure to perform, describe the mutual agreement to penalties, procedure for assessing, appeal procedure, include penalties for failure to meet transition deadlines
40	Force Majeure	Describe force majeure
41	Beach and Termination	List grounds and procedure for breach and termination including failure to fulfil obligations, insolvency of Contractor, repeat violations
42	Operations During Dispute	Require Contractor to perform duties during a dispute
43	Dispute Resolution Procedures	Describe dispute resolution procedures
44	Contractor's Obligations Prior to Termination	Describe requirements for Contractor to assist in transfer of service at termination of agreement

Section	Title	Description
45	Indemnification and Hold Harmless	As determined by County Attorney
46	Contractor's Insurance	As determined by County
47	Performance Bond	If required
48	Parent Corporation Guarantee	As determined by County
49	Assignment or Transfer of Agreement	Contract may be assigned or transferred by Contractor only with approval of the County
50	Amendments to Agreement	List conditions for amending agreement
51	Governing Law and Venue	As determined by County Attorney
52	Compliance with Regulations	Require Contractor to comply with all applicable laws and regulations
53	Permits and Licenses	Describe permits and licenses required by Contractor
54	Other Terms and Conditions	As determined by County Attorney, may include: Headings, Construction, Survivability, Severability, Sovran Immunity, Remedies, Equal Opportunity Employment, etc.
55	Agreement Documents	Describe any associated documents that are part of the agreement (e.g., request for proposal, Contractor's proposal, attached maps)
56	Notice to Parties	Notices
57	Exhibits	Exhibits

4.6.2 Commercial License Agreement Terms

Sections that may be incorporated into Commercial Licenses are listed in Table 4-7.

Table 4-7
Outline of Commercial Contract Terms

Section	Title	Description
TOC	Table of Contents	
Intro.	Recitals	Whereas clauses providing background for agreement
1	Definitions	Listing of all defined terms used in the license
2	License	Describe the rights granted under the license (e.g., right to collect commercial solid waste), along with the limitations of the license
3	License Term	Define the time period of the license and any renewals
4	Service Area	Define the service area granted under the license and describe how adjustments will be made to the service area, if any
5	General Scope of Licensee's Duties	General description of Licensees responsibilities

Section	Title	Description
6	Licensee's Specific Collection Services	Detailed description of the scope of work to be performed by the Licensee. Need to be sure to identify any special collection circumstances that may exist (e.g., alley collection, small roadways, etc.)
7	Hours and Days of Collection Service	Define dates and time collection is allowed, identify any holidays
8	Proper Collection Procedures	Describe Licensee collection requirements
9	Restriction On collection of Mixed Loads	Describe any materials that must be collected separately (e.g., requirement that recyclables may not be collected with garbage)
10	Protection of Private Property	Describe Licensee responsibility to repair private property damages
11	Licensee's Access to Streets and Collection Containers	Grant Licensee right to access County streets to provide collection service
12	The County's Designated Facility	List the facilities where Licensees are required to deliver collected materials (e.g., Caja Landfill for solid waste)
13	Spillage and Litter	Require Licensee to clean up spills and litter it causes
14	Exempt Waste	List wastes that are not required to be picked up
15	Ownership of Solid Waste and Recyclable Materials	Define that ownership of materials transfers from customer to hauler at time of collection
16	Collection Containers	Describe the types of collection containers to be used, who owns the containers, how they are distributed, etc.
17	Licensee's Vehicles and Collection Equipment	Requirements for the operation and maintenance of equipment to be operated by Licensee. Describe any required markings, cleanliness, etc. Describe if County wants to inspect vehicles periodically
18	Licensee's Personnel	Requirements for experience of management, training requirements, identification of points of contact, how employees should conduct themselves, minimum attire, any labor law restrictions and requirements
19	Licensee's Office	Require local office
20	Customer Relations and Handling Customer Complaints	Describe how customer complaints will be handled, local phone number, including dispute resolution
21	Licensee Relationship with County	Describe access County should have to Licensee's contacts, define County Manager as responsible official for contract management, County's right to inspect Licensee's operations and records

Section	Title	Description
22	Contract for Collection Service	Licensee will contract directly with customers for service. Describe the contract that Licensee must enter into with customers served, County has right to review and approve contract used to assure conformance with this license, state terms for Licensee to bill customers, describe frequency of invoicing and whether invoicing is in advance or arrears, define circumstances for terminating service
23	Record Keeping and Reporting	List what reports the Licensee must make to the County and reporting frequency (e.g., monthly report listing number of customer served each month, quantities collected, recycled and disposed, complaints, property damage), explicitly state County's right to audit hauler's records
24	Public Notices and Educational Services	Identify what notices need to be provided to residents and when (e.g., commencement of service notification, annual notice of rates to customers, notices to new customers, notices required for changing collection days, holiday collection) and any educational support that must be provided to the County
25	Rates for Licensee's Service	Rates to be negotiated with customers
26	Payments to the County	Fee paid to County for administering the contract, and any other amounts due to the County (e.g., "Each Agreement Year, the Licensee shall pay to the County the sum of _____, which shall compensate the County for the administrative and other services provided by the County in connection with this Agreement.
27	Tipping Fees	Licensee responsible for paying all tipping fees
28	Administrative Charges	List of penalties that may be assessed to Licensee for failure to perform, describe the mutual agreement to penalties, procedure for assessing, appeal procedure, include penalties for failure to meet transition milestones,
29	Force Majeure	Describe force majeure
30	Breach and Termination	List grounds and procedure for breach and termination including failure to fulfil obligations, insolvency of Licensee, repeat violations
31	Operations During Dispute	Require Licensee to perform duties during a dispute
32	Dispute Resolution Procedures	Describe dispute resolution procedures
33	Indemnification and Hold Harmless	As determined by County Attorney
34	Licensee's Insurance	As determined by County
35	Assignment or Transfer of Agreement	Contract may be assigned or transferred by Licensee only with approval of the County
36	Amendments to Agreement	List conditions for amending agreement
37	Governing Law and Venue	As determined by County Attorney
38	Compliance with Regulations	Require Licensee to comply with all applicable laws and regulations

Section	Title	Description
39	Permits and Licenses	Describe permits and licenses required by Licensee
40	Other Terms and Conditions	As determined by County Attorney, may include: Headings, Construction, Survivability, Severability, Sovran Immunity, Remedies, Equal Opportunity Employment, etc.
41	Agreement Documents	Describe any associated documents that are part of the agreement (e.g., request for proposal, Licensee's proposal, attached maps)
42	Notice to Parties	Notices
43	Exhibits	Exhibits

4.7 RFP Outline

It is expected that the County would conduct a competitive procurement to award Residential Contracts and Commercial Licenses. Through an RFP process, the County could select the best qualified firms to provide solid waste collection services. The County's standard procurement processes, forms, and timetables would provide the basis for the RFP process. Developing the draft Residential Contract or Commercial License and including them in the residential and commercial RFPs respectively, will allow for a streamlined process and will reduce uncertainty on the part of prospective proposers. The final RFP developed will depend on particular requirements of the County's procurement process, but general issues that should be considered in the solid waste collection service procurements are outlined in Table 4-8.

Table 4-8
RFP Outline

RFP Element	Description
General County Procurement Elements	Include standard County procurement terms and conditions, standard procurement forms, insurance requirements, etc.
Schedule of Events	Procurement Timeline
Scope of Work	Provide a brief scope of work explanation
Draft Residential Contract or Commercial License	This will provide an explicit list of contractor performance expectations
Required Technical Submittals	To include, but not limited to: 1. Experience and qualifications 2. Approach (e.g., equipment, staffing, billing procedures, etc.) 3. Financial statements/Bonding 4. References for similar work 6. Exceptions taken 7. Litigation and compliance history 8. Price Proposal (not for Commercial License)
Unbalanced Proposals	The County should reserve the right to reject proposals that present pricing that is not fair and equitable

4.8 Evaluation Criteria

Different communities approach the evaluation of RFPs and selection of the "best" proposers in a number of different ways. In the case of awarding Residential Contracts, it is recommended that only one firm would be awarded a given Residential Service Area, and no solid waste hauler should be awarded contracts for more than two of the three Residential Service Areas. Also, price would need to be a factor in the evaluation of residential service proposals. For Commercial Licenses, multiple agreements would be awarded. The County would need to determine if all proposers that meet minimum criteria will be awarded Commercial Licenses, or if only a limited number of top proposers are awarded Commercial Licenses. A generic evaluation criteria model is shown in Table 4-9.

Table 4-9
Evaluation Criteria

Compliance with RFP	Mandatory
Cost	20 to 50%
Experience	10 to 30%
Approach	10 to 30%
Financial History	0 to 20%
References	10 to 30%

4.9 Impact on County Resources and Personnel

Implementing a solid waste management system will have an impact on County resources and personnel. The actual level of participation by County staff in overseeing the Residential Contracts will depend on the final terms developed for the program. Staff time will need to be committed to prepare the ordinance updates and develop the contract and RFP. Also, staff time will be required to conduct outreach efforts as the solid waste management system is being developed.

A monitoring program will be necessary to assure the solid waste haulers are conducting activities in accordance with their Residential Contracts and to receive periodic reports and monitor hauler performance. Typically, once the system is fully implemented, such program management will likely require no more effort than one-quarter of an employee's time on an annual basis.

4.10 Initial Discussions with Private Haulers

On January 28 and 29, 2014, representatives of Leidos and County staff met with representatives of solid waste hauling companies that operate in Santa Fe County. During the meetings, the County's potential approaches to implementing a solid waste management system, and in particular Residential Contracts as described in this section, were discussed with solid waste management firms. Firms that Leidos and the County met with were:

- Waste Management Inc.
- East Mountain Disposal
- MCT Waste Inc.
- Ibarra's Trash Service

Important issues that were identified during the meetings are listed below this paragraph. In performing the work for "Section 3, Wasteshed Analysis," Leidos entered into confidentiality agreements with the solid waste haulers. During the discussions, certain sensitive topics such as number of customers served, areas served, etc. were addressed. So, in keeping with the spirit of the confidentiality agreements, items listed below are not attributed to any particular hauler or representative.

Items of note identified during discussions:

- All haulers indicated general support of a Residential Contract system as described in this Section.
- Different haulers have vastly different sizes of operation. The smallest hauler serves several hundred residential customers, while the larger firms serve several thousand. The smallest haulers would find it challenging to offer a proposal to serve several thousand households. In creating residential collection areas as described in Section 4.4.1, the County may want to consider creating one smaller area that smaller haulers could offer proposals on.
- Haulers that currently collect recyclables curbside do not collect glass. Haulers recommended that any Residential Contract exclude glass from curbside recyclables collection. All haulers supported collecting paper and non-glass containers in a single stream.
- Haulers generally believed that recyclables could be collected every other week.
- All haulers were amenable to delivering collected materials to BuRRT or the Caja del Rio Landfill.
- Haulers recognized the need to provide special services to residents unable to place solid waste carts roadside due to medical limitations. Such special services could be provided at "no additional charge" if the County reviewed and approved requests from residents for special services based on a physician's recommendation or other appropriate documentation.
- Haulers did not agree on the number of different container sizes to include in the residential service. One hauler indicated that its collection vehicles could not easily accommodate different sized collection carts and only provided one size cart (96-gallon), while another indicated that it provides three different size carts (48 -, 64 -, and 96-gallon) to its customers. Leidos recommends that no more than two sizes (64- and 96-gallon) be made available to residents, with the system potentially allowing a smaller container at a later time.
- Some haulers indicated that they have existing contracts with homeowners associations (HOA) to provide service to all residents in the development. Leidos recommends that the County Attorney's office research and provide direction on how this issue should be addressed in the RFP and contracting process.

- Haulers were generally supportive of providing bulky item (e.g., furniture, white goods without Freon, etc.) collection, as long as reasonable limitations were placed on the program. Limitations should include the exclusion of contractor generated construction debris, limiting set-out amounts, requiring residents to call in to schedule collection, providing bulky item collection a limited number of times each years (e.g., monthly, quarterly, or semi-annually). The inclusion of bulky item collection will result in an increased cost to the resident (over refuse and recycling collection, only). One hauler uses a subcontractor to collect bulky waste from its current customers.
- All haulers interviewed would be interested in providing service in the areas discussed in this section.
- Haulers requested that the price paid to the hauler should increase at some inflation rate. It was noted that solid waste collection is heavily dependent on diesel fuel, so the inflation index should accommodate diesel fuel, labor, and costs particular to refuse collection (often referred to as a refuse rate index).
- One hauler asked if reporting gross receipts tax in Santa Fe County was an important consideration. The company indicated that it's understanding is that a company's trucks need to be physically housed in Santa Fe County for the County to collect the gross receipt tax. The County may want to consider requiring haulers to locate its operations headquarters in Santa Fe County to collect the tax.
- One hauler indicated that the company was transitioning to compressed natural gas (CNG) collection vehicles and asked if it could cooperate with the County on a fueling location for its trucks. Leidos recommends that the County assess its ability to share any fueling location with a private company.
- It was mentioned that private roads, unmaintained roads, and hazardous roads should be considered as reasons for exempting residences from collection. Haulers were advised that the County would expect that they have smaller collection vehicles available that would be able to provide service to difficult to serve areas.
- A discussion was held regarding New Mexico State Procurement Code 13-1-98. Exemptions from procurement code states: "The provision of the Procurement Code shall not apply to: . . . D. purchases of publicly provided or publicly regulated gas, electricity, water, sewer and refuse collection services; . . ." Leidos recommends that the County Attorney research this provision and provide an opinion concerning its applicability to any solid waste procurement process.
- One large hauler stated that it would prefer to be able to propose on all three service areas, and that if it was not able to be awarded at least two areas, it might not propose because it could not maintain a cost-effective operation.
- One hauler mentioned that allowing haulers to individually negotiate with residents to provide services in addition to basic refuse and recycling collection could allow a higher level of service to certain customers upon request. Elective services could include non-medical back-door service, collection on long driveways, excessive bulky waste collection, etc.

4.11 Recommendations

1. **If the implementation of a solid waste management system (i.e. contract, franchising) is approved by the BCC, the County should immediately move forward with planning the development of such a system.**

   The benefits of such a system are numerous:

   - Elimination of multiple vendors serving the same area (i.e. reduced wear and tear on County roads, reduced air emissions)
   - Provision of curbside recycling
   - Increased diversion rate
   - Increased pricing competition