

Additional Alternative Scenario Analysis - Cost Modeling Results

FINAL - Statewide 2025 Tables

December 1, 2020

Original Baseline: Pre-Disruption List (\$0)						
FINAL - Statewide 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 2,657,886	\$ 1,060,354	\$ 2,367,922	\$ -	\$ 6,086,162	
Collection Engagement Labor and Expenses	\$ 1,113,886	\$ 19,833	\$ 76,537	NA	\$ 1,210,256	
Local Government Engagement Labor and Expenses	\$ 1,544,000	\$ 1,040,521	\$ 2,291,385	NA	\$ 4,875,906	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 95,386,631	\$ 17,222,768	\$ 70,027,588	\$ 11,550,479	\$ 194,187,467	
Direct Collection Costs	\$ 67,897,979	\$ 11,920,748	\$ 48,248,719	\$ 10,381,070	\$ 138,448,516	
Collection Capital - Containers	\$ 2,317,462	\$ 210,715	\$ 898,452	\$ 898,906	\$ 4,325,535	
Collection Capital - Trucks	\$ 9,664,982	\$ 1,070,588	\$ 4,697,564	NA	\$ 15,433,133	
Collection Labor	\$ 37,451,369	\$ 6,903,202	\$ 27,765,814	\$ 8,246,745	\$ 80,367,130	
Collection Operations	\$ 18,464,166	\$ 3,736,243	\$ 14,886,889	\$ 1,235,419	\$ 38,322,717	
Indirect Collection Costs	\$ 27,488,653	\$ 5,302,020	\$ 21,778,869	\$ 1,169,409	\$ 55,738,951	
Collection Administrative	\$ 15,506,657	\$ 3,198,358	\$ 13,264,390	\$ 1,169,409	\$ 33,138,813	
Collection Margin and Franchise Fee	\$ 11,981,996	\$ 2,103,661	\$ 8,514,480	NA	\$ 22,600,137	
Cost Savings from Reduced Garbage Disposal	\$ (25,588,011)	\$ (2,903,308)	\$ (24,550,691)	\$ (5,968,428)	\$ (59,010,438)	
Avoided Disposal Tip Fees	\$ (25,588,011)	\$ (2,903,308)	\$ (24,550,691)	\$ (5,968,428)	\$ (59,010,438)	
Initial Transfer Transport	\$ 2,499,930	\$ 166,486	\$ 4,149,284	\$ 4,493,339	\$ 11,309,039	
Consolidation and Transfer to MRF	\$ 2,499,930	\$ 166,486	\$ 4,149,284	\$ 4,493,339	\$ 11,309,039	
Sortation	\$ 36,268,072	\$ 3,138,221	\$ 18,619,407	\$ 1,243,659	\$ 59,269,359	
Sortation Labor	\$ 19,165,137	\$ 1,658,330	\$ 9,839,053	\$ 657,187	\$ 31,319,707	
Sortation Capital	\$ 1,191,692	\$ 103,115	\$ 611,794	\$ 40,864	\$ 1,947,466	
Sortation Facility	\$ 5,341,317	\$ 462,176	\$ 2,742,141	\$ 183,158	\$ 8,728,792	
Glass and Unsorted Container Transfer	\$ 270,941	\$ 23,444	\$ 139,096	\$ 9,291	\$ 442,772	
Sortation Residual Disposal	\$ 4,043,920	\$ 349,914	\$ 2,076,080	\$ 138,669	\$ 6,608,583	
Sortation Administrative & Marketing	\$ 3,588,610	\$ 310,517	\$ 1,842,331	\$ 123,056	\$ 5,864,513	
Sortation Margin	\$ 2,666,454	\$ 230,724	\$ 1,368,912	\$ 91,435	\$ 4,357,525	
Overall System Costs						
Total Costs	\$ 111,224,508	\$ 18,684,521	\$ 70,613,510	\$ 11,319,050	\$ 211,841,588	
Tons Collected for Recycling	243,032	23,376	231,207	78,621	576,235	
Tons Collected Commingled	208,898	18,076	107,245	7,163	341,382	
Tons Collected Source-Separated	34,133	5,300	123,962	71,458	234,853	
Tons Marketed	218,731	21,038	208,088	70,759	518,617	
Tons Marketed (excluding bale contamination)	218,731	21,038	208,088	70,759	518,617	
Total Cost per Ton Collected	\$ 458	\$ 799	\$ 305	\$ 144	\$ 368	
Total Cost per Ton Marketed	\$ 508	\$ 888	\$ 339	\$ 160	\$ 408	
Customers	995,572	17,726	68,407	NA	NA	
Annual pounds per customer	488	2,637	6,760	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 7,867,536	\$ 680,766	\$ 4,039,058	\$ 269,784	\$ 12,857,143	
Commodity Sales (mid-point)	\$ 27,383,714	\$ 2,369,471	\$ 14,058,330	\$ 939,008	\$ 44,750,522	
Commodity Sales (upper range)	\$ 46,899,892	\$ 4,058,176	\$ 24,077,601	\$ 1,608,233	\$ 76,643,901	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	20	13	28	-	61	
Local Government Engagement	20	13	28	-	61	
New Engagement (costs listed in collection)	-	-	-	-	-	
Recycling Collection	250	54	216	242	762	
Route Drivers and Operations	187	48	194	242	672	
Management and Administrative	63	5	22	NA	90	
Sortation	330	29	170	11	540	
Sorting Labor	248	21	128	9	406	
Equipment Operators, Supervisors, Maintenance	54	5	28	2	89	
Admininstrative and Marketing	28	2	14	1	45	
Overall Recycling Svsstem FTEs	600	96	414	253	1,362	

Figures in this report represent the consultant team's best modeling estimates based on available data.

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Revised Baseline: Post-Disruption List (\$5)						
FINAL - Statewide 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 2,657,886	\$ 1,060,354	\$ 2,367,922	\$ -	\$ 6,086,162	
Collection Engagement Labor and Expenses	\$ 1,113,886	\$ 19,833	\$ 76,537	NA	\$ 1,210,256	
Local Government Engagement Labor and Expenses	\$ 1,544,000	\$ 1,040,521	\$ 2,291,385	NA	\$ 4,875,906	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 95,386,631	\$ 17,222,768	\$ 70,027,588	\$ 11,013,214	\$ 193,650,202	
Direct Collection Costs	\$ 67,897,979	\$ 11,920,748	\$ 48,248,719	\$ 9,893,490	\$ 137,960,936	
Collection Capital - Containers	\$ 2,317,462	\$ 210,715	\$ 898,452	\$ 855,402	\$ 4,282,031	
Collection Capital - Trucks	\$ 9,664,982	\$ 1,070,588	\$ 4,697,564	NA	\$ 15,433,133	
Collection Labor	\$ 37,451,369	\$ 6,903,202	\$ 27,765,814	\$ 7,851,206	\$ 79,971,591	
Collection Operations	\$ 18,464,166	\$ 3,736,243	\$ 14,886,889	\$ 1,186,882	\$ 38,274,180	
Indirect Collection Costs	\$ 27,488,653	\$ 5,302,020	\$ 21,778,869	\$ 1,119,724	\$ 55,689,266	
Collection Administrative	\$ 15,506,657	\$ 3,198,358	\$ 13,264,390	\$ 1,119,724	\$ 33,089,129	
Collection Margin and Franchise Fee	\$ 11,981,996	\$ 2,103,661	\$ 8,514,480	NA	\$ 22,600,137	
Cost Savings from Reduced Garbage Disposal	\$ (24,286,277)	\$ (2,861,664)	\$ (24,314,753)	\$ (5,773,395)	\$ (57,236,089)	
Avoided Disposal Tip Fees	\$ (24,286,277)	\$ (2,861,664)	\$ (24,314,753)	\$ (5,773,395)	\$ (57,236,089)	
Initial Transfer Transport	\$ 2,206,413	\$ 163,711	\$ 4,123,845	\$ 4,323,792	\$ 10,817,762	
Consolidation and Transfer to MRF	\$ 2,206,413	\$ 163,711	\$ 4,123,845	\$ 4,323,792	\$ 10,817,762	
Sortation	\$ 33,714,247	\$ 3,090,773	\$ 18,306,623	\$ 1,049,246	\$ 56,160,889	
Sortation Labor	\$ 17,745,216	\$ 1,626,803	\$ 9,635,540	\$ 552,262	\$ 29,559,820	
Sortation Capital	\$ 1,169,094	\$ 107,177	\$ 634,810	\$ 36,384	\$ 1,947,466	
Sortation Facility	\$ 4,932,867	\$ 452,223	\$ 2,678,515	\$ 153,519	\$ 8,217,125	
Glass and Unsorted Container Transfer	\$ 265,803	\$ 24,368	\$ 144,329	\$ 8,272	\$ 442,772	
Sortation Residual Disposal	\$ 3,603,048	\$ 330,312	\$ 1,956,432	\$ 112,133	\$ 6,001,925	
Sortation Administrative & Marketing	\$ 3,520,558	\$ 322,749	\$ 1,911,641	\$ 109,566	\$ 5,864,513	
Sortation Margin	\$ 2,477,663	\$ 227,141	\$ 1,345,355	\$ 77,109	\$ 4,127,268	
Overall System Costs						
Total Costs	\$ 109,678,901	\$ 18,675,942	\$ 70,511,225	\$ 10,612,857	\$ 209,478,926	
Tons Collected for Recycling	227,057	22,987	228,717	75,933	554,695	
Tons Collected Commingled	192,924	17,686	104,756	6,004	321,370	
Tons Collected Source-Separated	34,133	5,300	123,961	69,929	233,324	
Tons Marketed	205,774	20,832	207,278	68,816	502,700	
Tons Marketed (excluding bale contamination)	205,774	20,832	207,278	68,816	502,700	
Total Cost per Ton Collected	\$ 483	\$ 812	\$ 308	\$ 140	\$ 378	
Total Cost per Ton Marketed	\$ 533	\$ 897	\$ 340	\$ 154	\$ 417	
Customers	995,572	17,726	68,407	NA	NA	
Annual pounds per customer	456	2,594	6,687	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 7,682,134	\$ 704,264	\$ 4,171,350	\$ 239,081	\$ 12,796,829	
Commodity Sales (mid-point)	\$ 26,177,742	\$ 2,399,860	\$ 14,214,348	\$ 814,697	\$ 43,606,647	
Commodity Sales (upper range)	\$ 44,673,350	\$ 4,095,455	\$ 24,257,347	\$ 1,390,312	\$ 74,416,464	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	20	13	28	-	61	
Local Government Engagement	20	13	28	-	61	
New Engagement (costs listed in collection)	-	-	-	-	-	
Recycling Collection	250	54	216	231	750	
Route Drivers and Operations	187	48	194	231	660	
Management and Administrative	63	5	22	NA	90	
Sortation	308	28	167	10	512	
Sorting Labor	229	21	125	7	382	
Equipment Operators, Supervisors, Maintenance	51	5	28	2	85	
Admininstrative and Marketing	27	2	15	1	45	
Overall Recycling System FTEs	577	95	411	240	1,324	

Figures in this report represent the consultant team's best modeling estimates based on available data.

+ Customer Engagement (S6/A-)						
FINAL - Statewide 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 5,442,601	\$ 6,851,506	\$ 24,716,698	\$ -	\$	37,010,805
Collection Engagement Labor and Expenses	\$ 3,898,601	\$ 5,810,985	\$ 22,425,313	NA	\$	32,134,898
Local Government Engagement Labor and Expenses	\$ 1,544,000	\$ 1,040,521	\$ 2,291,385	NA	\$	4,875,906
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$	-
Service level adjustments (included above)	NA	NA	NA	NA	\$	-
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$	-
Collection area adjustments	NA	NA	NA	NA	\$	-
Bulky collection	NA	NA	NA	NA	\$	-
Collection	\$ 95,386,631	\$ 17,222,768	\$ 70,027,588	\$ 12,889,207	\$	195,526,195
Direct Collection Costs	\$ 67,897,979	\$ 11,920,748	\$ 48,248,719	\$ 11,778,192	\$	139,845,638
Collection Capital - Containers	\$ 2,317,462	\$ 210,715	\$ 898,452	\$ 850,163	\$	4,276,792
Collection Capital - Trucks	\$ 9,664,982	\$ 1,070,588	\$ 4,697,564	NA	\$	15,433,133
Collection Labor	\$ 37,451,369	\$ 6,903,202	\$ 27,765,814	\$ 9,752,185	\$	81,872,569
Collection Operations	\$ 18,464,166	\$ 3,736,243	\$ 14,886,889	\$ 1,175,845	\$	38,263,143
Indirect Collection Costs	\$ 27,488,653	\$ 5,302,020	\$ 21,778,869	\$ 1,111,015	\$	55,680,557
Collection Administrative	\$ 15,506,657	\$ 3,198,358	\$ 13,264,390	\$ 1,111,015	\$	33,080,420
Collection Margin and Franchise Fee	\$ 11,981,996	\$ 2,103,661	\$ 8,514,480	NA	\$	22,600,137
Cost Savings from Reduced Garbage Disposal	\$ (23,139,497)	\$ (2,795,432)	\$ (24,114,600)	\$ (5,746,152)	\$	(55,795,682)
Avoided Disposal Tip Fees	\$ (23,139,497)	\$ (2,795,432)	\$ (24,114,600)	\$ (5,746,152)	\$	(55,795,682)
Initial Transfer Transport	\$ 2,102,841	\$ 161,756	\$ 4,116,373	\$ 4,316,719	\$	10,697,689
Consolidation and Transfer to MRF	\$ 2,102,841	\$ 161,756	\$ 4,116,373	\$ 4,316,719	\$	10,697,689
Sortation	\$ 31,283,983	\$ 2,949,400	\$ 17,712,223	\$ 969,966	\$	52,915,572
Sortation Labor	\$ 16,830,673	\$ 1,586,767	\$ 9,529,114	\$ 521,838	\$	28,468,392
Sortation Capital	\$ 1,151,353	\$ 108,548	\$ 651,868	\$ 35,698	\$	1,947,466
Sortation Facility	\$ 4,652,279	\$ 438,609	\$ 2,634,006	\$ 144,245	\$	7,869,139
Glass and Unsorted Container Transfer	\$ 261,769	\$ 24,679	\$ 148,207	\$ 8,116	\$	442,772
Sortation Residual Disposal	\$ 2,622,834	\$ 247,276	\$ 1,484,984	\$ 81,321	\$	4,436,416
Sortation Administrative & Marketing	\$ 3,467,133	\$ 326,875	\$ 1,963,006	\$ 107,499	\$	5,864,513
Sortation Margin	\$ 2,297,942	\$ 216,646	\$ 1,301,038	\$ 71,248	\$	3,886,874
Overall System Costs						
Total Costs	\$ 111,076,559	\$ 24,389,998	\$ 92,458,282	\$ 12,429,740	\$	240,354,579
Tons Collected for Recycling	216,083	22,454	226,977	75,571		541,085
Tons Collected Commingled	181,950	17,154	103,016	5,641		307,761
Tons Collected Source-Separated	34,133	5,300	123,961	69,929		233,324
Tons Marketed	200,682	20,854	210,799	70,184		502,518
Tons Marketed (excluding bale contamination)	200,682	20,854	210,799	70,184		502,518
Total Cost per Ton Collected	\$ 514	\$ 1,086	\$ 407	\$ 164	\$	444
Total Cost per Ton Marketed	\$ 553	\$ 1,170	\$ 439	\$ 177	\$	478
Customers	995,572	17,726	68,407	NA		NA
Annual pounds per customer	434	2,533	6,636	NA		NA
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 7,493,885	\$ 706,511	\$ 4,242,854	\$ 232,349	\$	12,675,599
Commodity Sales (mid-point)	\$ 25,562,263	\$ 2,409,966	\$ 14,472,726	\$ 792,563	\$	43,237,519
Commodity Sales (upper range)	\$ 43,630,641	\$ 4,113,421	\$ 24,702,599	\$ 1,352,776	\$	73,799,438
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	32	60	209	57	358	
Local Government Engagement	20	13	28	-	61	
New Engagement (costs listed in collection)	12	47	181	57	297	
Recycling Collection	250	54	216	229	749	
Route Drivers and Operations	187	48	194	229	659	
Management and Administrative	63	5	22	NA	90	
Sortation	293	28	166	9	495	
Sorting Labor	216	20	123	7	366	
Equipment Operators, Supervisors, Maintenance	50	5	28	2	84	
Admininstrative and Marketing	27	3	15	1	45	
Overall Recycling System FTEs	574	141	591	296	1,602	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + Improved MRFs (S1/A)						
FINAL - Statewide 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 5,442,601	\$ 6,851,506	\$ 24,716,698	\$ -	\$ 37,010,805	
Collection Engagement Labor and Expenses	\$ 3,898,601	\$ 5,810,985	\$ 22,425,313	NA	\$ 32,134,898	
Local Government Engagement Labor and Expenses	\$ 1,544,000	\$ 1,040,521	\$ 2,291,385	NA	\$ 4,875,906	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 95,386,631	\$ 17,222,768	\$ 70,027,588	\$ 12,889,207	\$ 195,526,195	
Direct Collection Costs	\$ 67,897,979	\$ 11,920,748	\$ 48,248,719	\$ 11,778,192	\$ 139,845,638	
Collection Capital - Containers	\$ 2,317,462	\$ 210,715	\$ 898,452	\$ 850,163	\$ 4,276,792	
Collection Capital - Trucks	\$ 9,664,982	\$ 1,070,588	\$ 4,697,564	NA	\$ 15,433,133	
Collection Labor	\$ 37,451,369	\$ 6,903,202	\$ 27,765,814	\$ 9,752,185	\$ 81,872,569	
Collection Operations	\$ 18,464,166	\$ 3,736,243	\$ 14,886,889	\$ 1,175,845	\$ 38,263,143	
Indirect Collection Costs	\$ 27,488,653	\$ 5,302,020	\$ 21,778,869	\$ 1,111,015	\$ 55,680,557	
Collection Administrative	\$ 15,506,657	\$ 3,198,358	\$ 13,264,390	\$ 1,111,015	\$ 33,080,420	
Collection Margin and Franchise Fee	\$ 11,981,996	\$ 2,103,661	\$ 8,514,480	NA	\$ 22,600,137	
Cost Savings from Reduced Garbage Disposal	\$ (23,139,497)	\$ (2,795,432)	\$ (24,114,600)	\$ (5,746,152)	\$ (55,795,682)	
Avoided Disposal Tip Fees	\$ (23,139,497)	\$ (2,795,432)	\$ (24,114,600)	\$ (5,746,152)	\$ (55,795,682)	
Initial Transfer Transport	\$ 2,102,841	\$ 161,756	\$ 4,116,373	\$ 4,316,719	\$ 10,697,689	
Consolidation and Transfer to MRF	\$ 2,102,841	\$ 161,756	\$ 4,116,373	\$ 4,316,719	\$ 10,697,689	
Sortation	\$ 31,872,430	\$ 3,004,878	\$ 18,045,388	\$ 988,211	\$ 53,910,906	
Sortation Labor	\$ 14,483,075	\$ 1,365,439	\$ 8,199,962	\$ 449,051	\$ 24,497,527	
Sortation Capital	\$ 3,262,900	\$ 307,621	\$ 1,847,374	\$ 101,167	\$ 5,519,062	
Sortation Facility	\$ 4,652,279	\$ 438,609	\$ 2,634,006	\$ 144,245	\$ 7,869,139	
Glass and Unsorted Container Transfer	\$ 261,769	\$ 24,679	\$ 148,207	\$ 8,116	\$ 442,772	
Sortation Residual Disposal	\$ 3,403,742	\$ 320,899	\$ 1,927,115	\$ 105,534	\$ 5,757,290	
Sortation Administrative & Marketing	\$ 3,467,133	\$ 326,875	\$ 1,963,006	\$ 107,499	\$ 5,864,513	
Sortation Margin	\$ 2,341,530	\$ 220,755	\$ 1,325,717	\$ 72,600	\$ 3,960,603	
Overall System Costs						
Total Costs	\$ 111,665,005	\$ 24,445,475	\$ 92,791,446	\$ 12,447,985	\$ 241,349,912	
Tons Collected for Recycling	216,083	22,454	226,977	75,571	541,085	
Tons Collected Commingled	181,950	17,154	103,016	5,641	307,761	
Tons Collected Source-Separated	34,133	5,300	123,961	69,929	233,324	
Tons Marketed	199,927	20,775	210,006	69,920	500,629	
Tons Marketed (excluding bale contamination)	199,927	20,775	210,006	69,920	500,629	
Total Cost per Ton Collected	\$ 517	\$ 1,089	\$ 409	\$ 165	\$ 446	
Total Cost per Ton Marketed	\$ 559	\$ 1,177	\$ 442	\$ 178	\$ 482	
Customers	995,572	17,726	68,407	NA	NA	
Annual pounds per customer	434	2,533	6,636	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 9,018,831	\$ 850,280	\$ 5,106,241	\$ 279,631	\$ 15,254,983	
Commodity Sales (mid-point)	\$ 24,952,392	\$ 2,352,468	\$ 14,127,432	\$ 773,654	\$ 42,205,947	
Commodity Sales (upper range)	\$ 40,885,953	\$ 3,854,657	\$ 23,148,624	\$ 1,267,677	\$ 69,156,911	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	32	60	209	57	358	
Local Government Engagement	20	13	28	-	61	
New Engagement (costs listed in collection)	12	47	181	57	297	
Recycling Collection	250	54	216	229	749	
Route Drivers and Operations	187	48	194	229	659	
Management and Administrative	63	5	22	NA	90	
Sortation	256	24	145	8	434	
Sorting Labor	178	17	101	6	302	
Equipment Operators, Supervisors, Maintenance	52	5	29	2	87	
Admininstrative and Marketing	27	3	15	1	45	
Overall Recycling System FTEs	538	138	570	295	1,541	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded Lists (S2/A+)						
FINAL - Statewide 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 5,442,601	\$ 6,851,506	\$ 24,716,698	\$ -	\$ 37,010,805	
Collection Engagement Labor and Expenses	\$ 3,898,601	\$ 5,810,985	\$ 22,425,313	NA	\$ 32,134,898	
Local Government Engagement Labor and Expenses	\$ 1,544,000	\$ 1,040,521	\$ 2,291,385	NA	\$ 4,875,906	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 95,386,631	\$ 17,222,768	\$ 70,027,588	\$ 15,913,963	\$ 198,550,950	
Direct Collection Costs	\$ 67,897,979	\$ 11,920,748	\$ 48,248,719	\$ 14,670,230	\$ 142,737,675	
Collection Capital - Containers	\$ 2,317,462	\$ 210,715	\$ 898,452	\$ 1,918,288	\$ 5,344,917	
Collection Capital - Trucks	\$ 9,664,982	\$ 1,070,588	\$ 4,697,564	NA	\$ 15,433,133	
Collection Labor	\$ 37,451,369	\$ 6,903,202	\$ 27,765,814	\$ 11,455,298	\$ 83,575,682	
Collection Operations	\$ 18,464,166	\$ 3,736,243	\$ 14,886,889	\$ 1,296,644	\$ 38,383,943	
Indirect Collection Costs	\$ 27,488,653	\$ 5,302,020	\$ 21,778,869	\$ 1,243,733	\$ 55,813,275	
Collection Administrative	\$ 15,506,657	\$ 3,198,358	\$ 13,264,390	\$ 1,243,733	\$ 33,213,137	
Collection Margin and Franchise Fee	\$ 11,981,996	\$ 2,103,661	\$ 8,514,480	NA	\$ 22,600,137	
Cost Savings from Reduced Garbage Disposal	\$ (26,243,156)	\$ (3,167,812)	\$ (26,250,347)	\$ (6,385,521)	\$ (62,046,835)	
Avoided Disposal Tip Fees	\$ (26,243,156)	\$ (3,167,812)	\$ (26,250,347)	\$ (6,385,521)	\$ (62,046,835)	
Initial Transfer Transport	\$ 3,006,867	\$ 219,021	\$ 4,516,403	\$ 4,715,291	\$ 12,457,582	
Consolidation and Transfer to MRF	\$ 3,006,867	\$ 219,021	\$ 4,516,403	\$ 4,715,291	\$ 12,457,582	
Sortation	\$ 35,298,237	\$ 3,424,365	\$ 20,763,453	\$ 1,477,327	\$ 60,963,382	
Sortation Labor	\$ 15,719,418	\$ 1,524,978	\$ 9,246,621	\$ 657,900	\$ 27,148,917	
Sortation Capital	\$ 3,409,683	\$ 330,781	\$ 2,005,675	\$ 142,704	\$ 5,888,844	
Sortation Facility	\$ 5,499,160	\$ 533,486	\$ 3,234,766	\$ 230,155	\$ 9,497,567	
Glass and Unsorted Container Transfer	\$ 555,600	\$ 53,900	\$ 326,820	\$ 23,253	\$ 959,574	
Sortation Residual Disposal	\$ 4,145,252	\$ 402,141	\$ 2,438,358	\$ 173,490	\$ 7,159,240	
Sortation Administrative & Marketing	\$ 3,395,595	\$ 329,415	\$ 1,997,388	\$ 142,115	\$ 5,864,513	
Sortation Margin	\$ 2,573,529	\$ 249,664	\$ 1,513,825	\$ 107,709	\$ 4,444,727	
Overall System Costs						
Total Costs	\$ 112,891,180	\$ 24,549,849	\$ 93,773,795	\$ 15,721,060	\$ 246,935,883	
Tons Collected for Recycling	254,703	26,373	251,786	83,108	615,969	
Tons Collected Commingled	215,575	20,913	126,807	9,022	372,318	
Tons Collected Source-Separated	39,128	5,459	124,979	74,085	243,652	
Tons Marketed	240,432	24,895	237,679	78,451	581,458	
Tons Marketed (excluding bale contamination)	240,432	24,895	237,679	78,451	581,458	
Total Cost per Ton Collected	\$ 443	\$ 931	\$ 372	\$ 189	\$ 401	
Total Cost per Ton Marketed	\$ 470	\$ 986	\$ 395	\$ 200	\$ 425	
Customers	995,572	17,726	68,407	NA	NA	
Annual pounds per customer	512	2,976	7,361	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 9,915,804	\$ 961,956	\$ 5,832,765	\$ 415,003	\$ 17,125,528	
Commodity Sales (mid-point)	\$ 28,162,155	\$ 2,732,077	\$ 16,565,801	\$ 1,178,662	\$ 48,638,696	
Commodity Sales (upper range)	\$ 46,408,506	\$ 4,502,199	\$ 27,298,838	\$ 1,942,321	\$ 80,151,864	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	32	60	209	65	366	
Local Government Engagement	20	13	28	-	61	
New Engagement (costs listed in collection)	12	47	181	65	305	
Recycling Collection	250	54	216	268	788	
Route Drivers and Operations	187	48	194	268	698	
Management and Administrative	63	5	22	NA	90	
Sortation	276	27	162	12	476	
Sorting Labor	193	19	114	8	333	
Equipment Operators, Supervisors, Maintenance	56	5	33	2	98	
Admininstrative and Marketing	26	3	15	1	45	
Overall Recycling System FTEs	557	141	587	345	1,630	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded + Statewide List (S7/A++)						
FINAL - Statewide 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 5,442,601	\$ 6,851,506	\$ 24,716,698	\$ -	\$ 37,010,805	
Collection Engagement Labor and Expenses	\$ 3,898,601	\$ 5,810,985	\$ 22,425,313	NA	\$ 32,134,898	
Local Government Engagement Labor and Expenses	\$ 1,544,000	\$ 1,040,521	\$ 2,291,385	NA	\$ 4,875,906	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 95,386,631	\$ 17,222,768	\$ 70,027,588	\$ 16,190,864	\$ 198,827,851	
Direct Collection Costs	\$ 67,897,979	\$ 11,920,748	\$ 48,248,719	\$ 14,928,752	\$ 142,996,198	
Collection Capital - Containers	\$ 2,317,462	\$ 210,715	\$ 898,452	\$ 1,955,052	\$ 5,381,681	
Collection Capital - Trucks	\$ 9,664,982	\$ 1,070,588	\$ 4,697,564	NA	\$ 15,433,133	
Collection Labor	\$ 37,451,369	\$ 6,903,202	\$ 27,765,814	\$ 11,661,602	\$ 83,781,987	
Collection Operations	\$ 18,464,166	\$ 3,736,243	\$ 14,886,889	\$ 1,312,099	\$ 38,399,397	
Indirect Collection Costs	\$ 27,488,653	\$ 5,302,020	\$ 21,778,869	\$ 1,262,112	\$ 55,831,653	
Collection Administrative	\$ 15,506,657	\$ 3,198,358	\$ 13,264,390	\$ 1,262,112	\$ 33,231,516	
Collection Margin and Franchise Fee	\$ 11,981,996	\$ 2,103,661	\$ 8,514,480	NA	\$ 22,600,137	
Cost Savings from Reduced Garbage Disposal	\$ (26,327,443)	\$ (3,169,960)	\$ (26,274,309)	\$ (6,464,829)	\$ (62,236,542)	
Avoided Disposal Tip Fees	\$ (26,327,443)	\$ (3,169,960)	\$ (26,274,309)	\$ (6,464,829)	\$ (62,236,542)	
Initial Transfer Transport	\$ 3,068,300	\$ 220,587	\$ 4,533,868	\$ 4,804,397	\$ 12,627,152	
Consolidation and Transfer to MRF	\$ 3,068,300	\$ 220,587	\$ 4,533,868	\$ 4,804,397	\$ 12,627,152	
Sortation	\$ 35,175,035	\$ 3,398,832	\$ 20,633,266	\$ 1,499,861	\$ 60,706,994	
Sortation Labor	\$ 15,820,170	\$ 1,528,644	\$ 9,279,927	\$ 674,571	\$ 27,303,312	
Sortation Capital	\$ 3,412,132	\$ 329,702	\$ 2,001,517	\$ 145,493	\$ 5,888,844	
Sortation Facility	\$ 5,524,960	\$ 533,856	\$ 3,240,877	\$ 235,584	\$ 9,535,277	
Glass and Unsorted Container Transfer	\$ 278,541	\$ 26,914	\$ 163,389	\$ 11,877	\$ 480,721	
Sortation Residual Disposal	\$ 4,156,272	\$ 401,605	\$ 2,438,021	\$ 177,223	\$ 7,173,120	
Sortation Administrative & Marketing	\$ 3,398,035	\$ 328,339	\$ 1,993,247	\$ 144,892	\$ 5,864,513	
Sortation Margin	\$ 2,584,925	\$ 249,772	\$ 1,516,287	\$ 110,221	\$ 4,461,205	
Overall System Costs						
Total Costs	\$ 112,745,124	\$ 24,523,732	\$ 93,637,110	\$ 16,030,293	\$ 246,936,260	
Tons Collected for Recycling 255,873 26,403 252,118 84,209 618,603						
Tons Collected Commingled 216,745 20,943 127,140 9,242 374,070						
Tons Collected Source-Separated 39,128 5,459 124,979 74,967 244,533						
Tons Marketed 241,574 24,927 238,029 79,503 584,033						
Tons Marketed (excluding bale contamination) 241,574 24,927 238,029 79,503 584,033						
Total Cost per Ton Collected	\$ 441	\$ 929	\$ 371	\$ 190	\$ 399	
Total Cost per Ton Marketed	\$ 467	\$ 984	\$ 393	\$ 202	\$ 423	
Customers	995,572	17,726	68,407	NA	NA	
Annual pounds per customer	514	2,979	7,371	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 10,820,681	\$ 1,045,562	\$ 6,347,286	\$ 461,393	\$ 18,674,922	
Commodity Sales (mid-point)	\$ 30,210,208	\$ 2,919,099	\$ 17,720,956	\$ 1,288,162	\$ 52,138,426	
Commodity Sales (upper range)	\$ 49,599,735	\$ 4,792,637	\$ 29,094,627	\$ 2,114,930	\$ 85,601,929	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	32	60	209	66	367	
Local Government Engagement	20	13	28	-	61	
New Engagement (costs listed in collection)	12	47	181	66	306	
Recycling Collection	250	54	216	273	793	
Route Drivers and Operations	187	48	194	273	703	
Management and Administrative	63	5	22	NA	90	
Sortation	277	27	163	12	478	
Sorting Labor	194	19	114	8	335	
Equipment Operators, Supervisors, Maintenance	57	5	33	2	98	
Admininstrative and Marketing	26	3	15	1	45	
Overall Recycling System FTEs	559	141	587	351	1,638	

Figures in this report represent the consultant team's best modeling estimates based on available data.

+Container Recovery Facility (S3/B)						
FINAL - Statewide 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 5,442,601	\$ 6,851,506	\$ 24,716,698	\$ -	\$ 37,010,805	
Collection Engagement Labor and Expenses	\$ 3,898,601	\$ 5,810,985	\$ 22,425,313	NA	\$ 32,134,898	
Local Government Engagement Labor and Expenses	\$ 1,544,000	\$ 1,040,521	\$ 2,291,385	NA	\$ 4,875,906	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 95,386,631	\$ 17,222,768	\$ 70,027,588	\$ 15,913,963	\$ 198,550,950	
Direct Collection Costs	\$ 67,897,979	\$ 11,920,748	\$ 48,248,719	\$ 14,670,230	\$ 142,737,675	
Collection Capital - Containers	\$ 2,317,462	\$ 210,715	\$ 898,452	\$ 1,918,288	\$ 5,344,917	
Collection Capital - Trucks	\$ 9,664,982	\$ 1,070,588	\$ 4,697,564	NA	\$ 15,433,133	
Collection Labor	\$ 37,451,369	\$ 6,903,202	\$ 27,765,814	\$ 11,455,298	\$ 83,575,682	
Collection Operations	\$ 18,464,166	\$ 3,736,243	\$ 14,886,889	\$ 1,296,644	\$ 38,383,943	
Indirect Collection Costs	\$ 27,488,653	\$ 5,302,020	\$ 21,778,869	\$ 1,243,733	\$ 55,813,275	
Collection Administrative	\$ 15,506,657	\$ 3,198,358	\$ 13,264,390	\$ 1,243,733	\$ 33,213,137	
Collection Margin and Franchise Fee	\$ 11,981,996	\$ 2,103,661	\$ 8,514,480	NA	\$ 22,600,137	
Cost Savings from Reduced Garbage Disposal	\$ (26,243,156)	\$ (3,167,812)	\$ (26,250,347)	\$ (6,385,521)	\$ (62,046,835)	
Avoided Disposal Tip Fees	\$ (26,243,156)	\$ (3,167,812)	\$ (26,250,347)	\$ (6,385,521)	\$ (62,046,835)	
Initial Transfer Transport	\$ 3,006,867	\$ 219,021	\$ 4,516,403	\$ 4,715,291	\$ 12,457,582	
Consolidation and Transfer to MRF	\$ 3,006,867	\$ 219,021	\$ 4,516,403	\$ 4,715,291	\$ 12,457,582	
Sortation	\$ 34,806,737	\$ 3,376,684	\$ 20,474,338	\$ 1,456,756	\$ 60,114,515	
Sortation Labor	\$ 15,386,457	\$ 1,492,677	\$ 9,050,763	\$ 643,965	\$ 26,573,862	
Sortation Capital	\$ 3,133,897	\$ 304,027	\$ 1,843,450	\$ 131,162	\$ 5,412,536	
Sortation Facility	\$ 5,476,363	\$ 531,275	\$ 3,221,356	\$ 229,201	\$ 9,458,195	
Glass and Unsorted Container Transfer	\$ 989,088	\$ 95,954	\$ 581,810	\$ 41,396	\$ 1,708,248	
Sortation Residual Disposal	\$ 3,920,325	\$ 380,320	\$ 2,306,050	\$ 164,076	\$ 6,770,771	
Sortation Administrative & Marketing	\$ 3,395,595	\$ 329,415	\$ 1,997,388	\$ 142,115	\$ 5,864,513	
Sortation Margin	\$ 2,505,011	\$ 243,017	\$ 1,473,521	\$ 104,841	\$ 4,326,390	
Overall System Costs						
Total Costs	\$ 112,399,680	\$ 24,502,167	\$ 93,484,680	\$ 15,700,490	\$ 246,087,017	
Tons Collected for Recycling	254,703	26,373	251,786	83,108	615,969	
Tons Collected Commingled	215,575	20,913	126,807	9,022	372,318	
Tons Collected Source-Separated	39,128	5,459	124,979	74,085	243,652	
Tons Marketed	241,509	25,007	238,743	78,803	584,062	
Tons Marketed (excluding bale contamination)	241,509	25,007	238,743	78,803	584,062	
Total Cost per Ton Collected	\$ 441	\$ 929	\$ 371	\$ 189	\$ 400	
Total Cost per Ton Marketed	\$ 465	\$ 980	\$ 392	\$ 199	\$ 421	
Customers	995,572	17,726	68,407	NA	NA	
Annual pounds per customer	512	2,976	7,361	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 8,744,315	\$ 848,307	\$ 5,143,661	\$ 365,973	\$ 15,102,256	
Commodity Sales (mid-point)	\$ 25,994,578	\$ 2,521,796	\$ 15,290,770	\$ 1,087,943	\$ 44,895,087	
Commodity Sales (upper range)	\$ 43,244,842	\$ 4,195,284	\$ 25,437,878	\$ 1,809,913	\$ 74,687,918	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	32	60	209	65	366	
Local Government Engagement	20	13	28	-	61	
New Engagement (costs listed in collection)	12	47	181	65	305	
Recycling Collection	250	54	216	268	788	
Route Drivers and Operations	187	48	194	268	698	
Management and Administrative	63	5	22	NA	90	
Sortation	270	26	159	11	467	
Sorting Labor	189	18	111	8	326	
Equipment Operators, Supervisors, Maintenance	56	5	33	2	96	
Admininstrative and Marketing	26	3	15	1	45	
Overall Recycling System FTEs	552	140	584	345	1,620	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Dual-Stream Collection (S4/C)						
FINAL - Statewide 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 5,442,601	\$ 6,851,506	\$ 24,716,698	\$ -	\$ 37,010,805	
Collection Engagement Labor and Expenses	\$ 3,898,601	\$ 5,810,985	\$ 22,425,313	NA	\$ 32,134,898	
Local Government Engagement Labor and Expenses	\$ 1,544,000	\$ 1,040,521	\$ 2,291,385	NA	\$ 4,875,906	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 134,350,236	\$ 18,642,599	\$ 75,416,475	\$ 15,913,451	\$ 244,322,761	
Direct Collection Costs	\$ 99,440,104	\$ 13,127,641	\$ 52,829,356	\$ 14,669,750	\$ 180,066,851	
Collection Capital - Containers	\$ 8,776,081	\$ 1,417,700	\$ 5,472,722	\$ 1,918,219	\$ 17,584,721	
Collection Capital - Trucks	\$ 19,088,871	\$ 1,066,082	\$ 4,680,145	NA	\$ 24,835,097	
Collection Labor	\$ 47,928,665	\$ 6,911,281	\$ 27,796,066	\$ 11,454,911	\$ 94,090,923	
Collection Operations	\$ 23,646,488	\$ 3,732,579	\$ 14,880,423	\$ 1,296,621	\$ 43,556,110	
Indirect Collection Costs	\$ 34,910,132	\$ 5,514,958	\$ 22,587,119	\$ 1,243,701	\$ 64,255,910	
Collection Administrative	\$ 17,361,878	\$ 3,198,315	\$ 13,264,292	\$ 1,243,701	\$ 35,068,186	
Collection Margin and Franchise Fee	\$ 17,548,254	\$ 2,316,643	\$ 9,322,828	NA	\$ 29,187,724	
Cost Savings from Reduced Garbage Disposal	\$ (26,243,156)	\$ (3,167,812)	\$ (26,250,347)	\$ (6,385,521)	\$ (62,046,835)	
Avoided Disposal Tip Fees	\$ (26,243,156)	\$ (3,167,812)	\$ (26,250,347)	\$ (6,385,521)	\$ (62,046,835)	
Initial Transfer Transport	\$ 3,006,867	\$ 219,021	\$ 4,516,403	\$ 4,715,291	\$ 12,457,582	
Consolidation and Transfer to MRF	\$ 3,006,867	\$ 219,021	\$ 4,516,403	\$ 4,715,291	\$ 12,457,582	
Sortation	\$ 34,191,984	\$ 3,317,045	\$ 20,112,723	\$ 1,431,027	\$ 59,052,779	
Sortation Labor	\$ 15,301,617	\$ 1,484,446	\$ 9,000,858	\$ 640,414	\$ 26,427,335	
Sortation Capital	\$ 3,254,558	\$ 315,732	\$ 1,914,426	\$ 136,212	\$ 5,620,928	
Sortation Facility	\$ 5,534,705	\$ 536,935	\$ 3,255,675	\$ 231,642	\$ 9,558,958	
Glass and Unsorted Container Transfer	\$ 278,341	\$ 27,003	\$ 163,728	\$ 11,649	\$ 480,721	
Sortation Residual Disposal	\$ 3,915,045	\$ 379,808	\$ 2,302,944	\$ 163,855	\$ 6,761,653	
Sortation Administrative & Marketing	\$ 3,395,595	\$ 329,415	\$ 1,997,388	\$ 142,115	\$ 5,864,513	
Sortation Margin	\$ 2,512,122	\$ 243,707	\$ 1,477,703	\$ 105,139	\$ 4,338,671	
Overall System Costs						
Total Costs	\$ 150,748,532	\$ 25,862,359	\$ 98,511,952	\$ 15,674,249	\$ 290,797,092	
Tons Collected for Recycling	254,703	26,373	251,786	83,108	615,969	
Tons Collected Commingled	215,575	20,913	126,807	9,022	372,318	
Tons Collected Source-Separated	39,128	5,459	124,979	74,085	243,652	
Tons Marketed	235,752	24,410	233,052	76,924	570,138	
Tons Marketed (excluding bale contamination)	235,752	24,410	233,052	76,924	570,138	
Total Cost per Ton Collected	\$ 592	\$ 981	\$ 391	\$ 189	\$ 472	
Total Cost per Ton Marketed	\$ 639	\$ 1,059	\$ 423	\$ 204	\$ 510	
Customers	995,572	17,726	68,407	NA	NA	
Annual pounds per customer	512	2,976	7,361	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 9,948,656	\$ 965,143	\$ 5,852,090	\$ 416,378	\$ 17,182,266	
Commodity Sales (mid-point)	\$ 27,895,650	\$ 2,706,223	\$ 16,409,036	\$ 1,167,508	\$ 48,178,417	
Commodity Sales (upper range)	\$ 45,842,645	\$ 4,447,303	\$ 26,965,982	\$ 1,918,638	\$ 79,174,568	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	32	60	209	65	366	
Local Government Engagement	20	13	28	-	61	
New Engagement (costs listed in collection)	12	47	181	65	305	
Recycling Collection	367	54	216	268	905	
Route Drivers and Operations	284	48	194	268	795	
Management and Administrative	83	5	22	NA	110	
Sortation	269	26	158	11	465	
Sorting Labor	184	18	108	8	317	
Equipment Operators, Supervisors, Maintenance	60	6	35	2	103	
Admininstrative and Marketing	26	3	15	1	45	
Overall Recycling System FTEs	668	140	583	345	1,736	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded + Statewide List + Expanded Collection (S8/D-low)					
FINAL - Statewide 2025					
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total
Recycling System Costs					
Customer Engagement Costs	\$ 5,647,748	\$ 8,758,678	\$ 26,541,412	\$ -	\$ 40,947,838
Collection Engagement Labor and Expenses	\$ 4,103,748	\$ 7,718,157	\$ 24,250,027	NA	\$ 36,071,932
Local Government Engagement Labor and Expenses	\$ 1,544,000	\$ 1,040,521	\$ 2,291,385	NA	\$ 4,875,906
Multifamily Property Improvements	\$ -	\$ 15,182,938	\$ -	\$ -	\$ 15,182,938
Service level adjustments (included above)	NA	NA	NA	NA	\$ -
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -
Collection area adjustments	NA	\$ 8,119,776	NA	NA	\$ 8,119,776
Bulky collection	NA	\$ 7,063,161	NA	NA	\$ 7,063,161
Collection	\$ 101,303,222	\$ 23,845,478	\$ 76,712,263	\$ 15,418,641	\$ 217,279,604
Direct Collection Costs	\$ 71,831,007	\$ 16,712,776	\$ 52,924,920	\$ 14,202,242	\$ 155,670,945
Collection Capital - Containers	\$ 2,413,796	\$ 311,548	\$ 1,021,415	\$ 1,855,750	\$ 5,602,508
Collection Capital - Trucks	\$ 10,347,573	\$ 1,401,538	\$ 5,146,562	NA	\$ 16,895,673
Collection Labor	\$ 39,508,408	\$ 9,707,117	\$ 30,306,722	\$ 11,068,297	\$ 90,590,545
Collection Operations	\$ 19,561,230	\$ 5,292,573	\$ 16,450,221	\$ 1,278,195	\$ 42,582,219
Indirect Collection Costs	\$ 29,472,215	\$ 7,132,702	\$ 23,787,343	\$ 1,216,399	\$ 61,608,659
Collection Administrative	\$ 16,796,155	\$ 4,183,389	\$ 14,447,651	\$ 1,216,399	\$ 36,643,594
Collection Margin and Franchise Fee	\$ 12,676,060	\$ 2,949,313	\$ 9,339,692	NA	\$ 24,965,065
Cost Savings from Reduced Garbage Disposal	\$ (26,831,552)	\$ (3,502,551)	\$ (26,518,232)	\$ (6,253,599)	\$ (63,105,935)
Avoided Disposal Tip Fees	\$ (26,831,552)	\$ (3,502,551)	\$ (26,518,232)	\$ (6,253,599)	\$ (63,105,935)
Initial Transfer Transport	\$ 3,713,446	\$ 405,386	\$ 4,870,775	\$ 4,518,788	\$ 13,508,394
Consolidation and Transfer to MRF	\$ 3,713,446	\$ 405,386	\$ 4,870,775	\$ 4,518,788	\$ 13,508,394
Sortation	\$ 36,034,640	\$ 4,124,238	\$ 21,130,341	\$ 1,496,585	\$ 62,785,804
Sortation Labor	\$ 16,360,674	\$ 1,872,512	\$ 9,593,730	\$ 679,489	\$ 28,506,405
Sortation Capital	\$ 3,379,783	\$ 386,823	\$ 1,981,870	\$ 140,369	\$ 5,888,844
Sortation Facility	\$ 5,663,810	\$ 648,235	\$ 3,321,200	\$ 235,229	\$ 9,868,473
Glass and Unsorted Container Transfer	\$ 277,484	\$ 31,759	\$ 162,713	\$ 11,524	\$ 483,480
Sortation Residual Disposal	\$ 4,338,393	\$ 496,538	\$ 2,543,989	\$ 180,182	\$ 7,559,102
Sortation Administrative & Marketing	\$ 3,365,819	\$ 385,225	\$ 1,973,681	\$ 139,789	\$ 5,864,513
Sortation Margin	\$ 2,648,678	\$ 303,147	\$ 1,553,158	\$ 110,005	\$ 4,614,987
Overall System Costs					
Total Costs	\$ 119,867,504	\$ 48,814,166	\$ 102,736,558	\$ 15,180,415	\$ 286,598,643
<i>Tons Collected for Recycling</i>	262,872	31,299	255,505	81,276	630,952
<i>Tons Collected Commingled</i>	222,528	25,469	130,488	9,242	387,726
<i>Tons Collected Source-Separated</i>	40,344	5,831	125,017	72,034	243,226
<i>Tons Marketed</i>	247,419	29,459	240,485	76,499	593,862
<i>Tons Marketed (excluding bale contamination)</i>	247,419	29,459	240,485	76,499	593,862
Total Cost per Ton Collected	\$ 456	\$ 1,560	\$ 402	\$ 187	\$ 454
Total Cost per Ton Marketed	\$ 484	\$ 1,657	\$ 427	\$ 198	\$ 483
Customers	1,047,960	23,544	73,974	NA	NA
Annual pounds per customer	502	2,659	6,908	NA	NA
Commodity Revenues					
Commodity Revenues					
Commodity Sales (lower range)	\$ 10,837,524	\$ 1,240,377	\$ 6,355,012	\$ 450,102	\$ 18,883,016
Commodity Sales (mid-point)	\$ 30,369,255	\$ 3,475,823	\$ 17,808,218	\$ 1,261,291	\$ 52,914,587
Commodity Sales (upper range)	\$ 49,900,986	\$ 5,711,269	\$ 29,261,423	\$ 2,072,480	\$ 86,946,158
Full-Time Equivalent (FTE) Employment					
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total
Recycling Customer Engagement	32	75	224	63	394
Local Government Engagement	20	13	28	-	61
New Engagement (costs listed in collection)	13	62	196	63	333
Recycling Collection	254	75	234	260	823
Route Drivers and Operations	190	68	210	260	727
Management and Administrative	65	8	24	NA	96
Sortation	285	33	167	12	497
Sorting Labor	202	23	118	8	352
Equipment Operators, Supervisors, Maintenance	58	7	34	2	101
Administrative and Marketing	26	3	15	1	45
Overall Recycling System FTEs	572	183	625	335	1,715

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded + Statewide List + Expanded Collection (S9/D-mid)						
FINAL - Statewide 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 5,750,322	\$ 11,412,873	\$ 26,863,420	\$ -	\$	44,026,615
Collection Engagement Labor and Expenses	\$ 4,206,322	\$ 10,372,352	\$ 24,572,035	NA	\$	39,150,709
Local Government Engagement Labor and Expenses	\$ 1,544,000	\$ 1,040,521	\$ 2,291,385	NA	\$	4,875,906
Multifamily Property Improvements	\$ -	\$ 20,404,194	\$ -	\$ -	\$	20,404,194
Service level adjustments (included above)	NA	NA	NA	NA	\$	-
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$	-
Collection area adjustments	NA	\$ 10,912,084	NA	NA	\$	10,912,084
Bulky collection	NA	\$ 9,492,110	NA	NA	\$	9,492,110
Collection	\$ 104,261,518	\$ 33,412,608	\$ 77,891,912	\$ 14,536,975	\$	230,103,012
Direct Collection Costs	\$ 73,797,521	\$ 23,678,703	\$ 53,750,132	\$ 13,375,815	\$	164,602,171
Collection Capital - Containers	\$ 2,461,963	\$ 440,810	\$ 1,043,114	\$ 1,744,062	\$	5,689,949
Collection Capital - Trucks	\$ 10,688,869	\$ 1,959,876	\$ 5,225,797	NA	\$	17,874,542
Collection Labor	\$ 40,536,928	\$ 13,763,908	\$ 30,755,118	\$ 10,399,322	\$	95,455,276
Collection Operations	\$ 20,109,761	\$ 7,514,108	\$ 16,726,103	\$ 1,232,432	\$	45,582,404
Indirect Collection Costs	\$ 30,463,997	\$ 9,733,906	\$ 24,141,779	\$ 1,161,160	\$	65,500,842
Collection Administrative	\$ 17,440,905	\$ 5,555,311	\$ 14,656,462	\$ 1,161,160	\$	38,813,838
Collection Margin and Franchise Fee	\$ 13,023,092	\$ 4,178,595	\$ 9,485,317	NA	\$	26,687,004
Cost Savings from Reduced Garbage Disposal	\$ (27,351,045)	\$ (4,783,435)	\$ (26,722,553)	\$ (6,013,112)	\$	(64,870,144)
Avoided Disposal Tip Fees	\$ (27,351,045)	\$ (4,783,435)	\$ (26,722,553)	\$ (6,013,112)	\$	(64,870,144)
Initial Transfer Transport	\$ 4,379,819	\$ 566,185	\$ 5,140,367	\$ 4,218,088	\$	14,304,459
Consolidation and Transfer to MRF	\$ 4,379,819	\$ 566,185	\$ 5,140,367	\$ 4,218,088	\$	14,304,459
Sortation	\$ 36,922,039	\$ 6,010,817	\$ 21,490,664	\$ 1,479,155	\$	65,902,676
Sortation Labor	\$ 16,960,153	\$ 2,761,071	\$ 9,871,745	\$ 679,450	\$	30,272,420
Sortation Capital	\$ 3,299,231	\$ 537,107	\$ 1,920,334	\$ 132,172	\$	5,888,844
Sortation Facility	\$ 5,793,357	\$ 943,144	\$ 3,372,054	\$ 232,091	\$	10,340,646
Glass and Unsorted Container Transfer	\$ 269,493	\$ 43,873	\$ 156,860	\$ 10,796	\$	481,023
Sortation Residual Disposal	\$ 4,599,202	\$ 748,739	\$ 2,676,989	\$ 184,251	\$	8,209,182
Sortation Administrative & Marketing	\$ 3,285,599	\$ 534,888	\$ 1,912,400	\$ 131,626	\$	5,864,513
Sortation Margin	\$ 2,715,003	\$ 441,996	\$ 1,580,282	\$ 108,767	\$	4,846,048
Overall System Costs						
Total Costs	\$ 123,962,653	\$ 67,023,243	\$ 104,663,810	\$ 14,221,106	\$	309,870,813
Tons Collected for Recycling	270,084	43,032	258,341	77,938		649,395
Tons Collected Commingled	228,521	37,203	133,012	9,155		407,891
Tons Collected Source-Separated	41,563	5,830	125,330	68,783		241,504
Tons Marketed	253,057	40,319	242,055	73,024		608,456
Tons Marketed (excluding bale contamination)	253,057	40,319	242,055	73,024		608,456
Total Cost per Ton Collected	\$ 459	\$ 1,558	\$ 405	\$ 182	\$	477
Total Cost per Ton Marketed	\$ 490	\$ 1,662	\$ 432	\$ 195	\$	509
Customers	1,074,154	31,640	74,956	NA		NA
Annual pounds per customer	503	2,720	6,893	NA		NA
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 10,848,159	\$ 1,766,054	\$ 6,314,227	\$ 434,594	\$	19,363,034
Commodity Sales (mid-point)	\$ 30,435,334	\$ 4,954,798	\$ 17,715,044	\$ 1,219,287	\$	54,324,462
Commodity Sales (upper range)	\$ 50,022,508	\$ 8,143,541	\$ 29,115,860	\$ 2,003,980	\$	89,285,890
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	32	97	226	59	415	
Local Government Engagement	20	13	28	-	61	
New Engagement (costs listed in collection)	13	84	198	59	354	
Recycling Collection	257	107	237	245	845	
Route Drivers and Operations	191	96	213	245	745	
Management and Administrative	65	11	24	NA	100	
Sortation	294	48	171	12	525	
Sorting Labor	210	34	122	8	376	
Equipment Operators, Supervisors, Maintenance	59	10	34	2	104	
Admininstrative and Marketing	25	4	15	1	45	
Overall Recycling System FTEs	583	251	635	316	1,785	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded + Statewide List + Expanded Collection (S10/D-hi)						
FINAL - Statewide 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 5,852,896	\$ 12,849,419	\$ 27,078,092	\$ -	\$ 45,780,407	
Collection Engagement Labor and Expenses	\$ 4,308,896	\$ 11,808,898	\$ 24,786,707	NA	\$ 40,904,501	
Local Government Engagement Labor and Expenses	\$ 1,544,000	\$ 1,040,521	\$ 2,291,385	NA	\$ 4,875,906	
Multifamily Property Improvements	\$ -	\$ 23,230,127	\$ -	\$ -	\$ 23,230,127	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	\$ 12,423,382	NA	NA	\$ 12,423,382	
Bulky collection	NA	\$ 10,806,745	NA	NA	\$ 10,806,745	
Collection	\$ 107,219,813	\$ 39,803,929	\$ 78,678,344	\$ 13,655,588	\$ 239,357,673	
Direct Collection Costs	\$ 75,764,035	\$ 28,453,371	\$ 54,300,273	\$ 12,549,649	\$ 171,067,329	
Collection Capital - Containers	\$ 2,510,130	\$ 532,697	\$ 1,057,580	\$ 1,632,411	\$ 5,732,819	
Collection Capital - Trucks	\$ 11,030,165	\$ 2,363,393	\$ 5,278,620	NA	\$ 18,672,178	
Collection Labor	\$ 41,565,447	\$ 16,528,226	\$ 31,054,049	\$ 9,730,556	\$ 98,878,278	
Collection Operations	\$ 20,658,293	\$ 9,029,055	\$ 16,910,025	\$ 1,186,681	\$ 47,784,054	
Indirect Collection Costs	\$ 31,455,778	\$ 11,350,558	\$ 24,378,070	\$ 1,105,938	\$ 68,290,344	
Collection Administrative	\$ 18,085,654	\$ 6,329,375	\$ 14,795,669	\$ 1,105,938	\$ 40,316,636	
Collection Margin and Franchise Fee	\$ 13,370,124	\$ 5,021,183	\$ 9,582,401	NA	\$ 27,973,708	
Cost Savings from Reduced Garbage Disposal	\$ (27,849,758)	\$ (5,629,061)	\$ (26,897,929)	\$ (5,772,705)	\$ (66,149,454)	
Avoided Disposal Tip Fees	\$ (27,849,758)	\$ (5,629,061)	\$ (26,897,929)	\$ (5,772,705)	\$ (66,149,454)	
Initial Transfer Transport	\$ 5,019,538	\$ 759,884	\$ 5,370,190	\$ 3,917,447	\$ 15,067,059	
Consolidation and Transfer to MRF	\$ 5,019,538	\$ 759,884	\$ 5,370,190	\$ 3,917,447	\$ 15,067,059	
Sortation	\$ 38,538,606	\$ 7,342,466	\$ 22,231,291	\$ 1,491,675	\$ 69,604,038	
Sortation Labor	\$ 17,922,393	\$ 3,414,616	\$ 10,338,670	\$ 693,704	\$ 32,369,383	
Sortation Capital	\$ 3,506,234	\$ 668,016	\$ 2,022,598	\$ 135,712	\$ 6,332,560	
Sortation Facility	\$ 5,927,635	\$ 1,129,347	\$ 3,419,402	\$ 229,435	\$ 10,705,820	
Glass and Unsorted Container Transfer	\$ 267,857	\$ 51,033	\$ 154,515	\$ 10,368	\$ 483,773	
Sortation Residual Disposal	\$ 4,832,532	\$ 920,705	\$ 2,787,683	\$ 187,048	\$ 8,727,969	
Sortation Administrative & Marketing	\$ 3,247,084	\$ 618,642	\$ 1,873,105	\$ 125,682	\$ 5,864,513	
Sortation Margin	\$ 2,834,870	\$ 540,106	\$ 1,635,317	\$ 109,726	\$ 5,120,020	
Overall System Costs						
Total Costs	\$ 128,781,095	\$ 78,356,763	\$ 106,459,987	\$ 13,292,005	\$ 326,889,850	
Tons Collected for Recycling 277,007 51,175 260,776 74,600 663,559						
Tons Collected Commingled 234,275 44,635 135,143 9,068 423,121						
Tons Collected Source-Separated 42,732 6,541 125,633 65,532 240,438						
Tons Marketed 258,579 47,771 243,428 69,637 619,415						
Tons Marketed (excluding bale contamination) 258,579 47,771 243,428 69,637 619,415						
Total Cost per Ton Collected	\$ 465	\$ 1,531	\$ 408	\$ 178	\$ 493	
Total Cost per Ton Marketed	\$ 498	\$ 1,640	\$ 437	\$ 191	\$ 528	
Customers	1,100,348	36,022	75,611	NA	NA	
Annual pounds per customer	503	2,841	6,898	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 10,871,530	\$ 2,071,269	\$ 6,271,325	\$ 420,793	\$ 19,634,918	
Commodity Sales (mid-point)	\$ 30,588,342	\$ 5,827,763	\$ 17,645,120	\$ 1,183,952	\$ 55,245,177	
Commodity Sales (upper range)	\$ 50,305,154	\$ 9,584,256	\$ 29,018,914	\$ 1,947,111	\$ 90,855,437	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	33	108	228	56	425	
Local Government Engagement	20	13	28	-	61	
New Engagement (costs listed in collection)	13	95	200	56	364	
Recycling Collection	259	128	239	230	856	
Route Drivers and Operations	193	115	215	230	752	
Management and Administrative	66	13	24	NA	103	
Sortation	309	59	178	12	558	
Sorting Labor	224	43	129	9	404	
Equipment Operators, Supervisors, Maintenance	61	12	35	2	109	
Admininstrative and Marketing	25	5	14	1	45	
Overall Recycling System FTEs	601	295	645	298	1,839	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Additional Alternative Scenario Analysis - Cost Modeling Results

FINAL - 1 - Metro Area 2025 Tables

December 1, 2020

Original Baseline: Pre-Disruption List (\$0)					
FINAL - 1 - Metro Area 2025					
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total
Recycling System Costs					
Customer Engagement Costs	\$ 2,065,229	\$ 1,048,601	\$ 2,331,116	\$ -	\$ 5,444,946
Collection Engagement Labor and Expenses	\$ 521,229	\$ 8,080	\$ 39,731	NA	\$ 569,040
Local Government Engagement Labor and Expenses	\$ 1,544,000	\$ 1,040,521	\$ 2,291,385	NA	\$ 4,875,906
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -
Service level adjustments (included above)	NA	NA	NA	NA	\$ -
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -
Collection area adjustments	NA	NA	NA	NA	\$ -
Bulky collection	NA	NA	NA	NA	\$ -
Collection	\$ 43,936,438	\$ 8,285,644	\$ 40,744,055	\$ 205,320	\$ 93,171,457
Direct Collection Costs	\$ 31,521,899	\$ 5,646,739	\$ 27,767,432	\$ 154,309	\$ 65,090,380
Collection Capital - Containers	\$ 1,082,732	\$ 98,918	\$ 486,422	\$ 12,080	\$ 1,680,152
Collection Capital - Trucks	\$ 5,133,308	\$ 700,660	\$ 3,445,442	NA	\$ 9,279,410
Collection Labor	\$ 18,066,088	\$ 3,161,137	\$ 15,544,664	\$ 114,719	\$ 36,886,608
Collection Operations	\$ 7,239,771	\$ 1,686,025	\$ 8,290,904	\$ 27,510	\$ 17,244,209
Indirect Collection Costs	\$ 12,414,539	\$ 2,638,905	\$ 12,976,623	\$ 51,010	\$ 28,081,077
Collection Administrative	\$ 6,851,851	\$ 1,642,421	\$ 8,076,488	\$ 51,010	\$ 16,621,771
Collection Margin and Franchise Fee	\$ 5,562,688	\$ 996,483	\$ 4,900,135	NA	\$ 11,459,307
Cost Savings from Reduced Garbage Disposal	\$ (17,374,781)	\$ (2,621,674)	\$ (16,975,815)	\$ (656,317)	\$ (37,628,587)
Avoided Disposal Tip Fees	\$ (17,374,781)	\$ (2,621,674)	\$ (16,975,815)	\$ (656,317)	\$ (37,628,587)
Initial Transfer Transport	\$ 280,371	\$ 98,474	\$ 268,145	\$ 24,363	\$ 671,353
Consolidation and Transfer to MRF	\$ 280,371	\$ 98,474	\$ 268,145	\$ 24,363	\$ 671,353
Sortation	\$ 18,721,876	\$ 2,609,467	\$ 12,764,961	\$ 61,021	\$ 34,157,326
Sortation Labor	\$ 9,893,201	\$ 1,378,921	\$ 6,745,389	\$ 32,245	\$ 18,049,756
Sortation Capital	\$ 615,161	\$ 85,742	\$ 419,430	\$ 2,005	\$ 1,122,337
Sortation Facility	\$ 2,757,232	\$ 384,305	\$ 1,879,938	\$ 8,987	\$ 5,030,461
Glass and Unsorted Container Transfer	\$ 139,862	\$ 19,494	\$ 95,361	\$ 456	\$ 255,172
Sortation Residual Disposal	\$ 2,087,505	\$ 290,958	\$ 1,423,304	\$ 6,804	\$ 3,808,571
Sortation Administrative & Marketing	\$ 1,852,470	\$ 258,198	\$ 1,263,052	\$ 6,038	\$ 3,379,758
Sortation Margin	\$ 1,376,446	\$ 191,850	\$ 938,489	\$ 4,486	\$ 2,511,271
Overall System Costs					
Total Costs	\$ 47,629,133	\$ 9,420,513	\$ 39,132,463	\$ (365,614)	\$ 95,816,494
<i>Tons Collected for Recycling</i>	129,008	19,466	126,046	4,873	279,393
<i>Tons Collected Commingled</i>	107,835	15,030	73,524	351	196,741
<i>Tons Collected Source-Separated</i>	21,173	4,436	52,521	4,522	82,652
<i>Tons Marketed</i>	116,108	17,520	113,442	4,386	251,456
<i>Tons Marketed (excluding bale contamination)</i>	116,108	17,520	113,442	4,386	251,456
Total Cost per Ton Collected	\$ 369	\$ 484	\$ 310	\$ (75)	\$ 343
Total Cost per Ton Marketed	\$ 410	\$ 538	\$ 345	\$ (83)	\$ 381
Customers	465,865	7,221	35,511	NA	NA
Annual pounds per customer	554	5,391	7,099	NA	NA
Commodity Revenues					
Commodity Revenues					
Commodity Sales (lower range)	\$ 4,061,287	\$ 566,065	\$ 2,769,069	\$ 13,237	\$ 7,409,657
Commodity Sales (mid-point)	\$ 14,135,698	\$ 1,970,243	\$ 9,638,010	\$ 46,073	\$ 25,790,024
Commodity Sales (upper range)	\$ 24,210,109	\$ 3,374,421	\$ 16,506,952	\$ 78,908	\$ 44,170,390
Full-Time Equivalent (FTE) Employment					
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total
Recycling Customer Engagement	20	13	28	-	61
Local Government Engagement	20	13	28	-	61
New Engagement (costs listed in collection)	-	-	-	-	-
Recycling Collection	148	25	122	14	308
Route Drivers and Operations	113	22	110	14	259
Management and Administrative	35	3	12	NA	50
Sortation	171	24	116	1	311
Sorting Labor	128	18	87	0	234
Equipment Operators, Supervisors, Maintenance	28	4	19	0	51
Administrative and Marketing	14	2	10	0	26
Overall Recycling System FTEs	338	62	267	14	680

Figures in this report represent the consultant team's best modeling estimates based on available data.

Cascadia Consulting Group, Inc. | Circular Matters, LLC | Bell & Associates

Page 1

Revised Baseline: Post-Disruption List (\$5)						
FINAL - 1 - Metro Area 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 2,065,229	\$ 1,048,601	\$ 2,331,116	\$ -	\$ 5,444,946	
Collection Engagement Labor and Expenses	\$ 521,229	\$ 8,080	\$ 39,731	NA	\$ 569,040	
Local Government Engagement Labor and Expenses	\$ 1,544,000	\$ 1,040,521	\$ 2,291,385	NA	\$ 4,875,906	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 43,936,438	\$ 8,285,644	\$ 40,744,055	\$ 203,986	\$ 93,170,123	
Direct Collection Costs	\$ 31,521,899	\$ 5,646,739	\$ 27,767,432	\$ 153,301	\$ 65,089,371	
Collection Capital - Containers	\$ 1,082,732	\$ 98,918	\$ 486,422	\$ 12,003	\$ 1,680,075	
Collection Capital - Trucks	\$ 5,133,308	\$ 700,660	\$ 3,445,442	NA	\$ 9,279,410	
Collection Labor	\$ 18,066,088	\$ 3,161,137	\$ 15,544,664	\$ 113,963	\$ 36,885,852	
Collection Operations	\$ 7,239,771	\$ 1,686,025	\$ 8,290,904	\$ 27,334	\$ 17,244,034	
Indirect Collection Costs	\$ 12,414,539	\$ 2,638,905	\$ 12,976,623	\$ 50,685	\$ 28,080,752	
Collection Administrative	\$ 6,851,851	\$ 1,642,421	\$ 8,076,488	\$ 50,685	\$ 16,621,446	
Collection Margin and Franchise Fee	\$ 5,562,688	\$ 996,483	\$ 4,900,135	NA	\$ 11,459,307	
Cost Savings from Reduced Garbage Disposal	\$ (17,049,998)	\$ (2,592,422)	\$ (16,854,123)	\$ (653,171)	\$ (37,149,714)	
Avoided Disposal Tip Fees	\$ (17,049,998)	\$ (2,592,422)	\$ (16,854,123)	\$ (653,171)	\$ (37,149,714)	
Initial Transfer Transport	\$ 274,101	\$ 98,039	\$ 267,063	\$ 24,306	\$ 663,509	
Consolidation and Transfer to MRF	\$ 274,101	\$ 98,039	\$ 267,063	\$ 24,306	\$ 663,509	
Sortation	\$ 18,423,197	\$ 2,588,620	\$ 12,690,950	\$ 57,640	\$ 33,760,408	
Sortation Labor	\$ 9,696,898	\$ 1,362,499	\$ 6,679,777	\$ 30,338	\$ 17,769,512	
Sortation Capital	\$ 638,853	\$ 89,764	\$ 440,078	\$ 1,999	\$ 1,170,694	
Sortation Facility	\$ 2,695,572	\$ 378,751	\$ 1,856,864	\$ 8,434	\$ 4,939,621	
Glass and Unsorted Container Transfer	\$ 145,248	\$ 20,409	\$ 100,055	\$ 454	\$ 266,167	
Sortation Residual Disposal	\$ 1,968,891	\$ 276,646	\$ 1,356,284	\$ 6,160	\$ 3,607,982	
Sortation Administrative & Marketing	\$ 1,923,814	\$ 270,313	\$ 1,325,233	\$ 6,019	\$ 3,525,378	
Sortation Margin	\$ 1,353,922	\$ 190,238	\$ 932,659	\$ 4,236	\$ 2,481,055	
Overall System Costs						
Total Costs	\$ 47,648,967	\$ 9,428,482	\$ 39,179,061	\$ (367,239)	\$ 95,889,271	
Tons Collected for Recycling	126,596	19,249	125,142	4,850	275,837	
Tons Collected Commingled	105,423	14,813	72,622	330	193,188	
Tons Collected Source-Separated	21,173	4,436	52,520	4,520	82,649	
Tons Marketed	114,730	17,444	113,412	4,395	249,981	
Tons Marketed (excluding bale contamination)	114,730	17,444	113,412	4,395	249,981	
Total Cost per Ton Collected	\$ 376	\$ 490	\$ 313	\$ (76)	\$ 348	
Total Cost per Ton Marketed	\$ 415	\$ 540	\$ 345	\$ (84)	\$ 384	
Customers	465,865	7,221	35,511	NA	NA	
Annual pounds per customer	543	5,331	7,048	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 4,197,913	\$ 589,843	\$ 2,891,762	\$ 13,134	\$ 7,692,652	
Commodity Sales (mid-point)	\$ 14,304,864	\$ 2,009,958	\$ 9,854,007	\$ 44,755	\$ 26,213,584	
Commodity Sales (upper range)	\$ 24,411,814	\$ 3,430,073	\$ 16,816,252	\$ 76,376	\$ 44,734,516	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	20	13	28	-	61	
Local Government Engagement	20	13	28	-	61	
New Engagement (costs listed in collection)	-	-	-	-	-	
Recycling Collection	148	25	122	13	308	
Route Drivers and Operations	113	22	110	13	259	
Management and Administrative	35	3	12	NA	50	
Sortation	168	24	116	1	308	
Sorting Labor	125	18	86	0	230	
Equipment Operators, Supervisors, Maintenance	28	4	19	0	51	
Admininstrative and Marketing	15	2	10	0	27	
Overall Recycling System FTEs	335	61	266	14	677	

Figures in this report represent the consultant team's best modeling estimates based on available data.

+ Customer Engagement (S6/A-)						
FINAL - 1 - Metro Area 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 3,368,301	\$ 3,407,849	\$ 13,932,547	\$ -	\$ 20,708,697	
Collection Engagement Labor and Expenses	\$ 1,824,301	\$ 2,367,328	\$ 11,641,162	NA	\$ 15,832,791	
Local Government Engagement Labor and Expenses	\$ 1,544,000	\$ 1,040,521	\$ 2,291,385	NA	\$ 4,875,906	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 43,936,438	\$ 8,285,644	\$ 40,744,055	\$ 231,340	\$ 93,197,478	
Direct Collection Costs	\$ 31,521,899	\$ 5,646,739	\$ 27,767,432	\$ 180,903	\$ 65,116,973	
Collection Capital - Containers	\$ 1,082,732	\$ 98,918	\$ 486,422	\$ 11,945	\$ 1,680,016	
Collection Capital - Trucks	\$ 5,133,308	\$ 700,660	\$ 3,445,442	NA	\$ 9,279,410	
Collection Labor	\$ 18,066,088	\$ 3,161,137	\$ 15,544,664	\$ 141,757	\$ 36,913,646	
Collection Operations	\$ 7,239,771	\$ 1,686,025	\$ 8,290,904	\$ 27,201	\$ 17,243,900	
Indirect Collection Costs	\$ 12,414,539	\$ 2,638,905	\$ 12,976,623	\$ 50,437	\$ 28,080,505	
Collection Administrative	\$ 6,851,851	\$ 1,642,421	\$ 8,076,488	\$ 50,437	\$ 16,621,198	
Collection Margin and Franchise Fee	\$ 5,562,688	\$ 996,483	\$ 4,900,135	NA	\$ 11,459,307	
Cost Savings from Reduced Garbage Disposal	\$ (16,283,972)	\$ (2,532,492)	\$ (16,693,396)	\$ (650,774)	\$ (36,160,634)	
Avoided Disposal Tip Fees	\$ (16,283,972)	\$ (2,532,492)	\$ (16,693,396)	\$ (650,774)	\$ (36,160,634)	
Initial Transfer Transport	\$ 259,313	\$ 97,149	\$ 265,631	\$ 24,260	\$ 646,353	
Consolidation and Transfer to MRF	\$ 259,313	\$ 97,149	\$ 265,631	\$ 24,260	\$ 646,353	
Sortation	\$ 17,148,281	\$ 2,470,383	\$ 12,281,182	\$ 53,651	\$ 31,953,498	
Sortation Labor	\$ 9,225,715	\$ 1,329,058	\$ 6,607,233	\$ 28,864	\$ 17,190,870	
Sortation Capital	\$ 631,113	\$ 90,918	\$ 451,988	\$ 1,975	\$ 1,175,993	
Sortation Facility	\$ 2,550,142	\$ 367,374	\$ 1,826,350	\$ 7,978	\$ 4,751,844	
Glass and Unsorted Container Transfer	\$ 143,488	\$ 20,671	\$ 102,763	\$ 449	\$ 267,371	
Sortation Residual Disposal	\$ 1,437,704	\$ 207,116	\$ 1,029,648	\$ 4,498	\$ 2,678,966	
Sortation Administrative & Marketing	\$ 1,900,505	\$ 273,787	\$ 1,361,096	\$ 5,946	\$ 3,541,334	
Sortation Margin	\$ 1,259,614	\$ 181,460	\$ 902,105	\$ 3,941	\$ 2,347,120	
Overall System Costs						
Total Costs	\$ 48,428,361	\$ 11,728,533	\$ 50,530,020	\$ (341,523)	\$ 110,345,391	
Tons Collected for Recycling	120,909	18,804	123,949	4,832	268,493	
Tons Collected Commingled	99,736	14,368	71,428	312	185,844	
Tons Collected Source-Separated	21,173	4,436	52,520	4,520	82,649	
Tons Marketed	112,291	17,464	115,114	4,488	249,356	
Tons Marketed (excluding bale contamination)	112,291	17,464	115,114	4,488	249,356	
Total Cost per Ton Collected	\$ 401	\$ 624	\$ 408	\$ (71)	\$ 411	
Total Cost per Ton Marketed	\$ 431	\$ 672	\$ 439	\$ (76)	\$ 443	
Customers	465,865	7,221	35,511	NA	NA	
Annual pounds per customer	519	5,208	6,981	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 4,107,765	\$ 591,765	\$ 2,941,882	\$ 12,852	\$ 7,654,263	
Commodity Sales (mid-point)	\$ 14,011,927	\$ 2,018,560	\$ 10,035,002	\$ 43,838	\$ 26,109,327	
Commodity Sales (upper range)	\$ 23,916,089	\$ 3,445,354	\$ 17,128,122	\$ 74,825	\$ 44,564,390	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	25	32	122	3	183	
Local Government Engagement	20	13	28	-	61	
New Engagement (costs listed in collection)	6	19	94	3	122	
Recycling Collection	148	25	122	13	308	
Route Drivers and Operations	113	22	110	13	259	
Management and Administrative	35	3	12	NA	50	
Sortation	160	23	115	1	299	
Sorting Labor	119	17	85	0	221	
Equipment Operators, Supervisors, Maintenance	27	4	20	0	51	
Admininstrative and Marketing	15	2	10	0	27	
Overall Recycling System FTEs	333	80	359	17	790	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + Improved MRFs (S1/A)						
FINAL - 1 - Metro Area 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 3,368,301	\$ 3,407,849	\$ 13,932,547	\$ -	\$ 20,708,697	
Collection Engagement Labor and Expenses	\$ 1,824,301	\$ 2,367,328	\$ 11,641,162	NA	\$ 15,832,791	
Local Government Engagement Labor and Expenses	\$ 1,544,000	\$ 1,040,521	\$ 2,291,385	NA	\$ 4,875,906	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 43,936,438	\$ 8,285,644	\$ 40,744,055	\$ 231,340	\$ 93,197,478	
Direct Collection Costs	\$ 31,521,899	\$ 5,646,739	\$ 27,767,432	\$ 180,903	\$ 65,116,973	
Collection Capital - Containers	\$ 1,082,732	\$ 98,918	\$ 486,422	\$ 11,945	\$ 1,680,016	
Collection Capital - Trucks	\$ 5,133,308	\$ 700,660	\$ 3,445,442	NA	\$ 9,279,410	
Collection Labor	\$ 18,066,088	\$ 3,161,137	\$ 15,544,664	\$ 141,757	\$ 36,913,646	
Collection Operations	\$ 7,239,771	\$ 1,686,025	\$ 8,290,904	\$ 27,201	\$ 17,243,900	
Indirect Collection Costs	\$ 12,414,539	\$ 2,638,905	\$ 12,976,623	\$ 50,437	\$ 28,080,505	
Collection Administrative	\$ 6,851,851	\$ 1,642,421	\$ 8,076,488	\$ 50,437	\$ 16,621,198	
Collection Margin and Franchise Fee	\$ 5,562,688	\$ 996,483	\$ 4,900,135	NA	\$ 11,459,307	
Cost Savings from Reduced Garbage Disposal	\$ (16,283,972)	\$ (2,532,492)	\$ (16,693,396)	\$ (650,774)	\$ (36,160,634)	
Avoided Disposal Tip Fees	\$ (16,283,972)	\$ (2,532,492)	\$ (16,693,396)	\$ (650,774)	\$ (36,160,634)	
Initial Transfer Transport	\$ 259,313	\$ 97,149	\$ 265,631	\$ 24,260	\$ 646,353	
Consolidation and Transfer to MRF	\$ 259,313	\$ 97,149	\$ 265,631	\$ 24,260	\$ 646,353	
Sortation	\$ 17,470,838	\$ 2,516,851	\$ 12,512,190	\$ 54,660	\$ 32,554,538	
Sortation Labor	\$ 7,938,882	\$ 1,143,676	\$ 5,685,634	\$ 24,838	\$ 14,793,031	
Sortation Capital	\$ 1,788,555	\$ 257,659	\$ 1,280,920	\$ 5,596	\$ 3,332,730	
Sortation Facility	\$ 2,550,142	\$ 367,374	\$ 1,826,350	\$ 7,978	\$ 4,751,844	
Glass and Unsorted Container Transfer	\$ 143,488	\$ 20,671	\$ 102,763	\$ 449	\$ 267,371	
Sortation Residual Disposal	\$ 1,865,758	\$ 268,781	\$ 1,336,210	\$ 5,837	\$ 3,476,586	
Sortation Administrative & Marketing	\$ 1,900,505	\$ 273,787	\$ 1,361,096	\$ 5,946	\$ 3,541,334	
Sortation Margin	\$ 1,283,507	\$ 184,902	\$ 919,217	\$ 4,016	\$ 2,391,642	
Overall System Costs						
Total Costs	\$ 48,750,918	\$ 11,775,001	\$ 50,761,027	\$ (340,514)	\$ 110,946,432	
Tons Collected for Recycling	120,909	18,804	123,949	4,832	268,493	
Tons Collected Commingled	99,736	14,368	71,428	312	185,844	
Tons Collected Source-Separated	21,173	4,436	52,520	4,520	82,649	
Tons Marketed	111,868	17,398	114,681	4,471	248,418	
Tons Marketed (excluding bale contamination)	111,868	17,398	114,681	4,471	248,418	
Total Cost per Ton Collected	\$ 403	\$ 626	\$ 410	\$ (70)	\$ 413	
Total Cost per Ton Marketed	\$ 436	\$ 677	\$ 443	\$ (76)	\$ 447	
Customers	465,865	7,221	35,511	NA	NA	
Annual pounds per customer	519	5,208	6,981	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 4,943,663	\$ 712,185	\$ 3,540,531	\$ 15,467	\$ 9,211,845	
Commodity Sales (mid-point)	\$ 13,677,627	\$ 1,970,400	\$ 9,795,584	\$ 42,792	\$ 25,486,404	
Commodity Sales (upper range)	\$ 22,411,591	\$ 3,228,616	\$ 16,050,637	\$ 70,118	\$ 41,760,962	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	25	32	122	3	183	
Local Government Engagement	20	13	28	-	61	
New Engagement (costs listed in collection)	6	19	94	3	122	
Recycling Collection	148	25	122	13	308	
Route Drivers and Operations	113	22	110	13	259	
Management and Administrative	35	3	12	NA	50	
Sortation	141	20	101	0	262	
Sorting Labor	98	14	70	0	182	
Equipment Operators, Supervisors, Maintenance	28	4	20	0	53	
Admininstrative and Marketing	15	2	10	0	27	
Overall Recycling System FTEs	314	77	345	17	753	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded Lists (S2/A+)						
FINAL - 1 - Metro Area 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 3,368,301	\$ 3,407,849	\$ 13,932,547	\$ -	\$ 20,708,697	
Collection Engagement Labor and Expenses	\$ 1,824,301	\$ 2,367,328	\$ 11,641,162	NA	\$ 15,832,791	
Local Government Engagement Labor and Expenses	\$ 1,544,000	\$ 1,040,521	\$ 2,291,385	NA	\$ 4,875,906	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 43,936,438	\$ 8,285,644	\$ 40,744,055	\$ 423,163	\$ 93,389,300	
Direct Collection Costs	\$ 31,521,899	\$ 5,646,739	\$ 27,767,432	\$ 351,289	\$ 65,287,360	
Collection Capital - Containers	\$ 1,082,732	\$ 98,918	\$ 486,422	\$ 35,773	\$ 1,703,844	
Collection Capital - Trucks	\$ 5,133,308	\$ 700,660	\$ 3,445,442	NA	\$ 9,279,410	
Collection Labor	\$ 18,066,088	\$ 3,161,137	\$ 15,544,664	\$ 276,755	\$ 37,048,645	
Collection Operations	\$ 7,239,771	\$ 1,686,025	\$ 8,290,904	\$ 38,761	\$ 17,255,461	
Indirect Collection Costs	\$ 12,414,539	\$ 2,638,905	\$ 12,976,623	\$ 71,873	\$ 28,101,941	
Collection Administrative	\$ 6,851,851	\$ 1,642,421	\$ 8,076,488	\$ 71,873	\$ 16,642,634	
Collection Margin and Franchise Fee	\$ 5,562,688	\$ 996,483	\$ 4,900,135	NA	\$ 11,459,307	
Cost Savings from Reduced Garbage Disposal	\$ (16,975,877)	\$ (2,726,232)	\$ (17,443,053)	\$ (858,169)	\$ (38,003,330)	
Avoided Disposal Tip Fees	\$ (16,975,877)	\$ (2,726,232)	\$ (17,443,053)	\$ (858,169)	\$ (38,003,330)	
Initial Transfer Transport	\$ 272,670	\$ 100,026	\$ 272,309	\$ 26,778	\$ 671,783	
Consolidation and Transfer to MRF	\$ 272,670	\$ 100,026	\$ 272,309	\$ 26,778	\$ 671,783	
Sortation	\$ 17,171,939	\$ 2,588,151	\$ 12,606,903	\$ 209,664	\$ 32,576,657	
Sortation Labor	\$ 7,647,206	\$ 1,152,585	\$ 5,614,252	\$ 93,370	\$ 14,507,413	
Sortation Capital	\$ 1,658,748	\$ 250,006	\$ 1,217,782	\$ 20,253	\$ 3,146,788	
Sortation Facility	\$ 2,675,239	\$ 403,212	\$ 1,964,046	\$ 32,664	\$ 5,075,161	
Glass and Unsorted Container Transfer	\$ 270,289	\$ 40,738	\$ 198,435	\$ 3,300	\$ 512,762	
Sortation Residual Disposal	\$ 2,016,588	\$ 303,940	\$ 1,480,493	\$ 24,622	\$ 3,825,643	
Sortation Administrative & Marketing	\$ 1,651,894	\$ 248,973	\$ 1,212,750	\$ 20,169	\$ 3,133,787	
Sortation Margin	\$ 1,251,974	\$ 188,697	\$ 919,146	\$ 15,286	\$ 2,375,103	
Overall System Costs						
Total Costs	\$ 47,773,471	\$ 11,655,439	\$ 50,112,762	\$ (198,564)	\$ 109,343,107	
Tons Collected for Recycling 126,046 20,242 129,515 6,372 282,175						
Tons Collected Commingled 104,873 15,806 76,993 1,280 198,953						
Tons Collected Source-Separated 21,173 4,436 52,521 5,091 83,222						
Tons Marketed 118,984 19,108 122,258 6,015 266,365						
Tons Marketed (excluding bale contamination) 118,984 19,108 122,258 6,015 266,365						
Total Cost per Ton Collected	\$ 379	\$ 576	\$ 387	\$ (31)	\$ 388	
Total Cost per Ton Marketed	\$ 402	\$ 610	\$ 410	\$ (33)	\$ 411	
Customers	465,865	7,221	35,511	NA	NA	
Annual pounds per customer	541	5,606	7,294	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 4,823,855	\$ 727,051	\$ 3,541,468	\$ 58,898	\$ 9,151,271	
Commodity Sales (mid-point)	\$ 13,700,367	\$ 2,064,917	\$ 10,058,224	\$ 167,277	\$ 25,990,784	
Commodity Sales (upper range)	\$ 22,576,879	\$ 3,402,783	\$ 16,574,979	\$ 275,656	\$ 42,830,297	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	25	32	122	5	184	
Local Government Engagement	20	13	28	-	61	
New Engagement (costs listed in collection)	6	19	94	5	123	
Recycling Collection	148	25	122	20	315	
Route Drivers and Operations	113	22	110	20	265	
Management and Administrative	35	3	12	NA	50	
Sortation	134	20	98	2	254	
Sorting Labor	94	14	69	1	178	
Equipment Operators, Supervisors, Maintenance	27	4	20	0	52	
Admininstrative and Marketing	13	2	9	0	24	
Overall Recycling System FTEs	307	77	343	27	753	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded + Statewide List (S7/A++)						
FINAL - 1 - Metro Area 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 3,368,301	\$ 3,407,849	\$ 13,932,547	\$ -	\$ 20,708,697	
Collection Engagement Labor and Expenses	\$ 1,824,301	\$ 2,367,328	\$ 11,641,162	NA	\$ 15,832,791	
Local Government Engagement Labor and Expenses	\$ 1,544,000	\$ 1,040,521	\$ 2,291,385	NA	\$ 4,875,906	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 43,936,438	\$ 8,285,644	\$ 40,744,055	\$ 423,163	\$ 93,389,300	
Direct Collection Costs	\$ 31,521,899	\$ 5,646,739	\$ 27,767,432	\$ 351,289	\$ 65,287,360	
Collection Capital - Containers	\$ 1,082,732	\$ 98,918	\$ 486,422	\$ 35,773	\$ 1,703,844	
Collection Capital - Trucks	\$ 5,133,308	\$ 700,660	\$ 3,445,442	NA	\$ 9,279,410	
Collection Labor	\$ 18,066,088	\$ 3,161,137	\$ 15,544,664	\$ 276,755	\$ 37,048,645	
Collection Operations	\$ 7,239,771	\$ 1,686,025	\$ 8,290,904	\$ 38,761	\$ 17,255,461	
Indirect Collection Costs	\$ 12,414,539	\$ 2,638,905	\$ 12,976,623	\$ 71,873	\$ 28,101,941	
Collection Administrative	\$ 6,851,851	\$ 1,642,421	\$ 8,076,488	\$ 71,873	\$ 16,642,634	
Collection Margin and Franchise Fee	\$ 5,562,688	\$ 996,483	\$ 4,900,135	NA	\$ 11,459,307	
Cost Savings from Reduced Garbage Disposal	\$ (16,975,877)	\$ (2,726,232)	\$ (17,443,053)	\$ (858,169)	\$ (38,003,330)	
Avoided Disposal Tip Fees	\$ (16,975,877)	\$ (2,726,232)	\$ (17,443,053)	\$ (858,169)	\$ (38,003,330)	
Initial Transfer Transport	\$ 272,670	\$ 100,026	\$ 272,309	\$ 26,778	\$ 671,783	
Consolidation and Transfer to MRF	\$ 272,670	\$ 100,026	\$ 272,309	\$ 26,778	\$ 671,783	
Sortation	\$ 17,019,620	\$ 2,565,194	\$ 12,495,078	\$ 207,804	\$ 32,287,696	
Sortation Labor	\$ 7,654,670	\$ 1,153,710	\$ 5,619,731	\$ 93,461	\$ 14,521,573	
Sortation Capital	\$ 1,650,978	\$ 248,835	\$ 1,212,077	\$ 20,158	\$ 3,132,048	
Sortation Facility	\$ 2,673,280	\$ 402,916	\$ 1,962,608	\$ 32,640	\$ 5,071,444	
Glass and Unsorted Container Transfer	\$ 134,774	\$ 20,313	\$ 98,945	\$ 1,646	\$ 255,677	
Sortation Residual Disposal	\$ 2,011,033	\$ 303,103	\$ 1,476,415	\$ 24,554	\$ 3,815,105	
Sortation Administrative & Marketing	\$ 1,644,156	\$ 247,807	\$ 1,207,069	\$ 20,075	\$ 3,119,107	
Sortation Margin	\$ 1,250,729	\$ 188,510	\$ 918,232	\$ 15,271	\$ 2,372,742	
Overall System Costs						
Total Costs	\$ 47,621,153	\$ 11,632,482	\$ 50,000,936	\$ (200,424)	\$ 109,054,146	
Tons Collected for Recycling 126,046 20,242 129,515 6,372 282,175						
Tons Collected Commingled 104,873 15,806 76,993 1,280 198,953						
Tons Collected Source-Separated 21,173 4,436 52,521 5,091 83,222						
Tons Marketed 119,002 19,111 122,277 6,016 266,406						
Tons Marketed (excluding bale contamination) 119,002 19,111 122,277 6,016 266,406						
Total Cost per Ton Collected	\$ 378	\$ 575	\$ 386	\$ (31)	\$ 386	
Total Cost per Ton Marketed	\$ 400	\$ 609	\$ 409	\$ (33)	\$ 409	
Customers	465,865	7,221	35,511	NA	NA	
Annual pounds per customer	541	5,606	7,294	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 5,235,642	\$ 789,115	\$ 3,843,785	\$ 63,925	\$ 9,932,467	
Commodity Sales (mid-point)	\$ 14,617,364	\$ 2,203,126	\$ 10,731,444	\$ 178,473	\$ 27,730,407	
Commodity Sales (upper range)	\$ 23,999,086	\$ 3,617,138	\$ 17,619,103	\$ 293,021	\$ 45,528,347	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	25	32	122	5	184	
Local Government Engagement	20	13	28	-	61	
New Engagement (costs listed in collection)	6	19	94	5	123	
Recycling Collection	148	25	122	20	315	
Route Drivers and Operations	113	22	110	20	265	
Management and Administrative	35	3	12	NA	50	
Sortation	134	20	98	2	254	
Sorting Labor	94	14	69	1	178	
Equipment Operators, Supervisors, Maintenance	27	4	20	0	52	
Admininstrative and Marketing	13	2	9	0	24	
Overall Recycling System FTEs	307	77	343	27	753	

Figures in this report represent the consultant team's best modeling estimates based on available data.

+Container Recovery Facility (S3/B)						
FINAL - 1 - Metro Area 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 3,368,301	\$ 3,407,849	\$ 13,932,547	\$ -	\$ 20,708,697	
Collection Engagement Labor and Expenses	\$ 1,824,301	\$ 2,367,328	\$ 11,641,162	NA	\$ 15,832,791	
Local Government Engagement Labor and Expenses	\$ 1,544,000	\$ 1,040,521	\$ 2,291,385	NA	\$ 4,875,906	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 43,936,438	\$ 8,285,644	\$ 40,744,055	\$ 423,163	\$ 93,389,300	
Direct Collection Costs	\$ 31,521,899	\$ 5,646,739	\$ 27,767,432	\$ 351,289	\$ 65,287,360	
Collection Capital - Containers	\$ 1,082,732	\$ 98,918	\$ 486,422	\$ 35,773	\$ 1,703,844	
Collection Capital - Trucks	\$ 5,133,308	\$ 700,660	\$ 3,445,442	NA	\$ 9,279,410	
Collection Labor	\$ 18,066,088	\$ 3,161,137	\$ 15,544,664	\$ 276,755	\$ 37,048,645	
Collection Operations	\$ 7,239,771	\$ 1,686,025	\$ 8,290,904	\$ 38,761	\$ 17,255,461	
Indirect Collection Costs	\$ 12,414,539	\$ 2,638,905	\$ 12,976,623	\$ 71,873	\$ 28,101,941	
Collection Administrative	\$ 6,851,851	\$ 1,642,421	\$ 8,076,488	\$ 71,873	\$ 16,642,634	
Collection Margin and Franchise Fee	\$ 5,562,688	\$ 996,483	\$ 4,900,135	NA	\$ 11,459,307	
Cost Savings from Reduced Garbage Disposal	\$ (16,975,877)	\$ (2,726,232)	\$ (17,443,053)	\$ (858,169)	\$ (38,003,330)	
Avoided Disposal Tip Fees	\$ (16,975,877)	\$ (2,726,232)	\$ (17,443,053)	\$ (858,169)	\$ (38,003,330)	
Initial Transfer Transport	\$ 272,670	\$ 100,026	\$ 272,309	\$ 26,778	\$ 671,783	
Consolidation and Transfer to MRF	\$ 272,670	\$ 100,026	\$ 272,309	\$ 26,778	\$ 671,783	
Sortation	\$ 16,932,833	\$ 2,552,113	\$ 12,431,362	\$ 206,744	\$ 32,123,053	
Sortation Labor	\$ 7,485,227	\$ 1,128,172	\$ 5,495,333	\$ 91,392	\$ 14,200,124	
Sortation Capital	\$ 1,524,583	\$ 229,785	\$ 1,119,284	\$ 18,615	\$ 2,892,266	
Sortation Facility	\$ 2,664,149	\$ 401,540	\$ 1,955,904	\$ 32,528	\$ 5,054,122	
Glass and Unsorted Container Transfer	\$ 481,173	\$ 72,522	\$ 353,257	\$ 5,875	\$ 912,827	
Sortation Residual Disposal	\$ 1,907,166	\$ 287,448	\$ 1,400,160	\$ 23,286	\$ 3,618,059	
Sortation Administrative & Marketing	\$ 1,651,894	\$ 248,973	\$ 1,212,750	\$ 20,169	\$ 3,133,787	
Sortation Margin	\$ 1,218,641	\$ 183,673	\$ 894,674	\$ 14,879	\$ 2,311,869	
Overall System Costs						
Total Costs	\$ 47,534,365	\$ 11,619,401	\$ 49,937,220	\$ (201,484)	\$ 108,889,503	
Tons Collected for Recycling	126,046	20,242	129,515	6,372	282,175	
Tons Collected Commingled	104,873	15,806	76,993	1,280	198,953	
Tons Collected Source-Separated	21,173	4,436	52,521	5,091	83,222	
Tons Marketed	119,517	19,194	122,806	6,042	267,558	
Tons Marketed (excluding bale contamination)	119,517	19,194	122,806	6,042	267,558	
Total Cost per Ton Collected	\$ 377	\$ 574	\$ 386	\$ (32)	\$ 386	
Total Cost per Ton Marketed	\$ 398	\$ 605	\$ 407	\$ (33)	\$ 407	
Customers	465,865	7,221	35,511	NA	NA	
Annual pounds per customer	541	5,606	7,294	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 4,253,947	\$ 641,154	\$ 3,123,066	\$ 51,939	\$ 8,070,107	
Commodity Sales (mid-point)	\$ 12,645,881	\$ 1,905,985	\$ 9,284,065	\$ 154,402	\$ 23,990,333	
Commodity Sales (upper range)	\$ 21,037,815	\$ 3,170,816	\$ 15,445,064	\$ 256,865	\$ 39,910,560	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	25	32	122	5	184	
Local Government Engagement	20	13	28	-	61	
New Engagement (costs listed in collection)	6	19	94	5	123	
Recycling Collection	148	25	122	20	315	
Route Drivers and Operations	113	22	110	20	265	
Management and Administrative	35	3	12	NA	50	
Sortation	131	20	97	2	249	
Sorting Labor	92	14	67	1	174	
Equipment Operators, Supervisors, Maintenance	27	4	20	0	51	
Admininstrative and Marketing	13	2	9	0	24	
Overall Recycling System FTEs	304	77	341	27	749	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Dual-Stream Collection (S4/C)						
FINAL - 1 - Metro Area 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 3,368,301	\$ 3,407,849	\$ 13,932,547	\$ -	\$ 20,708,697	
Collection Engagement Labor and Expenses	\$ 1,824,301	\$ 2,367,328	\$ 11,641,162	NA	\$ 15,832,791	
Local Government Engagement Labor and Expenses	\$ 1,544,000	\$ 1,040,521	\$ 2,291,385	NA	\$ 4,875,906	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 56,484,164	\$ 8,851,745	\$ 43,527,813	\$ 423,163	\$ 109,286,885	
Direct Collection Costs	\$ 41,808,915	\$ 6,127,922	\$ 30,133,614	\$ 351,289	\$ 78,421,740	
Collection Capital - Containers	\$ 4,065,586	\$ 578,155	\$ 2,843,034	\$ 35,773	\$ 7,522,548	
Collection Capital - Trucks	\$ 8,605,894	\$ 698,442	\$ 3,434,536	NA	\$ 12,738,872	
Collection Labor	\$ 21,146,985	\$ 3,164,096	\$ 15,559,211	\$ 276,755	\$ 40,147,047	
Collection Operations	\$ 7,990,450	\$ 1,687,230	\$ 8,296,832	\$ 38,761	\$ 18,013,273	
Indirect Collection Costs	\$ 14,675,250	\$ 2,723,822	\$ 13,394,200	\$ 71,873	\$ 30,865,145	
Collection Administrative	\$ 7,297,206	\$ 1,642,424	\$ 8,076,503	\$ 71,873	\$ 17,088,007	
Collection Margin and Franchise Fee	\$ 7,378,044	\$ 1,081,398	\$ 5,317,697	NA	\$ 13,777,138	
Cost Savings from Reduced Garbage Disposal	\$ (16,975,877)	\$ (2,726,232)	\$ (17,443,053)	\$ (858,169)	\$ (38,003,330)	
Avoided Disposal Tip Fees	\$ (16,975,877)	\$ (2,726,232)	\$ (17,443,053)	\$ (858,169)	\$ (38,003,330)	
Initial Transfer Transport	\$ 272,670	\$ 100,026	\$ 272,309	\$ 26,778	\$ 671,783	
Consolidation and Transfer to MRF	\$ 272,670	\$ 100,026	\$ 272,309	\$ 26,778	\$ 671,783	
Sortation	\$ 16,633,767	\$ 2,507,038	\$ 12,211,801	\$ 203,093	\$ 31,555,699	
Sortation Labor	\$ 7,443,953	\$ 1,121,951	\$ 5,465,032	\$ 90,888	\$ 14,121,825	
Sortation Capital	\$ 1,583,282	\$ 238,632	\$ 1,162,378	\$ 19,331	\$ 3,003,624	
Sortation Facility	\$ 2,692,532	\$ 405,818	\$ 1,976,742	\$ 32,875	\$ 5,107,966	
Glass and Unsorted Container Transfer	\$ 135,408	\$ 20,409	\$ 99,411	\$ 1,653	\$ 256,880	
Sortation Residual Disposal	\$ 1,904,597	\$ 287,061	\$ 1,398,274	\$ 23,254	\$ 3,613,186	
Sortation Administrative & Marketing	\$ 1,651,894	\$ 248,973	\$ 1,212,750	\$ 20,169	\$ 3,133,787	
Sortation Margin	\$ 1,222,101	\$ 184,195	\$ 897,214	\$ 14,921	\$ 2,318,431	
Overall System Costs						
Total Costs	\$ 59,783,026	\$ 12,140,426	\$ 52,501,417	\$ (205,135)	\$ 124,219,734	
Tons Collected for Recycling126,04620,242129,5156,372282,175						
Tons Collected Commingled104,87315,80676,9931,280198,953						
Tons Collected Source-Separated21,1734,43652,5215,09183,222						
Tons Marketed116,66818,736119,8785,898261,180						
Tons Marketed (excluding bale contamination)116,66818,736119,8785,898261,180						
Total Cost per Ton Collected	\$ 474	\$ 600	\$ 405	\$ (32)	\$ 440	
Total Cost per Ton Marketed	\$ 512	\$ 648	\$ 438	\$ (35)	\$ 476	
Customers	465,865	7,221	35,511	NA	NA	
Annual pounds per customer	541	5,606	7,294	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 4,839,837	\$ 729,459	\$ 3,553,201	\$ 59,093	\$ 9,181,590	
Commodity Sales (mid-point)	\$ 13,570,717	\$ 2,045,376	\$ 9,963,041	\$ 165,694	\$ 25,744,828	
Commodity Sales (upper range)	\$ 22,301,598	\$ 3,361,293	\$ 16,372,880	\$ 272,295	\$ 42,308,065	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	25	32	122	5	184	
Local Government Engagement	20	13	28	-	61	
New Engagement (costs listed in collection)	6	19	94	5	123	
Recycling Collection	172	25	122	20	339	
Route Drivers and Operations	133	22	110	20	285	
Management and Administrative	39	3	12	NA	54	
Sortation	131	20	96	2	249	
Sorting Labor	89	13	66	1	169	
Equipment Operators, Supervisors, Maintenance	29	4	21	0	55	
Admininstrative and Marketing	13	2	9	0	24	
Overall Recycling System FTEs	328	77	340	27	772	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded + Statewide List + Expanded Collection (S8/D-low)						
FINAL - 1 - Metro Area 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 3,368,301	\$ 3,417,729	\$ 13,932,547	\$ -	\$ 20,718,577	
Collection Engagement Labor and Expenses	\$ 1,824,301	\$ 2,377,207	\$ 11,641,162	NA	\$ 15,842,671	
Local Government Engagement Labor and Expenses	\$ 1,544,000	\$ 1,040,521	\$ 2,291,385	NA	\$ 4,875,906	
Multifamily Property Improvements	\$ -	\$ 4,676,374	\$ -	\$ -	\$ 4,676,374	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	\$ 2,500,907	NA	NA	\$ 2,500,907	
Bulky collection	NA	\$ 2,175,468	NA	NA	\$ 2,175,468	
Collection	\$ 43,936,438	\$ 8,320,223	\$ 40,744,055	\$ 423,301	\$ 93,424,018	
Direct Collection Costs	\$ 31,521,899	\$ 5,670,305	\$ 27,767,432	\$ 351,428	\$ 65,311,065	
Collection Capital - Containers	\$ 1,082,732	\$ 99,331	\$ 486,422	\$ 35,912	\$ 1,704,396	
Collection Capital - Trucks	\$ 5,133,308	\$ 703,584	\$ 3,445,442	NA	\$ 9,282,334	
Collection Labor	\$ 18,066,088	\$ 3,174,330	\$ 15,544,664	\$ 276,755	\$ 37,061,837	
Collection Operations	\$ 7,239,771	\$ 1,693,061	\$ 8,290,904	\$ 38,761	\$ 17,262,497	
Indirect Collection Costs	\$ 12,414,539	\$ 2,649,918	\$ 12,976,623	\$ 71,873	\$ 28,112,954	
Collection Administrative	\$ 6,851,851	\$ 1,649,276	\$ 8,076,488	\$ 71,873	\$ 16,649,488	
Collection Margin and Franchise Fee	\$ 5,562,688	\$ 1,000,642	\$ 4,900,135	NA	\$ 11,463,465	
Cost Savings from Reduced Garbage Disposal	\$ (16,975,877)	\$ (2,682,960)	\$ (17,443,053)	\$ (858,169)	\$ (37,960,058)	
Avoided Disposal Tip Fees	\$ (16,975,877)	\$ (2,682,960)	\$ (17,443,053)	\$ (858,169)	\$ (37,960,058)	
Initial Transfer Transport	\$ 272,670	\$ 99,384	\$ 272,309	\$ 26,778	\$ 671,140	
Consolidation and Transfer to MRF	\$ 272,670	\$ 99,384	\$ 272,309	\$ 26,778	\$ 671,140	
Sortation	\$ 16,982,446	\$ 2,507,563	\$ 12,467,786	\$ 207,350	\$ 32,165,144	
Sortation Labor	\$ 7,710,477	\$ 1,138,499	\$ 5,660,702	\$ 94,142	\$ 14,603,821	
Sortation Capital	\$ 1,592,828	\$ 235,191	\$ 1,169,386	\$ 19,448	\$ 3,016,853	
Sortation Facility	\$ 2,669,247	\$ 394,131	\$ 1,959,647	\$ 32,591	\$ 5,055,615	
Glass and Unsorted Container Transfer	\$ 130,773	\$ 19,309	\$ 96,008	\$ 1,597	\$ 247,687	
Sortation Residual Disposal	\$ 2,044,603	\$ 301,898	\$ 1,501,060	\$ 24,964	\$ 3,872,525	
Sortation Administrative & Marketing	\$ 1,586,247	\$ 234,219	\$ 1,164,555	\$ 19,368	\$ 3,004,388	
Sortation Margin	\$ 1,248,272	\$ 184,315	\$ 916,428	\$ 15,241	\$ 2,364,256	
Overall System Costs						
Total Costs	\$ 47,583,978	\$ 16,338,313	\$ 49,973,644	\$ (200,739)	\$ 113,695,197	
Tons Collected for Recycling 126,046 19,921 129,515 6,372 281,854						
Tons Collected Commingled 104,873 15,485 76,993 1,280 198,632						
Tons Collected Source-Separated 21,173 4,436 52,521 5,091 83,222						
Tons Marketed 118,637 18,750 121,901 5,997 265,285						
Tons Marketed (excluding bale contamination) 118,637 18,750 121,901 5,997 265,285						
Total Cost per Ton Collected	\$ 378	\$ 820	\$ 386	\$ (32)	\$ 403	
Total Cost per Ton Marketed	\$ 401	\$ 871	\$ 410	\$ (33)	\$ 429	
Customers	465,865	7,252	35,511	NA	NA	
Annual pounds per customer	541	5,494	7,294	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 5,107,521	\$ 754,157	\$ 3,749,723	\$ 62,361	\$ 9,673,762	
Commodity Sales (mid-point)	\$ 14,312,457	\$ 2,113,322	\$ 10,507,594	\$ 174,750	\$ 27,108,124	
Commodity Sales (upper range)	\$ 23,517,393	\$ 3,472,488	\$ 17,265,465	\$ 287,139	\$ 44,542,485	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	25	32	122	5	184	
Local Government Engagement	20	13	28	-	61	
New Engagement (costs listed in collection)	6	19	94	5	123	
Recycling Collection	148	25	122	20	315	
Route Drivers and Operations	113	22	110	20	265	
Management and Administrative	35	3	12	NA	50	
Sortation	134	20	99	2	255	
Sorting Labor	95	14	70	1	180	
Equipment Operators, Supervisors, Maintenance	27	4	20	0	52	
Admininstrative and Marketing	12	2	9	0	23	
Overall Recycling Svsytem FTEs	307	77	343	27	754	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded + Statewide List + Expanded Collection (S9/D-mid)					
FINAL - 1 - Metro Area 2025					
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total
Recycling System Costs					
Customer Engagement Costs	\$ 3,368,301	\$ 3,939,555	\$ 13,932,547	\$ -	\$ 21,240,403
Collection Engagement Labor and Expenses	\$ 1,824,301	\$ 2,899,033	\$ 11,641,162	NA	\$ 16,364,497
Local Government Engagement Labor and Expenses	\$ 1,544,000	\$ 1,040,521	\$ 2,291,385	NA	\$ 4,875,906
Multifamily Property Improvements	\$ -	\$ 5,702,896	\$ -	\$ -	\$ 5,702,896
Service level adjustments (included above)	NA	NA	NA	NA	\$ -
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -
Collection area adjustments	NA	\$ 3,049,887	NA	NA	\$ 3,049,887
Bulky collection	NA	\$ 2,653,009	NA	NA	\$ 2,653,009
Collection	\$ 43,936,438	\$ 10,960,144	\$ 40,744,055	\$ 423,479	\$ 96,064,116
Direct Collection Costs	\$ 31,521,899	\$ 7,606,507	\$ 27,767,432	\$ 351,605	\$ 67,247,444
Collection Capital - Containers	\$ 1,082,732	\$ 133,249	\$ 486,422	\$ 36,089	\$ 1,738,491
Collection Capital - Trucks	\$ 5,133,308	\$ 943,832	\$ 3,445,442	NA	\$ 9,522,583
Collection Labor	\$ 18,066,088	\$ 4,258,248	\$ 15,544,664	\$ 276,755	\$ 38,145,755
Collection Operations	\$ 7,239,771	\$ 2,271,179	\$ 8,290,904	\$ 38,761	\$ 17,840,616
Indirect Collection Costs	\$ 12,414,539	\$ 3,353,637	\$ 12,976,623	\$ 71,873	\$ 28,816,673
Collection Administrative	\$ 6,851,851	\$ 2,011,312	\$ 8,076,488	\$ 71,873	\$ 17,011,525
Collection Margin and Franchise Fee	\$ 5,562,688	\$ 1,342,325	\$ 4,900,135	NA	\$ 11,805,148
Cost Savings from Reduced Garbage Disposal	\$ (16,975,877)	\$ (3,619,721)	\$ (17,443,053)	\$ (858,169)	\$ (38,896,819)
Avoided Disposal Tip Fees	\$ (16,975,877)	\$ (3,619,721)	\$ (17,443,053)	\$ (858,169)	\$ (38,896,819)
Initial Transfer Transport	\$ 272,670	\$ 112,659	\$ 272,309	\$ 26,778	\$ 684,416
Consolidation and Transfer to MRF	\$ 272,670	\$ 112,659	\$ 272,309	\$ 26,778	\$ 684,416
Sortation	\$ 16,944,285	\$ 3,635,299	\$ 12,439,770	\$ 206,884	\$ 33,226,237
Sortation Labor	\$ 7,783,364	\$ 1,669,876	\$ 5,714,213	\$ 95,032	\$ 15,262,485
Sortation Capital	\$ 1,514,085	\$ 324,838	\$ 1,111,576	\$ 18,486	\$ 2,968,986
Sortation Facility	\$ 2,658,691	\$ 570,407	\$ 1,951,897	\$ 32,462	\$ 5,213,457
Glass and Unsorted Container Transfer	\$ 123,676	\$ 26,534	\$ 90,798	\$ 1,510	\$ 242,518
Sortation Residual Disposal	\$ 2,110,669	\$ 452,832	\$ 1,549,563	\$ 25,771	\$ 4,138,834
Sortation Administrative & Marketing	\$ 1,507,829	\$ 323,496	\$ 1,106,984	\$ 18,410	\$ 2,956,719
Sortation Margin	\$ 1,245,971	\$ 267,316	\$ 914,739	\$ 15,213	\$ 2,443,238
Overall System Costs					
Total Costs	\$ 47,545,817	\$ 20,730,832	\$ 49,945,628	\$ (201,028)	\$ 118,021,249
<i>Tons Collected for Recycling</i>	126,046	26,876	129,515	6,372	288,809
<i>Tons Collected Commingled</i>	104,873	22,500	76,993	1,280	205,647
<i>Tons Collected Source-Separated</i>	21,173	4,377	52,521	5,091	83,162
<i>Tons Marketed</i>	118,100	25,182	121,350	5,970	270,602
<i>Tons Marketed (excluding bale contamination)</i>	118,100	25,182	121,350	5,970	270,602
Total Cost per Ton Collected	\$ 377	\$ 771	\$ 386	\$ (32)	\$ 409
Total Cost per Ton Marketed	\$ 403	\$ 823	\$ 412	\$ (34)	\$ 436
Customers	465,865	8,843	35,511	NA	NA
Annual pounds per customer	541	6,078	7,294	NA	NA
Commodity Revenues					
Commodity Revenues					
Commodity Sales (lower range)	\$ 4,978,444	\$ 1,068,096	\$ 3,654,961	\$ 60,785	\$ 9,762,286
Commodity Sales (mid-point)	\$ 13,967,402	\$ 2,996,626	\$ 10,254,269	\$ 170,537	\$ 27,388,834
Commodity Sales (upper range)	\$ 22,956,360	\$ 4,925,155	\$ 16,853,578	\$ 280,289	\$ 45,015,382
Full-Time Equivalent (FTE) Employment					
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total
Recycling Customer Engagement	25	36	122	5	188
Local Government Engagement	20	13	28	-	61
New Engagement (costs listed in collection)	6	23	94	5	128
Recycling Collection	148	33	122	20	324
Route Drivers and Operations	113	30	110	20	273
Management and Administrative	35	3	12	NA	50
Sortation	135	29	99	2	265
Sorting Labor	97	21	71	1	189
Equipment Operators, Supervisors, Maintenance	27	6	20	0	53
Administrative and Marketing	12	2	8	0	23
Overall Recycling System FTEs	308	99	343	27	777

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded + Statewide List + Expanded Collection (S10/D-hi)						
FINAL - 1 - Metro Area 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 3,368,301	\$ 4,229,458	\$ 13,932,547	\$ -	\$ 21,530,306	
Collection Engagement Labor and Expenses	\$ 1,824,301	\$ 3,188,937	\$ 11,641,162	NA	\$ 16,654,400	
Local Government Engagement Labor and Expenses	\$ 1,544,000	\$ 1,040,521	\$ 2,291,385	NA	\$ 4,875,906	
Multifamily Property Improvements	\$ -	\$ 6,273,185	\$ -	\$ -	\$ 6,273,185	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	\$ 3,354,875	NA	NA	\$ 3,354,875	
Bulky collection	NA	\$ 2,918,310	NA	NA	\$ 2,918,310	
Collection	\$ 43,936,438	\$ 12,951,042	\$ 40,744,055	\$ 423,693	\$ 98,055,228	
Direct Collection Costs	\$ 31,521,899	\$ 9,127,809	\$ 27,767,432	\$ 351,819	\$ 68,768,959	
Collection Capital - Containers	\$ 1,082,732	\$ 159,898	\$ 486,422	\$ 36,303	\$ 1,765,355	
Collection Capital - Trucks	\$ 5,133,308	\$ 1,132,598	\$ 3,445,442	NA	\$ 9,711,349	
Collection Labor	\$ 18,066,088	\$ 5,109,897	\$ 15,544,664	\$ 276,755	\$ 38,997,404	
Collection Operations	\$ 7,239,771	\$ 2,725,415	\$ 8,290,904	\$ 38,761	\$ 18,294,852	
Indirect Collection Costs	\$ 12,414,539	\$ 3,823,233	\$ 12,976,623	\$ 71,873	\$ 29,286,269	
Collection Administrative	\$ 6,851,851	\$ 2,212,443	\$ 8,076,488	\$ 71,873	\$ 17,212,656	
Collection Margin and Franchise Fee	\$ 5,562,688	\$ 1,610,790	\$ 4,900,135	NA	\$ 12,073,613	
Cost Savings from Reduced Garbage Disposal	\$ (16,975,877)	\$ (4,176,678)	\$ (17,443,053)	\$ (858,169)	\$ (39,453,776)	
Avoided Disposal Tip Fees	\$ (16,975,877)	\$ (4,176,678)	\$ (17,443,053)	\$ (858,169)	\$ (39,453,776)	
Initial Transfer Transport	\$ 272,670	\$ 126,780	\$ 272,309	\$ 26,778	\$ 698,536	
Consolidation and Transfer to MRF	\$ 272,670	\$ 126,780	\$ 272,309	\$ 26,778	\$ 698,536	
Sortation	\$ 17,251,788	\$ 4,291,771	\$ 12,665,525	\$ 210,639	\$ 34,419,723	
Sortation Labor	\$ 8,022,950	\$ 1,995,890	\$ 5,890,107	\$ 97,958	\$ 16,006,905	
Sortation Capital	\$ 1,569,564	\$ 390,464	\$ 1,152,307	\$ 19,164	\$ 3,131,499	
Sortation Facility	\$ 2,653,503	\$ 660,119	\$ 1,948,089	\$ 32,398	\$ 5,294,109	
Glass and Unsorted Container Transfer	\$ 119,906	\$ 29,829	\$ 88,030	\$ 1,464	\$ 239,229	
Sortation Residual Disposal	\$ 2,163,281	\$ 538,165	\$ 1,588,188	\$ 26,413	\$ 4,316,047	
Sortation Administrative & Marketing	\$ 1,453,556	\$ 361,605	\$ 1,067,138	\$ 17,747	\$ 2,900,046	
Sortation Margin	\$ 1,269,028	\$ 315,699	\$ 931,666	\$ 15,494	\$ 2,531,888	
Overall System Costs						
Total Costs	\$ 47,853,320	\$ 23,695,558	\$ 50,171,384	\$ (197,059)	\$ 121,523,203	
Tons Collected for Recycling						
Tons Collected Commingled	126,046	31,012	129,515	6,372	292,945	
Tons Collected Source-Separated	104,873	26,090	76,993	1,280	209,236	
Tons Collected	21,173	4,922	52,521	5,091	83,708	
Tons Marketed	117,661	28,949	120,899	5,948	273,456	
Tons Marketed (excluding bale contamination)	117,661	28,949	120,899	5,948	273,456	
Total Cost per Ton Collected	\$ 380	\$ 764	\$ 387	\$ (31)	\$ 415	
Total Cost per Ton Marketed	\$ 407	\$ 819	\$ 415	\$ (33)	\$ 444	
Customers	465,865	9,728	35,511	NA	NA	
Annual pounds per customer	541	6,376	7,294	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 4,866,635	\$ 1,210,685	\$ 3,572,875	\$ 59,420	\$ 9,709,615	
Commodity Sales (mid-point)	\$ 13,692,856	\$ 3,406,407	\$ 10,052,710	\$ 167,185	\$ 27,319,158	
Commodity Sales (upper range)	\$ 22,519,078	\$ 5,602,128	\$ 16,532,544	\$ 274,950	\$ 44,928,700	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	25	39	122	5	191	
Local Government Engagement	20	13	28	-	61	
New Engagement (costs listed in collection)	6	26	94	5	130	
Recycling Collection	148	40	122	20	330	
Route Drivers and Operations	113	36	110	20	279	
Management and Administrative	35	4	12	NA	51	
Sortation	138	34	102	2	276	
Sorting Labor	100	25	73	1	200	
Equipment Operators, Supervisors, Maintenance	27	7	20	0	54	
Admininstrative and Marketing	11	3	8	0	22	
Overall Recycling System FTEs	311	113	346	27	797	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Additional Alternative Scenario Analysis - Cost Modeling Results

FINAL - 2 - Willamette Valley, etc. 2025 Tables

December 1, 2020

Original Baseline: Pre-Disruption List (\$0)						
FINAL - 2 - Willamette Valley, etc. 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 423,868	\$ 10,136	\$ 26,523	\$ -	\$ 460,528	
Collection Engagement Labor and Expenses	\$ 423,868	\$ 10,136	\$ 26,523	NA	\$ 460,528	
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 32,601,311	\$ 7,361,507	\$ 19,262,609	\$ 4,079,896	\$ 63,305,322	
Direct Collection Costs	\$ 23,409,367	\$ 5,188,266	\$ 13,575,963	\$ 3,541,877	\$ 45,715,473	
Collection Capital - Containers	\$ 909,021	\$ 79,875	\$ 209,007	\$ 256,444	\$ 1,454,348	
Collection Capital - Trucks	\$ 2,571,785	\$ 294,022	\$ 769,357	NA	\$ 3,635,164	
Collection Labor	\$ 12,559,081	\$ 3,093,068	\$ 8,093,528	\$ 2,507,980	\$ 26,253,657	
Collection Operations	\$ 7,369,481	\$ 1,721,301	\$ 4,504,070	\$ 777,453	\$ 14,372,305	
Indirect Collection Costs	\$ 9,191,943	\$ 2,173,241	\$ 5,686,646	\$ 538,019	\$ 17,589,849	
Collection Administrative	\$ 5,060,878	\$ 1,257,664	\$ 3,290,888	\$ 538,019	\$ 10,147,450	
Collection Margin and Franchise Fee	\$ 4,131,065	\$ 915,576	\$ 2,395,758	NA	\$ 7,442,399	
Cost Savings from Reduced Garbage Disposal	\$ (6,587,942)	\$ (239,236)	\$ (4,911,500)	\$ (1,696,052)	\$ (13,434,731)	
Avoided Disposal Tip Fees	\$ (6,587,942)	\$ (239,236)	\$ (4,911,500)	\$ (1,696,052)	\$ (13,434,731)	
Initial Transfer Transport	\$ 1,057,816	\$ 38,441	\$ 1,339,559	\$ 667,279	\$ 3,103,095	
Consolidation and Transfer to MRF	\$ 1,057,816	\$ 38,441	\$ 1,339,559	\$ 667,279	\$ 3,103,095	
Sortation	\$ 13,993,633	\$ 478,365	\$ 5,403,445	\$ 768,842	\$ 20,644,285	
Sortation Labor	\$ 7,394,655	\$ 252,783	\$ 2,855,342	\$ 406,279	\$ 10,909,059	
Sortation Capital	\$ 459,801	\$ 15,718	\$ 177,546	\$ 25,263	\$ 678,327	
Sortation Facility	\$ 2,060,888	\$ 70,450	\$ 795,783	\$ 113,230	\$ 3,040,351	
Glass and Unsorted Container Transfer	\$ 104,539	\$ 3,574	\$ 40,366	\$ 5,744	\$ 154,223	
Sortation Residual Disposal	\$ 1,560,302	\$ 53,338	\$ 602,489	\$ 85,727	\$ 2,301,855	
Sortation Administrative & Marketing	\$ 1,384,625	\$ 47,333	\$ 534,654	\$ 76,074	\$ 2,042,686	
Sortation Margin	\$ 1,028,822	\$ 35,170	\$ 397,265	\$ 56,526	\$ 1,517,782	
Overall System Costs						
Total Costs	\$ 41,488,685	\$ 7,649,213	\$ 21,120,636	\$ 3,819,965	\$ 74,078,499	
Tons Collected for Recycling 91,460 3,321 68,186 23,546 186,513						
Tons Collected Commingled 80,601 2,755 31,123 4,428 118,908						
Tons Collected Source-Separated 10,859 566 37,063 19,118 67,606						
Tons Marketed 82,315 2,989 61,368 21,192 167,864						
Tons Marketed (excluding bale contamination) 82,315 2,989 61,368 21,192 167,864						
Total Cost per Ton Collected	\$ 454	\$ 2,303	\$ 310	\$ 162	\$ 397	
Total Cost per Ton Marketed	\$ 504	\$ 2,559	\$ 344	\$ 180	\$ 441	
Customers	378,846	9,060	23,706	NA	NA	
Annual pounds per customer	483	733	5,753	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 3,035,601	\$ 103,771	\$ 1,172,155	\$ 166,783	\$ 4,478,309	
Commodity Sales (mid-point)	\$ 10,565,702	\$ 361,183	\$ 4,079,797	\$ 580,504	\$ 15,587,186	
Commodity Sales (upper range)	\$ 18,095,803	\$ 618,596	\$ 6,987,440	\$ 994,224	\$ 26,696,063	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	-	-	-	-	-	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	-	-	-	-	-	
Recycling Collection	70	24	64	68	226	
Route Drivers and Operations	50	22	57	68	197	
Management and Administrative	20	2	6	NA	29	
Sortation	127	4	49	7	188	
Sorting Labor	96	3	37	5	141	
Equipment Operators, Supervisors, Maintenance	21	1	8	1	31	
Admininstrative and Marketing	11	0	4	1	16	
Overall Recycling Svstem FTEs	197	29	113	75	414	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Cascadia Consulting Group, Inc. | Circular Matters, LLC | Bell & Associates

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Revised Baseline: Post-Disruption List (\$5)						
FINAL - 2 - Willamette Valley, etc. 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 423,868	\$ 10,136	\$ 26,523	\$ -	\$ 460,528	
Collection Engagement Labor and Expenses	\$ 423,868	\$ 10,136	\$ 26,523	NA	\$ 460,528	
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 32,601,311	\$ 7,361,507	\$ 19,262,609	\$ 3,953,145	\$ 63,178,571	
Direct Collection Costs	\$ 23,409,367	\$ 5,188,266	\$ 13,575,963	\$ 3,431,836	\$ 45,605,432	
Collection Capital - Containers	\$ 909,021	\$ 79,875	\$ 209,007	\$ 248,479	\$ 1,446,383	
Collection Capital - Trucks	\$ 2,571,785	\$ 294,022	\$ 769,357	NA	\$ 3,635,164	
Collection Labor	\$ 12,559,081	\$ 3,093,068	\$ 8,093,528	\$ 2,430,050	\$ 26,175,726	
Collection Operations	\$ 7,369,481	\$ 1,721,301	\$ 4,504,070	\$ 753,307	\$ 14,348,159	
Indirect Collection Costs	\$ 9,191,943	\$ 2,173,241	\$ 5,686,646	\$ 521,309	\$ 17,573,139	
Collection Administrative	\$ 5,060,878	\$ 1,257,664	\$ 3,290,888	\$ 521,309	\$ 10,130,740	
Collection Margin and Franchise Fee	\$ 4,131,065	\$ 915,576	\$ 2,395,758	NA	\$ 7,442,399	
Cost Savings from Reduced Garbage Disposal	\$ (5,902,368)	\$ (228,497)	\$ (4,816,725)	\$ (1,655,035)	\$ (12,602,625)	
Avoided Disposal Tip Fees	\$ (5,902,368)	\$ (228,497)	\$ (4,816,725)	\$ (1,655,035)	\$ (12,602,625)	
Initial Transfer Transport	\$ 985,861	\$ 37,314	\$ 1,329,611	\$ 665,074	\$ 3,017,860	
Consolidation and Transfer to MRF	\$ 985,861	\$ 37,314	\$ 1,329,611	\$ 665,074	\$ 3,017,860	
Sortation	\$ 12,422,105	\$ 455,448	\$ 5,208,944	\$ 677,538	\$ 18,764,035	
Sortation Labor	\$ 6,538,272	\$ 239,722	\$ 2,741,685	\$ 356,617	\$ 9,876,295	
Sortation Capital	\$ 430,756	\$ 15,793	\$ 180,628	\$ 23,495	\$ 650,672	
Sortation Facility	\$ 1,817,528	\$ 66,638	\$ 762,141	\$ 99,133	\$ 2,745,441	
Glass and Unsorted Container Transfer	\$ 97,936	\$ 3,591	\$ 41,067	\$ 5,342	\$ 147,935	
Sortation Residual Disposal	\$ 1,327,553	\$ 48,674	\$ 556,681	\$ 72,409	\$ 2,005,316	
Sortation Administrative & Marketing	\$ 1,297,159	\$ 47,559	\$ 543,936	\$ 70,751	\$ 1,959,405	
Sortation Margin	\$ 912,901	\$ 33,471	\$ 382,806	\$ 49,792	\$ 1,378,970	
Overall System Costs						
Total Costs	\$ 40,530,777	\$ 7,635,908	\$ 21,010,963	\$ 3,640,722	\$ 72,818,369	
Tons Collected for Recycling	81,942	3,172	66,870	22,977	174,961	
Tons Collected Commingled	71,083	2,606	29,807	3,877	107,374	
Tons Collected Source-Separated	10,859	566	37,063	19,100	67,588	
Tons Marketed	74,261	2,875	60,602	20,823	158,561	
Tons Marketed (excluding bale contamination)	74,261	2,875	60,602	20,823	158,561	
Total Cost per Ton Collected	\$ 495	\$ 2,407	\$ 314	\$ 158	\$ 416	
Total Cost per Ton Marketed	\$ 546	\$ 2,656	\$ 347	\$ 175	\$ 459	
Customers	378,846	9,060	23,706	NA	NA	
Annual pounds per customer	433	700	5,642	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 2,830,503	\$ 103,779	\$ 1,186,911	\$ 154,384	\$ 4,275,576	
Commodity Sales (mid-point)	\$ 9,645,259	\$ 353,637	\$ 4,044,533	\$ 526,081	\$ 14,569,510	
Commodity Sales (upper range)	\$ 16,460,016	\$ 603,496	\$ 6,902,155	\$ 897,778	\$ 24,863,445	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	-	-	-	-	-	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	-	-	-	-	-	
Recycling Collection	70	24	64	66	224	
Route Drivers and Operations	50	22	57	66	195	
Management and Administrative	20	2	6	NA	29	
Sortation	113	4	48	6	171	
Sorting Labor	85	3	35	5	128	
Equipment Operators, Supervisors, Maintenance	19	1	8	1	28	
Admininstrative and Marketing	10	0	4	1	15	
Overall Recycling System FTEs	183	29	111	72	395	

Figures in this report represent the consultant team's best modeling estimates based on available data.

+ Customer Engagement (S6/A-)						
FINAL - 2 - Willamette Valley, etc. 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 1,483,538	\$ 2,969,949	\$ 7,771,366	\$ -	\$	12,224,854
Collection Engagement Labor and Expenses	\$ 1,483,538	\$ 2,969,949	\$ 7,771,366	NA	\$	12,224,854
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$	-
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$	-
Service level adjustments (included above)	NA	NA	NA	NA	\$	-
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$	-
Collection area adjustments	NA	NA	NA	NA	\$	-
Bulky collection	NA	NA	NA	NA	\$	-
Collection	\$ 32,601,311	\$ 7,361,507	\$ 19,262,609	\$ 4,503,091	\$	63,728,517
Direct Collection Costs	\$ 23,409,367	\$ 5,188,266	\$ 13,575,963	\$ 3,988,362	\$	46,161,958
Collection Capital - Containers	\$ 909,021	\$ 79,875	\$ 209,007	\$ 245,343	\$	1,443,247
Collection Capital - Trucks	\$ 2,571,785	\$ 294,022	\$ 769,357	NA	\$	3,635,164
Collection Labor	\$ 12,559,081	\$ 3,093,068	\$ 8,093,528	\$ 2,999,221	\$	26,744,897
Collection Operations	\$ 7,369,481	\$ 1,721,301	\$ 4,504,070	\$ 743,799	\$	14,338,650
Indirect Collection Costs	\$ 9,191,943	\$ 2,173,241	\$ 5,686,646	\$ 514,729	\$	17,566,559
Collection Administrative	\$ 5,060,878	\$ 1,257,664	\$ 3,290,888	\$ 514,729	\$	10,124,160
Collection Margin and Franchise Fee	\$ 4,131,065	\$ 915,576	\$ 2,395,758	NA	\$	7,442,399
Cost Savings from Reduced Garbage Disposal	\$ (5,598,823)	\$ (222,840)	\$ (4,780,337)	\$ (1,638,883)	\$	(12,240,883)
Avoided Disposal Tip Fees	\$ (5,598,823)	\$ (222,840)	\$ (4,780,337)	\$ (1,638,883)	\$	(12,240,883)
Initial Transfer Transport	\$ 954,003	\$ 36,720	\$ 1,325,792	\$ 664,383	\$	2,980,898
Consolidation and Transfer to MRF	\$ 954,003	\$ 36,720	\$ 1,325,792	\$ 664,383	\$	2,980,898
Sortation	\$ 11,497,303	\$ 434,603	\$ 5,038,118	\$ 628,061	\$	17,598,085
Sortation Labor	\$ 6,185,509	\$ 233,815	\$ 2,710,490	\$ 337,895	\$	9,467,708
Sortation Capital	\$ 423,138	\$ 15,995	\$ 185,419	\$ 23,115	\$	647,667
Sortation Facility	\$ 1,709,778	\$ 64,630	\$ 749,225	\$ 93,400	\$	2,617,033
Glass and Unsorted Container Transfer	\$ 96,204	\$ 3,637	\$ 42,157	\$ 5,255	\$	147,252
Sortation Residual Disposal	\$ 963,928	\$ 36,437	\$ 422,393	\$ 52,656	\$	1,475,415
Sortation Administrative & Marketing	\$ 1,274,220	\$ 48,166	\$ 558,363	\$ 69,607	\$	1,950,356
Sortation Margin	\$ 844,526	\$ 31,923	\$ 370,071	\$ 46,134	\$	1,292,654
Overall System Costs						
Total Costs	\$ 40,937,332	\$ 10,579,938	\$ 28,617,549	\$ 4,156,652	\$	84,291,472
Tons Collected for Recycling	77,728	3,094	66,365	22,752		169,939
Tons Collected Commingled	66,869	2,528	29,302	3,653		102,352
Tons Collected Source-Separated	10,859	566	37,063	19,100		67,588
Tons Marketed	72,188	2,873	61,635	21,131		157,827
Tons Marketed (excluding bale contamination)	72,188	2,873	61,635	21,131		157,827
Total Cost per Ton Collected	\$ 527	\$ 3,420	\$ 431	\$ 183	\$	496
Total Cost per Ton Marketed	\$ 567	\$ 3,682	\$ 464	\$ 197	\$	534
Customers	378,846	9,060	23,706	NA		NA
Annual pounds per customer	410	683	5,599	NA		NA
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 2,754,108	\$ 104,106	\$ 1,206,850	\$ 150,448	\$	4,215,513
Commodity Sales (mid-point)	\$ 9,394,491	\$ 355,116	\$ 4,116,666	\$ 513,191	\$	14,379,464
Commodity Sales (upper range)	\$ 16,034,874	\$ 606,125	\$ 7,026,482	\$ 875,934	\$	24,543,414
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	5	24	63	16	107	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	5	24	63	16	107	
Recycling Collection	70	24	64	65	223	
Route Drivers and Operations	50	22	57	65	194	
Management and Administrative	20	2	6	NA	29	
Sortation	108	4	47	6	165	
Sorting Labor	80	3	35	4	122	
Equipment Operators, Supervisors, Maintenance	18	1	8	1	28	
Admininstrative and Marketing	10	0	4	1	15	
Overall Recycling System FTEs	182	52	174	87	495	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + Improved MRFs (S1/A)						
FINAL - 2 - Willamette Valley, etc. 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 1,483,538	\$ 2,969,949	\$ 7,771,366	\$ -	\$	12,224,854
Collection Engagement Labor and Expenses	\$ 1,483,538	\$ 2,969,949	\$ 7,771,366	NA	\$	12,224,854
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$	-
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$	-
Service level adjustments (included above)	NA	NA	NA	NA	\$	-
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$	-
Collection area adjustments	NA	NA	NA	NA	\$	-
Bulky collection	NA	NA	NA	NA	\$	-
Collection	\$ 32,601,311	\$ 7,361,507	\$ 19,262,609	\$ 4,503,091	\$	63,728,517
Direct Collection Costs	\$ 23,409,367	\$ 5,188,266	\$ 13,575,963	\$ 3,988,362	\$	46,161,958
Collection Capital - Containers	\$ 909,021	\$ 79,875	\$ 209,007	\$ 245,343	\$	1,443,247
Collection Capital - Trucks	\$ 2,571,785	\$ 294,022	\$ 769,357	NA	\$	3,635,164
Collection Labor	\$ 12,559,081	\$ 3,093,068	\$ 8,093,528	\$ 2,999,221	\$	26,744,897
Collection Operations	\$ 7,369,481	\$ 1,721,301	\$ 4,504,070	\$ 743,799	\$	14,338,650
Indirect Collection Costs	\$ 9,191,943	\$ 2,173,241	\$ 5,686,646	\$ 514,729	\$	17,566,559
Collection Administrative	\$ 5,060,878	\$ 1,257,664	\$ 3,290,888	\$ 514,729	\$	10,124,160
Collection Margin and Franchise Fee	\$ 4,131,065	\$ 915,576	\$ 2,395,758	NA	\$	7,442,399
Cost Savings from Reduced Garbage Disposal	\$ (5,598,823)	\$ (222,840)	\$ (4,780,337)	\$ (1,638,883)	\$	(12,240,883)
Avoided Disposal Tip Fees	\$ (5,598,823)	\$ (222,840)	\$ (4,780,337)	\$ (1,638,883)	\$	(12,240,883)
Initial Transfer Transport	\$ 954,003	\$ 36,720	\$ 1,325,792	\$ 664,383	\$	2,980,898
Consolidation and Transfer to MRF	\$ 954,003	\$ 36,720	\$ 1,325,792	\$ 664,383	\$	2,980,898
Sortation	\$ 11,713,566	\$ 442,778	\$ 5,132,885	\$ 639,875	\$	17,929,103
Sortation Labor	\$ 5,322,734	\$ 201,202	\$ 2,332,422	\$ 290,764	\$	8,147,121
Sortation Capital	\$ 1,199,162	\$ 45,329	\$ 525,473	\$ 65,506	\$	1,835,470
Sortation Facility	\$ 1,709,778	\$ 64,630	\$ 749,225	\$ 93,400	\$	2,617,033
Glass and Unsorted Container Transfer	\$ 96,204	\$ 3,637	\$ 42,157	\$ 5,255	\$	147,252
Sortation Residual Disposal	\$ 1,250,923	\$ 47,285	\$ 548,154	\$ 68,334	\$	1,914,697
Sortation Administrative & Marketing	\$ 1,274,220	\$ 48,166	\$ 558,363	\$ 69,607	\$	1,950,356
Sortation Margin	\$ 860,545	\$ 32,529	\$ 377,091	\$ 47,009	\$	1,317,174
Overall System Costs						
Total Costs	\$ 41,153,594	\$ 10,588,113	\$ 28,712,315	\$ 4,168,466	\$	84,622,489
Tons Collected for Recycling 77,728 3,094 66,365 22,752 169,939						
Tons Collected Commingled 66,869 2,528 29,302 3,653 102,352						
Tons Collected Source-Separated 10,859 566 37,063 19,100 67,588						
Tons Marketed 71,916 2,862 61,403 21,051 157,233						
Tons Marketed (excluding bale contamination) 71,916 2,862 61,403 21,051 157,233						
Total Cost per Ton Collected	\$ 529	\$ 3,423	\$ 433	\$ 183	\$	498
Total Cost per Ton Marketed	\$ 572	\$ 3,699	\$ 468	\$ 198	\$	538
Customers	378,846	9,060	23,706	NA		NA
Annual pounds per customer	410	683	5,599	NA		NA
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 3,314,547	\$ 125,291	\$ 1,452,435	\$ 181,063	\$	5,073,336
Commodity Sales (mid-point)	\$ 9,170,355	\$ 346,643	\$ 4,018,449	\$ 500,947	\$	14,036,395
Commodity Sales (upper range)	\$ 15,026,162	\$ 567,995	\$ 6,584,464	\$ 820,831	\$	22,999,453
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	5	24	63	16	107	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	5	24	63	16	107	
Recycling Collection	70	24	64	65	223	
Route Drivers and Operations	50	22	57	65	194	
Management and Administrative	20	2	6	NA	29	
Sortation	94	4	41	5	144	
Sorting Labor	66	2	29	4	100	
Equipment Operators, Supervisors, Maintenance	19	1	8	1	29	
Admininstrative and Marketing	10	0	4	1	15	
Overall Recycling System FTEs	169	52	168	86	475	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded Lists (S2/A+)						
FINAL - 2 - Willamette Valley, etc. 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 1,483,538	\$ 2,969,949	\$ 7,771,366	\$ -	\$	12,224,854
Collection Engagement Labor and Expenses	\$ 1,483,538	\$ 2,969,949	\$ 7,771,366	NA	\$	12,224,854
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$	-
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$	-
Service level adjustments (included above)	NA	NA	NA	NA	\$	-
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$	-
Collection area adjustments	NA	NA	NA	NA	\$	-
Bulky collection	NA	NA	NA	NA	\$	-
Collection	\$ 32,601,311	\$ 7,361,507	\$ 19,262,609	\$ 5,114,159	\$	64,339,585
Direct Collection Costs	\$ 23,409,367	\$ 5,188,266	\$ 13,575,963	\$ 4,561,464	\$	46,735,059
Collection Capital - Containers	\$ 909,021	\$ 79,875	\$ 209,007	\$ 527,229	\$	1,725,133
Collection Capital - Trucks	\$ 2,571,785	\$ 294,022	\$ 769,357	NA	\$	3,635,164
Collection Labor	\$ 12,559,081	\$ 3,093,068	\$ 8,093,528	\$ 3,235,573	\$	26,981,249
Collection Operations	\$ 7,369,481	\$ 1,721,301	\$ 4,504,070	\$ 798,662	\$	14,393,514
Indirect Collection Costs	\$ 9,191,943	\$ 2,173,241	\$ 5,686,646	\$ 552,696	\$	17,604,526
Collection Administrative	\$ 5,060,878	\$ 1,257,664	\$ 3,290,888	\$ 552,696	\$	10,162,127
Collection Margin and Franchise Fee	\$ 4,131,065	\$ 915,576	\$ 2,395,758	NA	\$	7,442,399
Cost Savings from Reduced Garbage Disposal	\$ (7,070,647)	\$ (352,971)	\$ (5,779,048)	\$ (1,732,080)	\$	(14,934,746)
Avoided Disposal Tip Fees	\$ (7,070,647)	\$ (352,971)	\$ (5,779,048)	\$ (1,732,080)	\$	(14,934,746)
Initial Transfer Transport	\$ 1,196,288	\$ 55,744	\$ 1,445,887	\$ 671,026	\$	3,368,944
Consolidation and Transfer to MRF	\$ 1,196,288	\$ 55,744	\$ 1,445,887	\$ 671,026	\$	3,368,944
Sortation	\$ 13,868,772	\$ 683,653	\$ 6,994,059	\$ 792,511	\$	22,338,995
Sortation Labor	\$ 6,176,202	\$ 304,452	\$ 3,114,675	\$ 352,930	\$	9,948,259
Sortation Capital	\$ 1,339,674	\$ 66,038	\$ 675,601	\$ 76,554	\$	2,157,867
Sortation Facility	\$ 2,160,635	\$ 106,507	\$ 1,089,614	\$ 123,466	\$	3,480,222
Glass and Unsorted Container Transfer	\$ 218,297	\$ 10,761	\$ 110,088	\$ 12,474	\$	351,619
Sortation Residual Disposal	\$ 1,628,680	\$ 80,285	\$ 821,348	\$ 93,069	\$	2,623,382
Sortation Administrative & Marketing	\$ 1,334,139	\$ 65,766	\$ 672,810	\$ 76,237	\$	2,148,951
Sortation Margin	\$ 1,011,146	\$ 49,844	\$ 509,924	\$ 57,781	\$	1,628,694
Overall System Costs						
Total Costs	\$ 42,079,261	\$ 10,717,882	\$ 29,694,873	\$ 4,845,616	\$	87,337,632
Tons Collected for Recycling 98,161 4,900 80,230 24,046 207,338						
Tons Collected Commingled 84,700 4,175 42,714 4,840 136,429						
Tons Collected Source-Separated 13,461 725 37,516 19,206 70,908						
Tons Marketed 92,661 4,626 75,735 22,699 195,721						
Tons Marketed (excluding bale contamination) 92,661 4,626 75,735 22,699 195,721						
Total Cost per Ton Collected	\$ 429	\$ 2,187	\$ 370	\$ 202	\$	421
Total Cost per Ton Marketed	\$ 454	\$ 2,317	\$ 392	\$ 213	\$	446
Customers	378,846	9,060	23,706	NA		NA
Annual pounds per customer	518	1,082	6,769	NA		NA
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 3,895,946	\$ 192,048	\$ 1,964,736	\$ 222,628	\$	6,275,359
Commodity Sales (mid-point)	\$ 11,064,986	\$ 545,442	\$ 5,580,102	\$ 632,293	\$	17,822,823
Commodity Sales (upper range)	\$ 18,234,026	\$ 898,836	\$ 9,195,468	\$ 1,041,957	\$	29,370,288
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	5	24	63	17	109	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	5	24	63	17	109	
Recycling Collection	70	24	64	70	228	
Route Drivers and Operations	50	22	57	70	199	
Management and Administrative	20	2	6	NA	29	
Sortation	108	5	55	6	174	
Sorting Labor	76	4	38	4	122	
Equipment Operators, Supervisors, Maintenance	22	1	11	1	36	
Admininstrative and Marketing	10	1	5	1	16	
Overall Recycling System FTEs	183	54	181	94	511	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded + Statewide List (S7/A++)						
FINAL - 2 - Willamette Valley, etc. 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 1,483,538	\$ 2,969,949	\$ 7,771,366	\$ -	\$ 12,224,854	
Collection Engagement Labor and Expenses	\$ 1,483,538	\$ 2,969,949	\$ 7,771,366	NA	\$ 12,224,854	
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 32,601,311	\$ 7,361,507	\$ 19,262,609	\$ 5,138,076	\$ 64,363,502	
Direct Collection Costs	\$ 23,409,367	\$ 5,188,266	\$ 13,575,963	\$ 4,582,787	\$ 46,756,383	
Collection Capital - Containers	\$ 909,021	\$ 79,875	\$ 209,007	\$ 529,700	\$ 1,727,604	
Collection Capital - Trucks	\$ 2,571,785	\$ 294,022	\$ 769,357	NA	\$ 3,635,164	
Collection Labor	\$ 12,559,081	\$ 3,093,068	\$ 8,093,528	\$ 3,250,679	\$ 26,996,355	
Collection Operations	\$ 7,369,481	\$ 1,721,301	\$ 4,504,070	\$ 802,408	\$ 14,397,260	
Indirect Collection Costs	\$ 9,191,943	\$ 2,173,241	\$ 5,686,646	\$ 555,288	\$ 17,607,119	
Collection Administrative	\$ 5,060,878	\$ 1,257,664	\$ 3,290,888	\$ 555,288	\$ 10,164,719	
Collection Margin and Franchise Fee	\$ 4,131,065	\$ 915,576	\$ 2,395,758	NA	\$ 7,442,399	
Cost Savings from Reduced Garbage Disposal	\$ (7,070,647)	\$ (352,971)	\$ (5,779,048)	\$ (1,738,444)	\$ (14,941,110)	
Avoided Disposal Tip Fees	\$ (7,070,647)	\$ (352,971)	\$ (5,779,048)	\$ (1,738,444)	\$ (14,941,110)	
Initial Transfer Transport	\$ 1,196,288	\$ 55,744	\$ 1,445,887	\$ 671,298	\$ 3,369,216	
Consolidation and Transfer to MRF	\$ 1,196,288	\$ 55,744	\$ 1,445,887	\$ 671,298	\$ 3,369,216	
Sortation	\$ 13,745,753	\$ 677,589	\$ 6,932,020	\$ 799,819	\$ 22,155,182	
Sortation Labor	\$ 6,182,230	\$ 304,750	\$ 3,117,715	\$ 359,723	\$ 9,964,418	
Sortation Capital	\$ 1,333,398	\$ 65,729	\$ 672,436	\$ 77,586	\$ 2,149,150	
Sortation Facility	\$ 2,159,052	\$ 106,429	\$ 1,088,816	\$ 125,628	\$ 3,479,925	
Glass and Unsorted Container Transfer	\$ 108,849	\$ 5,366	\$ 54,893	\$ 6,334	\$ 175,441	
Sortation Residual Disposal	\$ 1,624,194	\$ 80,064	\$ 819,085	\$ 94,506	\$ 2,617,850	
Sortation Administrative & Marketing	\$ 1,327,889	\$ 65,458	\$ 669,658	\$ 77,265	\$ 2,140,270	
Sortation Margin	\$ 1,010,141	\$ 49,794	\$ 509,417	\$ 58,777	\$ 1,628,129	
Overall System Costs						
Total Costs	\$ 41,956,243	\$ 10,711,818	\$ 29,632,834	\$ 4,870,749	\$ 87,171,644	
Tons Collected for Recycling 98,161 4,900 80,230 24,135 207,426						
Tons Collected Commingled 84,700 4,175 42,714 4,928 136,518						
Tons Collected Source-Separated 13,461 725 37,516 19,206 70,908						
Tons Marketed 92,676 4,626 75,746 22,786 195,834						
Tons Marketed (excluding bale contamination) 92,676 4,626 75,746 22,786 195,834						
Total Cost per Ton Collected	\$ 427	\$ 2,186	\$ 369	\$ 202	\$ 420	
Total Cost per Ton Marketed	\$ 453	\$ 2,315	\$ 391	\$ 214	\$ 445	
Customers	378,846	9,060	23,706	NA	NA	
Annual pounds per customer	518	1,082	6,769	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 4,228,522	\$ 208,443	\$ 2,132,455	\$ 246,044	\$ 6,815,464	
Commodity Sales (mid-point)	\$ 11,805,591	\$ 581,950	\$ 5,953,591	\$ 686,928	\$ 19,028,060	
Commodity Sales (upper range)	\$ 19,382,660	\$ 955,457	\$ 9,774,727	\$ 1,127,812	\$ 31,240,656	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	5	24	63	18	109	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	5	24	63	18	109	
Recycling Collection	70	24	64	70	228	
Route Drivers and Operations	50	22	57	70	200	
Management and Administrative	20	2	6	NA	29	
Sortation	108	5	55	6	175	
Sorting Labor	76	4	38	4	122	
Equipment Operators, Supervisors, Maintenance	22	1	11	1	36	
Admininstrative and Marketing	10	1	5	1	16	
Overall Recycling System FTEs	183	54	181	94	512	

Figures in this report represent the consultant team's best modeling estimates based on available data.

+Container Recovery Facility (S3/B)						
FINAL - 2 - Willamette Valley, etc. 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 1,483,538	\$ 2,969,949	\$ 7,771,366	\$ -	\$	12,224,854
Collection Engagement Labor and Expenses	\$ 1,483,538	\$ 2,969,949	\$ 7,771,366	NA	\$	12,224,854
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$	-
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$	-
Service level adjustments (included above)	NA	NA	NA	NA	\$	-
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$	-
Collection area adjustments	NA	NA	NA	NA	\$	-
Bulky collection	NA	NA	NA	NA	\$	-
Collection	\$ 32,601,311	\$ 7,361,507	\$ 19,262,609	\$ 5,114,159	\$	64,339,585
Direct Collection Costs	\$ 23,409,367	\$ 5,188,266	\$ 13,575,963	\$ 4,561,464	\$	46,735,059
Collection Capital - Containers	\$ 909,021	\$ 79,875	\$ 209,007	\$ 527,229	\$	1,725,133
Collection Capital - Trucks	\$ 2,571,785	\$ 294,022	\$ 769,357	NA	\$	3,635,164
Collection Labor	\$ 12,559,081	\$ 3,093,068	\$ 8,093,528	\$ 3,235,573	\$	26,981,249
Collection Operations	\$ 7,369,481	\$ 1,721,301	\$ 4,504,070	\$ 798,662	\$	14,393,514
Indirect Collection Costs	\$ 9,191,943	\$ 2,173,241	\$ 5,686,646	\$ 552,696	\$	17,604,526
Collection Administrative	\$ 5,060,878	\$ 1,257,664	\$ 3,290,888	\$ 552,696	\$	10,162,127
Collection Margin and Franchise Fee	\$ 4,131,065	\$ 915,576	\$ 2,395,758	NA	\$	7,442,399
Cost Savings from Reduced Garbage Disposal	\$ (7,070,647)	\$ (352,971)	\$ (5,779,048)	\$ (1,732,080)	\$	(14,934,746)
Avoided Disposal Tip Fees	\$ (7,070,647)	\$ (352,971)	\$ (5,779,048)	\$ (1,732,080)	\$	(14,934,746)
Initial Transfer Transport	\$ 1,196,288	\$ 55,744	\$ 1,445,887	\$ 671,026	\$	3,368,944
Consolidation and Transfer to MRF	\$ 1,196,288	\$ 55,744	\$ 1,445,887	\$ 671,026	\$	3,368,944
Sortation	\$ 13,675,660	\$ 674,134	\$ 6,896,672	\$ 781,476	\$	22,027,942
Sortation Labor	\$ 6,045,380	\$ 298,004	\$ 3,048,701	\$ 345,455	\$	9,737,540
Sortation Capital	\$ 1,231,317	\$ 60,697	\$ 620,956	\$ 70,362	\$	1,983,332
Sortation Facility	\$ 2,151,678	\$ 106,066	\$ 1,085,097	\$ 122,955	\$	3,465,795
Glass and Unsorted Container Transfer	\$ 388,615	\$ 19,157	\$ 195,980	\$ 22,207	\$	625,958
Sortation Residual Disposal	\$ 1,540,306	\$ 75,929	\$ 776,781	\$ 88,019	\$	2,481,034
Sortation Administrative & Marketing	\$ 1,334,139	\$ 65,766	\$ 672,810	\$ 76,237	\$	2,148,951
Sortation Margin	\$ 984,226	\$ 48,517	\$ 496,348	\$ 56,242	\$	1,585,332
Overall System Costs						
Total Costs	\$ 41,886,149	\$ 10,708,363	\$ 29,597,486	\$ 4,834,581	\$	87,026,579
Tons Collected for Recycling	98,161	4,900	80,230	24,046		207,338
Tons Collected Commingled	84,700	4,175	42,714	4,840		136,429
Tons Collected Source-Separated	13,461	725	37,516	19,206		70,908
Tons Marketed	93,076	4,646	76,074	22,801		196,598
Tons Marketed (excluding bale contamination)	93,076	4,646	76,074	22,801		196,598
Total Cost per Ton Collected	\$ 427	\$ 2,185	\$ 369	\$ 201	\$	420
Total Cost per Ton Marketed	\$ 450	\$ 2,305	\$ 389	\$ 212	\$	443
Customers	378,846	9,060	23,706	NA		NA
Annual pounds per customer	518	1,082	6,769	NA		NA
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 3,435,665	\$ 169,359	\$ 1,732,615	\$ 196,326	\$	5,533,965
Commodity Sales (mid-point)	\$ 10,213,340	\$ 503,461	\$ 5,150,614	\$ 583,627	\$	16,451,041
Commodity Sales (upper range)	\$ 16,991,014	\$ 837,562	\$ 8,568,614	\$ 970,927	\$	27,368,118
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	5	24	63	17	109	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	5	24	63	17	109	
Recycling Collection	70	24	64	70	228	
Route Drivers and Operations	50	22	57	70	199	
Management and Administrative	20	2	6	NA	29	
Sortation	106	5	54	6	171	
Sorting Labor	74	4	37	4	119	
Equipment Operators, Supervisors, Maintenance	22	1	11	1	35	
Admininstrative and Marketing	10	1	5	1	16	
Overall Recycling System FTEs	180	54	180	94	508	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Dual-Stream Collection (S4/C)						
FINAL - 2 - Willamette Valley, etc. 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 1,483,538	\$ 2,969,949	\$ 7,771,366	\$ -	\$	12,224,854
Collection Engagement Labor and Expenses	\$ 1,483,538	\$ 2,969,949	\$ 7,771,366	NA	\$	12,224,854
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$	-
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$	-
Service level adjustments (included above)	NA	NA	NA	NA	\$	-
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$	-
Collection area adjustments	NA	NA	NA	NA	\$	-
Bulky collection	NA	NA	NA	NA	\$	-
Collection	\$ 51,151,625	\$ 8,116,074	\$ 21,237,060	\$ 5,114,159	\$	85,618,918
Direct Collection Costs	\$ 37,905,227	\$ 5,829,689	\$ 15,254,353	\$ 4,561,464	\$	63,550,733
Collection Capital - Containers	\$ 3,306,171	\$ 723,905	\$ 1,894,219	\$ 527,229	\$	6,451,524
Collection Capital - Trucks	\$ 7,231,670	\$ 291,874	\$ 763,737	NA	\$	8,287,281
Collection Labor	\$ 17,403,929	\$ 3,097,572	\$ 8,105,312	\$ 3,235,573	\$	31,842,385
Collection Operations	\$ 9,963,457	\$ 1,716,338	\$ 4,491,085	\$ 798,662	\$	16,969,542
Indirect Collection Costs	\$ 13,246,398	\$ 2,286,385	\$ 5,982,707	\$ 552,696	\$	22,068,186
Collection Administrative	\$ 6,557,240	\$ 1,257,616	\$ 3,290,763	\$ 552,696	\$	11,658,315
Collection Margin and Franchise Fee	\$ 6,689,158	\$ 1,028,769	\$ 2,691,945	NA	\$	10,409,871
Cost Savings from Reduced Garbage Disposal	\$ (7,070,647)	\$ (352,971)	\$ (5,779,048)	\$ (1,732,080)	\$	(14,934,746)
Avoided Disposal Tip Fees	\$ (7,070,647)	\$ (352,971)	\$ (5,779,048)	\$ (1,732,080)	\$	(14,934,746)
Initial Transfer Transport	\$ 1,196,288	\$ 55,744	\$ 1,445,887	\$ 671,026	\$	3,368,944
Consolidation and Transfer to MRF	\$ 1,196,288	\$ 55,744	\$ 1,445,887	\$ 671,026	\$	3,368,944
Sortation	\$ 13,434,122	\$ 662,227	\$ 6,774,864	\$ 767,674	\$	21,638,887
Sortation Labor	\$ 6,012,046	\$ 296,360	\$ 3,031,891	\$ 343,550	\$	9,683,848
Sortation Capital	\$ 1,278,725	\$ 63,034	\$ 644,864	\$ 73,071	\$	2,059,694
Sortation Facility	\$ 2,174,601	\$ 107,196	\$ 1,096,657	\$ 124,264	\$	3,502,718
Glass and Unsorted Container Transfer	\$ 109,361	\$ 5,391	\$ 55,151	\$ 6,249	\$	176,152
Sortation Residual Disposal	\$ 1,538,232	\$ 75,826	\$ 775,734	\$ 87,900	\$	2,477,693
Sortation Administrative & Marketing	\$ 1,334,139	\$ 65,766	\$ 672,810	\$ 76,237	\$	2,148,951
Sortation Margin	\$ 987,019	\$ 48,655	\$ 497,756	\$ 56,402	\$	1,589,832
Overall System Costs						
Total Costs	\$ 60,194,926	\$ 11,451,024	\$ 31,450,129	\$ 4,820,779	\$	107,916,857
Tons Collected for Recycling 98,161 4,900 80,230 24,046 207,338						
Tons Collected Commingled 84,700 4,175 42,714 4,840 136,429						
Tons Collected Source-Separated 13,461 725 37,516 19,206 70,908						
Tons Marketed 90,858 4,536 74,261 22,257 191,911						
Tons Marketed (excluding bale contamination) 90,858 4,536 74,261 22,257 191,911						
Total Cost per Ton Collected	\$ 613	\$ 2,337	\$ 392	\$ 200	\$	520
Total Cost per Ton Marketed	\$ 663	\$ 2,525	\$ 424	\$ 217	\$	562
Customers	378,846	9,060	23,706	NA		NA
Annual pounds per customer	518	1,082	6,769	NA		NA
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 3,908,854	\$ 192,685	\$ 1,971,245	\$ 223,366	\$	6,296,149
Commodity Sales (mid-point)	\$ 10,960,276	\$ 540,281	\$ 5,527,296	\$ 626,309	\$	17,654,162
Commodity Sales (upper range)	\$ 18,011,698	\$ 887,877	\$ 9,083,347	\$ 1,029,253	\$	29,012,174
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	5	24	63	17	109	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	5	24	63	17	109	
Recycling Collection	140	24	64	70	298	
Route Drivers and Operations	108	22	57	70	258	
Management and Administrative	32	2	6	NA	40	
Sortation	106	5	53	6	170	
Sorting Labor	72	4	36	4	116	
Equipment Operators, Supervisors, Maintenance	23	1	12	1	38	
Admininstrative and Marketing	10	1	5	1	16	
Overall Recycling System FTEs	250	54	180	93	577	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded + Statewide List + Expanded Collection (S8/D-low)						
FINAL - 2 - Willamette Valley, etc. 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 1,483,538	\$ 4,058,930	\$ 7,771,366	\$ -	\$ 13,313,835	
Collection Engagement Labor and Expenses	\$ 1,483,538	\$ 4,058,930	\$ 7,771,366	NA	\$ 13,313,835	
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	
Multifamily Property Improvements	\$ -	\$ 7,984,611	\$ -	\$ -	\$ 7,984,611	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	\$ 4,270,139	NA	NA	\$ 4,270,139	
Bulky collection	NA	\$ 3,714,472	NA	NA	\$ 3,714,472	
Collection	\$ 32,601,311	\$ 10,886,141	\$ 19,262,609	\$ 5,138,104	\$ 67,888,164	
Direct Collection Costs	\$ 23,409,367	\$ 7,792,233	\$ 13,575,963	\$ 4,582,816	\$ 49,360,378	
Collection Capital - Containers	\$ 909,021	\$ 120,079	\$ 209,007	\$ 529,728	\$ 1,767,836	
Collection Capital - Trucks	\$ 2,571,785	\$ 442,013	\$ 769,357	NA	\$ 3,783,155	
Collection Labor	\$ 12,559,081	\$ 4,649,912	\$ 8,093,528	\$ 3,250,679	\$ 28,553,200	
Collection Operations	\$ 7,369,481	\$ 2,580,229	\$ 4,504,070	\$ 802,408	\$ 15,256,188	
Indirect Collection Costs	\$ 9,191,943	\$ 3,093,908	\$ 5,686,646	\$ 555,288	\$ 18,527,786	
Collection Administrative	\$ 5,060,878	\$ 1,718,808	\$ 3,290,888	\$ 555,288	\$ 10,625,863	
Collection Margin and Franchise Fee	\$ 4,131,065	\$ 1,375,100	\$ 2,395,758	NA	\$ 7,901,923	
Cost Savings from Reduced Garbage Disposal	\$ (7,070,647)	\$ (579,128)	\$ (5,779,048)	\$ (1,738,444)	\$ (15,167,267)	
Avoided Disposal Tip Fees	\$ (7,070,647)	\$ (579,128)	\$ (5,779,048)	\$ (1,738,444)	\$ (15,167,267)	
Initial Transfer Transport	\$ 1,196,288	\$ 87,364	\$ 1,445,887	\$ 671,298	\$ 3,400,836	
Consolidation and Transfer to MRF	\$ 1,196,288	\$ 87,364	\$ 1,445,887	\$ 671,298	\$ 3,400,836	
Sortation	\$ 13,715,730	\$ 1,146,700	\$ 6,916,879	\$ 798,072	\$ 22,577,381	
Sortation Labor	\$ 6,227,302	\$ 520,632	\$ 3,140,445	\$ 362,346	\$ 10,250,724	
Sortation Capital	\$ 1,286,434	\$ 107,552	\$ 648,752	\$ 74,853	\$ 2,117,591	
Sortation Facility	\$ 2,155,795	\$ 180,235	\$ 1,087,173	\$ 125,438	\$ 3,548,641	
Glass and Unsorted Container Transfer	\$ 105,618	\$ 8,830	\$ 53,263	\$ 6,146	\$ 173,856	
Sortation Residual Disposal	\$ 1,651,306	\$ 138,057	\$ 832,758	\$ 96,084	\$ 2,718,206	
Sortation Administrative & Marketing	\$ 1,281,119	\$ 107,108	\$ 646,072	\$ 74,544	\$ 2,108,842	
Sortation Margin	\$ 1,008,156	\$ 84,287	\$ 508,416	\$ 58,661	\$ 1,659,520	
Overall System Costs						
Total Costs	\$ 41,926,219	\$ 23,584,618	\$ 29,617,693	\$ 4,869,030	\$ 99,997,560	
Tons Collected for Recycling 98,161 8,040 80,230 24,135 210,566						
Tons Collected Commingled 84,700 7,081 42,714 4,928 139,424						
Tons Collected Source-Separated 13,461 959 37,516 19,206 71,142						
Tons Marketed 92,391 7,567 75,514 22,716 198,188						
Tons Marketed (excluding bale contamination) 92,391 7,567 75,514 22,716 198,188						
Total Cost per Ton Collected	\$ 427	\$ 2,933	\$ 369	\$ 202	\$ 475	
Total Cost per Ton Marketed	\$ 454	\$ 3,117	\$ 392	\$ 214	\$ 505	
Customers	378,846	12,382	23,706	NA	NA	
Annual pounds per customer	518	1,299	6,769	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 4,125,046	\$ 344,873	\$ 2,080,272	\$ 240,023	\$ 6,790,214	
Commodity Sales (mid-point)	\$ 11,559,336	\$ 966,415	\$ 5,829,404	\$ 672,599	\$ 19,027,754	
Commodity Sales (upper range)	\$ 18,993,625	\$ 1,587,957	\$ 9,578,536	\$ 1,105,176	\$ 31,265,293	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	5	33	63	18	117	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	5	33	63	18	117	
Recycling Collection	70	37	64	70	241	
Route Drivers and Operations	50	33	57	70	211	
Management and Administrative	20	4	6	NA	30	
Sortation	109	9	55	6	179	
Sorting Labor	77	6	39	4	126	
Equipment Operators, Supervisors, Maintenance	22	2	11	1	36	
Admininstrative and Marketing	10	1	5	1	16	
Overall Recycling System FTEs	183	79	181	94	537	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded + Statewide List + Expanded Collection (S9/D-mid)						
FINAL - 2 - Willamette Valley, etc. 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 1,483,538	\$ 5,692,402	\$ 7,771,366	\$ -	\$	14,947,307
Collection Engagement Labor and Expenses	\$ 1,483,538	\$ 5,692,402	\$ 7,771,366	NA	\$	14,947,307
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$	-
Multifamily Property Improvements	\$ -	\$ 11,197,931	\$ -	\$ -	\$	11,197,931
Service level adjustments (included above)	NA	NA	NA	NA	\$	-
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$	-
Collection area adjustments	NA	\$ 5,988,610	NA	NA	\$	5,988,610
Bulky collection	NA	\$ 5,209,321	NA	NA	\$	5,209,321
Collection	\$ 32,601,311	\$ 15,851,541	\$ 19,262,609	\$ 5,074,490	\$	72,789,951
Direct Collection Costs	\$ 23,409,367	\$ 11,424,865	\$ 13,575,963	\$ 4,526,018	\$	52,936,212
Collection Capital - Containers	\$ 909,021	\$ 176,059	\$ 209,007	\$ 523,247	\$	1,817,334
Collection Capital - Trucks	\$ 2,571,785	\$ 648,073	\$ 769,357	NA	\$	3,989,215
Collection Labor	\$ 12,559,081	\$ 6,817,637	\$ 8,093,528	\$ 3,210,211	\$	30,680,457
Collection Operations	\$ 7,369,481	\$ 3,783,096	\$ 4,504,070	\$ 792,560	\$	16,449,206
Indirect Collection Costs	\$ 9,191,943	\$ 4,426,676	\$ 5,686,646	\$ 548,473	\$	19,853,738
Collection Administrative	\$ 5,060,878	\$ 2,410,523	\$ 3,290,888	\$ 548,473	\$	11,310,763
Collection Margin and Franchise Fee	\$ 4,131,065	\$ 2,016,153	\$ 2,395,758	NA	\$	8,542,976
Cost Savings from Reduced Garbage Disposal	\$ (7,070,647)	\$ (803,057)	\$ (5,779,048)	\$ (1,721,714)	\$	(15,374,467)
Avoided Disposal Tip Fees	\$ (7,070,647)	\$ (803,057)	\$ (5,779,048)	\$ (1,721,714)	\$	(15,374,467)
Initial Transfer Transport	\$ 1,196,288	\$ 111,138	\$ 1,445,887	\$ 663,465	\$	3,416,777
Consolidation and Transfer to MRF	\$ 1,196,288	\$ 111,138	\$ 1,445,887	\$ 663,465	\$	3,416,777
Sortation	\$ 13,684,909	\$ 1,645,106	\$ 6,901,336	\$ 789,154	\$	23,020,506
Sortation Labor	\$ 6,286,168	\$ 755,680	\$ 3,170,131	\$ 362,498	\$	10,574,478
Sortation Capital	\$ 1,222,838	\$ 147,001	\$ 616,680	\$ 70,516	\$	2,057,036
Sortation Facility	\$ 2,147,269	\$ 258,130	\$ 1,082,874	\$ 123,824	\$	3,612,098
Glass and Unsorted Container Transfer	\$ 99,886	\$ 12,008	\$ 50,373	\$ 5,760	\$	168,026
Sortation Residual Disposal	\$ 1,704,664	\$ 204,923	\$ 859,666	\$ 98,301	\$	2,867,554
Sortation Administrative & Marketing	\$ 1,217,786	\$ 146,394	\$ 614,133	\$ 70,225	\$	2,048,537
Sortation Margin	\$ 1,006,298	\$ 120,970	\$ 507,479	\$ 58,029	\$	1,692,776
Overall System Costs						
Total Costs	\$ 41,895,398	\$ 33,695,061	\$ 29,602,150	\$ 4,805,395	\$	109,998,004
Tons Collected for Recycling 98,161 11,149 80,230 23,902 213,443						
Tons Collected Commingled 84,700 10,182 42,714 4,884 142,481						
Tons Collected Source-Separated 13,461 967 37,516 19,018 70,962						
Tons Marketed 91,973 10,446 75,172 22,396 199,987						
Tons Marketed (excluding bale contamination) 91,973 10,446 75,172 22,396 199,987						
Total Cost per Ton Collected	\$ 427	\$ 3,022	\$ 369	\$ 201	\$	515
Total Cost per Ton Marketed	\$ 456	\$ 3,226	\$ 394	\$ 215	\$	550
Customers	378,846	17,364	23,706	NA		NA
Annual pounds per customer	518	1,284	6,769	NA		NA
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 4,020,798	\$ 483,353	\$ 2,027,699	\$ 231,863	\$	6,763,714
Commodity Sales (mid-point)	\$ 11,280,655	\$ 1,356,083	\$ 5,688,864	\$ 650,511	\$	18,976,112
Commodity Sales (upper range)	\$ 18,540,511	\$ 2,228,813	\$ 9,350,029	\$ 1,069,158	\$	31,188,511
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	5	46	63	17	130	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	5	46	63	17	130	
Recycling Collection	70	54	64	69	257	
Route Drivers and Operations	50	48	57	69	225	
Management and Administrative	20	5	6	NA	32	
Sortation	109	13	55	6	183	
Sorting Labor	78	9	39	4	131	
Equipment Operators, Supervisors, Maintenance	22	3	11	1	36	
Admininstrative and Marketing	9	1	5	1	16	
Overall Recycling Svsstem FTEs	183	113	182	93	571	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded + Statewide List + Expanded Collection (S10/D-hi)						
FINAL - 2 - Willamette Valley, etc. 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 1,483,538	\$ 6,434,889	\$ 7,771,366	\$ -	\$ 15,689,794	
Collection Engagement Labor and Expenses	\$ 1,483,538	\$ 6,434,889	\$ 7,771,366	NA	\$ 15,689,794	
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	
Multifamily Property Improvements	\$ -	\$ 12,658,530	\$ -	\$ -	\$ 12,658,530	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	\$ 6,769,733	NA	NA	\$ 6,769,733	
Bulky collection	NA	\$ 5,888,797	NA	NA	\$ 5,888,797	
Collection	\$ 32,601,311	\$ 18,579,750	\$ 19,262,609	\$ 5,010,880	\$ 75,454,550	
Direct Collection Costs	\$ 23,409,367	\$ 13,476,589	\$ 13,575,963	\$ 4,469,223	\$ 54,931,142	
Collection Capital - Containers	\$ 909,021	\$ 207,676	\$ 209,007	\$ 516,768	\$ 1,842,472	
Collection Capital - Trucks	\$ 2,571,785	\$ 764,457	\$ 769,357	NA	\$ 4,105,599	
Collection Labor	\$ 12,559,081	\$ 8,041,977	\$ 8,093,528	\$ 3,169,743	\$ 31,864,329	
Collection Operations	\$ 7,369,481	\$ 4,462,479	\$ 4,504,070	\$ 782,711	\$ 17,118,742	
Indirect Collection Costs	\$ 9,191,943	\$ 5,103,161	\$ 5,686,646	\$ 541,658	\$ 20,523,408	
Collection Administrative	\$ 5,060,878	\$ 2,724,939	\$ 3,290,888	\$ 541,658	\$ 11,618,364	
Collection Margin and Franchise Fee	\$ 4,131,065	\$ 2,378,222	\$ 2,395,758	NA	\$ 8,905,045	
Cost Savings from Reduced Garbage Disposal	\$ (7,070,647)	\$ (952,643)	\$ (5,779,048)	\$ (1,704,985)	\$ (15,507,323)	
Avoided Disposal Tip Fees	\$ (7,070,647)	\$ (952,643)	\$ (5,779,048)	\$ (1,704,985)	\$ (15,507,323)	
Initial Transfer Transport	\$ 1,196,288	\$ 130,437	\$ 1,445,887	\$ 655,631	\$ 3,428,243	
Consolidation and Transfer to MRF	\$ 1,196,288	\$ 130,437	\$ 1,445,887	\$ 655,631	\$ 3,428,243	
Sortation	\$ 13,933,261	\$ 1,999,033	\$ 7,026,581	\$ 796,222	\$ 23,755,098	
Sortation Labor	\$ 6,479,668	\$ 929,651	\$ 3,267,714	\$ 370,283	\$ 11,047,317	
Sortation Capital	\$ 1,267,645	\$ 181,872	\$ 639,277	\$ 72,440	\$ 2,161,234	
Sortation Facility	\$ 2,143,079	\$ 307,472	\$ 1,080,761	\$ 122,467	\$ 3,653,779	
Glass and Unsorted Container Transfer	\$ 96,841	\$ 13,894	\$ 48,837	\$ 5,534	\$ 165,106	
Sortation Residual Disposal	\$ 1,747,156	\$ 250,668	\$ 881,095	\$ 99,842	\$ 2,978,761	
Sortation Administrative & Marketing	\$ 1,173,952	\$ 168,429	\$ 592,027	\$ 67,086	\$ 2,001,494	
Sortation Margin	\$ 1,024,920	\$ 147,047	\$ 516,870	\$ 58,569	\$ 1,747,407	
Overall System Costs						
Total Costs	\$ 42,143,751	\$ 38,849,997	\$ 29,727,395	\$ 4,757,749	\$ 115,478,892	
Tons Collected for Recycling 98,161 13,225 80,230 23,670 215,287						
Tons Collected Commingled 84,700 12,152 42,714 4,840 144,406						
Tons Collected Source-Separated 13,461 1,073 37,516 18,830 70,881						
Tons Marketed 91,631 12,346 74,893 22,095 200,965						
Tons Marketed (excluding bale contamination) 91,631 12,346 74,893 22,095 200,965						
Total Cost per Ton Collected	\$ 429	\$ 2,938	\$ 371	\$ 201	\$ 536	
Total Cost per Ton Marketed	\$ 460	\$ 3,147	\$ 397	\$ 215	\$ 575	
Customers	378,846	19,629	23,706	NA	NA	
Annual pounds per customer	518	1,348	6,769	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 3,930,497	\$ 563,916	\$ 1,982,160	\$ 224,610	\$ 6,701,183	
Commodity Sales (mid-point)	\$ 11,058,920	\$ 1,586,646	\$ 5,577,043	\$ 631,966	\$ 18,854,575	
Commodity Sales (upper range)	\$ 18,187,344	\$ 2,609,375	\$ 9,171,926	\$ 1,039,323	\$ 31,007,968	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	5	52	63	17	136	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	5	52	63	17	136	
Recycling Collection	70	63	64	69	266	
Route Drivers and Operations	50	57	57	69	233	
Management and Administrative	20	6	6	NA	32	
Sortation	112	16	56	6	190	
Sorting Labor	81	12	41	5	138	
Equipment Operators, Supervisors, Maintenance	22	3	11	1	37	
Admininstrative and Marketing	9	1	5	1	15	
Overall Recycling System FTEs	186	131	183	92	592	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Additional Alternative Scenario Analysis - Cost Modeling Results

FINAL - 3 - Other Areas with Curbside 2025 Tables

December 1, 2020

Original Baseline: Pre-Disruption List (\$0)						
FINAL - 3 - Other Areas with Curbside 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 168,789	\$ 1,617	\$ 10,283	\$ -	\$ 180,688	
Collection Engagement Labor and Expenses	\$ 168,789	\$ 1,617	\$ 10,283	NA	\$ 180,688	
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 18,848,882	\$ 1,575,617	\$ 10,020,924	\$ 2,038,787	\$ 32,484,211	
Direct Collection Costs	\$ 12,966,712	\$ 1,085,743	\$ 6,905,324	\$ 1,875,910	\$ 22,833,690	
Collection Capital - Containers	\$ 325,709	\$ 31,922	\$ 203,023	\$ 176,910	\$ 737,564	
Collection Capital - Trucks	\$ 1,959,889	\$ 75,906	\$ 482,764	NA	\$ 2,518,559	
Collection Labor	\$ 6,826,200	\$ 648,997	\$ 4,127,622	\$ 1,578,198	\$ 13,181,017	
Collection Operations	\$ 3,854,914	\$ 328,918	\$ 2,091,915	\$ 120,803	\$ 6,396,550	
Indirect Collection Costs	\$ 5,882,170	\$ 489,874	\$ 3,115,600	\$ 162,877	\$ 9,650,522	
Collection Administrative	\$ 3,593,927	\$ 298,272	\$ 1,897,013	\$ 162,877	\$ 5,952,090	
Collection Margin and Franchise Fee	\$ 2,288,243	\$ 191,602	\$ 1,218,587	NA	\$ 3,698,432	
Cost Savings from Reduced Garbage Disposal	\$ (1,607,236)	\$ (41,543)	\$ (1,707,643)	\$ (845,354)	\$ (4,201,776)	
Avoided Disposal Tip Fees	\$ (1,607,236)	\$ (41,543)	\$ (1,707,643)	\$ (845,354)	\$ (4,201,776)	
Initial Transfer Transport	\$ 1,136,810	\$ 28,461	\$ 1,240,175	\$ 557,350	\$ 2,962,796	
Consolidation and Transfer to MRF	\$ 1,136,810	\$ 28,461	\$ 1,240,175	\$ 557,350	\$ 2,962,796	
Sortation	\$ 3,509,548	\$ 50,217	\$ 449,286	\$ 413,797	\$ 4,422,848	
Sortation Labor	\$ 1,854,550	\$ 26,536	\$ 237,416	\$ 218,663	\$ 2,337,165	
Sortation Capital	\$ 115,316	\$ 1,650	\$ 14,763	\$ 13,596	\$ 145,325	
Sortation Facility	\$ 516,863	\$ 7,396	\$ 66,168	\$ 60,941	\$ 651,367	
Glass and Unsorted Container Transfer	\$ 26,218	\$ 375	\$ 3,356	\$ 3,091	\$ 33,041	
Sortation Residual Disposal	\$ 391,318	\$ 5,599	\$ 50,096	\$ 46,139	\$ 493,151	
Sortation Administrative & Marketing	\$ 347,258	\$ 4,969	\$ 44,455	\$ 40,944	\$ 437,627	
Sortation Margin	\$ 258,024	\$ 3,692	\$ 33,032	\$ 30,423	\$ 325,171	
Overall System Costs						
Total Costs	\$ 22,056,794	\$ 1,614,369	\$ 10,013,024	\$ 2,164,581	\$ 35,848,767	
Tons Collected for Recycling	22,313	577	23,707	11,736	58,333	
Tons Collected Commingled	20,214	289	2,588	2,383	25,475	
Tons Collected Source-Separated	2,099	287	21,119	9,353	32,858	
Tons Marketed	20,082	519	21,337	10,562	52,500	
Tons Marketed (excluding bale contamination)	20,082	519	21,337	10,562	52,500	
Total Cost per Ton Collected	\$ 989	\$ 2,799	\$ 422	\$ 184	\$ 615	
Total Cost per Ton Marketed	\$ 1,098	\$ 3,110	\$ 469	\$ 205	\$ 683	
Customers	150,861	1,445	9,190	NA	NA	
Annual pounds per customer	296	798	5,159	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 761,317	\$ 10,894	\$ 97,462	\$ 89,764	\$ 959,437	
Commodity Sales (mid-point)	\$ 2,649,836	\$ 37,916	\$ 339,227	\$ 312,432	\$ 3,339,411	
Commodity Sales (upper range)	\$ 4,538,355	\$ 64,938	\$ 580,992	\$ 535,100	\$ 5,719,386	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	-	-	-	-	-	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	-	-	-	-	-	
Recycling Collection	33	5	30	45	112	
Route Drivers and Operations	24	4	27	45	100	
Management and Administrative	9	0	3	NA	12	
Sortation	32	0	4	4	40	
Sorting Labor	24	0	3	3	30	
Equipment Operators, Supervisors, Maintenance	5	0	1	1	7	
Admininstrative and Marketing	3	0	0	0	3	
Overall Recycling Svstem FTEs	65	5	34	49	152	

Figures in this report represent the consultant team's best modeling estimates based on available data.

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Revised Baseline: Post-Disruption List (S5)						
FINAL - 3 - Other Areas with Curbside 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 168,789	\$ 1,617	\$ 10,283	\$ -	\$ 180,688	
Collection Engagement Labor and Expenses	\$ 168,789	\$ 1,617	\$ 10,283	NA	\$ 180,688	
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 18,848,882	\$ 1,575,617	\$ 10,020,924	\$ 1,865,562	\$ 32,310,985	
Direct Collection Costs	\$ 12,966,712	\$ 1,085,743	\$ 6,905,324	\$ 1,716,523	\$ 22,674,302	
Collection Capital - Containers	\$ 325,709	\$ 31,922	\$ 203,023	\$ 161,879	\$ 722,534	
Collection Capital - Trucks	\$ 1,959,889	\$ 75,906	\$ 482,764	NA	\$ 2,518,559	
Collection Labor	\$ 6,826,200	\$ 648,997	\$ 4,127,622	\$ 1,444,104	\$ 13,046,923	
Collection Operations	\$ 3,854,914	\$ 328,918	\$ 2,091,915	\$ 110,539	\$ 6,386,286	
Indirect Collection Costs	\$ 5,882,170	\$ 489,874	\$ 3,115,600	\$ 149,039	\$ 9,636,683	
Collection Administrative	\$ 3,593,927	\$ 298,272	\$ 1,897,013	\$ 149,039	\$ 5,938,252	
Collection Margin and Franchise Fee	\$ 2,288,243	\$ 191,602	\$ 1,218,587	NA	\$ 3,698,432	
Cost Savings from Reduced Garbage Disposal	\$ (1,320,289)	\$ (39,901)	\$ (1,688,501)	\$ (781,410)	\$ (3,830,102)	
Avoided Disposal Tip Fees	\$ (1,320,289)	\$ (39,901)	\$ (1,688,501)	\$ (781,410)	\$ (3,830,102)	
Initial Transfer Transport	\$ 927,669	\$ 27,264	\$ 1,226,223	\$ 510,744	\$ 2,691,901	
Consolidation and Transfer to MRF	\$ 927,669	\$ 27,264	\$ 1,226,223	\$ 510,744	\$ 2,691,901	
Sortation	\$ 2,836,396	\$ 46,563	\$ 405,799	\$ 314,067	\$ 3,602,826	
Sortation Labor	\$ 1,492,914	\$ 24,508	\$ 213,589	\$ 165,307	\$ 1,896,318	
Sortation Capital	\$ 98,356	\$ 1,615	\$ 14,072	\$ 10,891	\$ 124,934	
Sortation Facility	\$ 415,005	\$ 6,813	\$ 59,374	\$ 45,952	\$ 527,144	
Glass and Unsorted Container Transfer	\$ 22,362	\$ 367	\$ 3,199	\$ 2,476	\$ 28,405	
Sortation Residual Disposal	\$ 303,126	\$ 4,976	\$ 43,368	\$ 33,564	\$ 385,035	
Sortation Administrative & Marketing	\$ 296,186	\$ 4,862	\$ 42,375	\$ 32,796	\$ 376,220	
Sortation Margin	\$ 208,447	\$ 3,422	\$ 29,822	\$ 23,081	\$ 264,772	
Overall System Costs						
Total Costs	\$ 21,461,447	\$ 1,611,160	\$ 9,974,728	\$ 1,908,963	\$ 34,956,298	
Tons Collected for Recycling 18,329 554 23,441 10,848 53,173						
Tons Collected Commingled 16,231 266 2,322 1,797 20,617						
Tons Collected Source-Separated 2,099 287 21,119 9,051 32,557						
Tons Marketed 16,611 502 21,244 9,831 48,189						
Tons Marketed (excluding bale contamination) 16,611 502 21,244 9,831 48,189						
Total Cost per Ton Collected	\$ 1,171	\$ 2,909	\$ 426	\$ 176	\$ 657	
Total Cost per Ton Marketed	\$ 1,292	\$ 3,209	\$ 470	\$ 194	\$ 725	
Customers	150,861	1,445	9,190	NA	NA	
Annual pounds per customer	243	767	5,101	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 646,302	\$ 10,610	\$ 92,465	\$ 71,563	\$ 820,941	
Commodity Sales (mid-point)	\$ 2,202,346	\$ 36,154	\$ 315,087	\$ 243,861	\$ 2,797,448	
Commodity Sales (upper range)	\$ 3,758,391	\$ 61,699	\$ 537,708	\$ 416,158	\$ 4,773,955	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	-	-	-	-	-	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	-	-	-	-	-	
Recycling Collection	33	5	30	41	108	
Route Drivers and Operations	24	4	27	41	96	
Management and Administrative	9	0	3	NA	12	
Sortation	26	0	4	3	33	
Sorting Labor	19	0	3	2	25	
Equipment Operators, Supervisors, Maintenance	4	0	1	0	5	
Admininstrative and Marketing	2	0	0	0	3	
Overall Recycling System FTEs	58	5	33	44	141	

Figures in this report represent the consultant team's best modeling estimates based on available data.

+ Customer Engagement (S6/A-)						
FINAL - 3 - Other Areas with Curbside 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 590,761	\$ 473,708	\$ 3,012,784	\$ -	\$ 4,077,254	
Collection Engagement Labor and Expenses	\$ 590,761	\$ 473,708	\$ 3,012,784	NA	\$ 4,077,254	
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 18,848,882	\$ 1,575,617	\$ 10,020,924	\$ 2,198,481	\$ 32,643,905	
Direct Collection Costs	\$ 12,966,712	\$ 1,085,743	\$ 6,905,324	\$ 2,051,324	\$ 23,009,103	
Collection Capital - Containers	\$ 325,709	\$ 31,922	\$ 203,023	\$ 159,836	\$ 720,490	
Collection Capital - Trucks	\$ 1,959,889	\$ 75,906	\$ 482,764	NA	\$ 2,518,559	
Collection Labor	\$ 6,826,200	\$ 648,997	\$ 4,127,622	\$ 1,782,344	\$ 13,385,163	
Collection Operations	\$ 3,854,914	\$ 328,918	\$ 2,091,915	\$ 109,144	\$ 6,384,891	
Indirect Collection Costs	\$ 5,882,170	\$ 489,874	\$ 3,115,600	\$ 147,158	\$ 9,634,802	
Collection Administrative	\$ 3,593,927	\$ 298,272	\$ 1,897,013	\$ 147,158	\$ 5,936,370	
Collection Margin and Franchise Fee	\$ 2,288,243	\$ 191,602	\$ 1,218,587	NA	\$ 3,698,432	
Cost Savings from Reduced Garbage Disposal	\$ (1,244,067)	\$ (39,259)	\$ (1,685,476)	\$ (772,717)	\$ (3,741,519)	
Avoided Disposal Tip Fees	\$ (1,244,067)	\$ (39,259)	\$ (1,685,476)	\$ (772,717)	\$ (3,741,519)	
Initial Transfer Transport	\$ 872,114	\$ 26,796	\$ 1,224,018	\$ 504,408	\$ 2,627,336	
Consolidation and Transfer to MRF	\$ 872,114	\$ 26,796	\$ 1,224,018	\$ 504,408	\$ 2,627,336	
Sortation	\$ 2,608,732	\$ 44,279	\$ 392,036	\$ 288,254	\$ 3,333,301	
Sortation Labor	\$ 1,403,489	\$ 23,822	\$ 210,914	\$ 155,080	\$ 1,793,304	
Sortation Capital	\$ 96,010	\$ 1,630	\$ 14,428	\$ 10,609	\$ 122,676	
Sortation Facility	\$ 387,948	\$ 6,585	\$ 58,300	\$ 42,867	\$ 495,699	
Glass and Unsorted Container Transfer	\$ 21,829	\$ 371	\$ 3,280	\$ 2,412	\$ 27,891	
Sortation Residual Disposal	\$ 218,715	\$ 3,712	\$ 32,868	\$ 24,167	\$ 279,462	
Sortation Administrative & Marketing	\$ 289,120	\$ 4,907	\$ 43,448	\$ 31,947	\$ 369,422	
Sortation Margin	\$ 191,622	\$ 3,253	\$ 28,797	\$ 21,173	\$ 244,845	
Overall System Costs						
Total Costs	\$ 21,676,422	\$ 2,081,142	\$ 12,964,286	\$ 2,218,427	\$ 38,940,277	
Tons Collected for Recycling 17,271 545 23,399 10,728 51,943						
Tons Collected Commingled 15,173 258 2,280 1,677 19,387						
Tons Collected Source-Separated 2,099 287 21,119 9,051 32,557						
Tons Marketed 16,040 506 21,732 9,963 48,241						
Tons Marketed (excluding bale contamination) 16,040 506 21,732 9,963 48,241						
Total Cost per Ton Collected	\$ 1,255	\$ 3,818	\$ 554	\$ 207	\$ 750	
Total Cost per Ton Marketed	\$ 1,351	\$ 4,111	\$ 597	\$ 223	\$ 807	
Customers	150,861	1,445	9,190	NA	NA	
Annual pounds per customer	229	754	5,092	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 624,906	\$ 10,607	\$ 93,910	\$ 69,049	\$ 798,472	
Commodity Sales (mid-point)	\$ 2,131,605	\$ 36,181	\$ 320,334	\$ 235,533	\$ 2,723,653	
Commodity Sales (upper range)	\$ 3,638,305	\$ 61,755	\$ 546,758	\$ 402,018	\$ 4,648,835	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	2	4	24	10	40	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	2	4	24	10	40	
Recycling Collection	33	5	30	41	108	
Route Drivers and Operations	24	4	27	41	96	
Management and Administrative	9	0	3	NA	12	
Sortation	24	0	4	3	31	
Sorting Labor	18	0	3	2	23	
Equipment Operators, Supervisors, Maintenance	4	0	1	0	5	
Admininstrative and Marketing	2	0	0	0	3	
Overall Recycling System FTEs	59	9	58	54	179	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + Improved MRFs (S1/A)						
FINAL - 3 - Other Areas with Curbside 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 590,761	\$ 473,708	\$ 3,012,784	\$ -	\$ 4,077,254	
Collection Engagement Labor and Expenses	\$ 590,761	\$ 473,708	\$ 3,012,784	NA	\$ 4,077,254	
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 18,848,882	\$ 1,575,617	\$ 10,020,924	\$ 2,198,481	\$ 32,643,905	
Direct Collection Costs	\$ 12,966,712	\$ 1,085,743	\$ 6,905,324	\$ 2,051,324	\$ 23,009,103	
Collection Capital - Containers	\$ 325,709	\$ 31,922	\$ 203,023	\$ 159,836	\$ 720,490	
Collection Capital - Trucks	\$ 1,959,889	\$ 75,906	\$ 482,764	NA	\$ 2,518,559	
Collection Labor	\$ 6,826,200	\$ 648,997	\$ 4,127,622	\$ 1,782,344	\$ 13,385,163	
Collection Operations	\$ 3,854,914	\$ 328,918	\$ 2,091,915	\$ 109,144	\$ 6,384,891	
Indirect Collection Costs	\$ 5,882,170	\$ 489,874	\$ 3,115,600	\$ 147,158	\$ 9,634,802	
Collection Administrative	\$ 3,593,927	\$ 298,272	\$ 1,897,013	\$ 147,158	\$ 5,936,370	
Collection Margin and Franchise Fee	\$ 2,288,243	\$ 191,602	\$ 1,218,587	NA	\$ 3,698,432	
Cost Savings from Reduced Garbage Disposal	\$ (1,244,067)	\$ (39,259)	\$ (1,685,476)	\$ (772,717)	\$ (3,741,519)	
Avoided Disposal Tip Fees	\$ (1,244,067)	\$ (39,259)	\$ (1,685,476)	\$ (772,717)	\$ (3,741,519)	
Initial Transfer Transport	\$ 872,114	\$ 26,796	\$ 1,224,018	\$ 504,408	\$ 2,627,336	
Consolidation and Transfer to MRF	\$ 872,114	\$ 26,796	\$ 1,224,018	\$ 504,408	\$ 2,627,336	
Sortation	\$ 2,657,802	\$ 45,112	\$ 399,410	\$ 293,676	\$ 3,396,000	
Sortation Labor	\$ 1,207,725	\$ 20,499	\$ 181,495	\$ 133,449	\$ 1,543,168	
Sortation Capital	\$ 272,089	\$ 4,618	\$ 40,889	\$ 30,065	\$ 347,661	
Sortation Facility	\$ 387,948	\$ 6,585	\$ 58,300	\$ 42,867	\$ 495,699	
Glass and Unsorted Container Transfer	\$ 21,829	\$ 371	\$ 3,280	\$ 2,412	\$ 27,891	
Sortation Residual Disposal	\$ 283,834	\$ 4,818	\$ 42,654	\$ 31,362	\$ 362,668	
Sortation Administrative & Marketing	\$ 289,120	\$ 4,907	\$ 43,448	\$ 31,947	\$ 369,422	
Sortation Margin	\$ 195,257	\$ 3,314	\$ 29,343	\$ 21,575	\$ 249,490	
Overall System Costs						
Total Costs	\$ 21,725,492	\$ 2,081,975	\$ 12,971,660	\$ 2,223,849	\$ 39,002,976	
Tons Collected for Recycling 17,271 545 23,399 10,728 51,943						
Tons Collected Commingled 15,173 258 2,280 1,677 19,387						
Tons Collected Source-Separated 2,099 287 21,119 9,051 32,557						
Tons Marketed 15,980 504 21,650 9,925 48,060						
Tons Marketed (excluding bale contamination) 15,980 504 21,650 9,925 48,060						
Total Cost per Ton Collected	\$ 1,258	\$ 3,820	\$ 554	\$ 207	\$ 751	
Total Cost per Ton Marketed	\$ 1,360	\$ 4,129	\$ 599	\$ 224	\$ 812	
Customers	150,861	1,445	9,190	NA	NA	
Annual pounds per customer	229	754	5,092	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 752,069	\$ 12,765	\$ 113,020	\$ 83,100	\$ 960,954	
Commodity Sales (mid-point)	\$ 2,080,749	\$ 35,318	\$ 312,691	\$ 229,914	\$ 2,658,672	
Commodity Sales (upper range)	\$ 3,409,428	\$ 57,870	\$ 512,363	\$ 376,728	\$ 4,356,389	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	2	4	24	10	40	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	2	4	24	10	40	
Recycling Collection	33	5	30	41	108	
Route Drivers and Operations	24	4	27	41	96	
Management and Administrative	9	0	3	NA	12	
Sortation	21	0	3	2	27	
Sorting Labor	15	0	2	2	19	
Equipment Operators, Supervisors, Maintenance	4	0	1	0	5	
Admininstrative and Marketing	2	0	0	0	3	
Overall Recycling Svstem FTEs	56	9	57	53	175	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded Lists (S2/A+)						
FINAL - 3 - Other Areas with Curbside 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 590,761	\$ 473,708	\$ 3,012,784	\$ -	\$ 4,077,254	
Collection Engagement Labor and Expenses	\$ 590,761	\$ 473,708	\$ 3,012,784	NA	\$ 4,077,254	
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 18,848,882	\$ 1,575,617	\$ 10,020,924	\$ 2,832,294	\$ 33,277,718	
Direct Collection Costs	\$ 12,966,712	\$ 1,085,743	\$ 6,905,324	\$ 2,658,584	\$ 23,616,364	
Collection Capital - Containers	\$ 325,709	\$ 31,922	\$ 203,023	\$ 378,448	\$ 939,102	
Collection Capital - Trucks	\$ 1,959,889	\$ 75,906	\$ 482,764	NA	\$ 2,518,559	
Collection Labor	\$ 6,826,200	\$ 648,997	\$ 4,127,622	\$ 2,151,299	\$ 13,754,118	
Collection Operations	\$ 3,854,914	\$ 328,918	\$ 2,091,915	\$ 128,837	\$ 6,404,584	
Indirect Collection Costs	\$ 5,882,170	\$ 489,874	\$ 3,115,600	\$ 173,710	\$ 9,661,354	
Collection Administrative	\$ 3,593,927	\$ 298,272	\$ 1,897,013	\$ 173,710	\$ 5,962,923	
Collection Margin and Franchise Fee	\$ 2,288,243	\$ 191,602	\$ 1,218,587	NA	\$ 3,698,432	
Cost Savings from Reduced Garbage Disposal	\$ (2,179,771)	\$ (87,756)	\$ (2,072,530)	\$ (895,411)	\$ (5,235,468)	
Avoided Disposal Tip Fees	\$ (2,179,771)	\$ (87,756)	\$ (2,072,530)	\$ (895,411)	\$ (5,235,468)	
Initial Transfer Transport	\$ 1,514,630	\$ 62,143	\$ 1,496,825	\$ 593,834	\$ 3,667,432	
Consolidation and Transfer to MRF	\$ 1,514,630	\$ 62,143	\$ 1,496,825	\$ 593,834	\$ 3,667,432	
Sortation	\$ 4,219,666	\$ 152,405	\$ 1,160,909	\$ 475,152	\$ 6,008,132	
Sortation Labor	\$ 1,879,150	\$ 67,871	\$ 516,990	\$ 211,600	\$ 2,675,611	
Sortation Capital	\$ 407,605	\$ 14,722	\$ 112,140	\$ 45,898	\$ 580,364	
Sortation Facility	\$ 657,387	\$ 23,743	\$ 180,860	\$ 74,025	\$ 936,015	
Glass and Unsorted Container Transfer	\$ 66,418	\$ 2,399	\$ 18,273	\$ 7,479	\$ 94,569	
Sortation Residual Disposal	\$ 495,537	\$ 17,898	\$ 136,332	\$ 55,799	\$ 705,566	
Sortation Administrative & Marketing	\$ 405,920	\$ 14,661	\$ 111,676	\$ 45,708	\$ 577,966	
Sortation Margin	\$ 307,648	\$ 11,112	\$ 84,640	\$ 34,642	\$ 438,042	
Overall System Costs						
Total Costs	\$ 22,994,169	\$ 2,176,117	\$ 13,618,913	\$ 3,005,870	\$ 41,795,068	
Tons Collected for Recycling 30,262 1,218 28,773 12,431 72,684						
Tons Collected Commingled 25,770 931 7,090 2,902 36,693						
Tons Collected Source-Separated 4,491 288 21,683 9,529 35,991						
Tons Marketed 28,566 1,150 27,161 11,734 68,611						
Tons Marketed (excluding bale contamination) 28,566 1,150 27,161 11,734 68,611						
Total Cost per Ton Collected	\$ 760	\$ 1,786	\$ 473	\$ 242	\$ 575	
Total Cost per Ton Marketed	\$ 805	\$ 1,892	\$ 501	\$ 256	\$ 609	
Customers	150,861	1,445	9,190	NA	NA	
Annual pounds per customer	401	1,686	6,262	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 1,185,367	\$ 42,813	\$ 326,117	\$ 133,477	\$ 1,687,774	
Commodity Sales (mid-point)	\$ 3,366,595	\$ 121,594	\$ 926,214	\$ 379,093	\$ 4,793,496	
Commodity Sales (upper range)	\$ 5,547,823	\$ 200,375	\$ 1,526,311	\$ 624,708	\$ 7,899,217	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	2	4	24	12	42	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	2	4	24	12	42	
Recycling Collection	33	5	30	49	116	
Route Drivers and Operations	24	4	27	49	104	
Management and Administrative	9	0	3	NA	12	
Sortation	33	1	9	4	47	
Sorting Labor	23	1	6	3	33	
Equipment Operators, Supervisors, Maintenance	7	0	2	1	10	
Admininstrative and Marketing	3	0	1	0	4	
Overall Recycling System FTEs	67	10	63	64	205	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded + Statewide List (S7/A++)						
FINAL - 3 - Other Areas with Curbside 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 590,761	\$ 473,708	\$ 3,012,784	\$ -	\$ 4,077,254	
Collection Engagement Labor and Expenses	\$ 590,761	\$ 473,708	\$ 3,012,784	NA	\$ 4,077,254	
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 18,848,882	\$ 1,575,617	\$ 10,020,924	\$ 2,897,694	\$ 33,343,117	
Direct Collection Costs	\$ 12,966,712	\$ 1,085,743	\$ 6,905,324	\$ 2,719,903	\$ 23,677,682	
Collection Capital - Containers	\$ 325,709	\$ 31,922	\$ 203,023	\$ 387,313	\$ 947,967	
Collection Capital - Trucks	\$ 1,959,889	\$ 75,906	\$ 482,764	NA	\$ 2,518,559	
Collection Labor	\$ 6,826,200	\$ 648,997	\$ 4,127,622	\$ 2,200,726	\$ 13,803,545	
Collection Operations	\$ 3,854,914	\$ 328,918	\$ 2,091,915	\$ 131,864	\$ 6,407,611	
Indirect Collection Costs	\$ 5,882,170	\$ 489,874	\$ 3,115,600	\$ 177,791	\$ 9,665,435	
Collection Administrative	\$ 3,593,927	\$ 298,272	\$ 1,897,013	\$ 177,791	\$ 5,967,004	
Collection Margin and Franchise Fee	\$ 2,288,243	\$ 191,602	\$ 1,218,587	NA	\$ 3,698,432	
Cost Savings from Reduced Garbage Disposal	\$ (2,264,057)	\$ (89,905)	\$ (2,096,493)	\$ (914,268)	\$ (5,364,723)	
Avoided Disposal Tip Fees	\$ (2,264,057)	\$ (89,905)	\$ (2,096,493)	\$ (914,268)	\$ (5,364,723)	
Initial Transfer Transport	\$ 1,576,063	\$ 63,709	\$ 1,514,290	\$ 607,578	\$ 3,761,640	
Consolidation and Transfer to MRF	\$ 1,576,063	\$ 63,709	\$ 1,514,290	\$ 607,578	\$ 3,761,640	
Sortation	\$ 4,372,136	\$ 155,895	\$ 1,204,600	\$ 492,238	\$ 6,224,869	
Sortation Labor	\$ 1,966,393	\$ 70,114	\$ 541,776	\$ 221,387	\$ 2,799,670	
Sortation Capital	\$ 424,116	\$ 15,122	\$ 116,851	\$ 47,749	\$ 603,840	
Sortation Facility	\$ 686,734	\$ 24,486	\$ 189,207	\$ 77,316	\$ 977,743	
Glass and Unsorted Container Transfer	\$ 34,622	\$ 1,234	\$ 9,539	\$ 3,898	\$ 49,293	
Sortation Residual Disposal	\$ 516,610	\$ 18,420	\$ 142,335	\$ 58,163	\$ 735,529	
Sortation Administrative & Marketing	\$ 422,364	\$ 15,060	\$ 116,369	\$ 47,552	\$ 601,345	
Sortation Margin	\$ 321,297	\$ 11,456	\$ 88,523	\$ 36,173	\$ 457,450	
Overall System Costs						
Total Costs	\$ 23,123,785	\$ 2,179,024	\$ 13,656,106	\$ 3,083,242	\$ 42,042,158	
Tons Collected for Recycling	31,432	1,248	29,105	12,693	74,478	
Tons Collected Commingled	26,941	961	7,423	3,033	38,357	
Tons Collected Source-Separated	4,491	288	21,683	9,660	36,121	
Tons Marketed	29,675	1,178	27,479	11,983	70,316	
Tons Marketed (excluding bale contamination)	29,675	1,178	27,479	11,983	70,316	
Total Cost per Ton Collected	\$ 736	\$ 1,746	\$ 469	\$ 243	\$ 564	
Total Cost per Ton Marketed	\$ 779	\$ 1,849	\$ 497	\$ 257	\$ 598	
Customers	150,861	1,445	9,190	NA	NA	
Annual pounds per customer	417	1,728	6,334	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 1,344,974	\$ 47,957	\$ 370,564	\$ 151,424	\$ 1,914,919	
Commodity Sales (mid-point)	\$ 3,755,025	\$ 133,891	\$ 1,034,575	\$ 422,761	\$ 5,346,252	
Commodity Sales (upper range)	\$ 6,165,077	\$ 219,824	\$ 1,698,587	\$ 694,097	\$ 8,777,585	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	2	4	24	12	42	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	2	4	24	12	42	
Recycling Collection	33	5	30	50	117	
Route Drivers and Operations	24	4	27	50	105	
Management and Administrative	9	0	3	NA	12	
Sortation	34	1	9	4	49	
Sorting Labor	24	1	7	3	34	
Equipment Operators, Supervisors, Maintenance	7	0	2	1	10	
Admininstrative and Marketing	3	0	1	0	5	
Overall Recycling System FTEs	69	10	64	66	208	

Figures in this report represent the consultant team's best modeling estimates based on available data.

+Container Recovery Facility (S3/B)						
FINAL - 3 - Other Areas with Curbside 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 590,761	\$ 473,708	\$ 3,012,784	\$ -	\$ 4,077,254	
Collection Engagement Labor and Expenses	\$ 590,761	\$ 473,708	\$ 3,012,784	NA	\$ 4,077,254	
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 18,848,882	\$ 1,575,617	\$ 10,020,924	\$ 2,832,294	\$ 33,277,718	
Direct Collection Costs	\$ 12,966,712	\$ 1,085,743	\$ 6,905,324	\$ 2,658,584	\$ 23,616,364	
Collection Capital - Containers	\$ 325,709	\$ 31,922	\$ 203,023	\$ 378,448	\$ 939,102	
Collection Capital - Trucks	\$ 1,959,889	\$ 75,906	\$ 482,764	NA	\$ 2,518,559	
Collection Labor	\$ 6,826,200	\$ 648,997	\$ 4,127,622	\$ 2,151,299	\$ 13,754,118	
Collection Operations	\$ 3,854,914	\$ 328,918	\$ 2,091,915	\$ 128,837	\$ 6,404,584	
Indirect Collection Costs	\$ 5,882,170	\$ 489,874	\$ 3,115,600	\$ 173,710	\$ 9,661,354	
Collection Administrative	\$ 3,593,927	\$ 298,272	\$ 1,897,013	\$ 173,710	\$ 5,962,923	
Collection Margin and Franchise Fee	\$ 2,288,243	\$ 191,602	\$ 1,218,587	NA	\$ 3,698,432	
Cost Savings from Reduced Garbage Disposal	\$ (2,179,771)	\$ (87,756)	\$ (2,072,530)	\$ (895,411)	\$ (5,235,468)	
Avoided Disposal Tip Fees	\$ (2,179,771)	\$ (87,756)	\$ (2,072,530)	\$ (895,411)	\$ (5,235,468)	
Initial Transfer Transport	\$ 1,514,630	\$ 62,143	\$ 1,496,825	\$ 593,834	\$ 3,667,432	
Consolidation and Transfer to MRF	\$ 1,514,630	\$ 62,143	\$ 1,496,825	\$ 593,834	\$ 3,667,432	
Sortation	\$ 4,160,910	\$ 150,283	\$ 1,144,745	\$ 468,536	\$ 5,924,474	
Sortation Labor	\$ 1,839,347	\$ 66,433	\$ 506,039	\$ 207,118	\$ 2,618,937	
Sortation Capital	\$ 374,636	\$ 13,531	\$ 103,069	\$ 42,186	\$ 533,422	
Sortation Facility	\$ 654,662	\$ 23,645	\$ 180,110	\$ 73,718	\$ 932,135	
Glass and Unsorted Container Transfer	\$ 118,239	\$ 4,271	\$ 32,530	\$ 13,314	\$ 168,353	
Sortation Residual Disposal	\$ 468,648	\$ 16,927	\$ 128,934	\$ 52,772	\$ 667,281	
Sortation Administrative & Marketing	\$ 405,920	\$ 14,661	\$ 111,676	\$ 45,708	\$ 577,966	
Sortation Margin	\$ 299,457	\$ 10,816	\$ 82,386	\$ 33,720	\$ 426,379	
Overall System Costs						
Total Costs	\$ 22,935,413	\$ 2,173,995	\$ 13,602,748	\$ 2,999,253	\$ 41,711,410	
Tons Collected for Recycling	30,262	1,218	28,773	12,431	72,684	
Tons Collected Commingled	25,770	931	7,090	2,902	36,693	
Tons Collected Source-Separated	4,491	288	21,683	9,529	35,991	
Tons Marketed	28,694	1,155	27,282	11,787	68,919	
Tons Marketed (excluding bale contamination)	28,694	1,155	27,282	11,787	68,919	
Total Cost per Ton Collected	\$ 758	\$ 1,784	\$ 473	\$ 241	\$ 574	
Total Cost per Ton Marketed	\$ 799	\$ 1,882	\$ 499	\$ 254	\$ 605	
Customers	150,861	1,445	9,190	NA	NA	
Annual pounds per customer	401	1,686	6,262	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 1,045,324	\$ 37,755	\$ 287,588	\$ 117,708	\$ 1,488,375	
Commodity Sales (mid-point)	\$ 3,107,476	\$ 112,235	\$ 854,925	\$ 349,915	\$ 4,424,551	
Commodity Sales (upper range)	\$ 5,169,628	\$ 186,716	\$ 1,422,262	\$ 582,122	\$ 7,360,728	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	2	4	24	12	42	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	2	4	24	12	42	
Recycling Collection	33	5	30	49	116	
Route Drivers and Operations	24	4	27	49	104	
Management and Administrative	9	0	3	NA	12	
Sortation	32	1	9	4	46	
Sorting Labor	23	1	6	3	32	
Equipment Operators, Supervisors, Maintenance	7	0	2	1	9	
Admininstrative and Marketing	3	0	1	0	4	
Overall Recycling System FTEs	67	10	63	64	204	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Dual-Stream Collection (S4/C)						
FINAL - 3 - Other Areas with Curbside 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 590,761	\$ 473,708	\$ 3,012,784	\$ -	\$ 4,077,254	
Collection Engagement Labor and Expenses	\$ 590,761	\$ 473,708	\$ 3,012,784	NA	\$ 4,077,254	
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	
Collection	\$ 26,714,447	\$ 1,674,780	\$ 10,651,602	\$ 2,831,783	\$ 41,872,612	
Direct Collection Costs	\$ 19,725,962	\$ 1,170,030	\$ 7,441,390	\$ 2,658,105	\$ 30,995,486	
Collection Capital - Containers	\$ 1,404,323	\$ 115,640	\$ 735,469	\$ 378,379	\$ 2,633,811	
Collection Capital - Trucks	\$ 3,251,307	\$ 75,766	\$ 481,871	NA	\$ 3,808,945	
Collection Labor	\$ 9,377,751	\$ 649,614	\$ 4,131,543	\$ 2,150,912	\$ 16,309,820	
Collection Operations	\$ 5,692,581	\$ 329,010	\$ 2,092,506	\$ 128,814	\$ 8,242,911	
Indirect Collection Costs	\$ 6,988,485	\$ 504,750	\$ 3,210,212	\$ 173,678	\$ 10,877,126	
Collection Administrative	\$ 3,507,433	\$ 298,275	\$ 1,897,026	\$ 173,678	\$ 5,876,411	
Collection Margin and Franchise Fee	\$ 3,481,052	\$ 206,476	\$ 1,313,186	NA	\$ 5,000,714	
Cost Savings from Reduced Garbage Disposal	\$ (2,179,771)	\$ (87,756)	\$ (2,072,530)	\$ (895,411)	\$ (5,235,468)	
Avoided Disposal Tip Fees	\$ (2,179,771)	\$ (87,756)	\$ (2,072,530)	\$ (895,411)	\$ (5,235,468)	
Initial Transfer Transport	\$ 1,514,630	\$ 62,143	\$ 1,496,825	\$ 593,834	\$ 3,667,432	
Consolidation and Transfer to MRF	\$ 1,514,630	\$ 62,143	\$ 1,496,825	\$ 593,834	\$ 3,667,432	
Sortation	\$ 4,087,421	\$ 147,629	\$ 1,124,526	\$ 460,260	\$ 5,819,836	
Sortation Labor	\$ 1,829,205	\$ 66,067	\$ 503,249	\$ 205,976	\$ 2,604,497	
Sortation Capital	\$ 389,060	\$ 14,052	\$ 107,038	\$ 43,810	\$ 553,960	
Sortation Facility	\$ 661,637	\$ 23,897	\$ 182,029	\$ 74,503	\$ 942,065	
Glass and Unsorted Container Transfer	\$ 33,274	\$ 1,202	\$ 9,154	\$ 3,747	\$ 47,377	
Sortation Residual Disposal	\$ 468,017	\$ 16,904	\$ 128,760	\$ 52,701	\$ 666,382	
Sortation Administrative & Marketing	\$ 405,920	\$ 14,661	\$ 111,676	\$ 45,708	\$ 577,966	
Sortation Margin	\$ 300,307	\$ 10,846	\$ 82,620	\$ 33,816	\$ 427,590	
Overall System Costs						
Total Costs	\$ 30,727,488	\$ 2,270,504	\$ 14,213,207	\$ 2,990,467	\$ 50,201,666	
Tons Collected for Recycling	30,262	1,218	28,773	12,431	72,684	
Tons Collected Commingled	25,770	931	7,090	2,902	36,693	
Tons Collected Source-Separated	4,491	288	21,683	9,529	35,991	
Tons Marketed	28,010	1,128	26,632	11,506	67,276	
Tons Marketed (excluding bale contamination)	28,010	1,128	26,632	11,506	67,276	
Total Cost per Ton Collected	\$ 1,015	\$ 1,864	\$ 494	\$ 241	\$ 691	
Total Cost per Ton Marketed	\$ 1,097	\$ 2,013	\$ 534	\$ 260	\$ 746	
Customers	150,861	1,445	9,190	NA	NA	
Annual pounds per customer	401	1,686	6,262	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 1,189,295	\$ 42,955	\$ 327,197	\$ 133,919	\$ 1,693,366	
Commodity Sales (mid-point)	\$ 3,334,736	\$ 120,443	\$ 917,449	\$ 375,505	\$ 4,748,134	
Commodity Sales (upper range)	\$ 5,480,178	\$ 197,932	\$ 1,507,700	\$ 617,091	\$ 7,802,901	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	2	4	24	12	42	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	2	4	24	12	42	
Recycling Collection	56	5	30	49	139	
Route Drivers and Operations	43	4	27	49	123	
Management and Administrative	13	0	3	NA	16	
Sortation	32	1	9	4	46	
Sorting Labor	22	1	6	2	31	
Equipment Operators, Supervisors, Maintenance	7	0	2	1	10	
Admininstrative and Marketing	3	0	1	0	4	
Overall Recycling System FTEs	90	10	63	64	227	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded + Statewide List + Expanded Collection (S8/D-low)						
FINAL - 3 - Other Areas with Curbside 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 590,761	\$ 852,675	\$ 3,012,784	\$ -	\$	4,456,220
Collection Engagement Labor and Expenses	\$ 590,761	\$ 852,675	\$ 3,012,784	NA	\$	4,456,220
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$	-
Multifamily Property Improvements	\$ -	\$ 1,677,358	\$ -	\$ -	\$	1,677,358
Service level adjustments (included above)	NA	NA	NA	NA	\$	-
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$	-
Collection area adjustments	NA	\$ 897,044	NA	NA	\$	897,044
Bulky collection	NA	\$ 780,313	NA	NA	\$	780,313
Collection	\$ 18,848,882	\$ 3,066,249	\$ 10,020,924	\$ 2,897,782	\$	34,833,837
Direct Collection Costs	\$ 12,966,712	\$ 2,149,955	\$ 6,905,324	\$ 2,719,991	\$	24,741,982
Collection Capital - Containers	\$ 325,709	\$ 63,205	\$ 203,023	\$ 387,401	\$	979,339
Collection Capital - Trucks	\$ 1,959,889	\$ 150,294	\$ 482,764	NA	\$	2,592,947
Collection Labor	\$ 6,826,200	\$ 1,285,014	\$ 4,127,622	\$ 2,200,726	\$	14,439,562
Collection Operations	\$ 3,854,914	\$ 651,441	\$ 2,091,915	\$ 131,864	\$	6,730,134
Indirect Collection Costs	\$ 5,882,170	\$ 916,294	\$ 3,115,600	\$ 177,791	\$	10,091,855
Collection Administrative	\$ 3,593,927	\$ 536,890	\$ 1,897,013	\$ 177,791	\$	6,205,622
Collection Margin and Franchise Fee	\$ 2,288,243	\$ 379,404	\$ 1,218,587	NA	\$	3,886,234
Cost Savings from Reduced Garbage Disposal	\$ (2,264,057)	\$ (165,343)	\$ (2,096,493)	\$ (914,268)	\$	(5,440,161)
Avoided Disposal Tip Fees	\$ (2,264,057)	\$ (165,343)	\$ (2,096,493)	\$ (914,268)	\$	(5,440,161)
Initial Transfer Transport	\$ 1,576,063	\$ 117,577	\$ 1,514,290	\$ 607,578	\$	3,815,508
Consolidation and Transfer to MRF	\$ 1,576,063	\$ 117,577	\$ 1,514,290	\$ 607,578	\$	3,815,508
Sortation	\$ 4,362,587	\$ 314,197	\$ 1,201,969	\$ 491,163	\$	6,369,916
Sortation Labor	\$ 1,980,729	\$ 142,654	\$ 545,726	\$ 223,001	\$	2,892,109
Sortation Capital	\$ 409,178	\$ 29,469	\$ 112,736	\$ 46,067	\$	597,451
Sortation Facility	\$ 685,697	\$ 49,385	\$ 188,922	\$ 77,199	\$	1,001,203
Glass and Unsorted Container Transfer	\$ 33,594	\$ 2,419	\$ 9,256	\$ 3,782	\$	49,051
Sortation Residual Disposal	\$ 525,234	\$ 37,828	\$ 144,711	\$ 59,134	\$	766,907
Sortation Administrative & Marketing	\$ 407,488	\$ 29,348	\$ 112,270	\$ 45,877	\$	594,983
Sortation Margin	\$ 320,666	\$ 23,095	\$ 88,349	\$ 36,102	\$	468,212
Overall System Costs						
Total Costs	\$ 23,114,236	\$ 5,862,712	\$ 13,653,475	\$ 3,082,255	\$	45,712,678
Tons Collected for Recycling 31,432 2,295 29,105 12,693 75,525						
Tons Collected Commingled 26,941 1,940 7,423 3,033 39,337						
Tons Collected Source-Separated 4,491 355 21,683 9,660 36,189						
Tons Marketed 29,584 2,161 27,395 11,947 71,086						
Tons Marketed (excluding bale contamination) 29,584 2,161 27,395 11,947 71,086						
Total Cost per Ton Collected	\$ 735	\$ 2,554	\$ 469	\$ 243	\$	605
Total Cost per Ton Marketed	\$ 781	\$ 2,714	\$ 498	\$ 258	\$	643
Customers	150,861	2,601	9,190	NA		NA
Annual pounds per customer	417	1,765	6,334	NA		NA
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 1,312,061	\$ 94,496	\$ 361,496	\$ 147,719	\$	1,915,771
Commodity Sales (mid-point)	\$ 3,676,698	\$ 264,799	\$ 1,012,995	\$ 413,942	\$	5,368,435
Commodity Sales (upper range)	\$ 6,041,336	\$ 435,103	\$ 1,664,494	\$ 680,165	\$	8,821,098
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	2	7	24	12	45	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	2	7	24	12	45	
Recycling Collection	33	9	30	50	122	
Route Drivers and Operations	24	8	27	50	109	
Management and Administrative	9	1	3	NA	13	
Sortation	35	2	10	4	50	
Sorting Labor	24	2	7	3	36	
Equipment Operators, Supervisors, Maintenance	7	1	2	1	10	
Admininstrative and Marketing	3	0	1	0	5	
Overall Recycling System FTEs	69	19	64	66	217	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded + Statewide List + Expanded Collection (S9/D-mid)						
FINAL - 3 - Other Areas with Curbside 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 590,761	\$ 1,136,900	\$ 3,012,784	\$ -	\$ 4,740,445	
Collection Engagement Labor and Expenses	\$ 590,761	\$ 1,136,900	\$ 3,012,784	NA	\$ 4,740,445	
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	
Multifamily Property Improvements	\$ -	\$ 2,236,477	\$ -	\$ -	\$ 2,236,477	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	\$ 1,196,059	NA	NA	\$ 1,196,059	
Bulky collection	NA	\$ 1,040,418	NA	NA	\$ 1,040,418	
Collection	\$ 18,848,882	\$ 4,241,626	\$ 10,020,924	\$ 2,852,015	\$ 35,963,448	
Direct Collection Costs	\$ 12,966,712	\$ 2,996,907	\$ 6,905,324	\$ 2,676,935	\$ 25,545,878	
Collection Capital - Containers	\$ 325,709	\$ 88,104	\$ 203,023	\$ 381,559	\$ 998,396	
Collection Capital - Trucks	\$ 1,959,889	\$ 209,501	\$ 482,764	NA	\$ 2,652,154	
Collection Labor	\$ 6,826,200	\$ 1,791,232	\$ 4,127,622	\$ 2,165,522	\$ 14,910,576	
Collection Operations	\$ 3,854,914	\$ 908,069	\$ 2,091,915	\$ 129,853	\$ 6,984,751	
Indirect Collection Costs	\$ 5,882,170	\$ 1,244,720	\$ 3,115,600	\$ 175,080	\$ 10,417,570	
Collection Administrative	\$ 3,593,927	\$ 715,854	\$ 1,897,013	\$ 175,080	\$ 6,381,874	
Collection Margin and Franchise Fee	\$ 2,288,243	\$ 528,866	\$ 1,218,587	NA	\$ 4,035,696	
Cost Savings from Reduced Garbage Disposal	\$ (2,264,057)	\$ (227,033)	\$ (2,096,493)	\$ (901,741)	\$ (5,489,323)	
Avoided Disposal Tip Fees	\$ (2,264,057)	\$ (227,033)	\$ (2,096,493)	\$ (901,741)	\$ (5,489,323)	
Initial Transfer Transport	\$ 1,576,063	\$ 162,641	\$ 1,514,290	\$ 600,321	\$ 3,853,316	
Consolidation and Transfer to MRF	\$ 1,576,063	\$ 162,641	\$ 1,514,290	\$ 600,321	\$ 3,853,316	
Sortation	\$ 4,352,783	\$ 452,863	\$ 1,199,268	\$ 483,116	\$ 6,488,031	
Sortation Labor	\$ 1,999,453	\$ 208,023	\$ 550,884	\$ 221,920	\$ 2,980,280	
Sortation Capital	\$ 388,950	\$ 40,466	\$ 107,163	\$ 43,170	\$ 579,749	
Sortation Facility	\$ 682,986	\$ 71,058	\$ 188,175	\$ 75,805	\$ 1,018,023	
Glass and Unsorted Container Transfer	\$ 31,771	\$ 3,305	\$ 8,753	\$ 3,526	\$ 47,356	
Sortation Residual Disposal	\$ 542,205	\$ 56,411	\$ 149,387	\$ 60,179	\$ 808,183	
Sortation Administrative & Marketing	\$ 387,343	\$ 40,299	\$ 106,720	\$ 42,991	\$ 577,354	
Sortation Margin	\$ 320,075	\$ 33,301	\$ 88,186	\$ 35,525	\$ 477,087	
Overall System Costs						
Total Costs	\$ 23,104,432	\$ 8,003,474	\$ 13,650,774	\$ 3,033,712	\$ 47,792,393	
Tons Collected for Recycling 31,432 3,152 29,105 12,519 76,208						
Tons Collected Commingled 26,941 2,803 7,423 2,990 40,156						
Tons Collected Source-Separated 4,491 349 21,683 9,529 36,052						
Tons Marketed 29,450 2,953 27,271 11,730 71,404						
Tons Marketed (excluding bale contamination) 29,450 2,953 27,271 11,730 71,404						
Total Cost per Ton Collected	\$ 735	\$ 2,539	\$ 469	\$ 242	\$ 627	
Total Cost per Ton Marketed	\$ 785	\$ 2,710	\$ 501	\$ 259	\$ 669	
Customers	150,861	3,468	9,190	NA	NA	
Annual pounds per customer	417	1,818	6,334	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 1,278,902	\$ 133,057	\$ 352,360	\$ 141,946	\$ 1,906,265	
Commodity Sales (mid-point)	\$ 3,588,058	\$ 373,301	\$ 988,573	\$ 398,239	\$ 5,348,171	
Commodity Sales (upper range)	\$ 5,897,213	\$ 613,545	\$ 1,624,786	\$ 654,533	\$ 8,790,077	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	2	9	24	12	47	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	2	9	24	12	47	
Recycling Collection	33	13	30	49	124	
Route Drivers and Operations	24	12	27	49	111	
Management and Administrative	9	1	3	NA	13	
Sortation	35	4	10	4	52	
Sorting Labor	25	3	7	3	37	
Equipment Operators, Supervisors, Maintenance	7	1	2	1	10	
Admininstrative and Marketing	3	0	1	0	4	
Overall Recycling System FTEs	69	26	64	65	223	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded + Statewide List + Expanded Collection (S10/D-hi)						
FINAL - 3 - Other Areas with Curbside 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 590,761	\$ 1,326,383	\$ 3,012,784	\$ -	\$	4,929,928
Collection Engagement Labor and Expenses	\$ 590,761	\$ 1,326,383	\$ 3,012,784	NA	\$	4,929,928
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$	-
Multifamily Property Improvements	\$ -	\$ 2,609,223	\$ -	\$ -	\$	2,609,223
Service level adjustments (included above)	NA	NA	NA	NA	\$	-
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$	-
Collection area adjustments	NA	\$ 1,395,402	NA	NA	\$	1,395,402
Bulky collection	NA	\$ 1,213,821	NA	NA	\$	1,213,821
Collection	\$ 18,848,882	\$ 5,127,408	\$ 10,020,924	\$ 2,806,536	\$	36,803,750
Direct Collection Costs	\$ 12,966,712	\$ 3,648,408	\$ 6,905,324	\$ 2,634,150	\$	26,154,594
Collection Capital - Containers	\$ 325,709	\$ 107,258	\$ 203,023	\$ 375,765	\$	1,011,755
Collection Capital - Trucks	\$ 1,959,889	\$ 255,045	\$ 482,764	NA	\$	2,697,698
Collection Labor	\$ 6,826,200	\$ 2,180,631	\$ 4,127,622	\$ 2,130,529	\$	15,264,982
Collection Operations	\$ 3,854,914	\$ 1,105,475	\$ 2,091,915	\$ 127,855	\$	7,180,160
Indirect Collection Costs	\$ 5,882,170	\$ 1,479,000	\$ 3,115,600	\$ 172,386	\$	10,649,156
Collection Administrative	\$ 3,593,927	\$ 835,163	\$ 1,897,013	\$ 172,386	\$	6,498,489
Collection Margin and Franchise Fee	\$ 2,288,243	\$ 643,837	\$ 1,218,587	NA	\$	4,150,667
Cost Savings from Reduced Garbage Disposal	\$ (2,264,057)	\$ (274,434)	\$ (2,096,493)	\$ (889,294)	\$	(5,524,278)
Avoided Disposal Tip Fees	\$ (2,264,057)	\$ (274,434)	\$ (2,096,493)	\$ (889,294)	\$	(5,524,278)
Initial Transfer Transport	\$ 1,576,063	\$ 196,561	\$ 1,514,290	\$ 593,123	\$	3,880,037
Consolidation and Transfer to MRF	\$ 1,576,063	\$ 196,561	\$ 1,514,290	\$ 593,123	\$	3,880,037
Sortation	\$ 4,431,777	\$ 563,061	\$ 1,221,032	\$ 484,815	\$	6,700,686
Sortation Labor	\$ 2,061,000	\$ 261,852	\$ 567,842	\$ 225,463	\$	3,116,156
Sortation Capital	\$ 403,202	\$ 51,227	\$ 111,089	\$ 44,108	\$	609,627
Sortation Facility	\$ 681,653	\$ 86,605	\$ 187,807	\$ 74,570	\$	1,030,635
Glass and Unsorted Container Transfer	\$ 30,802	\$ 3,913	\$ 8,487	\$ 3,370	\$	46,572
Sortation Residual Disposal	\$ 555,721	\$ 70,605	\$ 153,111	\$ 60,793	\$	840,230
Sortation Administrative & Marketing	\$ 373,401	\$ 47,441	\$ 102,879	\$ 40,848	\$	564,569
Sortation Margin	\$ 325,998	\$ 41,418	\$ 89,818	\$ 35,663	\$	492,897
Overall System Costs						
Total Costs	\$ 23,183,426	\$ 9,548,201	\$ 13,672,538	\$ 2,995,180	\$	49,399,346
Tons Collected for Recycling	31,432	3,810	29,105	12,346		76,693
Tons Collected Commingled	26,941	3,423	7,423	2,947		40,733
Tons Collected Source-Separated	4,491	387	21,683	9,399		35,960
Tons Marketed	29,341	3,556	27,169	11,525		71,591
Tons Marketed (excluding bale contamination)	29,341	3,556	27,169	11,525		71,591
Total Cost per Ton Collected	\$ 738	\$ 2,506	\$ 470	\$ 243	\$	644
Total Cost per Ton Marketed	\$ 790	\$ 2,685	\$ 503	\$ 260	\$	690
Customers	150,861	4,046	9,190	NA		NA
Annual pounds per customer	417	1,883	6,334	NA		NA
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 1,250,180	\$ 158,837	\$ 344,447	\$ 136,764	\$	1,890,227
Commodity Sales (mid-point)	\$ 3,517,530	\$ 446,905	\$ 969,141	\$ 384,801	\$	5,318,378
Commodity Sales (upper range)	\$ 5,784,881	\$ 734,974	\$ 1,593,836	\$ 632,838	\$	8,746,529
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	2	11	24	12	49	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	2	11	24	12	49	
Recycling Collection	33	16	30	48	126	
Route Drivers and Operations	24	14	27	48	113	
Management and Administrative	9	2	3	NA	13	
Sortation	36	5	10	4	54	
Sorting Labor	26	3	7	3	39	
Equipment Operators, Supervisors, Maintenance	7	1	2	1	11	
Admininstrative and Marketing	3	0	1	0	4	
Overall Recycling System FTEs	70	31	64	64	229	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Additional Alternative Scenario Analysis - Cost Modeling Results

FINAL - 4 - Areas Without Curbside 2025 Tables

December 1, 2020

Original Baseline: Pre-Disruption List (S0)						
FINAL - 4 - Areas Without Curbside 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Collection Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	\$ -
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	\$ -
Collection area adjustments	NA	NA	NA	NA	\$ -	\$ -
Bulky collection	NA	NA	NA	NA	\$ -	\$ -
Collection	\$ -	\$ -	\$ -	\$ 5,226,476	\$ 5,226,476	\$ 5,226,476
Direct Collection Costs	\$ -	\$ -	\$ -	\$ 4,808,973	\$ 4,808,973	\$ 4,808,973
Collection Capital - Containers	\$ -	\$ -	\$ -	\$ 453,472	\$ 453,472	\$ 453,472
Collection Capital - Trucks	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Collection Labor	\$ -	\$ -	\$ -	\$ 4,045,848	\$ 4,045,848	\$ 4,045,848
Collection Operations	\$ -	\$ -	\$ -	\$ 309,653	\$ 309,653	\$ 309,653
Indirect Collection Costs	\$ -	\$ -	\$ -	\$ 417,503	\$ 417,503	\$ 417,503
Collection Administrative	\$ -	\$ -	\$ -	\$ 417,503	\$ 417,503	\$ 417,503
Collection Margin and Franchise Fee	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Cost Savings from Reduced Garbage Disposal	\$ (18,052)	\$ (855)	\$ (955,732)	\$ (2,770,705)	\$ (3,745,344)	\$ (3,745,344)
Avoided Disposal Tip Fees	\$ (18,052)	\$ (855)	\$ (955,732)	\$ (2,770,705)	\$ (3,745,344)	\$ (3,745,344)
Initial Transfer Transport	\$ 24,933	\$ 1,111	\$ 1,301,404	\$ 3,244,347	\$ 4,571,795	\$ 4,571,795
Consolidation and Transfer to MRF	\$ 24,933	\$ 1,111	\$ 1,301,404	\$ 3,244,347	\$ 4,571,795	\$ 4,571,795
Sortation	\$ 43,015	\$ 171	\$ 1,715	\$ -	\$ 44,900	\$ 44,900
Sortation Labor	\$ 22,730	\$ 90	\$ 906	\$ -	\$ 23,727	\$ 23,727
Sortation Capital	\$ 1,413	\$ 6	\$ 56	\$ -	\$ 1,475	\$ 1,475
Sortation Facility	\$ 6,335	\$ 25	\$ 253	\$ -	\$ 6,613	\$ 6,613
Glass and Unsorted Container Transfer	\$ 321	\$ 1	\$ 13	\$ -	\$ 335	\$ 335
Sortation Residual Disposal	\$ 4,796	\$ 19	\$ 191	\$ -	\$ 5,006	\$ 5,006
Sortation Administrative & Marketing	\$ 4,256	\$ 17	\$ 170	\$ -	\$ 4,443	\$ 4,443
Sortation Margin	\$ 3,162	\$ 13	\$ 126	\$ -	\$ 3,301	\$ 3,301
Overall System Costs						
Total Costs	\$ 49,896	\$ 426	\$ 347,387	\$ 5,700,118	\$ 6,097,827	\$ 6,097,827
Tons Collected for Recycling	251	12	13,268	38,465	51,996	51,996
Tons Collected Commingled	248	1	10	-	259	259
Tons Collected Source-Separated	3	11	13,258	38,465	51,738	51,738
Tons Marketed	226	11	11,942	34,619	46,797	46,797
Tons Marketed (excluding bale contamination)	226	11	11,942	34,619	46,797	46,797
Total Cost per Ton Collected	\$ 199	\$ 36	\$ 26	\$ 148	\$ 117	\$ 117
Total Cost per Ton Marketed	\$ 221	\$ 40	\$ 29	\$ 165	\$ 130	\$ 130
Customers	-	-	-	NA	NA	NA
Annual pounds per customer	NA	NA	NA	NA	NA	NA
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 9,331	\$ 37	\$ 372	\$ -	\$ 9,740	\$ 9,740
Commodity Sales (mid-point)	\$ 32,478	\$ 129	\$ 1,295	\$ -	\$ 33,901	\$ 33,901
Commodity Sales (upper range)	\$ 55,624	\$ 221	\$ 2,218	\$ -	\$ 58,063	\$ 58,063
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	-	-	-	-	-	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	-	-	-	-	-	
Recycling Collection	-	-	-	115	115	
Route Drivers and Operations	-	-	-	115	115	
Management and Administrative	-	-	-	NA	-	
Sortation	0	0	0	-	0	
Sorting Labor	0	0	0	-	0	
Equipment Operators, Supervisors, Maintenance	0	0	0	-	0	
Admininstrative and Marketing	0	0	0	-	0	
Overall Recycling System FTEs	0	0	0	115	116	

Figures in this report represent the consultant team's best modeling estimates based on available data.

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Revised Baseline: Post-Disruption List (\$5)						
FINAL - 4 - Areas Without Curbside 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Collection Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	\$ -
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	\$ -
Collection area adjustments	NA	NA	NA	NA	\$ -	\$ -
Bulky collection	NA	NA	NA	NA	\$ -	\$ -
Collection	\$ -	\$ -	\$ -	\$ 4,990,522	\$ 4,990,522	\$ 4,990,522
Direct Collection Costs	\$ -	\$ -	\$ -	\$ 4,591,831	\$ 4,591,831	\$ 4,591,831
Collection Capital - Containers	\$ -	\$ -	\$ -	\$ 433,040	\$ 433,040	\$ 433,040
Collection Capital - Trucks	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Collection Labor	\$ -	\$ -	\$ -	\$ 3,863,090	\$ 3,863,090	\$ 3,863,090
Collection Operations	\$ -	\$ -	\$ -	\$ 295,701	\$ 295,701	\$ 295,701
Indirect Collection Costs	\$ -	\$ -	\$ -	\$ 398,691	\$ 398,691	\$ 398,691
Collection Administrative	\$ -	\$ -	\$ -	\$ 398,691	\$ 398,691	\$ 398,691
Collection Margin and Franchise Fee	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Cost Savings from Reduced Garbage Disposal	\$ (13,622)	\$ (843)	\$ (955,404)	\$ (2,683,779)	\$ (3,653,647)	\$ (3,653,647)
Avoided Disposal Tip Fees	\$ (13,622)	\$ (843)	\$ (955,404)	\$ (2,683,779)	\$ (3,653,647)	\$ (3,653,647)
Initial Transfer Transport	\$ 18,783	\$ 1,093	\$ 1,300,948	\$ 3,123,668	\$ 4,444,492	\$ 4,444,492
Consolidation and Transfer to MRF	\$ 18,783	\$ 1,093	\$ 1,300,948	\$ 3,123,668	\$ 4,444,492	\$ 4,444,492
Sortation	\$ 32,549	\$ 141	\$ 930	\$ -	\$ 33,620	\$ 33,620
Sortation Labor	\$ 17,132	\$ 74	\$ 489	\$ -	\$ 17,696	\$ 17,696
Sortation Capital	\$ 1,129	\$ 5	\$ 32	\$ -	\$ 1,166	\$ 1,166
Sortation Facility	\$ 4,762	\$ 21	\$ 136	\$ -	\$ 4,919	\$ 4,919
Glass and Unsorted Container Transfer	\$ 257	\$ 1	\$ 7	\$ -	\$ 265	\$ 265
Sortation Residual Disposal	\$ 3,479	\$ 15	\$ 99	\$ -	\$ 3,593	\$ 3,593
Sortation Administrative & Marketing	\$ 3,399	\$ 15	\$ 97	\$ -	\$ 3,511	\$ 3,511
Sortation Margin	\$ 2,392	\$ 10	\$ 68	\$ -	\$ 2,471	\$ 2,471
Overall System Costs						
Total Costs	\$ 37,710	\$ 392	\$ 346,474	\$ 5,430,411	\$ 5,814,987	\$ 5,814,987
Tons Collected for Recycling1891213,26437,25950,723						
Tons Collected Commingled18615-192						
Tons Collected Source-Separated31113,25837,25950,531						
Tons Marketed1711112,02133,76645,969						
Tons Marketed (excluding bale contamination)1711112,02133,76645,969						
Total Cost per Ton Collected	\$ 199	\$ 33	\$ 26	\$ 146	\$ 115	\$ 115
Total Cost per Ton Marketed	\$ 220	\$ 37	\$ 29	\$ 161	\$ 126	\$ 126
Customers	-	-	-	NA	NA	NA
Annual pounds per customer	NA	NA	NA	NA	NA	NA
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 7,417	\$ 32	\$ 212	\$ -	\$ 7,661	\$ 7,661
Commodity Sales (mid-point)	\$ 25,273	\$ 110	\$ 722	\$ -	\$ 26,105	\$ 26,105
Commodity Sales (upper range)	\$ 43,129	\$ 187	\$ 1,232	\$ -	\$ 44,548	\$ 44,548
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	-	-	-	-	-	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	-	-	-	-	-	
Recycling Collection	-	-	-	110	110	
Route Drivers and Operations	-	-	-	110	110	
Management and Administrative	-	-	-	NA	-	
Sortation	0	0	0	-	0	
Sorting Labor	0	0	0	-	0	
Equipment Operators, Supervisors, Maintenance	0	0	0	-	0	
Admininstrative and Marketing	0	0	0	-	0	
Overall Recycling Svstem FTEs	0	0	0	110	111	

Figures in this report represent the consultant team's best modeling estimates based on available data.

+ Customer Engagement (S6/A-)						
FINAL - 4 - Areas Without Curbside 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Collection Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	\$ -
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	\$ -
Collection area adjustments	NA	NA	NA	NA	\$ -	\$ -
Bulky collection	NA	NA	NA	NA	\$ -	\$ -
Collection	\$ -	\$ -	\$ -	\$ 5,956,295	\$ 5,956,295	\$ 5,956,295
Direct Collection Costs	\$ -	\$ -	\$ -	\$ 5,557,603	\$ 5,557,603	\$ 5,557,603
Collection Capital - Containers	\$ -	\$ -	\$ -	\$ 433,040	\$ 433,040	\$ 433,040
Collection Capital - Trucks	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Collection Labor	\$ -	\$ -	\$ -	\$ 4,828,863	\$ 4,828,863	\$ 4,828,863
Collection Operations	\$ -	\$ -	\$ -	\$ 295,701	\$ 295,701	\$ 295,701
Indirect Collection Costs	\$ -	\$ -	\$ -	\$ 398,691	\$ 398,691	\$ 398,691
Collection Administrative	\$ -	\$ -	\$ -	\$ 398,691	\$ 398,691	\$ 398,691
Collection Margin and Franchise Fee	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Cost Savings from Reduced Garbage Disposal	\$ (12,634)	\$ (841)	\$ (955,392)	\$ (2,683,779)	\$ (3,652,646)	\$ (3,652,646)
Avoided Disposal Tip Fees	\$ (12,634)	\$ (841)	\$ (955,392)	\$ (2,683,779)	\$ (3,652,646)	\$ (3,652,646)
Initial Transfer Transport	\$ 17,411	\$ 1,091	\$ 1,300,932	\$ 3,123,668	\$ 4,443,102	\$ 4,443,102
Consolidation and Transfer to MRF	\$ 17,411	\$ 1,091	\$ 1,300,932	\$ 3,123,668	\$ 4,443,102	\$ 4,443,102
Sortation	\$ 29,666	\$ 134	\$ 887	\$ -	\$ 30,688	\$ 30,688
Sortation Labor	\$ 15,960	\$ 72	\$ 477	\$ -	\$ 16,510	\$ 16,510
Sortation Capital	\$ 1,092	\$ 5	\$ 33	\$ -	\$ 1,129	\$ 1,129
Sortation Facility	\$ 4,412	\$ 20	\$ 132	\$ -	\$ 4,564	\$ 4,564
Glass and Unsorted Container Transfer	\$ 248	\$ 1	\$ 7	\$ -	\$ 257	\$ 257
Sortation Residual Disposal	\$ 2,487	\$ 11	\$ 74	\$ -	\$ 2,573	\$ 2,573
Sortation Administrative & Marketing	\$ 3,288	\$ 15	\$ 98	\$ -	\$ 3,401	\$ 3,401
Sortation Margin	\$ 2,179	\$ 10	\$ 65	\$ -	\$ 2,254	\$ 2,254
Overall System Costs						
Total Costs	\$ 34,443	\$ 384	\$ 346,427	\$ 6,396,184	\$ 6,777,439	\$ 6,777,439
Tons Collected for Recycling	175	12	13,264	37,259	50,709	50,709
Tons Collected Commingled	173	1	5	-	178	178
Tons Collected Source-Separated	3	11	13,258	37,259	50,531	50,531
Tons Marketed	163	11	12,318	34,603	47,095	47,095
Tons Marketed (excluding bale contamination)	163	11	12,318	34,603	47,095	47,095
Total Cost per Ton Collected	\$ 196	\$ 33	\$ 26	\$ 172	\$ 134	\$ 134
Total Cost per Ton Marketed	\$ 211	\$ 35	\$ 28	\$ 185	\$ 144	\$ 144
Customers	-	-	-	NA	NA	NA
Annual pounds per customer	NA	NA	NA	NA	NA	NA
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 7,106	\$ 32	\$ 212	\$ -	\$ 7,351	\$ 7,351
Commodity Sales (mid-point)	\$ 24,240	\$ 110	\$ 725	\$ -	\$ 25,075	\$ 25,075
Commodity Sales (upper range)	\$ 41,374	\$ 187	\$ 1,237	\$ -	\$ 42,799	\$ 42,799
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	-	-	-	28	28	28
Local Government Engagement	-	-	-	-	-	-
New Engagement (costs listed in collection)	-	-	-	28	28	28
Recycling Collection	-	-	-	110	110	110
Route Drivers and Operations	-	-	-	110	110	110
Management and Administrative	-	-	-	NA	-	-
Sortation	0	0	0	-	0	0
Sorting Labor	0	0	0	-	0	0
Equipment Operators, Supervisors, Maintenance	0	0	0	-	0	0
Admininstrative and Marketing	0	0	0	-	0	0
Overall Recycling Svstem FTEs	0	0	0	138	138	138

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + Improved MRFs (S1/A)						
FINAL - 4 - Areas Without Curbside 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Collection Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	\$ -
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	\$ -
Collection area adjustments	NA	NA	NA	NA	\$ -	\$ -
Bulky collection	NA	NA	NA	NA	\$ -	\$ -
Collection	\$ -	\$ -	\$ -	\$ 5,956,295	\$ 5,956,295	\$ 5,956,295
Direct Collection Costs	\$ -	\$ -	\$ -	\$ 5,557,603	\$ 5,557,603	\$ 5,557,603
Collection Capital - Containers	\$ -	\$ -	\$ -	\$ 433,040	\$ 433,040	\$ 433,040
Collection Capital - Trucks	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Collection Labor	\$ -	\$ -	\$ -	\$ 4,828,863	\$ 4,828,863	\$ 4,828,863
Collection Operations	\$ -	\$ -	\$ -	\$ 295,701	\$ 295,701	\$ 295,701
Indirect Collection Costs	\$ -	\$ -	\$ -	\$ 398,691	\$ 398,691	\$ 398,691
Collection Administrative	\$ -	\$ -	\$ -	\$ 398,691	\$ 398,691	\$ 398,691
Collection Margin and Franchise Fee	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Cost Savings from Reduced Garbage Disposal	\$ (12,634)	\$ (841)	\$ (955,392)	\$ (2,683,779)	\$ (3,652,646)	\$ (3,652,646)
Avoided Disposal Tip Fees	\$ (12,634)	\$ (841)	\$ (955,392)	\$ (2,683,779)	\$ (3,652,646)	\$ (3,652,646)
Initial Transfer Transport	\$ 17,411	\$ 1,091	\$ 1,300,932	\$ 3,123,668	\$ 4,443,102	\$ 4,443,102
Consolidation and Transfer to MRF	\$ 17,411	\$ 1,091	\$ 1,300,932	\$ 3,123,668	\$ 4,443,102	\$ 4,443,102
Sortation	\$ 30,224	\$ 137	\$ 904	\$ -	\$ 31,265	\$ 31,265
Sortation Labor	\$ 13,734	\$ 62	\$ 411	\$ -	\$ 14,207	\$ 14,207
Sortation Capital	\$ 3,094	\$ 14	\$ 93	\$ -	\$ 3,201	\$ 3,201
Sortation Facility	\$ 4,412	\$ 20	\$ 132	\$ -	\$ 4,564	\$ 4,564
Glass and Unsorted Container Transfer	\$ 248	\$ 1	\$ 7	\$ -	\$ 257	\$ 257
Sortation Residual Disposal	\$ 3,228	\$ 15	\$ 97	\$ -	\$ 3,339	\$ 3,339
Sortation Administrative & Marketing	\$ 3,288	\$ 15	\$ 98	\$ -	\$ 3,401	\$ 3,401
Sortation Margin	\$ 2,220	\$ 10	\$ 66	\$ -	\$ 2,297	\$ 2,297
Overall System Costs						
Total Costs	\$ 35,001	\$ 387	\$ 346,444	\$ 6,396,184	\$ 6,778,016	\$ 6,778,016
Tons Collected for Recycling						
Tons Collected Commingled	175	12	13,264	37,259	50,709	50,709
Tons Collected Source-Separated	173	1	5	-	178	178
Tons Collected Source-Separated	3	11	13,258	37,259	50,531	50,531
Tons Marketed						
Tons Marketed (excluding bale contamination)	162	11	12,272	34,473	46,918	46,918
Tons Marketed (excluding bale contamination)	162	11	12,272	34,473	46,918	46,918
Total Cost per Ton Collected	\$ 200	\$ 33	\$ 26	\$ 172	\$ 134	\$ 134
Total Cost per Ton Marketed	\$ 216	\$ 36	\$ 28	\$ 186	\$ 144	\$ 144
Customers	-	-	-	NA	NA	NA
Annual pounds per customer	NA	NA	NA	NA	NA	NA
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 8,552	\$ 39	\$ 256	\$ -	\$ 8,847	\$ 8,847
Commodity Sales (mid-point)	\$ 23,662	\$ 107	\$ 707	\$ -	\$ 24,477	\$ 24,477
Commodity Sales (upper range)	\$ 38,772	\$ 176	\$ 1,159	\$ -	\$ 40,107	\$ 40,107
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	-	-	-	28	28	28
Local Government Engagement	-	-	-	-	-	-
New Engagement (costs listed in collection)	-	-	-	28	28	28
Recycling Collection	-	-	-	110	110	110
Route Drivers and Operations	-	-	-	110	110	110
Management and Administrative	-	-	-	NA	-	-
Sortation	0	0	0	-	0	0
Sorting Labor	0	0	0	-	0	0
Equipment Operators, Supervisors, Maintenance	0	0	0	-	0	0
Admininstrative and Marketing	0	0	0	-	0	0
Overall Recycling System FTEs	0	0	0	138	138	138

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded Lists (S2/A+)							
FINAL - 4 - Areas Without Curbside 2025							
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total		
Recycling System Costs							
Customer Engagement Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Collection Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	\$ -	
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	\$ -	
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	\$ -	
Collection area adjustments	NA	NA	NA	NA	\$ -	\$ -	
Bulky collection	NA	NA	NA	NA	\$ -	\$ -	
Collection	\$ -	\$ -	\$ -	\$ 7,544,347	\$ 7,544,347	\$ 7,544,347	
Direct Collection Costs	\$ -	\$ -	\$ -	\$ 7,098,893	\$ 7,098,893	\$ 7,098,893	
Collection Capital - Containers	\$ -	\$ -	\$ -	\$ 976,838	\$ 976,838	\$ 976,838	
Collection Capital - Trucks	\$ -	\$ -	\$ -	NA	\$ -	\$ -	
Collection Labor	\$ -	\$ -	\$ -	\$ 5,791,671	\$ 5,791,671	\$ 5,791,671	
Collection Operations	\$ -	\$ -	\$ -	\$ 330,384	\$ 330,384	\$ 330,384	
Indirect Collection Costs	\$ -	\$ -	\$ -	\$ 445,454	\$ 445,454	\$ 445,454	
Collection Administrative	\$ -	\$ -	\$ -	\$ 445,454	\$ 445,454	\$ 445,454	
Collection Margin and Franchise Fee	\$ -	\$ -	\$ -	NA	\$ -	\$ -	
Cost Savings from Reduced Garbage Disposal	\$ (16,861)	\$ (853)	\$ (955,716)	\$ (2,899,861)	\$ (3,873,291)	\$ (3,873,291)	
Avoided Disposal Tip Fees	\$ (16,861)	\$ (853)	\$ (955,716)	\$ (2,899,861)	\$ (3,873,291)	\$ (3,873,291)	
Initial Transfer Transport	\$ 23,280	\$ 1,107	\$ 1,301,382	\$ 3,423,653	\$ 4,749,423	\$ 4,749,423	
Consolidation and Transfer to MRF	\$ 23,280	\$ 1,107	\$ 1,301,382	\$ 3,423,653	\$ 4,749,423	\$ 4,749,423	
Sortation	\$ 37,861	\$ 156	\$ 1,582	\$ -	\$ 39,598	\$ 39,598	
Sortation Labor	\$ 16,861	\$ 69	\$ 704	\$ -	\$ 17,634	\$ 17,634	
Sortation Capital	\$ 3,657	\$ 15	\$ 153	\$ -	\$ 3,825	\$ 3,825	
Sortation Facility	\$ 5,898	\$ 24	\$ 246	\$ -	\$ 6,169	\$ 6,169	
Glass and Unsorted Container Transfer	\$ 596	\$ 2	\$ 25	\$ -	\$ 623	\$ 623	
Sortation Residual Disposal	\$ 4,446	\$ 18	\$ 186	\$ -	\$ 4,650	\$ 4,650	
Sortation Administrative & Marketing	\$ 3,642	\$ 15	\$ 152	\$ -	\$ 3,809	\$ 3,809	
Sortation Margin	\$ 2,760	\$ 11	\$ 115	\$ -	\$ 2,887	\$ 2,887	
Overall System Costs							
Total Costs	\$ 44,279	\$ 410	\$ 347,248	\$ 8,068,139	\$ 8,460,076	\$ 8,460,076	
Tons Collected for Recycling2341213,26840,25953,773							
Tons Collected Commingled231110-242							
Tons Collected Source-Separated31113,25840,25953,531							
Tons Marketed2211112,52538,00350,760							
Tons Marketed (excluding bale contamination)2211112,52538,00350,760							
Total Cost per Ton Collected	\$ 189	\$ 35	\$ 26	\$ 200	\$ 157	\$ 157	
Total Cost per Ton Marketed	\$ 200	\$ 37	\$ 28	\$ 212	\$ 167	\$ 167	
Customers	-	-	-	NA	NA	NA	
Annual pounds per customer	NA	NA	NA	NA	NA	NA	
Commodity Revenues							
Commodity Revenues							
Commodity Sales (lower range)	\$ 10,636	\$ 44	\$ 444	\$ -	\$ 11,124	\$ 11,124	
Commodity Sales (mid-point)	\$ 30,207	\$ 124	\$ 1,262	\$ -	\$ 31,593	\$ 31,593	
Commodity Sales (upper range)	\$ 49,777	\$ 205	\$ 2,080	\$ -	\$ 52,062	\$ 52,062	
Full-Time Equivalent (FTE) Employment							
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total		
Recycling Customer Engagement	-	-	-	31	31	31	
Local Government Engagement	-	-	-	-	-	-	
New Engagement (costs listed in collection)	-	-	-	31	31	31	
Recycling Collection	-	-	-	129	129	129	
Route Drivers and Operations	-	-	-	129	129	129	
Management and Administrative	-	-	-	NA	-	-	
Sortation	0	0	0	-	0	0	
Sorting Labor	0	0	0	-	0	0	
Equipment Operators, Supervisors, Maintenance	0	0	0	-	0	0	
Admininstrative and Marketing	0	0	0	-	0	0	
Overall Recycling Svstem FTEs	0	0	0	160	160	160	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded + Statewide List (S7/A++)						
FINAL - 4 - Areas Without Curbside 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Collection Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Service level adjustments (included above)	NA	NA	NA	NA	NA	\$ -
Signage, labels, and container color (included above)	NA	NA	NA	NA	NA	\$ -
Collection area adjustments	NA	NA	NA	NA	NA	\$ -
Bulky collection	NA	NA	NA	NA	NA	\$ -
Collection	\$ -	\$ -	\$ -	\$ 7,731,932	\$ 7,731,932	\$ 7,731,932
Direct Collection Costs	\$ -	\$ -	\$ -	\$ 7,274,773	\$ 7,274,773	\$ 7,274,773
Collection Capital - Containers	\$ -	\$ -	\$ -	\$ 1,002,266	\$ 1,002,266	\$ 1,002,266
Collection Capital - Trucks	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Collection Labor	\$ -	\$ -	\$ -	\$ 5,933,442	\$ 5,933,442	\$ 5,933,442
Collection Operations	\$ -	\$ -	\$ -	\$ 339,066	\$ 339,066	\$ 339,066
Indirect Collection Costs	\$ -	\$ -	\$ -	\$ 457,159	\$ 457,159	\$ 457,159
Collection Administrative	\$ -	\$ -	\$ -	\$ 457,159	\$ 457,159	\$ 457,159
Collection Margin and Franchise Fee	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Cost Savings from Reduced Garbage Disposal	\$ (16,861)	\$ (853)	\$ (955,716)	\$ (2,953,949)	\$ (3,927,379)	\$ (3,927,379)
Avoided Disposal Tip Fees	\$ (16,861)	\$ (853)	\$ (955,716)	\$ (2,953,949)	\$ (3,927,379)	\$ (3,927,379)
Initial Transfer Transport	\$ 23,280	\$ 1,107	\$ 1,301,382	\$ 3,498,743	\$ 4,824,512	\$ 4,824,512
Consolidation and Transfer to MRF	\$ 23,280	\$ 1,107	\$ 1,301,382	\$ 3,498,743	\$ 4,824,512	\$ 4,824,512
Sortation	\$ 37,525	\$ 154	\$ 1,568	\$ -	\$ 39,247	\$ 39,247
Sortation Labor	\$ 16,877	\$ 69	\$ 705	\$ -	\$ 17,651	\$ 17,651
Sortation Capital	\$ 3,640	\$ 15	\$ 152	\$ -	\$ 3,807	\$ 3,807
Sortation Facility	\$ 5,894	\$ 24	\$ 246	\$ -	\$ 6,165	\$ 6,165
Glass and Unsorted Container Transfer	\$ 297	\$ 1	\$ 12	\$ -	\$ 311	\$ 311
Sortation Residual Disposal	\$ 4,434	\$ 18	\$ 185	\$ -	\$ 4,637	\$ 4,637
Sortation Administrative & Marketing	\$ 3,625	\$ 15	\$ 151	\$ -	\$ 3,791	\$ 3,791
Sortation Margin	\$ 2,758	\$ 11	\$ 115	\$ -	\$ 2,884	\$ 2,884
Overall System Costs						
Total Costs	\$ 43,943	\$ 409	\$ 347,234	\$ 8,276,726	\$ 8,668,312	\$ 8,668,312
Tons Collected for Recycling	234	12	13,268	41,009	54,524	54,524
Tons Collected Commingled	231	1	10	-	242	242
Tons Collected Source-Separated	3	11	13,258	41,009	54,282	54,282
Tons Marketed	221	11	12,527	38,718	51,476	51,476
Tons Marketed (excluding bale contamination)	221	11	12,527	38,718	51,476	51,476
Total Cost per Ton Collected	\$ 188	\$ 35	\$ 26	\$ 202	\$ 159	\$ 159
Total Cost per Ton Marketed	\$ 199	\$ 37	\$ 28	\$ 214	\$ 168	\$ 168
Customers	-	-	-	NA	NA	NA
Annual pounds per customer	NA	NA	NA	NA	NA	NA
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 11,544	\$ 47	\$ 482	\$ -	\$ 12,073	\$ 12,073
Commodity Sales (mid-point)	\$ 32,228	\$ 132	\$ 1,346	\$ -	\$ 33,707	\$ 33,707
Commodity Sales (upper range)	\$ 52,913	\$ 217	\$ 2,211	\$ -	\$ 55,341	\$ 55,341
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	-	-	-	32	32	32
Local Government Engagement	-	-	-	-	-	-
New Engagement (costs listed in collection)	-	-	-	32	32	32
Recycling Collection	-	-	-	133	133	133
Route Drivers and Operations	-	-	-	133	133	133
Management and Administrative	-	-	-	NA	-	-
Sortation	0	0	0	-	0	0
Sorting Labor	0	0	0	-	0	0
Equipment Operators, Supervisors, Maintenance	0	0	0	-	0	0
Admininstrative and Marketing	0	0	0	-	0	0
Overall Recycling System FTEs	0	0	0	164	164	164

Figures in this report represent the consultant team's best modeling estimates based on available data.

+Container Recovery Facility (S3/B)						
FINAL - 4 - Areas Without Curbside 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Collection Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	\$ -
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	\$ -
Collection area adjustments	NA	NA	NA	NA	\$ -	\$ -
Bulky collection	NA	NA	NA	NA	\$ -	\$ -
Collection	\$ -	\$ -	\$ -	\$ 7,544,347	\$ 7,544,347	\$ 7,544,347
Direct Collection Costs	\$ -	\$ -	\$ -	\$ 7,098,893	\$ 7,098,893	\$ 7,098,893
Collection Capital - Containers	\$ -	\$ -	\$ -	\$ 976,838	\$ 976,838	\$ 976,838
Collection Capital - Trucks	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Collection Labor	\$ -	\$ -	\$ -	\$ 5,791,671	\$ 5,791,671	\$ 5,791,671
Collection Operations	\$ -	\$ -	\$ -	\$ 330,384	\$ 330,384	\$ 330,384
Indirect Collection Costs	\$ -	\$ -	\$ -	\$ 445,454	\$ 445,454	\$ 445,454
Collection Administrative	\$ -	\$ -	\$ -	\$ 445,454	\$ 445,454	\$ 445,454
Collection Margin and Franchise Fee	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Cost Savings from Reduced Garbage Disposal	\$ (16,861)	\$ (853)	\$ (955,716)	\$ (2,899,861)	\$ (3,873,291)	\$ (3,873,291)
Avoided Disposal Tip Fees	\$ (16,861)	\$ (853)	\$ (955,716)	\$ (2,899,861)	\$ (3,873,291)	\$ (3,873,291)
Initial Transfer Transport	\$ 23,280	\$ 1,107	\$ 1,301,382	\$ 3,423,653	\$ 4,749,423	\$ 4,749,423
Consolidation and Transfer to MRF	\$ 23,280	\$ 1,107	\$ 1,301,382	\$ 3,423,653	\$ 4,749,423	\$ 4,749,423
Sortation	\$ 37,333	\$ 153	\$ 1,560	\$ -	\$ 39,047	\$ 39,047
Sortation Labor	\$ 16,503	\$ 68	\$ 689	\$ -	\$ 17,261	\$ 17,261
Sortation Capital	\$ 3,361	\$ 14	\$ 140	\$ -	\$ 3,516	\$ 3,516
Sortation Facility	\$ 5,874	\$ 24	\$ 245	\$ -	\$ 6,143	\$ 6,143
Glass and Unsorted Container Transfer	\$ 1,061	\$ 4	\$ 44	\$ -	\$ 1,110	\$ 1,110
Sortation Residual Disposal	\$ 4,205	\$ 17	\$ 176	\$ -	\$ 4,398	\$ 4,398
Sortation Administrative & Marketing	\$ 3,642	\$ 15	\$ 152	\$ -	\$ 3,809	\$ 3,809
Sortation Margin	\$ 2,687	\$ 11	\$ 112	\$ -	\$ 2,810	\$ 2,810
Overall System Costs						
Total Costs	\$ 43,752	\$ 408	\$ 347,226	\$ 8,068,139	\$ 8,459,525	\$ 8,459,525
Tons Collected for Recycling						
Tons Collected Commingled	234	12	13,268	40,259	53,773	53,773
Tons Collected Source-Separated	231	1	10	-	242	242
Tons Collected	3	11	13,258	40,259	53,531	53,531
Tons Marketed	222	11	12,581	38,173	50,987	50,987
Tons Marketed (excluding bale contamination)	222	11	12,581	38,173	50,987	50,987
Total Cost per Ton Collected	\$ 187	\$ 34	\$ 26	\$ 200	\$ 157	\$ 157
Total Cost per Ton Marketed	\$ 197	\$ 36	\$ 28	\$ 211	\$ 166	\$ 166
Customers	-	-	-	NA	NA	NA
Annual pounds per customer	NA	NA	NA	NA	NA	NA
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 9,379	\$ 39	\$ 392	\$ -	\$ 9,809	\$ 9,809
Commodity Sales (mid-point)	\$ 27,882	\$ 115	\$ 1,165	\$ -	\$ 29,161	\$ 29,161
Commodity Sales (upper range)	\$ 46,384	\$ 191	\$ 1,938	\$ -	\$ 48,513	\$ 48,513
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	-	-	-	31	31	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	-	-	-	31	31	
Recycling Collection	-	-	-	129	129	
Route Drivers and Operations	-	-	-	129	129	
Management and Administrative	-	-	-	NA	-	
Sortation	0	0	0	-	0	
Sorting Labor	0	0	0	-	0	
Equipment Operators, Supervisors, Maintenance	0	0	0	-	0	
Admininstrative and Marketing	0	0	0	-	0	
Overall Recycling System FTEs	0	0	0	160	160	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Dual-Stream Collection (S4/C)						
FINAL - 4 - Areas Without Curbside 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Collection Engagement Labor and Expenses	\$ -	\$ -	\$ -		NA	\$ -
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -		NA	\$ -
Multifamily Property Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Service level adjustments (included above)	NA	NA	NA	NA	NA	\$ -
Signage, labels, and container color (included above)	NA	NA	NA	NA	NA	\$ -
Collection area adjustments	NA	NA	NA	NA	NA	\$ -
Bulky collection	NA	NA	NA	NA	NA	\$ -
Collection	\$ -	\$ -	\$ -	\$ 7,544,347	\$ 7,544,347	\$ 7,544,347
Direct Collection Costs	\$ -	\$ -	\$ -	\$ 7,098,893	\$ 7,098,893	\$ 7,098,893
Collection Capital - Containers	\$ -	\$ -	\$ -	\$ 976,838	\$ 976,838	\$ 976,838
Collection Capital - Trucks	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Collection Labor	\$ -	\$ -	\$ -	\$ 5,791,671	\$ 5,791,671	\$ 5,791,671
Collection Operations	\$ -	\$ -	\$ -	\$ 330,384	\$ 330,384	\$ 330,384
Indirect Collection Costs	\$ -	\$ -	\$ -	\$ 445,454	\$ 445,454	\$ 445,454
Collection Administrative	\$ -	\$ -	\$ -	\$ 445,454	\$ 445,454	\$ 445,454
Collection Margin and Franchise Fee	\$ -	\$ -	\$ -	NA	\$ -	\$ -
Cost Savings from Reduced Garbage Disposal	\$ (16,861)	\$ (853)	\$ (955,716)	\$ (2,899,861)	\$ (3,873,291)	\$ (3,873,291)
Avoided Disposal Tip Fees	\$ (16,861)	\$ (853)	\$ (955,716)	\$ (2,899,861)	\$ (3,873,291)	\$ (3,873,291)
Initial Transfer Transport	\$ 23,280	\$ 1,107	\$ 1,301,382	\$ 3,423,653	\$ 4,749,423	\$ 4,749,423
Consolidation and Transfer to MRF	\$ 23,280	\$ 1,107	\$ 1,301,382	\$ 3,423,653	\$ 4,749,423	\$ 4,749,423
Sortation	\$ 36,674	\$ 151	\$ 1,532	\$ -	\$ 38,357	\$ 38,357
Sortation Labor	\$ 16,412	\$ 67	\$ 686	\$ -	\$ 17,166	\$ 17,166
Sortation Capital	\$ 3,491	\$ 14	\$ 146	\$ -	\$ 3,651	\$ 3,651
Sortation Facility	\$ 5,936	\$ 24	\$ 248	\$ -	\$ 6,209	\$ 6,209
Glass and Unsorted Container Transfer	\$ 299	\$ 1	\$ 12	\$ -	\$ 312	\$ 312
Sortation Residual Disposal	\$ 4,199	\$ 17	\$ 175	\$ -	\$ 4,392	\$ 4,392
Sortation Administrative & Marketing	\$ 3,642	\$ 15	\$ 152	\$ -	\$ 3,809	\$ 3,809
Sortation Margin	\$ 2,694	\$ 11	\$ 113	\$ -	\$ 2,818	\$ 2,818
Overall System Costs						
Total Costs	\$ 43,093	\$ 405	\$ 347,198	\$ 8,068,139	\$ 8,458,835	\$ 8,458,835
Tons Collected for Recycling	234	12	13,268	40,259	53,773	53,773
Tons Collected Commingled	231	1	10	-	242	242
Tons Collected Source-Separated	3	11	13,258	40,259	53,531	53,531
Tons Marketed	217	11	12,281	37,263	49,772	49,772
Tons Marketed (excluding bale contamination)	217	11	12,281	37,263	49,772	49,772
Total Cost per Ton Collected	\$ 184	\$ 34	\$ 26	\$ 200	\$ 157	\$ 157
Total Cost per Ton Marketed	\$ 199	\$ 37	\$ 28	\$ 217	\$ 170	\$ 170
Customers	-	-	-	NA	NA	NA
Annual pounds per customer	NA	NA	NA	NA	NA	NA
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 10,671	\$ 44	\$ 446	\$ -	\$ 11,161	\$ 11,161
Commodity Sales (mid-point)	\$ 29,921	\$ 123	\$ 1,250	\$ -	\$ 31,294	\$ 31,294
Commodity Sales (upper range)	\$ 49,170	\$ 202	\$ 2,054	\$ -	\$ 51,427	\$ 51,427
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	-	-	-	31	31	31
Local Government Engagement	-	-	-	-	-	-
New Engagement (costs listed in collection)	-	-	-	31	31	31
Recycling Collection	-	-	-	129	129	129
Route Drivers and Operations	-	-	-	129	129	129
Management and Administrative	-	-	-	NA	-	-
Sortation	0	0	0	-	0	0
Sorting Labor	0	0	0	-	0	0
Equipment Operators, Supervisors, Maintenance	0	0	0	-	0	0
Admininstrative and Marketing	0	0	0	-	0	0
Overall Recycling Svstem FTEs	0	0	0	160	160	160

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded + Statewide List + Expanded Collection (S8/D-low)						
FINAL - 4 - Areas Without Curbside 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 205,148	\$ 429,344	\$ 1,824,714	\$ -	\$ 2,459,206	
Collection Engagement Labor and Expenses	\$ 205,148	\$ 429,344	\$ 1,824,714	NA	\$ 2,459,206	
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	
Multifamily Property Improvements	\$ -	\$ 844,594	\$ -	\$ -	\$ 844,594	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	\$ 451,686	NA	NA	\$ 451,686	
Bulky collection	NA	\$ 392,908	NA	NA	\$ 392,908	
Collection	\$ 5,916,591	\$ 1,572,865	\$ 6,684,675	\$ 6,959,454	\$ 21,133,584	
Direct Collection Costs	\$ 3,933,028	\$ 1,100,283	\$ 4,676,201	\$ 6,548,008	\$ 16,257,520	
Collection Capital - Containers	\$ 96,334	\$ 28,932	\$ 122,962	\$ 902,709	\$ 1,150,938	
Collection Capital - Trucks	\$ 682,591	\$ 105,647	\$ 448,998	NA	\$ 1,237,236	
Collection Labor	\$ 2,057,039	\$ 597,861	\$ 2,540,909	\$ 5,340,137	\$ 10,535,946	
Collection Operations	\$ 1,097,063	\$ 367,843	\$ 1,563,332	\$ 305,161	\$ 3,333,400	
Indirect Collection Costs	\$ 1,983,562	\$ 472,582	\$ 2,008,474	\$ 411,446	\$ 4,876,064	
Collection Administrative	\$ 1,289,499	\$ 278,414	\$ 1,183,262	\$ 411,446	\$ 3,162,621	
Collection Margin and Franchise Fee	\$ 694,064	\$ 194,168	\$ 825,212	NA	\$ 1,713,443	
Cost Savings from Reduced Garbage Disposal	\$ (520,971)	\$ (75,121)	\$ (1,199,639)	\$ (2,742,718)	\$ (4,538,449)	
Avoided Disposal Tip Fees	\$ (520,971)	\$ (75,121)	\$ (1,199,639)	\$ (2,742,718)	\$ (4,538,449)	
Initial Transfer Transport	\$ 668,426	\$ 101,062	\$ 1,638,289	\$ 3,213,133	\$ 5,620,910	
Consolidation and Transfer to MRF	\$ 668,426	\$ 101,062	\$ 1,638,289	\$ 3,213,133	\$ 5,620,910	
Sortation	\$ 973,878	\$ 155,778	\$ 543,707	\$ -	\$ 1,673,362	
Sortation Labor	\$ 442,166	\$ 70,727	\$ 246,857	\$ -	\$ 759,750	
Sortation Capital	\$ 91,343	\$ 14,611	\$ 50,996	\$ -	\$ 156,949	
Sortation Facility	\$ 153,071	\$ 24,485	\$ 85,458	\$ -	\$ 263,014	
Glass and Unsorted Container Transfer	\$ 7,499	\$ 1,200	\$ 4,187	\$ -	\$ 12,886	
Sortation Residual Disposal	\$ 117,250	\$ 18,755	\$ 65,460	\$ -	\$ 201,465	
Sortation Administrative & Marketing	\$ 90,965	\$ 14,550	\$ 50,785	\$ -	\$ 156,301	
Sortation Margin	\$ 71,584	\$ 11,450	\$ 39,964	\$ -	\$ 122,998	
Overall System Costs						
Total Costs	\$ 7,243,071	\$ 3,028,522	\$ 9,491,746	\$ 7,429,869	\$ 27,193,208	
Tons Collected for Recycling 7,233 1,043 16,654 38,077 63,007						
Tons Collected Commingled 6,014 962 3,358 - 10,334						
Tons Collected Source-Separated 1,219 81 13,297 38,077 52,673						
Tons Marketed 6,807 982 15,675 35,839 59,303						
Tons Marketed (excluding bale contamination) 6,807 982 15,675 35,839 59,303						
Total Cost per Ton Collected	\$ 1,001	\$ 2,904	\$ 570	\$ 195	\$ 432	
Total Cost per Ton Marketed	\$ 1,064	\$ 3,085	\$ 606	\$ 207	\$ 459	
Customers	52,388	1,310	5,566	NA	NA	
Annual pounds per customer	276	1,593	5,984	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 292,897	\$ 46,851	\$ 163,521	\$ -	\$ 503,269	
Commodity Sales (mid-point)	\$ 820,764	\$ 131,286	\$ 458,225	\$ -	\$ 1,410,275	
Commodity Sales (upper range)	\$ 1,348,632	\$ 215,722	\$ 752,929	\$ -	\$ 2,317,282	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	1	3	15	28	47	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	1	3	15	28	47	
Recycling Collection	4	4	18	119	146	
Route Drivers and Operations	3	4	16	119	142	
Management and Administrative	2	0	2	NA	4	
Sortation	8	1	4	-	13	
Sorting Labor	5	1	3	-	9	
Equipment Operators, Supervisors, Maintenance	2	0	1	-	3	
Admininstrative and Marketing	1	0	0	-	1	
Overall Recycling Svstem FTEs	13	9	37	148	206	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded + Statewide List + Expanded Collection (S9/D-mid)						
FINAL - 4 - Areas Without Curbside 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 307,721	\$ 644,017	\$ 2,146,722	\$ -	\$	3,098,460
Collection Engagement Labor and Expenses	\$ 307,721	\$ 644,017	\$ 2,146,722	NA	\$	3,098,460
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$	-
Multifamily Property Improvements	\$ -	\$ 1,266,891	\$ -	\$ -	\$	1,266,891
Service level adjustments (included above)	NA	NA	NA	NA	\$	-
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$	-
Collection area adjustments	NA	\$ 677,528	NA	NA	\$	677,528
Bulky collection	NA	\$ 589,363	NA	NA	\$	589,363
Collection	\$ 8,874,886	\$ 2,359,297	\$ 7,864,323	\$ 6,186,991	\$	25,285,498
Direct Collection Costs	\$ 5,899,542	\$ 1,650,424	\$ 5,501,413	\$ 5,821,258	\$	18,872,637
Collection Capital - Containers	\$ 144,501	\$ 43,399	\$ 144,662	\$ 803,167	\$	1,135,729
Collection Capital - Trucks	\$ 1,023,887	\$ 158,470	\$ 528,233	NA	\$	1,710,590
Collection Labor	\$ 3,085,559	\$ 896,791	\$ 2,989,304	\$ 4,746,833	\$	11,718,488
Collection Operations	\$ 1,645,595	\$ 551,764	\$ 1,839,214	\$ 271,257	\$	4,307,831
Indirect Collection Costs	\$ 2,975,344	\$ 708,873	\$ 2,362,910	\$ 365,734	\$	6,412,861
Collection Administrative	\$ 1,934,248	\$ 417,622	\$ 1,392,072	\$ 365,734	\$	4,109,676
Collection Margin and Franchise Fee	\$ 1,041,096	\$ 291,251	\$ 970,838	NA	\$	2,303,185
Cost Savings from Reduced Garbage Disposal	\$ (1,040,463)	\$ (133,624)	\$ (1,403,960)	\$ (2,531,488)	\$	(5,109,536)
Avoided Disposal Tip Fees	\$ (1,040,463)	\$ (133,624)	\$ (1,403,960)	\$ (2,531,488)	\$	(5,109,536)
Initial Transfer Transport	\$ 1,334,799	\$ 179,746	\$ 1,907,882	\$ 2,927,524	\$	6,349,951
Consolidation and Transfer to MRF	\$ 1,334,799	\$ 179,746	\$ 1,907,882	\$ 2,927,524	\$	6,349,951
Sortation	\$ 1,940,062	\$ 277,549	\$ 950,291	\$ -	\$	3,167,902
Sortation Labor	\$ 891,168	\$ 127,492	\$ 436,516	\$ -	\$	1,455,177
Sortation Capital	\$ 173,358	\$ 24,801	\$ 84,915	\$ -	\$	283,073
Sortation Facility	\$ 304,411	\$ 43,550	\$ 149,108	\$ -	\$	497,069
Glass and Unsorted Container Transfer	\$ 14,160	\$ 2,026	\$ 6,936	\$ -	\$	23,122
Sortation Residual Disposal	\$ 241,664	\$ 34,573	\$ 118,373	\$ -	\$	394,610
Sortation Administrative & Marketing	\$ 172,641	\$ 24,698	\$ 84,564	\$ -	\$	281,904
Sortation Margin	\$ 142,659	\$ 20,409	\$ 69,878	\$ -	\$	232,947
Overall System Costs						
Total Costs	\$ 11,417,005	\$ 4,593,876	\$ 11,465,258	\$ 6,583,027	\$	34,059,167
Tons Collected for Recycling 14,445 1,855 19,491 35,144 70,935						
Tons Collected Commingled 12,008 1,718 5,882 - 19,607						
Tons Collected Source-Separated 2,437 137 13,609 35,144 51,328						
Tons Marketed 13,534 1,738 18,262 32,929 66,463						
Tons Marketed (excluding bale contamination) 13,534 1,738 18,262 32,929 66,463						
Total Cost per Ton Collected	\$ 790	\$ 2,476	\$ 588	\$ 187	\$	480
Total Cost per Ton Marketed	\$ 844	\$ 2,643	\$ 628	\$ 200	\$	512
Customers	78,582	1,965	6,548	NA		NA
Annual pounds per customer	368	1,889	5,953	NA		NA
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 570,015	\$ 81,547	\$ 279,207	\$ -	\$	930,769
Commodity Sales (mid-point)	\$ 1,599,219	\$ 228,788	\$ 783,337	\$ -	\$	2,611,344
Commodity Sales (upper range)	\$ 2,628,424	\$ 376,028	\$ 1,287,467	\$ -	\$	4,291,919
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	1	5	17	25	49	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	1	5	17	25	49	
Recycling Collection	6	6	21	106	140	
Route Drivers and Operations	4	6	19	106	135	
Management and Administrative	2	1	2	NA	5	
Sortation	15	2	8	-	25	
Sorting Labor	11	2	5	-	18	
Equipment Operators, Supervisors, Maintenance	3	0	2	-	5	
Admininstrative and Marketing	1	0	1	-	2	
Overall Recycling Svstem FTEs	23	14	46	131	214	

Figures in this report represent the consultant team's best modeling estimates based on available data.

Engagement + MRFs + Expanded + Statewide List + Expanded Collection (S10/D-hi)						
FINAL - 4 - Areas Without Curbside 2025						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling System Costs						
Customer Engagement Costs	\$ 410,295	\$ 858,689	\$ 2,361,394	\$ -	\$ 3,630,378	
Collection Engagement Labor and Expenses	\$ 410,295	\$ 858,689	\$ 2,361,394	NA	\$ 3,630,378	
Local Government Engagement Labor and Expenses	\$ -	\$ -	\$ -	NA	\$ -	
Multifamily Property Improvements	\$ -	\$ 1,689,188	\$ -	\$ -	\$ 1,689,188	
Service level adjustments (included above)	NA	NA	NA	NA	\$ -	
Signage, labels, and container color (included above)	NA	NA	NA	NA	\$ -	
Collection area adjustments	NA	\$ 903,371	NA	NA	\$ 903,371	
Bulky collection	NA	\$ 785,817	NA	NA	\$ 785,817	
Collection	\$ 11,833,182	\$ 3,145,729	\$ 8,650,756	\$ 5,414,479	\$ 29,044,145	
Direct Collection Costs	\$ 7,866,057	\$ 2,200,565	\$ 6,051,554	\$ 5,094,458	\$ 21,212,634	
Collection Capital - Containers	\$ 192,668	\$ 57,865	\$ 159,128	\$ 703,576	\$ 1,113,237	
Collection Capital - Trucks	\$ 1,365,183	\$ 211,293	\$ 581,057	NA	\$ 2,157,533	
Collection Labor	\$ 4,114,078	\$ 1,195,722	\$ 3,288,235	\$ 4,153,529	\$ 12,751,564	
Collection Operations	\$ 2,194,127	\$ 735,686	\$ 2,023,135	\$ 237,353	\$ 5,190,301	
Indirect Collection Costs	\$ 3,967,125	\$ 945,164	\$ 2,599,201	\$ 320,021	\$ 7,831,511	
Collection Administrative	\$ 2,578,997	\$ 556,829	\$ 1,531,280	\$ 320,021	\$ 4,987,127	
Collection Margin and Franchise Fee	\$ 1,388,128	\$ 388,335	\$ 1,067,921	NA	\$ 2,844,384	
Cost Savings from Reduced Garbage Disposal	\$ (1,539,176)	\$ (225,306)	\$ (1,579,336)	\$ (2,320,258)	\$ (5,664,076)	
Avoided Disposal Tip Fees	\$ (1,539,176)	\$ (225,306)	\$ (1,579,336)	\$ (2,320,258)	\$ (5,664,076)	
Initial Transfer Transport	\$ 1,974,517	\$ 306,106	\$ 2,137,705	\$ 2,641,914	\$ 7,060,243	
Consolidation and Transfer to MRF	\$ 1,974,517	\$ 306,106	\$ 2,137,705	\$ 2,641,914	\$ 7,060,243	
Sortation	\$ 2,921,779	\$ 488,600	\$ 1,318,152	\$ -	\$ 4,728,531	
Sortation Labor	\$ 1,358,774	\$ 227,224	\$ 613,007	\$ -	\$ 2,199,005	
Sortation Capital	\$ 265,823	\$ 44,453	\$ 119,925	\$ -	\$ 430,201	
Sortation Facility	\$ 449,400	\$ 75,152	\$ 202,745	\$ -	\$ 727,297	
Glass and Unsorted Container Transfer	\$ 20,307	\$ 3,396	\$ 9,162	\$ -	\$ 32,865	
Sortation Residual Disposal	\$ 366,375	\$ 61,268	\$ 165,289	\$ -	\$ 592,932	
Sortation Administrative & Marketing	\$ 246,176	\$ 41,167	\$ 111,061	\$ -	\$ 398,404	
Sortation Margin	\$ 214,924	\$ 35,941	\$ 96,962	\$ -	\$ 347,827	
Overall System Costs						
Total Costs	\$ 15,600,597	\$ 6,263,007	\$ 12,888,670	\$ 5,736,135	\$ 40,488,410	
Tons Collected for Recycling 21,368 3,128 21,926 32,212 78,634						
Tons Collected Commingled 17,761 2,970 8,013 - 28,745						
Tons Collected Source-Separated 3,607 158 13,913 32,212 49,889						
Tons Marketed 19,947 2,920 20,467 30,069 73,403						
Tons Marketed (excluding bale contamination) 19,947 2,920 20,467 30,069 73,403						
Total Cost per Ton Collected	\$ 730	\$ 2,002	\$ 588	\$ 178	\$ 515	
Total Cost per Ton Marketed	\$ 782	\$ 2,145	\$ 630	\$ 191	\$ 552	
Customers	104,776	2,619	7,203	NA	NA	
Annual pounds per customer	408	2,388	6,088	NA	NA	
Commodity Revenues						
Commodity Revenues						
Commodity Sales (lower range)	\$ 824,218	\$ 137,831	\$ 371,843	\$ -	\$ 1,333,893	
Commodity Sales (mid-point)	\$ 2,319,035	\$ 387,805	\$ 1,046,226	\$ -	\$ 3,753,066	
Commodity Sales (upper range)	\$ 3,813,852	\$ 637,779	\$ 1,720,608	\$ -	\$ 6,172,239	
Full-Time Equivalent (FTE) Employment						
	SF Res. (on-route)	MF Res. (on-route)	Commercial (on-route)	Self-haul (excluding Bottle Bill)	Total	
Recycling Customer Engagement	1	7	19	22	49	
Local Government Engagement	-	-	-	-	-	
New Engagement (costs listed in collection)	1	7	19	22	49	
Recycling Collection	9	8	23	93	133	
Route Drivers and Operations	5	8	21	93	127	
Management and Administrative	3	1	2	NA	6	
Sortation	23	4	11	-	38	
Sorting Labor	17	3	8	-	27	
Equipment Operators, Supervisors, Maintenance	5	1	2	-	7	
Admininstrative and Marketing	2	0	1	-	3	
Overall Recycling System FTEs	33	19	53	115	220	

Figures in this report represent the consultant team's best modeling estimates based on available data.