

## PROJECTED 2020 AVERAGE QUARTERLY PRICING (Using CY2019 Material Sales Data)

Material	1st Quarter Average \$ Received	2nd Quarter Average \$ Received	3rd Quarter Average \$ Received	4th Quarter Average \$ Received	2019 Average Quarterly Pricing	Residential 3 Year Composition %	Average Price/Ton	Commercial 3 Year Composition %	Average Price/Ton
Aluminum	\$4,931.63	\$4,535.65	\$4,426.20	\$4,020.76	\$4,478.56	0.53%	\$23.92	0.23%	\$10.39
Cardboard	\$77.93	\$92.87	\$78.10	\$42.40	\$72.83	23.78%	\$17.32	34.65%	\$25.23
GLASS--Mixed	\$43.89	\$51.32	\$57.62	\$24.84	\$44.42	23.71%	\$10.53	18.56%	\$8.25
HDPE--Mixed	\$182.14	\$135.03	\$129.45	\$384.80	\$207.86	1.50%	\$3.12	1.27%	\$2.64
HDPE--Natural	\$578.20	\$489.38	\$467.50	\$417.11	\$488.05	0.60%	\$2.90	1.10%	\$5.34
LDPE--Mixed	\$0.00	\$0.00	\$0.00	\$0.00	(\$69.25)	3.71%	(\$2.57)	4.27%	(\$2.96)
METAL	\$116.62	\$89.39	\$96.66	\$100.11	\$100.70	2.00%	\$2.01	4.56%	\$4.59
Mixed Plastic	\$7.44	\$7.72	\$23.14	\$28.22	\$16.63	1.15%	\$0.19	2.70%	\$0.45
Newspaper	\$3.53	\$4.93	(\$18.16)	(\$15.12)	(\$6.21)	29.37%	(\$1.82)	19.83%	(\$1.23)
PET	\$2,036.82	\$1,877.15	\$1,893.32	\$2,419.18	\$2,056.62	3.44%	\$70.79	1.89%	\$38.91
TIN	\$56.15	\$48.07	\$41.63	\$33.79	\$44.91	1.36%	\$0.61	3.54%	\$1.59
Residue					(\$69.25)	8.84%	(\$6.12)	7.40%	(\$5.12)
Single Stream Value per Ton							\$120.87		\$88.08

City 70% Material Sales Revenue Share (30% paid to NRWS)	\$84.61	\$61.66
Over-baseline Processing Fee paid to NRWS (3% PPI increase)	84.96	84.96
Net Revenue Retained by City	(\$0.34)	(\$23.30)
Projected \$/ton Single-Stream Portion of Capital Costs	\$ 14.17	\$ 14.17
Recommended Market Variability (10%) Buffer	\$ 12.09	\$ 8.81
Net Revenue before Proposed Gate Fee	(\$26.60)	(\$46.28)
Proposed Residential Single-Stream Gate Fee	\$ 30.00	
Proposed Commercial Single-Stream Gate Fee		\$50.00
Net Revenue Retained by City (before 10% market buffer)	\$ 3.40	\$3.72
Net Revenue Retained by City (after 10% market buffer)	\$ 15.48	\$12.53

Description	CY2019 (Average \$/ton)	CY2018 (Average \$/ton)	CY2017 (Average \$/ton)	CY2016 (Average \$/ton)	CY2015 (Average \$/ton)	CY2014 (Average \$/ton)
Residential Single Stream	\$121.00	\$135.01	\$164.73	\$150.75	\$163.11	\$175.29
Commercial Single Stream	\$88.20	\$103.97	\$133.71	\$118.96	\$137.96	\$152.69
	CY19 vs. CY18	CY18 vs. CY17	CY17 vs. CY16	CY16 vs. CY15	CY15 vs. CY14	Average Annual Change (CY14 CY19)
Residential \$/ton Change	(\$14.01)	(\$29.72)	\$13.99	(\$12.37)	(\$12.17)	(\$10.86)
Residential \$/ton % Change	-10%	-18%	9%	-8%	-7%	-7%
Commercial \$/ton Change	(\$15.77)	(\$29.74)	\$14.76	(\$19.00)	(\$14.73)	(\$12.90)
Commercial \$/ton % Change	-15%	-22%	12%	-14%	-10%	-10%
Recommended Market Volatility Buffer Percentage	10%					

## 2019 AVERAGE QUARTERLY PRICING

Material	1st Quarter Average \$ Received	2nd Quarter Average \$ Received	3rd Quarter Average \$ Received	4th Quarter Average \$ Received	2019 Average Quarterly Pricing	Residential 3 Year Composition %	Average Price/Ton	Commercial 3 Year Composition %	Average Price/Ton
Aluminum	\$4,931.63	\$4,535.65	\$4,426.20	\$4,020.76	\$4,478.56	0.53%	\$23.92	0.23%	\$10.39
Cardboard	\$77.93	\$92.87	\$78.10	\$42.40	\$72.83	23.78%	\$17.32	34.65%	\$25.23
GLASS--Mixed	\$43.89	\$51.32	\$57.62	\$24.84	\$44.42	23.71%	\$10.53	18.56%	\$8.25
HDPE--Mixed	\$182.14	\$135.03	\$129.45	\$384.80	\$207.86	1.50%	\$3.12	1.27%	\$2.64
HDPE--Natural	\$578.20	\$489.38	\$467.50	\$417.11	\$488.05	0.60%	\$2.90	1.10%	\$5.34
LDPE--Mixed	\$0.00	\$0.00	\$0.00	\$0.00	(\$68.25)	3.71%	(\$2.53)	4.27%	(\$2.92)
METAL	\$116.62	\$89.39	\$96.66	\$100.11	\$100.70	2.00%	\$2.01	4.56%	\$4.59
Mixed Plastic	\$7.44	\$7.72	\$23.14	\$28.22	\$16.63	1.15%	\$0.19	2.70%	\$0.45
Newspaper	\$3.53	\$4.93	(\$18.16)	(\$15.12)	(\$6.21)	29.37%	(\$1.82)	19.83%	(\$1.23)
PET	\$2,036.82	\$1,877.15	\$1,893.32	\$2,419.18	\$2,056.62	3.44%	\$70.79	1.89%	\$38.91
TIN	\$56.15	\$48.07	\$41.63	\$33.79	\$44.91	1.36%	\$0.61	3.54%	\$1.59
Residue					(\$68.25)	8.84%	(\$6.03)	7.40%	(\$5.05)
Single Stream Value per Ton						\$121.00		\$88.20	

## 2019 AVERAGE QUARTERLY PRICING

Material	1st Quarter Average \$ Received	2nd Quarter Average \$ Received	3rd Quarter Average \$ Received	4th Quarter Average \$ Received	2019 Average Quarterly Pricing	Residential 3 Year Composition %	Average Price/Ton	Commercial 3 Year Composition %	Average Price/Ton
Aluminum	\$4,931.63	\$4,535.65	\$4,426.20	\$4,020.76	\$4,478.56	0.53%	\$23.92	0.23%	\$10.39
Cardboard	\$77.93	\$92.87	\$78.10	\$42.40	\$72.83	23.78%	\$17.32	34.65%	\$25.23
GLASS--Mixed	\$43.89	\$51.32	\$57.62	\$24.84	\$44.42	23.71%	\$10.53	18.56%	\$8.25
HDPE--Mixed	\$182.14	\$135.03	\$129.45	\$384.80	\$207.86	1.50%	\$3.12	1.27%	\$2.64
HDPE--Natural	\$578.20	\$489.38	\$467.50	\$417.11	\$488.05	0.60%	\$2.90	1.10%	\$5.34
LDPE--Mixed	\$0.00	\$0.00	\$0.00	\$0.00	(\$68.25)	3.71%	(\$2.53)	4.27%	(\$2.92)
METAL	\$116.62	\$89.39	\$96.66	\$100.11	\$100.70	2.00%	\$2.01	4.56%	\$4.59
Mixed Plastic	\$7.44	\$7.72	\$23.14	\$28.22	\$16.63	1.15%	\$0.19	2.70%	\$0.45
Newspaper	\$3.53	\$4.93	(\$18.16)	(\$15.12)	(\$6.21)	29.37%	(\$1.82)	19.83%	(\$1.23)
PET	\$2,036.82	\$1,877.15	\$1,893.32	\$2,419.18	\$2,056.62	3.44%	\$70.79	1.89%	\$38.91
TIN	\$56.15	\$48.07	\$41.63	\$33.79	\$44.91	1.36%	\$0.61	3.54%	\$1.59
Residue					(\$68.25)	8.84%	(\$6.03)	7.40%	(\$5.05)
Single Stream Value per Ton						\$121.00		\$88.20	

## 2018 AVERAGE QUARTERLY PRICING

Material	1st Quarter Average \$ Received	2nd Quarter Average \$ Received	3rd Quarter Average \$ Received	4th Quarter Average \$ Received	2018 Average Quarterly Pricing	Residential 3 Year Composition %	Average Price/Ton	Commercial 3 Year Composition %	Average Price/Ton
Aluminum	\$4,582.71	\$5,052.60	\$4,297.20	\$4,455.64	\$4,597.04	0.53%	\$24.55	0.23%	\$10.67
Cardboard	\$165.37	\$129.03	\$65.93	\$56.15	\$104.12	23.78%	\$24.76	34.65%	\$36.08
GLASS--Mixed	\$42.27	\$42.18	\$41.26	\$41.26	\$41.74	23.71%	\$9.90	18.56%	\$7.75
HDPE--Mixed	\$140.44	\$123.27	\$185.10	\$193.66	\$160.62	1.50%	\$2.41	1.27%	\$2.04
HDPE--Natural	\$377.41	\$408.61	\$336.69	\$461.75	\$396.12	0.60%	\$2.36	1.10%	\$4.34
LDPE--Mixed	\$0.00	\$0.00	\$0.00	\$0.00	(\$67.25)	3.71%	(\$2.50)	4.27%	(\$2.87)
METAL	\$117.53	\$101.00	\$109.17	\$105.33	\$108.26	2.00%	\$2.16	4.56%	\$4.94
Mixed Plastic	\$59.21	\$33.46	\$32.15	\$30.63	\$38.86	1.15%	\$0.45	2.70%	\$1.05
Newspaper	\$104.15	\$67.58	(\$8.72)	(\$21.17)	\$35.46	29.37%	\$10.41	19.83%	\$7.03
PET	\$2,264.67	\$1,903.43	\$1,526.44	\$1,949.04	\$1,910.90	3.44%	\$65.77	1.89%	\$36.15
TIN	\$21.05	\$60.00	\$60.00	\$60.00	\$50.26	1.36%	\$0.69	3.54%	\$1.78
Residue					(\$67.25)	8.84%	(\$5.95)	7.40%	(\$4.98)
Single Stream Value per Ton						\$135.01		\$103.97	

# 2017 AVERAGE PRICING

# ATTACHMENT 2

## 2017 AVERAGE QUARTERLY PRICING

Material	1st Quarter Average \$ Received	2nd Quarter Average \$ Received	3rd Quarter Average \$ Received	4th Quarter Average \$ Received	2017 Average Quarterly Pricing	Residential 3 Year Composition %	Average Price/Ton	Commercial 3 Year Composition %	Average Price/Ton
Aluminum	\$3,660.68	\$4,236.75	\$4,205.97	\$4,249.53	\$4,088.23	0.53%	\$21.83	0.23%	\$9.48
Cardboard	\$79.19	\$138.64	\$169.27	\$187.81	\$143.73	23.78%	\$34.18	34.65%	\$49.80
GLASS--Mixed	\$56.88	\$60.68	\$10.77	\$35.71	\$41.01	23.71%	\$9.72	18.56%	\$7.61
HDPE--Mixed	\$169.64	\$217.08	\$324.14	\$156.83	\$216.92	1.50%	\$3.25	1.27%	\$2.75
HDPE--Natural	\$503.61	\$163.61	\$293.81	\$492.20	\$363.31	0.60%	\$2.16	1.10%	\$3.98
LDPE--Mixed	\$22.46	\$14.54	\$28.36	\$0.00	\$16.34	3.71%	\$0.61	4.27%	\$0.70
METAL	\$50.38	\$63.12	\$81.02	\$81.36	\$68.97	2.00%	\$1.38	4.56%	\$3.15
Mixed Plastic	\$97.32	\$101.19	\$113.54	\$90.00	\$100.51	1.15%	\$1.16	2.70%	\$2.71
Newspaper	\$109.13	\$112.66	\$109.90	\$93.47	\$106.29	29.37%	\$31.22	19.83%	\$21.08
PET	\$1,797.85	\$1,896.28	\$1,916.88	\$1,862.71	\$1,868.43	3.44%	\$64.31	1.89%	\$35.35
TIN	\$42.71	\$45.26	\$64.79	\$73.37	\$56.53	1.36%	\$0.77	3.54%	\$2.00
Residue	\$0.00	\$0.00	\$0.00	\$0.00	(\$66.25)	8.84%	(\$5.86)	7.40%	(\$4.90)
Single Stream Value per Ton						\$164.73		\$133.71	

## 2016 AVERAGE QUARTERLY PRICING

Material	1st Quarter Average \$ Received	2nd Quarter Average \$ Received	3rd Quarter Average \$ Received	4th Quarter Average \$ Received	2016 Average Quarterly Pricing	Residential 3 Year Composition %	Average Price/Ton	Commercial 3 Year Composition %	Average Price/Ton
Aluminum	\$4,220.94	\$3,801.35	\$4,238.99	\$4,341.62	\$4,150.73	0.53%	\$22.16	0.23%	\$9.63
Cardboard	\$123.57	\$115.73	\$104.16	\$111.18	\$113.66	23.78%	\$27.03	34.65%	\$39.38
GLASS--Mixed	\$51.97	\$58.02	\$63.50	\$53.36	\$56.71	23.71%	\$13.45	18.56%	\$10.53
HDPE--Mixed	\$411.79	\$350.71	\$223.13	\$205.90	\$297.88	1.50%	\$4.47	1.27%	\$3.78
HDPE--Natural	\$800.25	\$588.62	\$351.53	\$430.23	\$542.66	0.60%	\$3.23	1.10%	\$5.94
LDPE--Mixed	\$2.23	\$7.50	\$18.01	\$12.24	\$10.00	3.71%	\$0.37	4.27%	\$0.43
METAL	\$86.14	\$24.96	\$38.08	\$49.15	\$49.58	2.00%	\$0.99	4.56%	\$2.26
Mixed Plastic	\$105.97	\$76.94	\$61.86	\$85.96	\$82.68	1.15%	\$0.95	2.70%	\$2.23
Newspaper	\$84.13	\$69.51	\$73.31	\$88.34	\$78.82	29.37%	\$23.15	19.83%	\$15.63
PET	\$1,808.32	\$1,662.54	\$1,689.54	\$1,860.93	\$1,755.33	3.44%	\$60.42	1.89%	\$33.21
TIN	\$33.62	\$14.13	\$7.85	\$30.41	\$21.50	1.36%	\$0.29	3.54%	\$0.76
Residue					(\$65.25)	8.84%	(\$5.77)	7.40%	(\$4.83)
Single Stream Value per Ton						\$150.75		\$118.96	

## 2015 AVERAGE QUARTERLY PRICING

Material	1st Quarter Average \$ Received	2nd Quarter Average \$ Received	3rd Quarter Average \$ Received	4th Quarter Average \$ Received	2015 Average Quarterly Pricing	Residential 3 Year Composition %	Average Price/Ton	Commercial 3 Year Composition %	Average Price/Ton
Aluminum	\$5,497.16	\$3,626.80	\$4,021.98	\$4,428.60	\$4,393.64	0.53%	\$23.46	0.23%	\$10.19
Cardboard	\$134.49	\$128.76	\$100.75	\$115.76	\$119.94	23.78%	\$28.52	34.65%	\$41.56
GLASS--Mixed	\$62.46	\$71.70	\$32.83	\$51.76	\$54.69	23.71%	\$12.97	18.56%	\$10.15
HDPE--Mixed	\$595.09	\$624.57	\$432.42	\$565.42	\$554.38	1.50%	\$8.32	1.27%	\$7.04
HDPE--Natural	\$946.72	\$959.16	\$525.56	\$644.22	\$768.92	0.60%	\$4.58	1.10%	\$8.42
LDPE--Mixed	\$96.07	\$54.25	\$76.30	\$126.16	\$88.20	3.71%	\$3.28	4.27%	\$3.77
METAL	\$140.24	\$134.79	\$81.96	\$63.95	\$105.24	2.00%	\$2.10	4.56%	\$4.80
Mixed Plastic	\$231.61	\$209.64	\$151.91	\$174.33	\$191.87	1.15%	\$2.21	2.70%	\$5.17
Newspaper	\$97.57	\$88.24	\$68.10	\$81.23	\$83.79	29.37%	\$24.61	19.83%	\$16.62
PET	\$1,600.08	\$1,788.94	\$1,575.21	\$1,710.16	\$1,668.60	3.44%	\$57.43	1.89%	\$31.57
TIN	\$150.20	\$127.25	\$80.05	\$30.17	\$96.92	1.36%	\$1.32	3.54%	\$3.43
Residue					(\$64.25)	8.84%	(\$5.68)	7.40%	(\$4.75)
Single Stream Value per Ton						\$163.11		\$137.96	



## 2014 AVERAGE QUARTERLY PRICING

Material	1st Quarter Average \$ Received	2nd Quarter Average \$ Received	3rd Quarter Average \$ Received	4th Quarter Average \$ Received	2014 Average Quarterly Pricing	Residential 3 Year Composition %	Average Price/Ton	Commercial 3 Year Composition %	Average Price/Ton
Aluminum	\$4,906.23	\$4,150.79	\$4,448.37	\$3,726.54	\$4,307.98	0.53%	\$23.00	0.23%	\$9.99
Cardboard	\$159.67	\$142.59	\$153.40	\$133.22	\$147.22	23.78%	\$35.01	34.65%	\$51.01
GLASS--Mixed	\$73.43	\$67.22	(\$28.87)	\$226.81	\$84.65	23.71%	\$20.07	18.56%	\$15.71
HDPE--Mixed	\$438.77	\$418.91	\$511.27	\$567.25	\$484.05	1.50%	\$7.26	1.27%	\$6.14
HDPE--Natural	\$715.32	\$681.07	\$804.71	\$733.34	\$733.61	0.60%	\$4.36	1.10%	\$8.03
LDPE--Mixed	\$5.47	\$1.47	\$14.26	\$35.11	\$14.08	3.71%	\$0.52	4.27%	\$0.60
METAL	\$153.74	\$164.98	\$146.66	\$141.95	\$151.83	2.00%	\$3.03	4.56%	\$6.93
Mixed Plastic	\$40.26	\$160.87	\$134.72	\$201.58	\$134.36	1.15%	\$1.55	2.70%	\$3.62
Newspaper	\$106.62	\$102.29	\$104.68	\$103.29	\$104.22	29.37%	\$30.61	19.83%	\$20.67
PET	\$1,545.39	\$1,588.17	\$1,528.83	\$1,544.85	\$1,551.81	3.44%	\$53.41	1.89%	\$29.36
TIN	\$143.89	\$151.89	\$152.99	\$150.20	\$149.74	1.36%	\$2.04	3.54%	\$5.29
Residue					(\$63.25)	8.84%	(\$5.59)	7.40%	(\$4.68)
Single Stream Value per Ton						\$175.29		\$152.69	

# COMMERCIAL COMPOSITION

# ATTACHMENT 2

Commercial		2005	2006	2007	2008	2009	2010	2011	2012	12/17/2013	12/5/2014	12/15/2015	12/20/2016	12/14/2017	12/11/2018	12/11/2019	AVG.	3 year ave 2017-2019 (2020 reporting)
Year																		
Composition (% by weight)																		
Paper	Newspaper (including mixed paper and magazines)	1.00	0.89	0.95	1.25	6.24	2.09	6.84	22.10	19.50	26.60	11.56	6.05	28.12	6.84	22.77	10.85	19.24%
	Corrugated cardboard (including chipboard and kraft bags)	60.00	62.31	61.35	63.00	40.31	38.13	41.26	28.80	28.20	32.09	32.22	43.32	30.87	35.19	37.90	42.33	34.65%
	Paper cartons (#s prior to 2016 are for white office paper)	5.00	4.85	4.81	2.17	1.98	0.60	1.68	1.06	0.24	0.23	0.18	0.31	0.63	0.65	0.48	1.66	0.59%
Plastic	PET #1 bottles	1.14	1.36	1.41	1.46	1.29	1.30	1.35	1.90	1.80	1.26	2.06	2.54	2.11	2.61	0.96	1.64	1.89%
	HDPE #2 bottles natural	0.71	0.75	0.76	0.15	0.84	0.81	0.78	1.68	1.40	1.21	1.02	2.54	0.85	2.28	0.16	1.06	1.10%
	HDPE #2 bottles colored	1.14	1.19	1.11	0.97	1.87	2.50	1.62	1.84	1.75	0.96	1.38	0.63	1.06	1.95	0.80	1.38	1.27%
	Film plastic	0.85	0.82	0.76	0.87	1.20	1.22	0.96	1.12	0.85	1.14	1.15	0.63	2.54	3.91	6.37	1.63	4.27%
	Mixed rigid plastic	0.57	0.89	0.81	0.82	1.09	1.70	1.03	0.67	1.00	0.81	1.07	4.77	2.75	3.58	1.75	1.55	2.69%
Metal	Aluminum cans	0.14	0.15	0.18	0.43	0.55	0.65	0.46	0.56	0.58	0.26	0.56	0.63	0.21	0.33	0.16	0.39	0.23%
	Steel/tin cans	3.46	3.02	3.23	3.76	5.08	3.20	5.93	2.68	2.70	1.11	2.01	2.86	4.44	5.21	0.96	3.31	3.54%
	Scrap metal	0.99	0.86	0.67	0.24	0.76	0.90	0.86	2.23	1.58	1.35	1.72	0.95	11.42	1.95	0.32	1.79	4.56%
Glass	Mixed glass	20.00	20.26	21.03	20.12	33.57	37.80	32.56	25.65	30.90	23.50	35.56	33.12	8.46	25.74	21.50	25.98	18.56%
Residue		5.00	2.65	2.93	4.76	5.22	9.10	4.67	9.71	9.50	9.49	9.51	1.65	6.55	9.75	5.89	6.43	7.40%
Total		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	

# RESIDENTIAL COMPOSITION

# ATTACHMENT 2

Residential		12/15/2005	12/14/2006	12/21/2007	3/16/2009	12/22/2009	12/7/2010	12/19/2011	12/13/2012	12/23/2013	12/3/2014	12/15/2015	12/20/2016	12/14/2017	12/11/2018	12/11/2019	AVG.	3 year ave 2017-2019 (2020 reporting)
Composition (% by weight)																		
Paper	Newspaper (including mixed paper and magazines)	51.60	43.05	45.19	41.03	38.51	40.80	36.59	30.70	31.42	23.71	24.56	23.31	32.87	25.54	28.11	34.47	28.84% *
	Corrugated cardboard (including chipboard and kraft bags)	14.27	16.86	16.55	17.27	20.68	17.13	22.53	21.60	22.18	34.15	32.23	34.24	21.00	20.68	29.67	22.74	23.78%
	Paper cartons (#s prior to 2016 are for white office paper)	0.28	0.59	0.11	0.50	0.49	0.47	0.34	0.50	0.07	0.26	0.22	0.72	0.53	0.82	0.22	0.41	0.52% *
Plastic	PET #1 bottles	1.69	1.60	2.35	2.50	2.21	1.97	2.12	2.30	2.77	1.72	2.23	3.91	3.61	4.72	2.00	2.51	3.44%
	HDPE #2 bottles natural	0.56	1.20	0.78	0.71	0.79	0.77	0.75	3.00	0.74	0.56	0.68	0.66	0.42	1.03	0.33	0.87	0.59%
	HDPE #2 bottles colored	0.65	0.77	0.67	1.20	1.21	1.05	1.12	1.80	1.48	1.07	1.23	1.06	1.70	1.03	1.78	1.19	1.50%
	Film plastic	0.48	0.63	0.56	0.89	0.61	0.67	0.75	1.80	1.30	0.86	1.32	1.06	2.23	2.03	6.89	1.47	3.71%
	Mixed rigid plastic	0.16	0.37	0.67	1.03	1.24	0.64	1.23	0.70	1.48	0.53	1.30	0.60	0.85	2.05	0.56	0.89	1.15%
Metal	Aluminum cans	0.48	0.87	0.78	1.01	0.86	0.75	0.76	0.90	0.74	0.52	0.90	0.60	0.64	0.41	0.56	0.72	0.53%
	Steel/tin cans	1.69	1.74	1.57	1.89	1.93	1.83	1.98	2.20	1.52	1.80	2.02	1.59	1.59	2.05	0.44	1.72	1.36%
	Scrap metal	1.37	1.51	0.89	1.48	1.47	1.45	1.56	2.20	1.84	3.02	2.75	2.91	0.11	1.44	4.44	1.90	2.00%
Glass	Mixed glass	17.74	20.06	21.71	21.45	20.22	22.81	21.70	22.40	26.51	24.10	21.33	22.85	27.25	28.33	15.56	22.27	23.71%
Residue		9.03	10.75	8.17	9.04	9.78	9.66	8.57	9.90	7.95	7.69	9.23	6.49	7.21	9.87	9.44	8.85	8.84%
Total		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	

\* Newspaper and Paper cartons combined

## CY2019 OVER BASELINE

## ATTACHMENT 2

## EXPANSION LEVEL 1

AREA	BASELINE	EXPANSION LEVEL 1 MAXIMUM	TONS PROCESSED	TONS OVER BASELINE	TONS Within Expansion Level 1	UNIT COST	TOTAL PAYMENT FOR EXPANSION LEVEL 1
Composting Area	40,670	51,215	97,013	56,343	10,545	27.93	\$ 294,564.75
Clean MRF	19,290	27,720	51,291	32,001	8,430	79.83	\$ 672,949.82
Wood Processing	3,970	5,760	8,414	4,444	1,790	23.96	\$ 42,888.11
Source Separated C&D Processing	16,620	19,493	18,131	1,511	1,511	18.64	28,166.82
<b>TOTALS</b>	<b>80,550</b>	<b>104,188</b>	<b>174,848</b>	<b>94,298</b>	<b>22,276</b>		<b>\$ 1,038,569.50</b>
<b>TONS IN EXPANSION LEVEL 1</b>					<b>22,276</b>		

## EXPANSION LEVEL 2

AREA	EXPANSION LEVEL 1 MAXIMUM	TONS PROCESSED	TONS OVER EXPANSION LEVEL 1 MAXIMUM	UNIT COST	TOTAL PAYMENT FOR EXPANSION CAPACITY LEVEL 2
Composting Area	51,215	97,013	45,798	30.59	\$ 1,400,811.72
Clean MRF	27,720	51,291	23,571	82.48	\$ 1,944,176.97
Wood Processing	5,760	8,414	2,654	26.60	\$ 70,595.03
Source Separated C&D Processing	19,493	18,131	#N/A	21.29	N/A
<b>TOTALS</b>	<b>104,188</b>	<b>174,848</b>	<b>#N/A</b>		<b>\$ 3,415,583.72</b>
<b>TONS IN EXPANSION LEVEL 2</b>			<b>72,023</b>		

<b>TOTAL OB PAYMENT DUE</b>	<b>\$ 4,454,153.22</b>
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## EXPANSION LEVEL 1

AREA	BASELINE	EXPANSION LEVEL 1 MAXIMUM	TONS PROCESSED	TONS OVER BASELINE	TONS Within Expansion Level 1	UNIT COST	TOTAL PAYMENT FOR EXPANSION LEVEL 1
Composting Area	40,670	51,215	95,376	54,706	10,545	27.76	\$ 292,759.78
Clean MRF	19,290	27,720	44,604	25,314	8,430	79.34	\$ 668,826.25
Wood Processing	3,970	5,760	7,861	3,891	1,790	23.81	\$ 42,625.31
Source Separated C&D Processing	16,620	19,493	17,011	391	391	18.53	7,244.02
<b>TOTALS</b>	<b>80,550</b>	<b>104,188</b>	<b>164,851</b>	<b>84,301</b>	<b>21,156</b>		<b>\$ 1,011,455.36</b>
<b>TONS IN EXPANSION LEVEL 1</b>					<b>21,156</b>		

## EXPANSION LEVEL 2

AREA	EXPANSION LEVEL 1 MAXIMUM	TONS PROCESSED	TONS OVER EXPANSION LEVEL 1 MAXIMUM	UNIT COST	TOTAL PAYMENT FOR EXPANSION CAPACITY LEVEL 2
Composting Area	51,215	95,376	44,161	30.40	\$ 1,342,462.14
Clean MRF	27,720	44,604	16,884	81.98	\$ 1,384,057.46
Wood Processing	5,760	7,861	2,101	26.44	\$ 55,552.57
Source Separated C&D Processing	19,493	17,011	#N/A	21.16	N/A
<b>TOTALS</b>	<b>104,188</b>	<b>164,851</b>	<b>#N/A</b>		<b>\$ 2,782,072.18</b>
<b>TONS IN EXPANSION LEVEL 2</b>			<b>63,145</b>		

<b>TOTAL OB PAYMENT DUE</b>	<b>\$ 3,793,527.54</b>
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## CY2017 OVER BASELINE

## ATTACHMENT 2

## EXPANSION LEVEL 1

AREA	BASELINE	EXPANSION LEVEL 1 MAXIMUM	TONS PROCESSED	TONS OVER BASELINE	TONS Within Expansion Level 1	UNIT COST	TOTAL PAYMENT FOR EXPANSION LEVEL 1
Composting Area	40,670	51,215	92,235	51,565	10,545	26.85	\$ 283,133.25
Clean MRF	19,290	27,720	36,421	17,131	8,430	76.73	\$ 646,833.90
Wood Processing	3,970	5,760	6,228	2,258	1,790	23.03	\$ 41,223.70
Source Separated C&D Processing	16,620	19,493	15,675	(945)	#N/A	17.92	#N/A
<b>TOTALS</b>	<b>80,550</b>	<b>104,188</b>	<b>150,558</b>	<b>70,008</b>	<b>23,638</b>		\$ 971,190.85
<b>TONS IN EXPANSION LEVEL 1</b>					<b>23,638</b>		

## EXPANSION LEVEL 2

AREA	EXPANSION LEVEL 1 MAXIMUM	TONS PROCESSED	TONS OVER EXPANSION LEVEL 1 MAXIMUM	UNIT COST	TOTAL PAYMENT FOR EXPANSION CAPACITY LEVEL 2
Composting Area	51,215	92,235	41,020	29.40	\$ 1,205,976.83
Clean MRF	27,720	36,421	8,701	79.28	\$ 689,816.07
Wood Processing	5,760	6,228	468	25.57	\$ 11,960.37
Source Separated C&D Processing	19,493	15,675	#N/A	20.46	N/A
<b>TOTALS</b>	<b>104,188</b>	<b>150,558</b>	<b>#N/A</b>		\$ 1,907,753.27
<b>TONS IN EXPANSION LEVEL 2</b>			<b>50,188</b>		

<b>TOTAL OB PAYMENT DUE</b>	<b>\$ 2,878,944.12</b>
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## CY2016 OVER BASELINE

## ATTACHMENT 2

Were Expansion Level 1 Criteria Met? (Yes=1, No=0)  
 Were ExpansionLevel 2 Criteria Met? (Yes=1, No=0)  
 Were Maximum Processing Capacity Criteria Met? (Yes=1, No=0)

1  
 1  
 0

## EXPANSION LEVEL 1

AREA	BASELINE	EXPANSION LEVEL 1 MAXIMUM	TONS PROCESSED	TONS OVER BASELINE	TONS W/IN EXPANSION LEVEL 1 RANGE	POSITIVE TONS W/In EXPANSION LEVEL 1 RANGE	UNIT COST	WT AVG	WEIGHTED DOLLAR VALUE	TOTAL PAYMENT FOR EXPANSION LEVEL 1
Composting Area	40,670	51,215	82,411	41,741	10,545	10,545	23.86	51.31%	\$12.24	
Clean MRF	19,290	27,720	35,790	16,500	8,430	8,430	71.59	41.02%	\$29.37	
Wood Processing	3,970	5,760	5,545	1,575	1,575	1,575	21.33	7.66%	\$1.63	
Source Separated C&D Processing	16,620	19,493	15,761	(859)	(859)	0	15.08	0.00%	\$0.00	
<b>TOTALS</b>	<b>80,550</b>	<b>104,188</b>	<b>139,506</b>	<b>58,956</b>	<b>19,691</b>	<b>20,550</b>		<b>100.00%</b>	<b>\$43.25</b>	
<b>TONS IN EXPANSION LEVEL 1</b>					<b>19,691</b>				<b>\$43.25</b>	<b>\$851,617.59</b>

## EXPANSION LEVEL 2

AREA	EXPANSION LEVEL 1 MAXIMUM	EXPANSION LEVEL 2 MAXIMUM	TONS PROCESSED	TONS OVER EXPANSION LEVEL 1	TONS W/IN EXPANSION LEVEL 2 RANGE	UNIT COST	WT AVG	WEIGHTED DOLLAR VALUE	TOTAL PAYMENT FOR EXPANSION CAPACITY LEVEL 2
Composting Area	51,215	61,760	82,411	31,196	31,196	22.63	79.45%	\$17.98	
Clean MRF	27,720	36,150	35,790	8,070	8,070	65.32	20.55%	\$13.42	
Wood Processing	5,760	7,550	5,545	-	-	18.84	0.00%	\$0.00	
Source Separated C&D Processing	19,493	25,883	15,761	-	-	13.82	0.00%	\$0.00	
<b>TOTALS</b>	<b>104,188</b>	<b>131,343</b>	<b>139,506</b>	<b>39,265</b>	<b>39,265</b>		<b>100.00%</b>	<b>\$31.40</b>	
<b>TONS IN EXPANSION LEVEL 2</b>					<b>39,265</b>			<b>\$31.40</b>	<b>\$1,232,933.87</b>

## MAXIMUM PROCESSING CAPACITY

AREA	EXPANSION LEVEL 2 MAXIMUM	MAXIMUM PROCESSING CAPACITY	TONS PROCESSED	TONS OVER EXPANSION LEVEL 1	TONS W/IN EXPANSION LEVEL 2 RANGE	UNIT COST	WT AVG	WEIGHTED DOLLAR VALUE	TOTAL PAYMENT FOR EXPANSION CAPACITY LEVEL 2
Composting Area	61,760	72,000	82,411	-	-	21.35	#DIV/0!	#DIV/0!	
Clean MRF	36,150	46,800	35,790	-	-	55.27	#DIV/0!	#DIV/0!	
Wood Processing	7,550	15,000	5,545	-	-	11.31	#DIV/0!	#DIV/0!	
Source Separated C&D Processing	25,883	36,483	15,761	-	-	11.31	#DIV/0!	#DIV/0!	
<b>TOTALS</b>	<b>131,343</b>	<b>170,283</b>	<b>139,506</b>	-	-		<b>#DIV/0!</b>	<b>#DIV/0!</b>	
<b>TONS IN EXPANSION LEVEL 2</b>					-		<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>

## PAYMENT SUMMARY

Expansion Level 1  
 Expansion Level 2  
 Maximum Processing Capacity  
 Total

\$851,617.59  
 \$1,232,933.87  
 \$0.00  
**\$2,084,551.46**

Were Expansion Level 1 Criteria Met? (Yes=1, No=0)  
 Were ExpansionLevel 2 Criteria Met? (Yes=1, No=0)  
 Were Maximum Processing Capacity Criteria Met? (Yes=1, No=0)

1  
 0  
 0

## EXPANSION LEVEL 1

AREA	BASELINE	EXPANSION LEVEL 1 MAXIMUM	TONS PROCESSED	TONS OVER BASELINE	TONS W/IN EXPANSION LEVEL 1 RANGE	POSITIVE TONS W/In EXPANSION LEVEL 1 RANGE	UNIT COST	WT AVG	WEIGHTED DOLLAR VALUE	TOTAL PAYMENT FOR EXPANSION LEVEL 1
Composting Area	40,670	51,215	50,982	10,312	10,312	10,312	23.48	36.69%	\$8.61	
Clean MRF	19,290	27,720	36,460	17,170	17,170	17,170	70.46	61.08%	\$43.04	
Wood Processing	3,970	5,760	4,597	627	627	627	20.99	2.23%	\$0.47	
Source Separated C&D Processing	16,620	19,493	15,440	(1,180)	(1,180)	0	14.84	0.00%	\$0.00	
<b>TOTALS</b>	<b>80,550</b>	<b>104,188</b>	<b>107,479</b>	<b>26,929</b>	<b>26,929</b>	<b>28,109</b>		<b>100.00%</b>	<b>\$52.12</b>	
<b>TONS IN EXPANSION LEVEL 1</b>					<b>26,929</b>				<b>\$52.12</b>	<b>\$1,403,530.10</b>

## EXPANSION LEVEL 2

AREA	EXPANSION LEVEL 1 MAXIMUM	EXPANSION LEVEL 2 MAXIMUM	TONS PROCESSED	TONS OVER EXPANSION LEVEL 1	TONS W/IN EXPANSION LEVEL 2 RANGE	UNIT COST	WT AVG	WEIGHTED DOLLAR VALUE	TOTAL PAYMENT FOR EXPANSION CAPACITY LEVEL 2
Composting Area	51,215	61,760	50,982	-	-	22.27	#DIV/0!	#DIV/0!	
Clean MRF	27,720	36,150	36,460	-	-	64.29	#DIV/0!	#DIV/0!	
Wood Processing	5,760	7,550	4,597	-	-	18.54	#DIV/0!	#DIV/0!	
Source Separated C&D Processing	19,493	25,883	15,440	-	-	13.60	#DIV/0!	#DIV/0!	
<b>TOTALS</b>	<b>104,188</b>	<b>131,343</b>	<b>107,479</b>	<b>-</b>	<b>-</b>		<b>#DIV/0!</b>	<b>#DIV/0!</b>	
<b>TONS IN EXPANSION LEVEL 2</b>					<b>-</b>			<b>#DIV/0!</b>	<b>#DIV/0!</b>

## MAXIMUM PROCESSING CAPACITY

AREA	EXPANSION LEVEL 2 MAXIMUM	MAXIMUM PROCESSING CAPACITY	TONS PROCESSED	TONS OVER EXPANSION LEVEL 1	TONS W/IN EXPANSION LEVEL 2 RANGE	UNIT COST	WT AVG	WEIGHTED DOLLAR VALUE	TOTAL PAYMENT FOR EXPANSION CAPACITY LEVEL 2
Composting Area	61,760	72,000	50,982	-	-	21.01	#DIV/0!	#DIV/0!	
Clean MRF	36,150	46,800	36,460	-	-	54.40	#DIV/0!	#DIV/0!	
Wood Processing	7,550	15,000	4,597	-	-	11.13	#DIV/0!	#DIV/0!	
Source Separated C&D Processing	25,883	36,483	15,440	-	-	11.13	#DIV/0!	#DIV/0!	
<b>TOTALS</b>	<b>131,343</b>	<b>170,283</b>	<b>107,479</b>	<b>-</b>	<b>-</b>		<b>#DIV/0!</b>	<b>#DIV/0!</b>	
<b>TONS IN EXPANSION LEVEL 2</b>					<b>-</b>			<b>#DIV/0!</b>	<b>#DIV/0!</b>

## PAYMENT SUMMARY

Expansion Level 1	\$1,403,530.10
Expansion Level 2	\$0.00
Maximum Processing Capacity	\$0.00
<b>Total</b>	<b>\$1,403,530.10</b>



## CY2014 OVER BASELINE

## ATTACHMENT 2

Were Expansion Level 1 Criteria Met? (Yes=1, No=0)  
 Were ExpansionLevel 2 Criteria Met? (Yes=1, No=0)  
 Were Maximum Processing Capacity Criteria Met? (Yes=1, No=0)

1  
0  
0

## EXPANSION LEVEL 1

AREA	BASELINE	EXPANSION LEVEL 1 MAXIMUM	TONS PROCESSED	TONS OVER BASELINE	TONS W/IN EXPANSION LEVEL 1 RANGE	POSITIVE TONS W/In EXPANSION LEVEL 1 RANGE	UNIT COST	WT AVG	WEIGHTED DOLLAR VALUE	TOTAL PAYMENT FOR EXPANSION LEVEL 1
Composting Area	40,670	51,215	46,554	5,884	5,884	5,884	23.02	25.83%	\$5.95	
Clean MRF	19,290	27,720	34,890	15,600	15,600	15,600	69.08	68.50%	\$47.32	
Wood Processing	3,970	5,760	5,261	1,291	1,291	1,291	20.58	5.67%	\$1.17	
Source Separated C&D Processing	16,620	19,493	16,360	(260)	(260)	0	14.55	0.00%	\$0.00	
<b>TOTALS</b>	<b>80,550</b>	<b>104,188</b>	<b>103,066</b>	<b>22,516</b>	<b>22,516</b>	<b>22,775</b>		<b>100.00%</b>	<b>\$54.43</b>	
<b>TONS IN EXPANSION LEVEL 1</b>					<b>22,516</b>				<b>\$54.43</b>	<b>\$1,225,520.84</b>

## EXPANSION LEVEL 2

AREA	EXPANSION LEVEL 1 MAXIMUM	EXPANSION LEVEL 2 MAXIMUM	TONS PROCESSED	TONS OVER EXPANSION LEVEL 1	TONS W/IN EXPANSION LEVEL 2 RANGE	UNIT COST	WT AVG	WEIGHTED DOLLAR VALUE	TOTAL PAYMENT FOR EXPANSION CAPACITY LEVEL 2
Composting Area	51,215	61,760	46,554	-	-	21.83	#DIV/0!	#DIV/0!	
Clean MRF	27,720	36,150	34,890	-	-	63.03	#DIV/0!	#DIV/0!	
Wood Processing	5,760	7,550	5,261	-	-	18.18	#DIV/0!	#DIV/0!	
Source Separated C&D Processing	19,493	25,883	16,360	-	-	13.33	#DIV/0!	#DIV/0!	
<b>TOTALS</b>	<b>104,188</b>	<b>131,343</b>	<b>103,066</b>	<b>-</b>	<b>-</b>		<b>#DIV/0!</b>	<b>#DIV/0!</b>	
<b>TONS IN EXPANSION LEVEL 2</b>					<b>-</b>			<b>#DIV/0!</b>	<b>#DIV/0!</b>

## MAXIMUM PROCESSING CAPACITY

AREA	EXPANSION LEVEL 2 MAXIMUM	MAXIMUM PROCESSIN G CAPACITY	TONS PROCESSED	TONS OVER EXPANSION LEVEL 1	TONS W/IN EXPANSION LEVEL 2 RANGE	UNIT COST	WT AVG	WEIGHTED DOLLAR VALUE	TOTAL PAYMENT FOR EXPANSION CAPACITY LEVEL 2
Composting Area	61,760	72,000	46,554	-	-	20.60	#DIV/0!	#DIV/0!	
Clean MRF	36,150	46,800	34,890	-	-	53.33	#DIV/0!	#DIV/0!	
Wood Processing	7,550	15,000	5,261	-	-	10.91	#DIV/0!	#DIV/0!	
Source Separated C&D Processing	25,883	36,483	16,360	-	-	10.91	#DIV/0!	#DIV/0!	
<b>TOTALS</b>	<b>131,343</b>	<b>170,283</b>	<b>103,066</b>	<b>-</b>	<b>-</b>		<b>#DIV/0!</b>	<b>#DIV/0!</b>	
<b>TONS IN EXPANSION LEVEL 2</b>					<b>-</b>			<b>#DIV/0!</b>	<b>#DIV/0!</b>

## PAYMENT SUMMARY

Expansion Level 1	\$1,225,520.84
Expansion Level 2	\$0.00
Maximum Processing Capacity	\$0.00
<b>Total</b>	<b>\$1,225,520.84</b>

# CY2019 SINGLE STREAM TONNAGE

# ATTACHMENT 2

## Third Party Single Stream Tonnage for Calendar Year 2019

Row Labels	Sum of TONS
<b>NORTHERN RECYCLING UPPER VALLEY</b>	<b>523</b>
SINGLE STREAM RECYCL	523
<b>NRWS - BERRYESSA GARBAGE</b>	<b>254</b>
SINGLE STREAM RECYCL	254
<b>NRWS - CAL WASTE</b>	<b>3,704</b>
SINGLE STREAM RECYCL	3,704
<b>NRWS - EL CERRITO</b>	<b>1,778</b>
SINGLE STREAM RECYCL	1,778
<b>NRWS - PARADISE</b>	<b>1,096</b>
SINGLE STREAM RECYCL	1,096
<b>NRWS - RECOLOGY AMERICAN CANYON</b>	<b>24</b>
SINGLE STREAM RECYCL	24
<b>NRWS - RECOLOGY VALLEJO</b>	<b>144</b>
SINGLE STREAM RECYCL	144
<b>NRWS - SONOMA GARBAGE</b>	<b>2,276</b>
SINGLE STREAM RECYCL	2,276
<b>RECOLOGY VACAVILLE</b>	<b>1,966</b>
SINGLE STREAM RECYCL	1,966
<b>SONOMA COUNTY RESOURCE RECOVERY</b>	<b>3,921</b>
SINGLE STREAM RECYCL	3,921
<b>SONOMA COUNTY RESOURE RECOVERY</b>	<b>6</b>
SINGLE STREAM RECYCL	6
<b>Grand Total</b>	<b>15,692</b>

## Napa County Single Stream Tonnage for Calendar Year 2019

Customer	Tons	Amount
<b>NCRWS COUNTY COMMERC</b>	<b>1,279</b>	<b>-\$17,804.09</b>
SINGLE STREAM RECYCL	1,279	-\$17,804.09
<b>NCRWS COUNTY RESIDEN</b>	<b>2,743</b>	<b>-\$36,556.81</b>
SINGLE STREAM RECYCL	2,743	-\$36,556.81
<b>NCRWS COUNTY ROLL OF</b>	<b>1,834</b>	<b>-\$39,700.84</b>
SINGLE STREAM RECYCL	1,834	-\$39,700.84
<b>Grand Total</b>	<b>5,856</b>	<b>-\$94,061.74</b>

21,548 Total CY2019 single stream tons (Napa County + 3rd party)

# CAPITAL & OPERATING PAYMENTS

# ATTACHMENT 2

Description of NRWS Capital Cost Source/Program	Calendar Year (CY) 2018	Monthly CY2018	July 2018 thru Dec 2018 (Capital Costs Only)	Calendar Year (CY) 2019	Monthly CY2019	Jan 2019 thru June 2019 (Capital Costs Only)	Total City FY19 payments to NRWS (Capital Costs Only)
Base Capital Expenses (GL 51004-58902)	\$ 1,375,367	\$ 114,614	\$ 687,684	\$ 1,687,341	\$ 140,612	\$ 843,671	\$ 1,531,354
Food Scraps Collection Route Capital - Costs Only (GL 51004-58914)	\$ 51,465	\$ 4,289	\$ 25,732	\$ 51,465	\$ 4,289	\$ 25,732	\$ 51,465
MRF Upgrades - Capital Cost Only (GL 51004-58902)	\$ 78,075	\$ 6,506	\$ 39,037	\$ 73,329	\$ 6,111	\$ 36,664	\$ 75,702
Totals	\$ 1,504,906	\$ 125,409	\$ 752,453	\$ 1,812,134	\$ 151,011	\$ 906,067	\$ 1,658,520

Total CY2020 Contractual Capital Costs to be paid to NRWS (includes Collection, Compost, Wood, C&D and Clean MRF)	CY2020 \$ 1,531,354	
Total CY2020 Contractual Capital Costs paid to NRWS (Compost, Wood, C&D & Clean MRF; no collection capital costs included)	\$ 566,889.02	Note: Derived from Attachment T-1 of NRWS Compensation Schedule; Processing Capital Cost Only
Clean MRF Only Capital Costs (from Baseline Capital Costs)	\$ 283,444.51	
Single Stream Tons (Based on CY2019; projected for CY2020)	20000 tons of Single Stream; projected for CY2020	

	Projected CY2020 Capital Cost/Ton of Single Stream
\$ 14.17	