

Town of Friday Harbor Water, Wastewater, and Solid Waste Utilities Summary Reports

www.fridayharbor.org

Period ending: February 2018

Data provided by
Wayne Haefele, PE, Public Works Director
Water Utility, Mike Deegan, Water System Mgr.
Frank Byrne, Water Treatment Plant Operator
Wastewater Utility, Don Reitan, Leadman
Solid Waste Utility, Dave Smith, Leadman

Analysis & Reports prepared by
Steven Dubail, System Administrator

Utilization of Sustainable Annual Water System Capacity

Period start: Mar-17

Period end: Feb-18

Sustainable Annual Yield (TFH
Comprehensive Water System Plan
Update, June, 2013, page 3-6)

205 million gallons

Annual use - 12 month period
percent of Sustainable Annual Yield

114.9 million gallons
56.0%

exceeds Sustainable Yield?

No

TOWN OF FRIDAY HARBOR

Water Consumption & Production

Revised meter loss reporting begin 07/09 (per Robert Krebs, Evergreen Rural Water Assoc.)

Period	USE (consumption)	Cumulative Use YTD	Flow (production)	Unaccounted over / (under)	Cumulative Flow YTD	Average Daily Flow	
2016							
<i>gallons</i>	Jan-16	6,904,531	6,697,000	207,531		216,032	
	Feb-16	6,043,999	12,948,530	-177,001	12,918,000	222,179	
	Mar-16	5,087,613	18,036,143	-972,387	18,978,000	195,484	
	Apr-16	7,613,121	25,649,264	-6,879	26,598,000	254,000	
	May-16	8,678,417	34,327,681	-317,583	35,594,000	290,194	
	Jun-16	10,308,890	44,636,572	-414,110	46,317,000	357,433	
	Jul-16	12,724,140	57,360,712	-241,860	59,283,000	418,258	YTD
	Aug-16	14,723,626	72,084,337	-1,091,374	75,098,000	510,161	Unaccounted
	Sep-16	12,583,251	84,667,588	-12,749	87,694,000	419,867	as % of Flow
Average	Oct-16	8,473,803	93,141,391	421,803	95,746,000	259,742	0.38%
Monthly Use	Nov-16	6,714,525	99,855,916	1,656,525	100,804,000	168,600	
8,877,761	Dec-16	6,677,221	106,533,136	1,356,221	106,125,000	171,645	408,136
YEAR TOTAL:	12	107,043,584	Cumulative Metered/Other Use YTD	106,125,000	408,136 Unaccounted	Cumulative 3% meter loss	290,300 2,915,731
2017							
<i>gallons</i>	Jan-17	8,403,985	8,484,000	-80,015		273,677	
	Feb-17	6,321,628	14,725,613	-770,372	15,576,000	253,286	
	Mar-17	6,110,787	20,836,401	-688,213	22,375,000	219,323	
	Apr-17	8,344,725	29,181,126	-1,394,275	32,114,000	324,633	
	May-17	7,085,245	36,266,371	672,245	38,527,000	206,871	
	Jun-17	10,048,456	46,314,827	-256,544	48,832,000	343,500	
	Jul-17	14,681,313	60,996,140	-353,687	63,867,000	485,000	YTD
	Aug-17	13,661,250	74,657,390	-1,147,750	78,676,000	477,710	Unaccounted
	Sep-17	14,093,015	88,750,405	-874,985	93,644,000	498,933	as % of Flow
Average	Oct-17	7,823,149	96,573,554	-216,851	101,684,000	259,355	5.10%
Monthly Use	Nov-17	6,680,806	103,254,360	-592,194	108,957,000	242,433	
9,176,124	Dec-17	6,859,133	110,113,492	-211,867	116,028,000	228,097	-5,914,508
YEAR TOTAL:	12	110,113,492	Cumulative Metered/Other Use YTD	116,028,000	-5,914,508 Unaccounted	Cumulative 3% meter loss	317,735 2,989,222
2018							
<i>gallons</i>	Jan-18	6,473,834	7,347,000	-873,166		237,000	
	Feb-18	6,318,823	12,792,658	-735,177	14,401,000	251,929	
	Mar-18	0	12,792,658	0	14,401,000	0	
	Apr-18	0	12,792,658	0	14,401,000	0	
	May-18	0	12,792,658	0	14,401,000	0	
	Jun-18	0	12,792,658	0	14,401,000	0	
	Jul-18	0	12,792,658	0	14,401,000	0	YTD
	Aug-18	0	12,792,658	0	14,401,000	0	Unaccounted
	Sep-18	0	12,792,658	0	14,401,000	0	as % of Flow
Average	Oct-18	0	12,792,658	0	14,401,000	0	11.17%
Monthly Use	Nov-18	0	12,792,658	0	14,401,000	0	
6,396,329	Dec-18	0	12,792,658	0	14,401,000	0	-1,608,342
YEAR TOTAL:	2	12,792,658	Cumulative Metered/Other Use YTD	14,401,000	-1,608,342 Unaccounted	Cumulative 3% meter loss	244,464 358,986

3 YEAR	Use	Flow	Daily Flow	3 Year Loss
AVERAGES:	4,609,086 :gal/month	9,098,231 :gal/month	187,400	as % of Flow 3.01%

source: Monthly Water Treatment Plant Report & utility.mdb's 3 yr cumulative flow 236,554,000
 3 yr unaccounted -7,114,714

TOWN OF FRIDAY HARBOR

WATER CONSUMPTION (Use) BY CUSTOMER CLASS

source: utilITry08 & 13.mdb

2017

CLASS:	COM	IND	MFR	P.A	SFR	Special	other uses	TOTAL	% of Use	Avg. Daily Use
JAN	1,522,040	64,130	1,784,220	551,340	2,709,390	26,341	1,746,524	8,403,985	7.6%	271,096
FEB	1,365,694	62,440	1,609,780	543,810	2,304,698	11,761	423,445	6,321,628	5.7%	217,987
MAR	1,260,276	59,000	1,487,140	553,910	2,123,792	16,589	610,080	6,110,787	5.5%	197,122
APR	1,822,081	82,410	1,735,510	818,880	2,721,771	24,848	1,139,225	8,344,725	7.6%	278,158
MAY	1,674,249	82,550	1,463,560	889,740	2,385,893	12,380	576,873	7,085,245	6.4%	228,556
JUN	2,446,960	164,880	1,824,870	1,242,690	3,826,796	112,208	430,052	10,048,456	9.1%	334,949
JUL	3,334,220	268,660	2,381,990	2,639,580	5,193,251	326,292	537,320	14,681,313	13.3%	473,591
AUG	3,357,600	237,730	2,092,660	2,205,820	4,655,884	342,879	768,677	13,661,250	12.4%	440,685
SEP	3,407,091	310,670	2,344,390	2,203,930	4,918,473	250,810	657,651	14,093,015	12.8%	469,767
OCT	1,865,743	210,540	1,634,240	925,160	2,679,317	17,669	490,480	7,823,149	7.1%	252,360
NOV	1,464,721	103,880	1,561,380	712,520	2,376,936	15,326	446,043	6,680,806	6.1%	222,694
DEC	1,371,120	107,260	1,598,730	883,340	2,437,286	26,115	435,282	6,859,133	6.2%	221,262
TOTAL	24,891,795	1,754,150	21,518,470	14,170,720	38,333,487	1,183,218	8,261,652	110,113,492	100.0%	300,857
AVERAGE	2,074,316	146,179	1,793,206	1,180,893	3,194,457	98,602	688,471	9,176,124	110,113,492 :USE for Year	:LOSS for Year

% of USE
% of FLOW

:FLOW (Use+Loss)
Loss as % of Flow

2018

CLASS:	COM	IND	MFR	P.A	SFR	Special	other uses	TOTAL	% of Use	Avg. Daily Use
JAN	1,312,140	61,070	1,614,762	626,860	2,424,228	18,020	416,754	6,473,834	50.6%	208,833
FEB	1,236,460	75,520	1,683,748	602,090	2,294,360	16,927	409,718	6,318,823	49.4%	217,890
MAR								0	0.0%	0
APR								0	0.0%	0
MAY								0	0.0%	0
JUN								0	0.0%	0
JUL								0	0.0%	0
AUG								0	0.0%	0
SEP								0	0.0%	0
OCT								0	0.0%	0
NOV								0	0.0%	0
DEC								0	0.0%	0
TOTAL	2,548,600	136,590	3,298,510	1,228,950	4,718,588	34,947	826,473	12,792,658	100.0%	213,211
AVERAGE	1,274,300	68,295	1,649,255	614,475	2,359,294	17,474	68,873	1,066,055	-1,608,342 :USE for Year	:LOSS for Year

% of USE
% of FLOW

:FLOW (Use+Loss)
Loss as % of Flow

Net Water Production - 2018

amounts in gallons

	Jan	Feb	Mar	Apr	May	Jun
Gross Production for billing period from WTP Chemical Weights & Finish Flow to Town Report	7,347,000	7,054,000	0	0	0	0
3% meter loss	181,712	177,273	0	0	0	0
Flushing	230,042	227,445				
SJC#3 FD use	5,000	5,000				
Leaks						
notes						
other non-metered use						
notes						
Additional water in storage						
notes						
Total other uses	-416,754	-409,718	0	0	0	0
Net production	6,930,246	6,644,282				

	Jul	Aug	Sep	Oct	Nov	Dec
Gross Production for billing period from WTP Chemical Weights & Finish Flow to Town Report	0	0	0	0	0	0
3% meter loss	0	0	0	0	0	0
Flushing						
SJC#3 FD use						
Leaks						
notes						
other non-metered use						
notes						
Total other uses	0	0	0	0	0	0
Net production	0	0	0	0	0	0

Water - use MTD

sourceDate
2 / 2018

Spe=Special, Sfr=Single Family Residential, P.A= Public Authority, Mfr=Multi-family, Ind=Industrial, Com=Commerc

Water Class	Accounts	Gallons
Spe	4	16,927
Sfr	976	2,294,360
PA	75	602,090
Mfr	119	1,683,748
Ind	16	75,520
Com	217	1,236,460
TOTAL	1,407	5,909,105

Water - use MTD by LocationsourceDate

2 / 2018

Spe=Special, Sfr=Single Family Residential, P.A= Public Authority, Mfr=Multi-family, Ind=Industrial, Com=Commerc

Water Class	Accounts	Gallons
Location: IN		
Spe	3	9,317
Sfr	623	1,576,180
PA	69	429,130
Mfr	114	1,554,678
Ind	13	66,320
Com	213	1,183,830
	<hr/> 1,035	<hr/> 4,819,455
Location: Out		
Spe	1	7,610
Sfr	353	718,180
PA	6	172,960
Mfr	5	129,070
Ind	3	9,200
Com	4	52,630
	<hr/> 372	<hr/> 1,089,650
TOTAL	1,407	5,909,105

Finish Water Flow to Town
source: Water Treatment Facility Monthly Report

Revised reporting period: per K. Anderson 03/06/17
to reflect meter reading dates (?).
Dates will change monthly.

31 :count of days in reporting period.

Jan-18		Feb-18	
day	flow (total flow)	day	flow (total flow)
15	180	1	205
16	198	2	213
17	293	3	108
18	195	4	341
19	221	5	201
20	220	6	249
21	258	7	255
22	191	8	203
23	227	9	244
24	234	10	234
25	213	11	242
26	199	12	230
27	262	13	218
28	251	14	252
29	237		
30	257		
31	223		

days 17	days 14
3859	3195
TOTAL DAYS	31
TOTAL FLOW	7054
	1,000's gallons

Trout Lake Reservoir Level

Months with positive levels may reflect that a removable 7.25 inch riser has been added to the top of the original spillway.

end of	Inches above/(below) original spillway		end of	Inches above/(below) original spillway		end of	Inches above/(below) original spillway
Jan-12	-1.75		Jan-15	0.00		Jan-18	0.00
Feb-12	0.00		Feb-15	0.00		Feb-18	0.00
Mar-12	0.00		Mar-15	0.00		Mar-18	
Apr-12	8.00		Apr-15	6.50		Apr-18	
May-12	0.00		May-15	0.00		May-18	
Jun-12	7.00		Jun-15	-13.00		Jun-18	
Jul-12	-19.00		Jul-15	-29.50		Jul-18	
Aug-12	-32.75		Aug-15	-42.25		Aug-18	
Sep-12	-45.00		Sep-15	-49.50		Sep-18	
Oct-12	-48.00		Oct-15	-54.50		Oct-18	
Nov-12	-24.25		Nov-15	-17.25		Nov-18	
Dec-12	0.00		Dec-15	0.00		Dec-18	
Jan-13	0.00		Jan-16	0.00		Jan-19	
Feb-13	0.00		Feb-16	0.00		Feb-19	
Mar-13	0.00		Mar-16	0.00		Mar-19	
Apr-13	8.50		Apr-16	6.00		Apr-19	
May-13	3.75		May-16	-2.50		May-19	
Jun-13	-3.75		Jun-16	-11.00		Jun-19	
Jul-13	-21.00		Jul-16	-21.00		Jul-19	
Aug-13	-34.25		Aug-16	-36.50		Aug-19	
Sep-13	-39.25		Sep-16	-49.50		Sep-19	
Oct-13	-43.50		Oct-16	-51.00		Oct-19	
Nov-13	-44.75		Nov-16	-45.50		Nov-19	
Dec-13	-26.00		Dec-16	-10.35		Dec-19	
Jan-14	0.00		Jan-17	0.00		Jan-20	
Feb-14	0.00		Feb-17	0.00		Feb-20	
Mar-14	0.00		Mar-17	2.75		Mar-20	
Apr-14	8.25		Apr-17	9.00		Apr-20	
May-14	5.00		May-17	4.75		May-20	
Jun-14	7.00		Jun-17	-4.00		Jun-20	
Jul-14	-20.50		Jul-17	-19.00		Jul-20	
Aug-14	-30.25		Aug-17	-32.00		Aug-20	
Sep-14	-42.75		Sep-17	-43.00		Sep-20	
Oct-14	-45.25		Oct-17	-50.50		Oct-20	
Nov-14	-46.50		Nov-17	-48.00		Nov-20	
Dec-14	0.00		Dec-17	-11.50		Dec-20	

Rainfall - Trout Lake Water Treatment Facility

source: Water Treatment Plant Weather Reports

all figures in inches

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	average (2005-14)
JAN	5.49	6.87	6.51	2.34	3.82	4.73	5.90	3.46	4.14	2.86	4.61
FEB	1.01	1.61	2.83	1.78	1.50	1.24	2.74	3.38	1.32	4.22	2.16
MAR	2.33	0.91	3.70	1.99	2.05	3.30	3.37	3.09	3.63	3.88	2.83
APR	1.37	2.23	1.49	1.32	2.07	1.47	2.96	1.91	2.70	1.94	1.95
MAY	1.08	1.24	0.78	1.26	1.69	2.09	3.07	1.09	2.20	1.05	1.56
JUN	1.63	0.56	1.03	1.16	0.35	1.10	0.68	2.60	0.83	0.52	1.05
JUL	0.70	0.26	1.56	0.21	0.45	0.11	0.84	1.04	0.00	0.36	0.55
AUG	1.60	0.03	0.64	1.88	0.81	0.72	0.29	0.00	0.95	0.49	0.74
SEP	0.94	1.15	0.54	0.84	1.58	4.35	0.72	0.12	5.08	1.34	1.67
OCT	3.50	1.89	2.12	1.83	5.24	1.38	2.29	6.40	1.42	4.00	3.01
NOV	4.28	10.43	2.32	5.15	6.76	2.94	4.50	3.32	2.49	4.00	4.62
DEC	2.89	3.74	4.59	3.70	1.80	6.55	1.88	4.79	2.28	3.37	3.56
Total	26.82	30.92	28.11	23.46	28.12	29.98	29.24	31.20	27.04	28.03	28.29

Cumulative thru

FEB	6.50	8.48	9.34	4.12	5.32	5.97	8.64	6.84	5.46	7.08
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all figures in inches

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
JAN	3.97	2.17	1.60	5.10						
FEB	2.95	4.83	2.99	3.80						
MAR	3.62	2.88	3.27							
APR	0.51	0.75	2.20							
MAY	0.30	0.48	1.61							
JUN	0.14	1.22	0.75							
JUL	0.36	0.32	0.15							
AUG	0.94	0.11	0.11							
SEP	1.28	1.40	0.71							
OCT	3.53	4.80	4.28							
NOV	6.19	3.47	4.32							
DEC	5.26	4.02	3.83							
Total	29.05	26.45	25.82	8.90	0.00	0.00	0.00	0.00	0.00	0.00

Cumulative thru

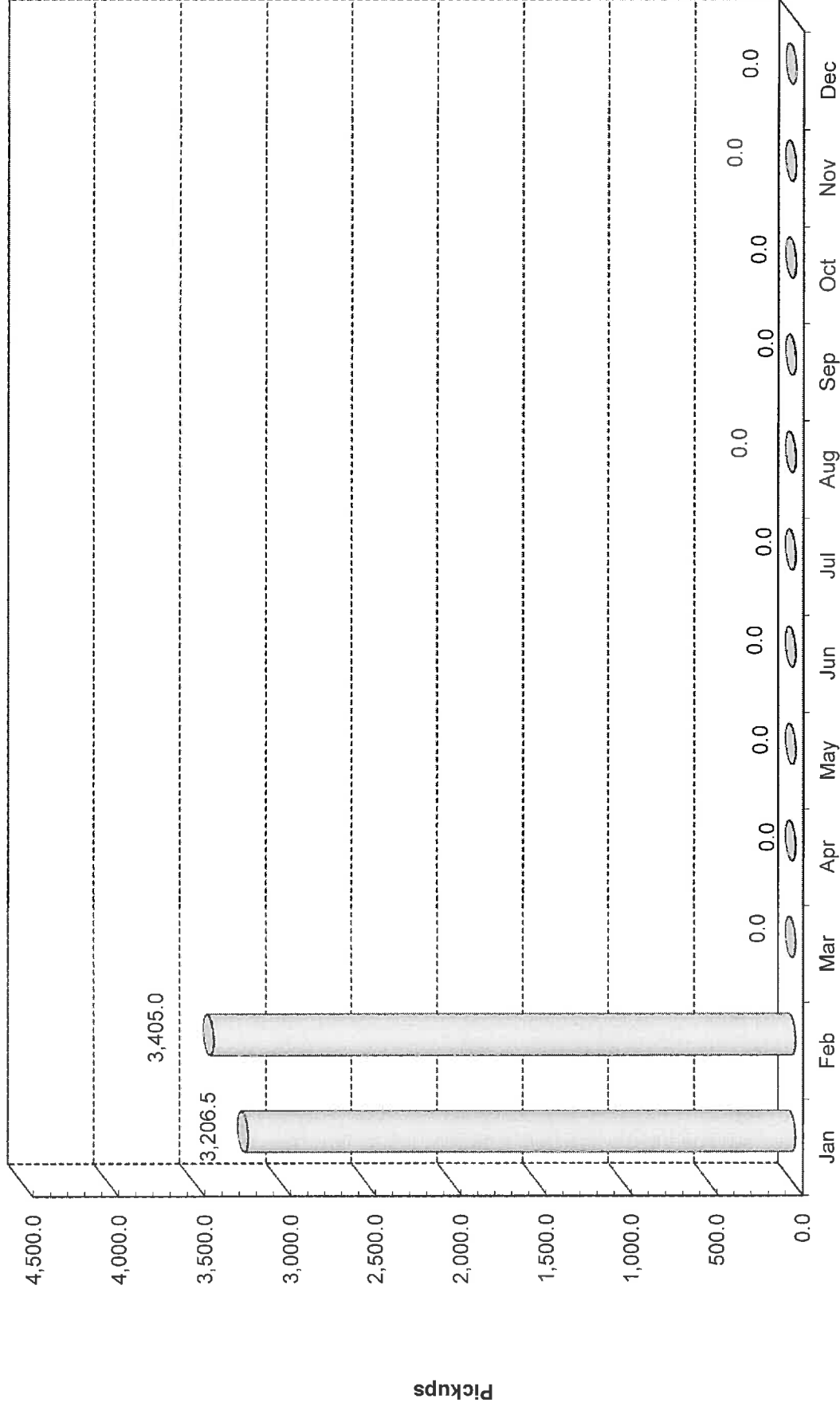
FEB	6.92	7.00	4.59	8.90	0.00	0.00	0.00	0.00	0.00	0.00
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NOTE: The Wastewater Treatment Concurrency Threshold report will be available following receipt of monthly results at the conclusion of the current testing cycle.

Water use MTD - accounts with sewersourceDate
2 / 2018

Sewer Class	Accounts	Gallons
Location: IN		
Mfr In/lo Strength	51	542,488
Com In/lo Strength	160	646,190
Dot In/lo Strength	3	26,830
Ind In/hi Strength	1	12,350
Ind In/lo Strength	10	50,800
Lmf In/lo Strength	1	2,570
Com In/hi Strength	42	515,300
Mfr In/lo Strength	57	567,850
Mhp In/lo Strength	2	398,000
PA In/hi Strength	3	47,940
PA In/lo Strength	43	323,120
Sfr IN Town	603	1,548,620
Low Rate / IN Town	6	9,620
	<hr/>	
	982	4,691,678
Location: Out		
UW Out/hi Strength	1	32,400
Mfr Out/lo Strength	1	5,000
Sfr Out of Town	4	8,070
	<hr/>	
	6	45,470
TOTAL	988	4,737,148

Refuse Pickups by Month - 2018



Refuse Pickups - 2018 YTD

Account Type	SFR	Refuse Only	P.A	MFR	IND	COM	Other	Total
Jan	1,433.0	151.5	145.5	435.5	24.5	1,016.5		3,206.5
Feb	1,347.0	149.0	172.5	385.5	18.0	1,333.0		3,405.0
Mar								0.0
Apr								0.0
May								0.0
Jun								0.0
Jul								0.0
Aug								0.0
Sep								0.0
Oct								0.0
Nov								0.0
Dec								0.0
YTD	2,780.0	300.5	318.0	821.0	42.5	2,349.5	0.0	6,611.5

Refuse - pickups by ClasssourceDate
2 / 2018

Location	Class	Pickups
IN	Sfr	1,347.0
	RefuseOnly	149.0
	PA	172.5
	Mfr	381.5
	Ind	18.0
	Com	1,333.0
		<hr/> 3,401.0
Out	Sfr	0.0
	Mfr	4.0
		<hr/> 4.0
TOTAL		3,405.0

Refuse - active accountssourceDate
2 / 2018

Location	Refuse Type	Accounts
IN		
	Small Dumpster	52
	PA	39
	Medium Dumpste	57
	Large Dumpster	69
	Compactors	4
	Cans Low Rate	6
	Cans	771
		<hr/>
		998
Out		
	Large Dumpster	1
	Cans	1
		<hr/>
		2
		<hr/>
	TOTAL	1,000

Recycle - pickups by ClasssourceDate
2 / 2018

Location	Class	Pickups
IN	Sfr	483
	RefuseOnly	15
	PA	0
	Mfr	32
	Ind	0
	Com	5
		<hr/> 535
Out	Sfr	0
	Mfr	0
		<hr/> 0
	TOTAL	535