

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

www.fridayharbor.org

Period ending: April 2018

Data provided by
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Wastewater Utility, Don Reitan, Leadman
Solid Waste Utility, Dave Smith, Leadman

Analysis & Reports prepared by
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Utilization of Sustainable Annual Water System Capacity

Period start: May-17

Period end: Apr-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

113.1 million gallons
55.2%

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 gallons	Jan-16	6,904,531	6,697,000	207,531		216,032		
	Feb-16	6,043,999	12,948,530	6,221,000	-177,001	12,918,000	222,179	
	Mar-16	5,087,613	18,036,143	6,060,000	-972,387	18,978,000	195,484	
	Apr-16	7,613,121	25,649,264	7,620,000	-6,879	26,598,000	254,000	
	May-16	8,678,417	34,327,681	8,996,000	-317,583	35,594,000	290,194	
	Jun-16	10,308,890	44,636,572	10,723,000	-414,110	46,317,000	357,433	
	Jul-16	12,724,140	57,360,712	12,966,000	-241,860	59,283,000	418,258	
	Aug-16	14,723,626	72,084,337	15,815,000	-1,091,374	75,098,000	510,161	
	Sep-16	12,583,251	84,667,588	12,596,000	-12,749	87,694,000	419,867	
	Average	Oct-16	8,473,803	93,141,391	8,052,000	421,803	95,746,000	259,742
	Monthly Use	Nov-16	6,714,525	99,855,916	5,058,000	1,656,525	100,804,000	168,600
	8,877,761	Dec-16	6,677,221	106,533,136	5,321,000	1,356,221	106,125,000	171,645
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 gallons	Jan-17	8,403,985	8,484,000	-80,015		273,677		
	Feb-17	6,321,628	14,725,613	7,092,000	-770,372	15,576,000	253,286	
	Mar-17	6,110,787	20,836,401	6,799,000	-688,213	22,375,000	219,323	
	Apr-17	8,344,725	29,181,126	9,739,000	-1,394,275	32,114,000	324,633	
	May-17	7,085,245	36,266,371	6,413,000	672,245	38,527,000	206,871	
	Jun-17	10,048,456	46,314,827	10,305,000	-256,544	48,832,000	343,500	
	Jul-17	14,681,313	60,996,140	15,035,000	-353,687	63,867,000	485,000	
	Aug-17	13,661,250	74,657,390	14,809,000	-1,147,750	78,676,000	477,710	
	Sep-17	14,093,015	88,750,405	14,968,000	-874,985	93,644,000	498,933	
	Average	Oct-17	7,823,149	96,573,554	8,040,000	-216,851	101,684,000	259,355
	Monthly Use	Nov-17	6,680,806	103,254,360	7,273,000	-592,194	108,957,000	242,433
	9,176,124	Dec-17	6,859,133	110,113,492	7,071,000	-211,867	116,028,000	228,097
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 gallons	Jan-18	6,473,834	7,347,000	-873,166		237,000		
	Feb-18	6,318,823	12,792,658	7,054,000	-735,177	14,401,000	251,929	
	Mar-18	5,860,732	18,653,389	6,566,000	-705,268	20,967,000	211,806	
	Apr-18	7,416,815	26,070,204	8,256,000	-839,185	29,223,000	275,200	
	May-18	0	26,070,204	0	0	29,223,000	0	
	Jun-18	0	26,070,204	0	0	29,223,000	0	
	Jul-18	0	26,070,204	0	0	29,223,000	0	
	Aug-18	0	26,070,204	0	0	29,223,000	0	
	Sep-18	0	26,070,204	0	0	29,223,000	0	
	Average	Oct-18	0	26,070,204	0	0	29,223,000	0
	Monthly Use	Nov-18	0	26,070,204	0	0	29,223,000	0
	6,517,551	Dec-18	0	26,070,204	0	0	29,223,000	0
YEAR TOTAL:	4	26,070,204	Cumulative Metered/Other Use YTD	29,223,000	-3,152,796 Unaccounted	Cumulative 3% meter loss	243,984 719,134	

3 YEAR AVERAGES:	Use 4,754,064 :gal/month	Flow 8,977,714 :gal/month	Daily Flow 187,240	3 Year Loss as % of Flow 3.44%
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source: Monthly Water Treatment Plant Report & utility.mdb's 3 yr cumulative flow 251,376,000
3 yr unaccounted -8,659,167

TOWN OF FRIDAY HARBOR

WATER CONSUMPTION (Use) BY CUSTOMER CLASS

source: utilTry08 & 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	271,096
FEB	1,365,694	62,440	1,609,780	543,810	2,304,698	11,761	423,445	6,321,628	217,987
MAR	1,260,276	59,000	1,487,140	553,910	2,123,792	16,589	610,080	6,110,787	197,122
APR	1,822,081	82,410	1,735,510	818,880	2,721,771	24,848	1,139,225	8,344,725	278,158
MAY	1,674,249	82,550	1,463,560	889,740	2,385,893	12,380	576,873	7,085,245	228,556
JUN	2,446,960	164,880	1,824,870	1,242,690	3,826,796	112,208	430,052	10,048,456	334,949
JUL	3,334,220	268,660	2,381,990	2,639,580	5,193,251	326,292	537,320	14,681,313	473,591
AUG	3,357,600	237,730	2,092,660	2,205,820	4,655,884	342,879	768,677	13,661,250	440,685
SEP	3,407,091	310,670	2,344,390	2,203,930	4,918,473	250,810	657,651	14,093,015	469,767
OCT	1,865,743	210,540	1,634,240	925,160	2,679,317	17,669	490,480	7,823,149	252,360
NOV	1,464,721	103,880	1,561,380	712,520	2,376,936	15,326	446,043	6,680,806	222,694
DEC	1,371,120	107,260	1,598,730	883,340	2,437,286	26,115	435,282	6,859,133	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	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

% of USE
% of FLOW

FLOW (User+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	208,833
FEB	1,236,460	75,520	1,683,748	602,090	2,294,360	16,927	409,718	6,318,823	217,890
MAR	1,154,050	65,030	1,497,650	428,330	2,161,960	28,836	524,876	5,860,732	189,056
APR	1,670,940	100,680	1,702,730	749,850	2,426,860	18,042	747,713	7,416,815	247,227
MAY							0	0	0
JUN							0	0	0
JUL							0	0	0
AUG							0	0	0
SEP							0	0	0
OCT							0	0	0
NOV							0	0	0
DEC							0	0	0
TOTAL	5,373,590	302,300	6,498,890	2,407,130	9,307,408	81,825	2,099,061	26,070,204	215,456
AVERAGE	1,343,398	75,575	1,624,723	601,783	2,326,852	20,456	174,922	2,172,517	-3,152,796

% of USE
% of FLOW

FLOW (User+Loss)
Loss as % of Flow

Water - use MTD

sourceDate
4 / 2018

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

Water Class	Accounts	Gallons
Spe	3	18,042
Sfr	976	2,426,860
PA	75	749,850
Mfr	119	1,702,730
Ind	16	100,680
Com	218	1,670,940
TOTAL	1,407	6,669,102

Water - use MTD by Location

sourceDate

4 / 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	18,042
Sfr	622	1,622,550
PA	69	502,730
Mfr	114	1,631,390
Ind	13	83,760
Com	214	1,585,160
	<hr/>	<hr/>
	1,035	5,443,632
Location: Out		
Sfr	354	804,310
PA	6	247,120
Mfr	5	71,340
Ind	3	16,920
Com	4	85,780
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	372	1,225,470
TOTAL	1,407	6,669,102

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	6,566,000	8,256,000	0	0
3% meter loss	181,712	177,273	160,076	200,073	0	0
Flushing	230,042	227,445	143,800	216,200		
SJC#3 FD use	5,000	5,000	5,000	5,000		
Leaks			216,000	247,840		
notes			University Road	1st St. N		
other non-metered use				78,600		
notes				Strider-Tucker Ave.		
Additional water in storage						
notes						
Total other uses	-416,754	-409,718	-524,876	-747,713	0	0
Net production	6,930,246	6,644,282	6,041,124	7,508,287	0	0

	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

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 (?).
 Start/End dates may change monthly.

32 :count of days in reporting period.

Mar-18		Apr-18	
day	flow (total flow)	day	flow (total flow)
15	212	1	336
16	221	2	228
17	224	3	335
18	257	4	234
19	203	5	341
20	241	6	316
21	242	7	312
22	253	8	302
23	236	9	288
24	269	10	291
25	251	11	217
26	223	12	237
27	264	13	229
28	227	14	244
29	253	15	242
30	266		
31	262		

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;">days</td><td style="text-align: center;">4104</td></tr> <tr><td style="text-align: center;">17</td><td style="text-align: center;">4104</td></tr> </table>	days	4104	17	4104	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;">days</td><td style="text-align: center;">4152</td></tr> <tr><td style="text-align: center;">15</td><td style="text-align: center;">4152</td></tr> </table>	days	4152	15	4152
days	4104								
17	4104								
days	4152								
15	4152								
TOTAL DAYS	32								
TOTAL FLOW	8256								
	1,000's gallons								

TOWN OF FRIDAY HARBOR

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.

<i>end of</i>	<i>Inches above/(below) original spillway</i>	<i>end of</i>	<i>Inches above/(below) original spillway</i>	<i>end of</i>	<i>Inches above/(below) original spillway</i>
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	8.75
Apr-12	8.00	Apr-15	6.50	Apr-18	8.25
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

APR	10.20	11.62	14.53	7.43	9.44	10.74	14.97	11.84	11.79	12.90
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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	1.48						
APR	0.51	0.75	2.20	3.10						
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	13.48	0.00	0.00	0.00	0.00	0.00	0.00

Cumulative thru

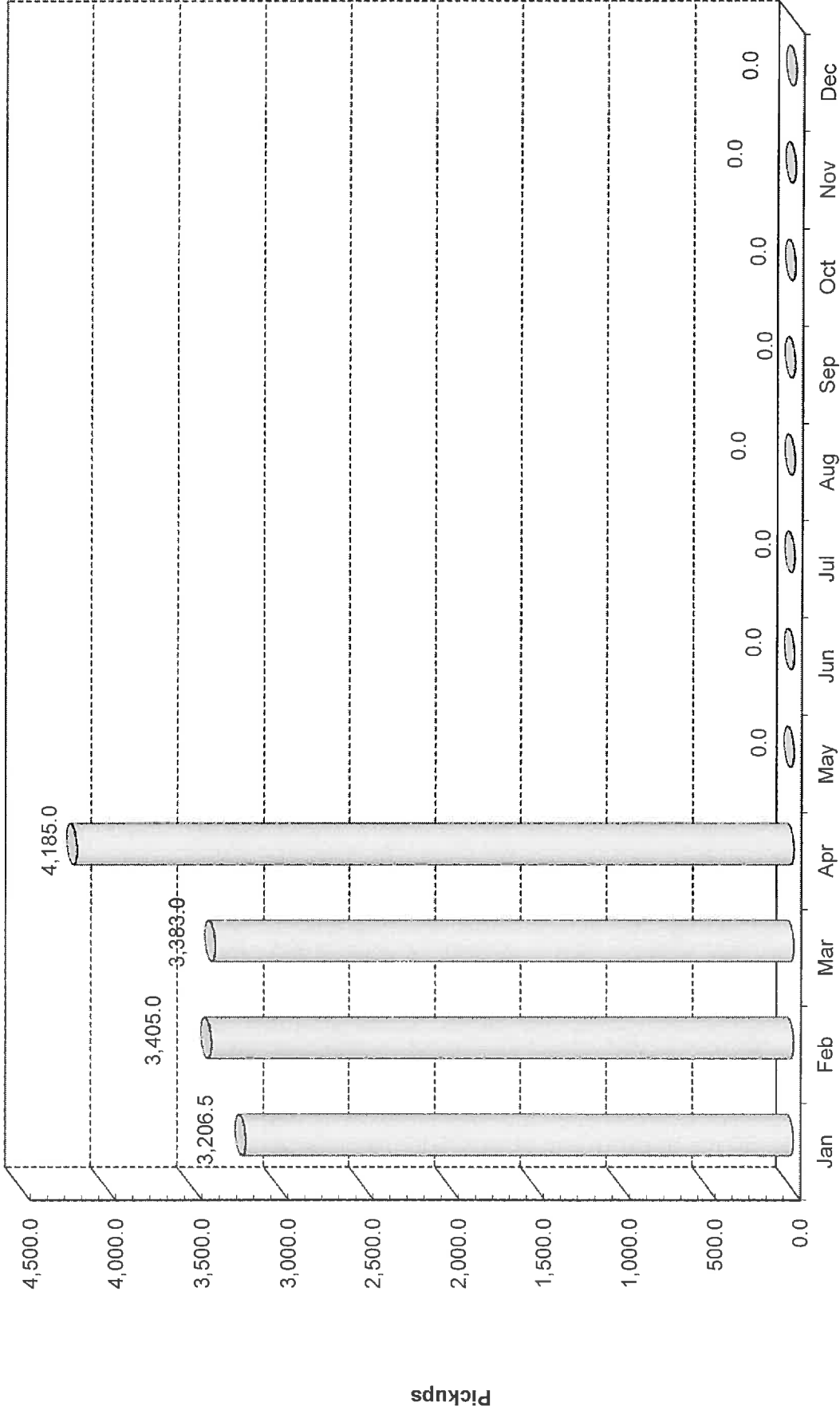
APR	11.05	10.63	10.06	13.48	0.00	0.00	0.00	0.00	0.00	0.00
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NOTE: The Wastewater Treatment Concurrency Threshold report will be available following receipt of monthly results at the conclusion of the current testing cycle.

Water use MTD - accounts with sewersourceDate
4 / 2018

Sewer Class	Accounts	Gallons
Location: IN		
Mfr In/low Strength	53	595,200
Com In/lo Strength	160	881,170
Dot In/lo Strength	3	77,820
Ind In/hi Strength	1	28,230
Ind In/lo Strength	10	51,540
Lmf In/lo Strength	1	2,970
Com In/hi Strength	42	671,980
Mfr In/lo Strength	55	520,450
Mhp In/lo Strength	2	459,000
PA In/hi Strength	3	72,940
PA In/lo Strength	43	315,000
Sfr IN Town	604	1,598,290
Low Rate / IN Town	5	9,800
	<hr/> 982	<hr/> 5,284,390
Location: Out		
UW Out/hi Strength	1	195,100
Mfr Out/lo Strength	1	3,610
Sfr Out of Town	4	6,920
	<hr/> 6	<hr/> 205,630
TOTAL	988	5,490,020

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	1,218.0	166.0	165.5	389.0	15.5	1,429.0		3,383.0
Apr	1,635.0	206.0	205.5	458.5	21.0	1,659.0		4,185.0
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	5,633.0	672.5	689.0	1,668.5	79.0	5,437.5	0.0	14,179.5

Refuse - active accounts

sourceDate

4 / 2018

Location	Refuse Type	Accounts
IN		
	Small Dumpster	48
	PA	40
	Medium Dumpste	58
	Large Dumpster	70
	Compactors	3
	Cans Low Rate	5
	Cans	773
		<hr/>
		997
Out		
	Large Dumpster	1
	Cans	1
		<hr/>
		2
		<hr/>
	TOTAL	999

Refuse - pickups by Class

sourceDate
4 / 2018

Location	Class	Pickups
IN	Sfr	1,635.0
	RefuseOnly	206.0
	PA	205.5
	Mfr	452.5
	Ind	21.0
	Com	1,659.0
		<hr/> 4,179.0
Out	Sfr	0.0
	Mfr	6.0
		<hr/> 6.0
	TOTAL	4,185.0

Recycle - pickups by ClasssourceDate
4 / 2018

Location	Class	Pickups
IN	Sfr	667
	RefuseOnly	21
	PA	0
	Mfr	49
	Ind	4
	Com	7
		<hr/> 748
Out	Sfr	0
	Mfr	0
		<hr/> 0
	TOTAL	748