

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

www.fridayharbor.org

Period ending: January 2018

Data provided by
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Frank Byrne, Water Treatment Plant Operator
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: Feb-17

Period end: Jan-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

123.4 million gallons
60.2%

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							
<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	0	6,473,834	0	7,347,000	0	
	Mar-18	0	6,473,834	0	7,347,000	0	
	Apr-18	0	6,473,834	0	7,347,000	0	
	May-18	0	6,473,834	0	7,347,000	0	
	Jun-18	0	6,473,834	0	7,347,000	0	
	Jul-18	0	6,473,834	0	7,347,000	0	YTD
	Aug-18	0	6,473,834	0	7,347,000	0	Unaccounted
	Sep-18	0	6,473,834	0	7,347,000	0	as % of Flow
Average	Oct-18	0	6,473,834	0	7,347,000	0	11.88%
Monthly Use	Nov-18	0	6,473,834	0	7,347,000	0	
6,473,834	Dec-18	0	6,473,834	0	7,347,000	0	-873,166
YEAR TOTAL:	1	6,473,834	Cumulative Metered/Other Use YTD	7,347,000	-873,166 Unaccounted	Cumulative 3% meter loss	237,000 181,712

3 YEAR AVERAGES:	Use	Flow	Daily Flow	3 Year Loss as % of Flow
	4,540,697 :gal/month	9,180,000 :gal/month	184,912	2.78%

source: Monthly Water Treatment Plant Report & utility.mdb's 3 yr cumulative flow 229,500,000
3 yr unaccounted -6,379,537

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	38,333,467	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	221,262

% 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							0	0	0
MAR							0	0	0
APR							0	0	0
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	1,312,140	61,070	1,614,762	626,860	2,424,228	18,020	416,754	6,473,834	208,833
AVERAGE	1,312,140	61,070	1,614,762	626,860	2,424,228	18,020	34,730	539,486	208,833

% of USE
% of FLOW

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

Water - use MTD

sourceDate
1 / 2018

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

Water Class	Accounts	Gallons
Spe	4	18,020
Sfr	965	2,424,228
PA	75	626,860
Mfr	119	1,614,762
Ind	16	61,070
Com	217	1,312,140
TOTAL	1,396	6,057,080

Water - use MTD by LocationsourceDate

1 / 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	9,160
Sfr	612	1,628,478
PA	69	354,590
Mfr	114	1,502,592
Ind	13	51,800
Com	213	1,257,840
	<hr/> 1,024	<hr/> 4,804,460
Location: Out		
Spe	1	8,860
Sfr	353	795,750
PA	6	272,270
Mfr	5	112,170
Ind	3	9,270
Com	4	54,300
	<hr/> 372	<hr/> 1,252,620
TOTAL	1,396	6,057,080

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	0	0	0	0	0
3% meter loss	181,712	0	0	0	0	0
Flushing	230,042					
SJC#3 FD use	5,000					
Leaks						
notes						
other non-metered use						
notes						
Additional water in storage						
notes						
Total other uses	-416,754					
Net production	6,930,246					

	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 (?).
Dates will change monthly.

31 :count of days in reporting period.

Dec-17		Jan-18	
day	flow (total flow)	day	flow (total flow)
15	288	1	221
16	267	2	226
17	216	3	248
18	228	4	192
19	263	5	227
20	274	6	235
21	255	7	204
22	283	8	221
23	267	9	229
24	202	10	262
25	180	11	215
26	223	12	241
27	225	13	244
28	283	14	219
29	234		
30	214		
31	261		

<u>days</u>	<u>days</u>
17	14
4163	3184
TOTAL DAYS	31
TOTAL FLOW	7347
	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	
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

JAN	5.49	6.87	6.51	2.34	3.82	4.73	5.90	3.46	4.14	2.86
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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							
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	5.10	0.00	0.00	0.00	0.00	0.00	0.00

Cumulative thru

JAN	3.97	2.17	1.60	5.10	0.00	0.00	0.00	0.00	0.00	0.00
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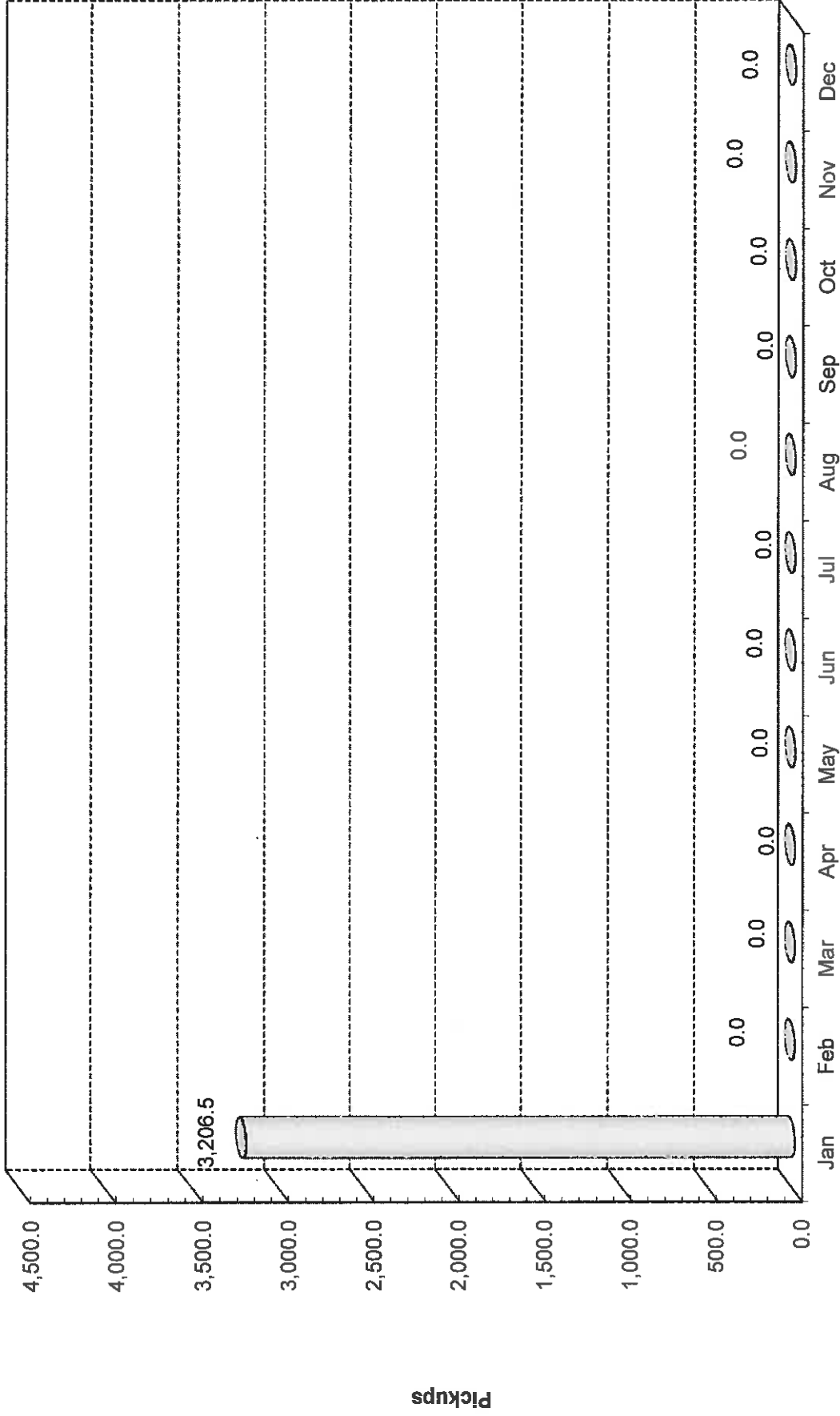
NOTE: The Wastewater Treatment Concurrency Threshold report will be available following receipt of monthly results at the conclusion of the current testing cycle.

Water use MTD - accounts with sewersourceDate

1 / 2018

Sewer Class	Accounts	Gallons
Location: IN		
Mfr In/low Strength	58	464,120
Com In/lo Strength	159	666,270
Dot In/lo Strength	3	36,500
Ind In/hi Strength	1	12,270
Ind In/lo Strength	10	37,550
Lmf In/lo Strength	1	1,100
Com In/hi Strength	42	563,300
Mfr In/lo Strength	50	632,922
Mhp In/lo Strength	2	358,300
PA In/hi Strength	3	50,750
PA In/lo Strength	43	234,060
Sfr IN Town	593	1,606,558
Low Rate / IN Town	6	10,540
	<hr/> 971	<hr/> 4,674,240
Location: Out		
UW Out/hi Strength	1	124,700
Mfr Out/lo Strength	1	4,390
Sfr Out of Town	4	6,170
	<hr/> 6	<hr/> 135,260
TOTAL	977	4,809,500

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								0.0
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	1,433.0	151.5	145.5	435.5	24.5	1,016.5	0.0	3,206.5

Refuse - pickups by Class

sourceDate
1 / 2018

Location	Class	Pickups
IN	Sfr	1,433.0
	RefuseOnly	151.5
	PA	145.5
	Mfr	432.0
	Ind	24.5
	Com	1,016.5
		<hr/> 3,203.0
Out	Sfr	0.0
	Mfr	3.5
		<hr/> 3.5
	TOTAL	3,206.5

Refuse - active accounts

sourceDate
1 / 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 Class

sourceDate
1 / 2018

Location	Class	Pickups
IN	Sfr	603
	RefuseOnly	16
	PA	0
	Mfr	45
	Ind	2
	Com	11
		677
Out	Sfr	0
	Mfr	0
		0
TOTAL		677