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

www.fridayharbor.org

Period ending: March 2013

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

Period start: Apr-12
Period end: Mar-13

Sustainable Annual Yield (TFH Comprehensive Water System Plan Update - Final, Feb.97, page 3-3, paragraph 4)	168 million gallons
Annual use - 12 month period	123.1 million gallons
percent of Sustainable Annual Yield	73.3%
exceeds Sustainable Yield?	**No**

TOWN OF FRIDAY HARBOR

Water Consumption & Production

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

Period		USE (consumption)	Cumulative Use YTD	Flow (production)	Unaccounted over / (under)	Cumulative Flow YTD	Average Daily Flow	
2011	Jan-11	6,268,425		6,879,000	-610,575		221,903	
gallons	Feb-11	6,390,646	12,659,071	6,923,000	-532,354	13,802,000	247,250	
	Mar-11	5,939,256	18,598,327	6,700,000	-760,744	20,502,000	216,129	
	Apr-11	6,852,097	25,450,424	7,516,000	-663,903	28,018,000	250,533	
	May-11	6,708,571	32,158,995	7,544,000	-835,429	35,562,000	243,355	
	Jun-11	8,650,614	40,809,609	9,489,000	-838,386	45,051,000	316,300	
	Jul-11	11,919,094	52,728,704	11,643,000	276,094	56,694,000	375,581	YTD
	Aug-11	12,366,683	65,095,387	12,870,000	-503,317	69,564,000	415,161	Unaccounted
	Sep-11	12,012,407	77,107,794	11,798,000	214,407	81,362,000	393,267	as % of Flow
Average	Oct-11	7,818,724	84,926,517	8,198,000	-379,276	89,560,000	264,452	5.83%
Monthly Use	Nov-11	6,212,805	91,139,323	7,062,000	-849,195	96,622,000	235,400	
8,119,739	Dec-11	6,297,540	97,436,863	6,852,000	-554,460	103,474,000	221,032	-6,037,137
YEAR TOTAL:	12	97,436,863	Cumulative	103,474,000	-6,037,137	Cumulative	283,364	
		Metered/Other	Use YTD		Unaccounted	3% meter loss	2,887,604	
2012	Jan-12	7,182,276		7,256,000	-73,724		234,065	
gallons	Feb-12	8,021,711	15,203,987	7,663,000	358,711	14,919,000	273,679	
	Mar-12	6,202,891	21,406,878	7,448,000	-1,245,109	22,367,000	240,258	
	Apr-12	7,440,103	28,846,981	8,517,000	-1,076,897	30,884,000	283,900	
	May-12	8,498,044	37,345,025	9,568,000	-1,069,956	40,452,000	308,645	
	Jun-12	9,420,805	46,765,830	10,305,000	-884,195	50,757,000	343,500	
	Jul-12	10,956,648	57,722,478	12,202,000	-1,245,352	62,959,000	393,613	YTD
	Aug-12	12,524,121	70,246,599	13,570,000	-1,045,879	76,529,000	437,742	Unaccounted
	Sep-12	12,793,397	83,039,996	13,131,000	-337,603	89,660,000	437,700	as % of Flow
Average	Oct-12	10,599,178	93,639,173	11,169,000	-569,822	100,829,000	360,290	9.23%
Monthly Use	Nov-12	7,822,971	101,462,144	9,187,000	-1,364,029	110,016,000	306,233	
9,013,058	Dec-12	6,694,551	108,156,695	9,136,000	-2,441,449	119,152,000	294,710	-10,995,305
YEAR TOTAL:	12	108,156,695	Cumulative	119,152,000	-10,995,305	Cumulative	326,195	
		Metered/Other	Use YTD		Unaccounted	3% meter loss	2,754,688	
2013	Jan-13	7,610,292		9,735,000	-2,124,708		314,032	
gallons	Feb-13	7,445,324	15,055,616	9,012,000	-1,566,676	18,747,000	321,857	
	Mar-13	6,929,325	21,984,941	7,584,000	-654,675	26,331,000	244,645	
	Apr-13	0	21,984,941	0	0	26,331,000	0	
	May-13	0	21,984,941	0	0	26,331,000	0	
	Jun-13	0	21,984,941	0	0	26,331,000	0	
	Jul-13	0	21,984,941	0	0	26,331,000	0	YTD
	Aug-13	0	21,984,941	0	0	26,331,000	0	Unaccounted
	Sep-13	0	21,984,941	0	0	26,331,000	0	as % of Flow
Average	Oct-13	0	21,984,941	0	0	26,331,000	0	16.51%
Monthly Use	Nov-13	0	21,984,941	0	0	26,331,000	0	
7,328,314	Dec-13	0	21,984,941	0	0	26,331,000	0	-4,346,059
YEAR TOTAL:	3	21,984,941	Cumulative	26,331,000	-4,346,059	Cumulative	293,512	
		Metered/Other	Use YTD		Unaccounted over / (under)	3% meter loss	529,058	

3 YEAR AVERAGES:	Use	Flow	Daily Flow	3 Year Loss as % of Flow
	4,423,030 :gal/month	9,220,630 :gal/month	206,569	**8.59%**

source: Monthly Water Treatment Plant Report & utility.mdb's

3 yr cumulative flow	248,957,000
3 yr unaccounted	-21,378,500

WATER CONSUMPTION (Use) BY CUSTOMER CLASS

source: utilTry08 & 13.mdb

2012

CLASS:	COM	IND	MFR	P.A	SFR+RUR	Special	other uses	TOTAL	% of Use	Avg.Daily Use
JAN	1,760,680	75,640	1,742,180	558,120	2,776,400	840	268,416	7,182,276	6.6%	231,686
FEB	1,157,520	71,580	1,246,120	379,990	1,787,821	378	3,378,302	8,021,711	7.4%	276,611
MAR	1,485,710	86,490	1,551,750	530,110	2,193,339	873	354,619	6,202,891	5.7%	200,093
APR	1,824,940	79,940	1,701,070	626,620	2,491,170	1,117	715,246	7,440,103	6.9%	248,003
MAY	1,767,280	100,000	1,699,990	710,320	2,841,810	3,167	1,375,477	8,498,044	7.9%	274,130
JUN	2,310,360	131,140	1,992,260	864,350	3,389,160	2,851	730,684	9,420,805	8.7%	314,027
JUL	2,488,420	157,140	1,802,990	2,006,180	3,654,650	2,919	844,349	10,956,648	10.1%	353,440
AUG	3,115,250	232,600	2,082,290	1,873,110	4,582,220	4,240	634,411	12,524,121	11.6%	404,004
SEP	3,244,800	277,890	1,945,470	2,117,140	4,246,930		961,167	12,793,397	11.8%	426,447
OCT	2,192,010	280,090	1,641,700	954,590	3,261,420	185,508	2,083,860	10,599,178	9.8%	341,909
NOV	1,641,940	122,240	1,807,460	634,125	2,640,110	7,495	969,601	7,822,971	7.2%	260,766
DEC	1,548,790	87,310	1,795,050	617,700	2,420,830	175	224,696	6,694,551	6.2%	215,953
								108,156,695	100.0%	295,510
TOTAL	24,537,700	1,702,060	21,008,330	11,872,355	36,285,860	209,563	12,540,827	**108,156,695**	:USE for Year	
AVERAGE	2,044,808	141,838	1,750,694	989,363	3,023,822	19,051	1,045,069	9,013,058	-10,995,305	:LOSS for Year
% of USE	24.9%	1.7%	21.3%	12.1%	36.8%	0.2%	2.9%	100.0%	196,968,688	:FLOW (Use+Loss)
% of FLOW	12.5%	0.9%	10.7%	6.0%	18.4%	0.1%	1.5%	50.0%	50.0%	Loss as % of Flow

2013

CLASS:	COM	IND	MFR	P.A	SFR	Special	other uses	TOTAL	% of Use	Avg.Daily Use
JAN	1,961,730	79,830	1,454,766	607,508	2,585,770	0	920,688	7,610,292	34.6%	245,493
FEB	1,428,410	73,700	1,460,074	532,852	2,254,620	3,086	1,692,582	7,445,324	33.9%	256,735
MAR	1,280,620	78,170	1,318,630	460,410	2,052,830	2,277	1,736,388	6,929,325	31.5%	223,527
APR							0	0	0.0%	0
MAY							0	0	0.0%	0
JUN							0	0	0.0%	0
JUL							0	0	0.0%	0
AUG							0	0	0.0%	0
SEP							0	0	0.0%	0
OCT							0	0	0.0%	0
NOV							0	0	0.0%	0
DEC							0	0	0.0%	0
								21,984,941	100.0%	241,593
TOTAL	4,670,760	231,700	4,233,470	1,600,770	6,893,220	5,363	4,349,658	**21,984,941**	:USE for Year	
AVERAGE	1,556,920	77,233	1,411,157	533,590	2,297,740	1,788	362,472	1,832,078	-4,346,059	:LOSS for Year
% of USE	21.2%	1.1%	19.3%	7.3%	31.4%	0.0%	19.8%	100.0%	26,331,000	:FLOW (Use+Loss)
% of FLOW	17.7%	0.9%	16.1%	6.1%	26.2%	0.0%	16.5%	83.5%	-16.5%	Loss as % of Flow

Water - use MTD

sourceDate
3 / 2013

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

Water Class	Accounts	Gallons
Spe	4	2,277
Sfr	938	2,052,830
P.A	70	460,410
Mfr	111	1,318,630
Ind	16	78,170
Com	216	1,280,620
TOTAL	**1,355**	**5,192,937**

Water - use MTD by Location

sourceDate
3 / 2013

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	2,277
Sfr	585	1,345,310
P.A	65	360,880
Mfr	106	1,261,110
Ind	13	72,770
Com	212	1,270,660
	984	4,313,007
Location: Out		
Spe	1	0
Sfr	353	707,520
P.A	5	99,530
Mfr	5	57,520
Ind	3	5,400
Com	4	9,960
	371	879,930
TOTAL	**1,355**	**5,192,937**

Net Water Production - 2013

amounts in gallons

	Jan	Feb	Mar	Apr	May	Jun
Gross Production for billing period from WTP Chemical Weights & Finish Flow to Town Report	9,735,000	9,012,000	7,584,000	0	0	0
3% meter loss	200,688	172,582	155,788	0	0	0
Flushing	25,000	15,000	75,600			
SJC#3 FD use	15,000	5,000	5,000			
Leaks	500,000	1,500,000	1,500,000			
notes	*Pear Pt.*	*location not specified*	*location not specified*			
other non-metered use	180,000					
notes	*Hillview Terr. Tank overflow*					
Additional water in storage						
notes						
Total other uses	*-920,688*	*-1,692,582*	*-1,736,388*	*0*	*0*	*0*
Net production	8,814,312	7,319,418	5,847,612	0	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						
other non-metered use [a]						
notes						
other non-metered use [b]						
notes						
notes						
Total other uses	*0*	*0*	*0*	*0*	*0*	*0*
Net production	0	0	0	0	0	0

Flow to Town (Gross Water Production) 2013

reporting (meter reading) period *from WTP Chem. Wts. & Finish Flow to Town Report*			days in period	Gross *flow to Town*	Flow to Town (millions)
21-Dec	*to*	20-Jan	31	9,735,000	9.74
21-Jan	*to*	20-Feb	31	9,012,000	9.01
21-Feb	*to*	20-Mar	28	7,584,000	7.58
21-Mar	*to*	20-Apr	31		
21-Apr	*to*	20-May	30		
21-May	*to*	20-Jun	31		
21-Jun	*to*	20-Jul	30		
21-Jul	*to*	20-Aug	31		
21-Aug	*to*	20-Sep	31		
21-Sep	*to*	20-Oct	30		
21-Oct	*to*	20-Nov	31		
21-Nov	*to*	20-Dec	30		
			365	26,331,000	26.331

Finish Water Flow to Town

day	Previous Month flow (total flow)
21	309
22	267
23	393
24	247
25	259
26	267
27	242
28	270
29	
30	
31	
	2,254

day	Current Month flow (total flow)
1	261
2	313
3	287
4	211
5	281
6	230
7	273
8	271
9	289
10	225
11	263
12	309
13	233
14	277
15	273
16	310
17	306
18	195
19	262
20	261
	5,330

TOTAL FLOW

7,584

1,000's gallons

7,584,000 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-06	0.00		Jan-09	0.50		Jan-12	-1.75
Feb-06	0.00		Feb-09	0.00		Feb-12	0.00
Mar-06	0.00		Mar-09	0.50		Mar-12	0.00
Apr-06	0.00		Apr-09	-0.50		Apr-12	8.00
May-06	-0.05		May-09	-2.00		May-12	0.00
Jun-06	-15.00		Jun-09	-11.25		Jun-12	7.00
Jul-06	-31.00		Jul-09	-26.50		Jul-12	-19.00
Aug-06	-48.00		Aug-09	-29.50		Aug-12	-32.75
Sep-06	-59.50		Sep-09	-51.50		Sep-12	-45.00
Oct-06	-68.00		Oct-09	-54.50		Oct-12	-48.00
Nov-06	-34.00		Nov-09	-10.75		Nov-12	-24.25
Dec-06	0.00		Dec-09	0.00		Dec-12	0.00
Jan-07	0.00		Jan-10	0.00		Jan-13	0.00
Feb-07	-0.75		Feb-10	0.00		Feb-13	0.00
Mar-07	0.00		Mar-10	7.25		Mar-13	0.00
Apr-07	0.00		Apr-10	7.50		Apr-13	
May-07	-0.50		May-10	2.00		May-13	
Jun-07	-9.50		Jun-10	-5.50		Jun-13	
Jul-07	-24.50		Jul-10	-17.75		Jul-13	
Aug-07	-39.50		Aug-10	-33.50		Aug-13	
Sep-07	-50.25		Sep-10	-37.75		Sep-13	
Oct-07	-56.75		Oct-10	-43.50		Oct-13	
Nov-07	-60.75		Nov-10	-46.25		Nov-13	
Dec-07	-47.75		Dec-10	0.00		Dec-13	
Jan-08	-17.75		Jan-11	1.00		Jan-14	
Feb-08	0.00		Feb-11	0.00		Feb-14	
Mar-08	8.50		Mar-11	0.00		Mar-14	
Apr-08	7.75		Apr-11	9.00		Apr-14	
May-08	1.50		May-11	9.00		May-14	
Jun-08	-9.50		Jun-11	0.25		Jun-14	
Jul-08	-25.25		Jul-11	-9.50		Jul-14	
Aug-08	-36.00		Aug-11	-24.00		Aug-14	
Sep-08	-47.50		Sep-11	-34.50		Sep-14	
Oct-08	-54.25		Oct-11	-39.75		Oct-14	
Nov-08	-51.00		Nov-11	-38.75		Nov-14	
Dec-08	-36.50		Dec-11	-39.50		Dec-14	

Rainfall - Trout Lake Water Treatment Facility

source: Water Treatment Plant Weather Reports

all figures in inches

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004		average (1995-04)
JAN	1.95	4.47	4.99	4.99	6.24	2.88	3.55	4.81	4.80	3.22	JAN	4.19
FEB	4.51	2.45	2.76	1.78	4.53	1.45	1.96	2.37	1.73	0.09	FEB	2.36
MAR	1.94	0.77	3.56	2.73	1.94	2.02	2.11	2.10	3.21	2.08	MAR	2.25
APR	1.66	3.08	0.94	0.48	1.29	1.28	1.47	1.63	2.71	0.34	APR	1.49
MAY	0.39	2.56	1.27	2.53	0.66	2.82	0.85	1.35	0.62	2.11	MAY	1.52
JUN	0.84	0.51	3.09	0.96	1.94	1.36	1.79	1.07	0.43	0.51	JUN	1.25
JUL	1.30	0.40	1.14	1.34	0.31	0.47	0.59	0.13	0.13	0.57	JUL	0.64
AUG	2.98	0.34	0.03	0.10	1.31	0.41	1.01	0.22	0.10	3.59	AUG	1.01
SEP	0.56	1.66	2.23	0.31	0.26	1.06	1.04	0.64	1.03	2.27	SEP	1.11
OCT	4.04	4.08	5.08	1.37	3.75	2.58	4.05	0.90	9.02	2.44	OCT	3.73
NOV	9.62	3.38	2.34	9.04	4.22	3.42	3.77	1.97	5.40	4.53	NOV	4.77
DEC	4.39	8.09	3.45	6.85	5.29	3.59	5.17	2.39	1.42	3.37	DEC	4.40
Total	34.18	31.79	30.88	32.47	31.74	23.34	27.36	19.58	30.60	25.12	Total	28.71
Cumulative thru **MAR**	**8.40**	**7.69**	**11.31**	**9.49**	**12.71**	**6.35**	**7.62**	**9.28**	**9.74**	**5.39**		

all figures in inches

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014		average (2005-10)
JAN	5.49	6.87	6.51	2.34	3.82	4.73	5.90	3.46	4.14		JAN	4.96
FEB	1.01	1.61	2.83	1.78	1.50	1.24	2.74	3.38	1.32		FEB	1.66
MAR	2.33	0.91	3.70	1.99	2.05	3.30	3.37	3.09	3.63		MAR	2.38
APR	1.37	2.23	1.49	1.32	2.07	1.47	2.96	1.91			APR	1.66
MAY	1.08	1.24	0.78	1.26	1.69	2.09	3.07	1.09			MAY	1.36
JUN	1.63	0.56	1.03	1.16	0.35	1.10	0.68	2.60			JUN	0.97
JUL	0.70	0.26	1.56	0.21	0.45	0.11	0.84	1.04			JUL	0.55
AUG	1.60	0.03	0.64	1.88	0.81	0.72	0.29	0.00			AUG	0.95
SEP	0.94	1.15	0.54	0.84	1.58	4.35	0.72	0.12			SEP	1.57
OCT	3.50	1.89	2.12	1.83	5.24	1.38	2.29	6.40			OCT	2.66
NOV	4.28	10.43	2.32	5.15	6.76	2.94	4.50	3.32			NOV	5.31
DEC	2.89	3.74	4.59	3.70	1.80	6.55	1.88	4.79			DEC	3.88
Total	26.82	30.92	28.11	23.46	28.12	29.98	29.24	31.20	9.09	0.00	Total	27.90
Cumulative thru **MAR**	**8.83**	**9.39**	**13.04**	**6.11**	**7.37**	**9.27**	**12.01**	**9.93**	**9.09**	**0.00**		

Prevention of Wastewater Facility Overloading

Period start: Apr-12
Period end: Mar-13

INFLUENT BOD LOADING

(pounds per day)

Design Criteria (06/06 NPDES Permit #WA-002358-2, pg 12, paragraph S4.A) max.month	1,600
85% Capacity Planning Threshold (06/06 NPDES Permit #WA-002358-2, pg 12, paragraph S4.B.1)	1,360
Month with highest average loading in period	Jul-12
Highest average monthly loading in period (pounds per day)	961
% of Design Criteria	**60%**
exceeds Design Criteria?	**No**
Previous month's loading	871
Following month's loading	957
exceeds Planning Threshold for 3 consecutive months?	**No**

AVG. EFFLUENT FLOW

(millions of gallons per day)

Design Criteria (06/06 NPDES Permit #WA-002358-2, pg 12, paragraph S4.A) max.month	0.69000
85% Capacity Planning Threshold (06/06 NPDES Permit #WA-002358-2, pg 12, paragraph S4.B.1)	0.58650
Month with highest average flow in period	Dec-12
Highest average monthly flow in period (millions of gallons per day)	0.4492
% of Design Criteria	**65%**
exceeds Design Criteria?	**No**
Previous month's flow	0.3561
Following month's flow	0.445
exceeds Planning Threshold for 3 consecutive months?	**No**

SUSPENDED SOLIDS LOADING

(pounds per day)

Design Criteria (06/06 NPDES Permit #WA-002358-2, pg 12, paragraph S4.A) max.month	1,110
85% Capacity Planning Threshold (06/06 NPDES Permit #WA-002358-2, pg 12, paragraph S4.B.1)	944
Month with highest average loading in period	Jul-12
Highest average monthly loading in period (pounds per day)	716
% of Design Criteria	**65%**
exceeds Design Criteria?	**No**
Previous month's loading	508
Following month's loading	698
exceeds Planning Threshold for 3 consecutive months?	**No**

Water use MTD - Accounts with sewer

sourceDate
3 / 2013

Sewer Class	Accounts	Gallons
Location: IN		
Sfr IN Town	569	1,327,150
P.A In/lo Strength	42	180,060
P.A In/hi Strength	2	29,330
Mhp In-LO Strength	2	400,000
Mfr In/low Strength	102	842,210
Low Rate / IN Town	2	6,230
Lmf In/lo Strength	1	1,710
Ind In/lo Strength	11	68,070
Dot In-LO Strength	3	38,950
Com In/lo Strength	157	702,540
Com In/hi Strength	42	546,200
	933	4,142,450
Location: Out		
U.W Out-HI Streng	1	98,000
Sfr Out of Town	4	16,880
Mfr Out/lo Strength	1	3,500
	6	118,380
TOTAL	**939**	**4,260,830**

WasteWater - active accounts

sourceDate
3 / 2013

Sewer Class	InTown	OutofTown	Summary
Com In/hi Strength	42		42
Com In/lo Strength	157		157
Dot In-LO Strength	3		3
Ind In/lo Strength	11		11
Lmf In/lo Strength	1		1
Low Rate / IN Town	2		2
Mfr In/low Strength	102		102
Mfr Out/lo Strength		1	1
Mhp In-LO Strength	2		2
P.A In/hi Strength	2		2
P.A In/lo Strength	42		42
Sfr IN Town	569		569
Sfr Out of Town		4	4
U.W Out-HI Streng		1	1
TOTAL	**933**	**6**	**939**

Refuse - Active accounts

sourceDate
3 / 2013

Location	Refuse Type	Accounts
IN		
	Small Dumpster	43
	P.A.	38
	Med. Dumpster	53
	Low Rate	2
	Large Dumpster	67
	Compactors	4
	Cans	758
		965
Out		
	Large Dumpster	1
		1
	TOTAL	**966**

Refuse - Pickups by Class

sourceDate
3 / 2013

Location	Class	Pickups
IN		
	Sfr	943
	RefuseOnly	102
	P.A	106
	Mfr	273
	Ind	19
	Com	493
		1,936
Out		
	Mfr	5
		5
	TOTAL	**1,941**

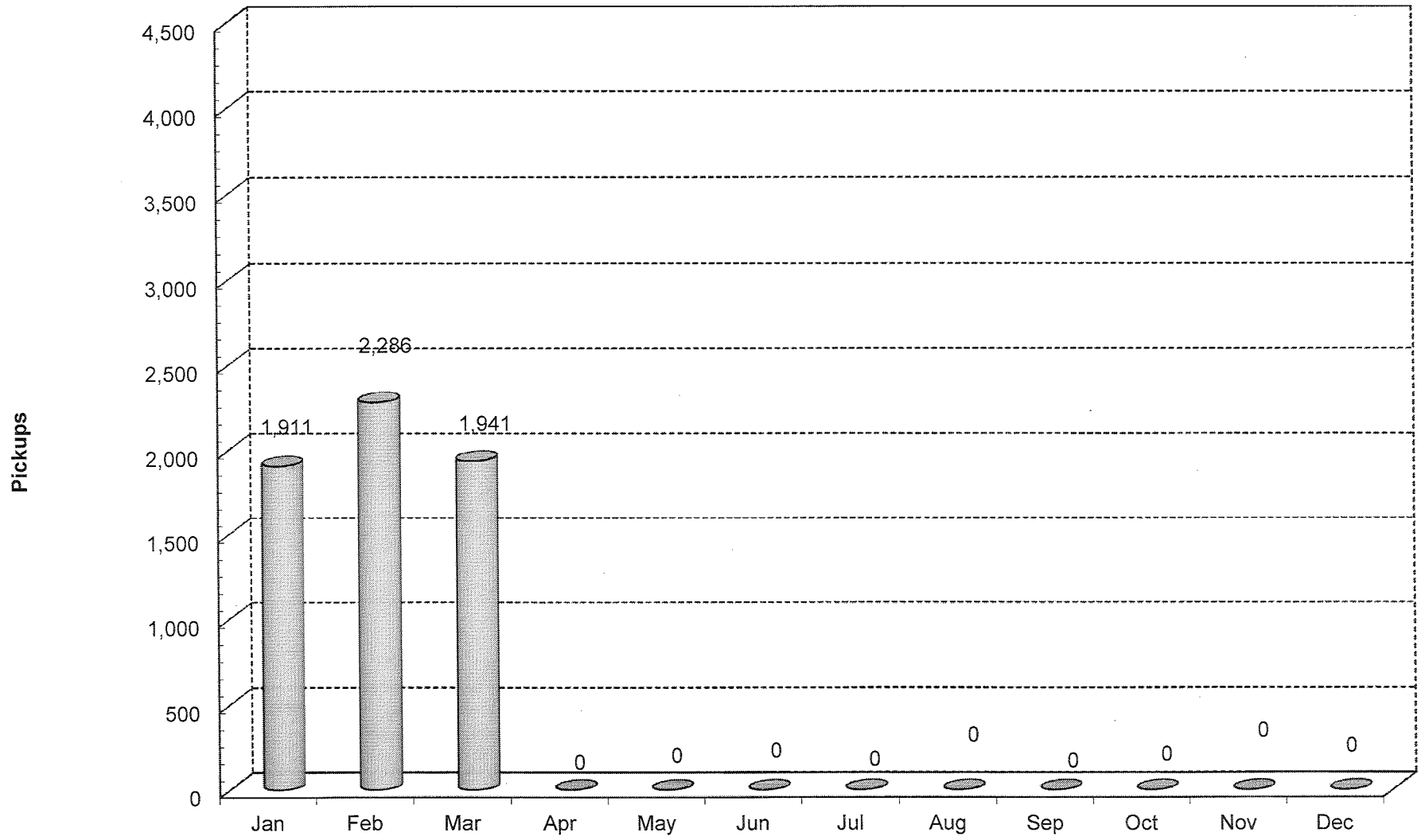
Refuse - Pickups by Type

sourceDate
3 / 2013

Location	Refuse Type	Pickups
IN		
	Small Dumpster	61
	P.A.	106
	Med. Dumpster	76
	Low Rate	2
	Large Dumpster	214
	Compactors	4
	Cans	1,473
		1,936
Out		
	Large Dumpster	5
		5
	TOTAL	**1,941**

Refuse Pickups - 2013 YTD

Account Type	SFR	Refuse Only	P.A	MFR	IND	COM	Other	Total
Jan	903	107	112	288	14	487		1,911
Feb	1,108	120	148	335	14	561		2,286
Mar	943	102	106	278	19	493		1,941
Apr								0
May								0
Jun								0
Jul								0
Aug								0
Sep								0
Oct								0
Nov								0
Dec								0
YTD	2,954	329	366	901	47	1,541	0	6,138

Town of Friday Harbor

Refuse Pickups by Month - 2013