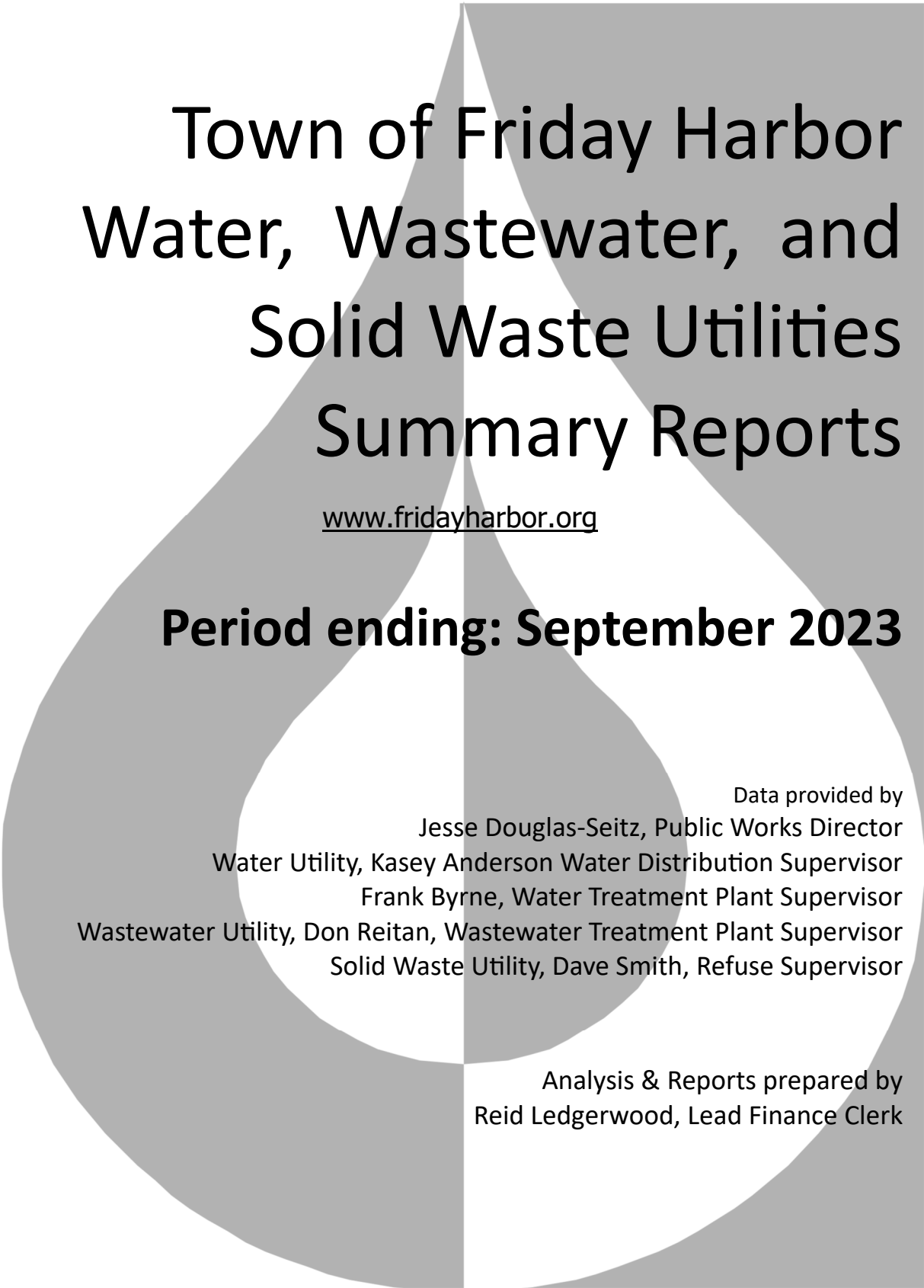




Town of Friday Harbor Water, Wastewater, and Solid Waste Utilities Summary Reports

www.fridayharbor.org

Period ending: September 2023

Data provided by
Jesse Douglas-Seitz, Public Works Director
Water Utility, Kasey Anderson Water Distribution Supervisor
Frank Byrne, Water Treatment Plant Supervisor
Wastewater Utility, Don Reitan, Wastewater Treatment Plant Supervisor
Solid Waste Utility, Dave Smith, Refuse Supervisor

Analysis & Reports prepared by
Reid Ledgerwood, Lead Finance Clerk

Water - Use MTD

Water Class	Accounts	Gallons
Spe	3	227,037
Sfr	1,018	5,123,796
PA	82	1,657,256
Mfr	134	2,273,923
Ind	14	222,516
Com	220	2,720,379
TOTAL	1,471	12,224,907

Water - Use MTD by Location

Water Class	Accounts	Gallons
Location: IN		
Spe	3	227,037
Sfr	661	2,913,349
PA	74	1,316,869
Mfr	129	1,983,339
Ind	13	219,278
Com	217	2,700,734
	1,097	9,360,606
Location: Out		
Sfr	357	2,210,447
PA	8	340,387
Mfr	5	290,584
Ind	1	3,238
Com	3	19,645
	374	2,864,301
TOTAL	1,471	12,224,907

Water use MTD - Accounts with Sewer

Sewer Class	Accounts	Gallons
Location: IN		
Mfr In/low Strength	61	795,709
Com In/lo Strength	164	1,506,708
Dot In/lo Strength	3	58,425
Ind In/hi Strength	1	41,506
Ind In/lo Strength	10	165,949
Lmf In/lo Strength	1	1,584
Com In/hi Strength	42	1,074,700
Mfr In/lo Strength	59	805,169
Mhp In/lo Strength	2	285,900
PA In/hi Strength	3	181,233
PA In/lo Strength	46	678,256
Sfr IN Town	637	2,846,525
Low Rate / IN Town	11	32,816
	1,040	8,474,480
Location: Out		
UW Out/hi Strength	1	183,600
Mfr Out/lo Strength	1	12,099
Sfr Out of Town	4	29,206
	6	224,905
TOTAL	1,046	8,699,385

Refuse - Pickups by Class

Class	Pickups
Com	4,187.5
Ind	23.5
Mfr	629.0
PA	113.5
Refuse Only	644.5
Sfr	2,787.0
TOTAL	8,385.0

Refuse - Active Accounts

Refuse Type	Accounts
Cans	883
Cans Low Rate	12
Compactors	4
Large Dumpster	74
Medium Dumpste	56
PA	43
Small Dumpster	41
TOTAL	1,113

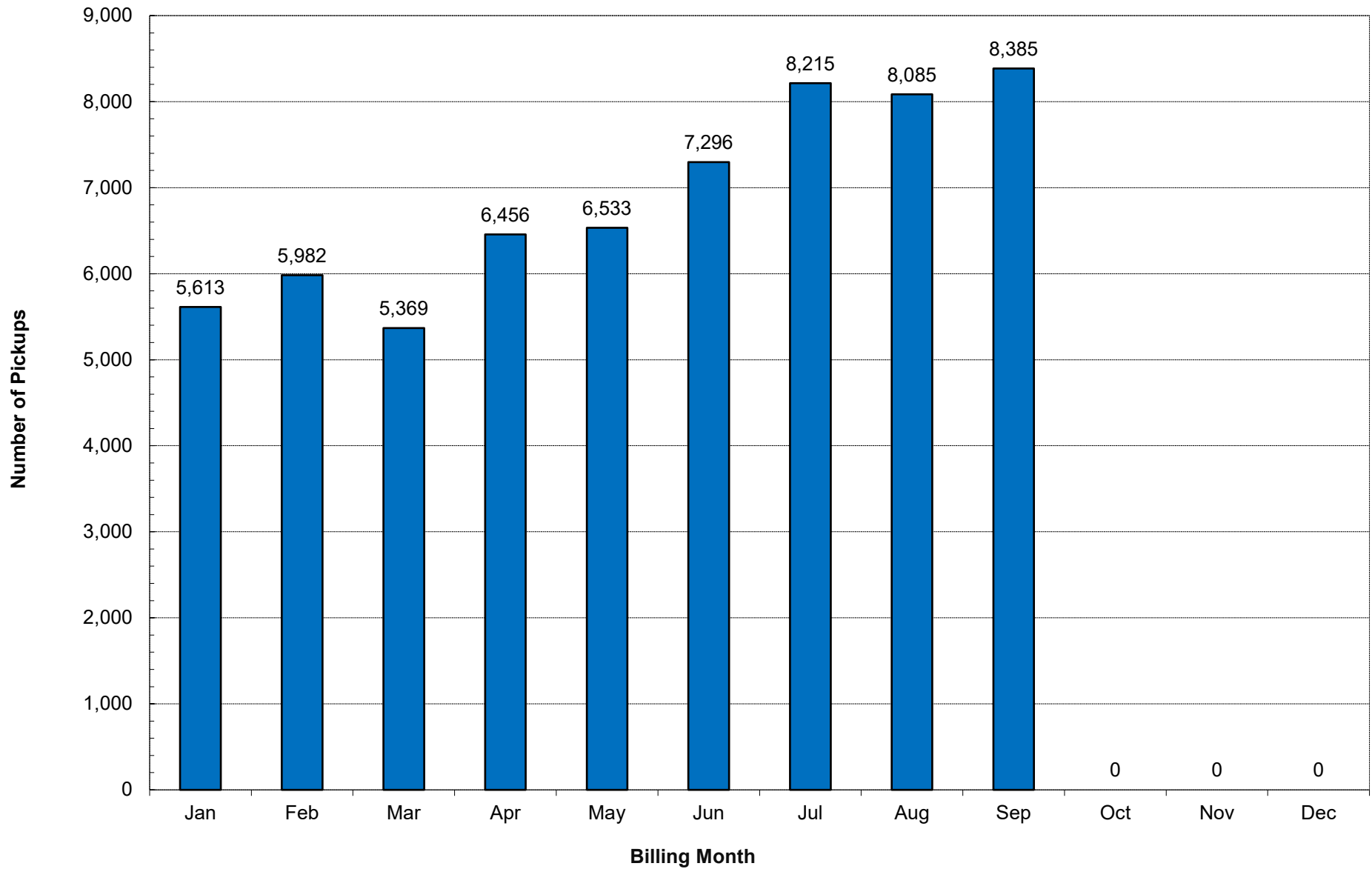
Recycle - pickups by Class

Class	Pickups
Com	4
Ind	3
Mfr	79
PA	0
RefuseOnly	34
Sfr	919
TOTAL	1,039

Refuse Pickups by Account Type - 2023 YTD

Billing Month	SFR	Refuse Only	PA	MFR	IND	COM	Total
Jan	1,790.0	340.0	97.0	507.5	24.0	2,854.5	5,613.0
Feb	1,974.0	399.5	135.0	595.0	17.5	2,861.0	5,982.0
Mar	1,767.0	318.0	151.0	490.5	18.5	2,624.0	5,369.0
Apr	2,105.0	466.5	173.0	573.5	19.0	3,118.5	6,455.5
May	2,125.0	414.5	190.0	551.0	22.5	3,230.0	6,533.0
Jun	2,564.0	502.0	169.5	599.5	26.5	3,434.3	7,295.8
Jul	2,612.0	538.0	145.0	684.5	22.0	4,213.0	8,214.5
Aug	2,507.0	608.0	106.0	626.5	18.5	4,219.0	8,085.0
Sep	2,787.0	644.5	113.5	629.0	23.5	4,187.5	8,385.0
Oct							-
Nov							-
Dec							-
YTD	20,231.0	4,231.0	1,280.0	5,257.0	192.0	30,741.8	61,932.8

Total Refuse Pickups by Month - 2023



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-15	0.00	Jan-18	0.00	Jan-21	0.00
Feb-15	0.00	Feb-18	0.00	Feb-21	0.00
Mar-15	0.00	Mar-18	8.75	Mar-21	8.25
Apr-15	6.50	Apr-18	8.25	Apr-21	4.30
May-15	0.00	May-18	1.50	May-21	4.30
Jun-15	-13.00	Jun-18	-10.50	Jun-21	-5.50
Jul-15	-29.50	Jul-18	-29.50	Jul-21	-34.00
Aug-15	-42.25	Aug-18	-42.00	Aug-21	-48.00
Sep-15	-49.50	Sep-18	-50.00	Sep-21	-48.00
Oct-15	-54.50	Oct-18	-54.50	Oct-21	-54.50
Nov-15	-17.25	Nov-18	-55.50	Nov-21	-55.00
Dec-15	0.00	Dec-18	-26.00	Dec-21	3.00
Jan-16	0.00	Jan-19	0.00	Jan-22	8.00
Feb-16	0.00	Feb-19	0.00	Feb-22	8.00
Mar-16	0.00	Mar-19	2.75	Mar-22	8.75
Apr-16	6.00	Apr-19	2.75	Apr-22	8.75
May-16	-2.50	May-19	-0.75	May-22	7.75
Jun-16	-11.00	Jun-19	-2.00	Jun-22	3.50
Jul-16	-21.00	Jul-19	-16.00	Jul-22	-5.50
Aug-16	-36.50	Aug-19	-26.25	Aug-22	-19.00
Sep-16	-49.50	Sep-19	-40.00	Sep-22	-34.50
Oct-16	-51.00	Oct-19	-46.25	Oct-22	-43.00
Nov-16	-45.50	Nov-19	-49.75	Nov-22	-42.25
Dec-16	-10.35	Dec-19	-49.50	Dec-22	-34.00
Jan-17	0.00	Jan-20	-11.00	Jan-23	0.00
Feb-17	0.00	Feb-20	0.00	Feb-23	1.50
Mar-17	2.75	Mar-20	0.00	Mar-23	2.75
Apr-17	9.00	Apr-20	4.00	Apr-23	8.50
May-17	4.75	May-20	0.00	May-23	8.00
Jun-17	-4.00	Jun-20	-0.75	Jun-23	-2.75
Jul-17	-19.00	Jul-20	-8.50	Jul-23	-12.00
Aug-17	-32.00	Aug-20	-22.50	Aug-23	-24.75
Sep-17	-43.00	Sep-20	-34.00	Sep-23	-37.75
Oct-17	-50.50	Oct-20	-42.50	Oct-23	
Nov-17	-48.00	Nov-20	-45.25	Nov-23	
Dec-17	-11.50	Dec-20	-28.25	Dec-23	

Flow to Town (Gross Water Production) 2023

Billing Month	Start Date		End Date	Days in Period	Gross Flow to Town
Jan	13-Dec	to	9-Jan	28	6,934,000
Feb	10-Jan	to	7-Feb	29	6,653,000
Mar	8-Feb	to	4-Mar	25	5,829,000
Apr	5-Mar	to	2-Apr	29	7,012,000
May	3-Apr	to	2-May	30	7,746,000
Jun	3-May	to	31-May	29	9,315,000
Jul	1-Jun	to	30-Jun	30	11,385,000
Aug	1-Jul	to	31-Jul	31	13,850,000
Sep	1-Aug	to	31-Aug	31	13,308,000
Oct		to		-	-
Nov		to		-	-
Dec		to		-	-
				262	82,032,000

Rainfall - Trout Lake Water Treatment Facility

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

Sep	16.15	14.86	19.08	12.78	14.32	19.11	20.57	16.69	20.85	16.66
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	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	average (2015-Current)
Jan	3.97	2.17	1.60	5.10	3.87	7.32	4.36	4.49	1.57		3.83
Feb	2.95	4.83	2.99	3.80	1.76	5.34	3.41	1.38	2.18		3.18
Mar	3.62	2.88	3.27	1.48	0.87	1.25	1.18	2.64	1.99		2.13
Apr	0.51	0.75	2.20	3.10	1.61	1.38	1.12	2.25	1.71		1.63
May	0.30	0.48	1.61	0.07	1.29	1.49	0.40	1.70	0.70		0.89
Jun	0.14	1.22	0.75	0.72	0.61	1.25	0.69	1.70	0.81		0.88
Jul	0.36	0.32	0.15	0.18	0.75	0.86	0.00	0.68	0.43		0.41
Aug	0.94	0.11	0.11	0.01	0.84	0.68	0.30	0.09	0.43		0.39
Sep	1.28	1.40	0.71	1.27	2.74	2.34	3.76	0.01	0.88		1.60
Oct	3.53	4.80	4.28	2.23	3.33	3.39	4.34	3.78			3.71
Nov	6.19	3.47	4.32	4.32	2.1	4.68	11.31	3.67			5.01
Dec	5.26	4.02	3.83	4.26	3.63	6.81	4.59	3.55			4.49
Total	29.05	26.45	25.82	26.54	23.40	36.79	35.46	25.94	10.70	0.00	28.15

Cumulative thru

Sep	14.07	14.16	13.39	15.73	14.34	21.91	15.22	14.94	10.70	0.00
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Net Water Production - 2023

Amounts in Gallons

	Jan	Feb	Mar	Apr	May	Jun
Gross Production	6,934,000	6,653,000	5,829,000	7,012,000	7,746,000	9,315,000
3% meter loss	178,437	168,827	158,709	182,452	187,567	253,657
Flushing	65,195	113,030	35,200	110,500	72,000	163,300
SJC#3 FD use	5,000	5,000	5,000	5,000	34,300	29,300
Leaks	100,000	50,000	103,100	162,500	271,775	185,880
Other non-metered use	-					
Total other uses	(348,632)	(336,857)	(302,009)	(460,452)	(565,642)	(632,137)
Net production	6,585,368	6,316,143	5,526,991	6,551,548	7,180,358	8,682,863

	Jul	Aug	Sep	Oct	Nov	Dec
Gross Production	11,385,000	13,850,000	13,308,000	-	-	-
3% meter loss	302,844	393,866	366,747	-	-	-
Flushing	109,350	11,200	59,400			
SJC#3 FD use	5,000	5,000	5,000			
Leaks	112,700	100,000	183,080			
Other non-metered use						
Total other uses	(529,894)	(510,066)	(614,227)	-	-	-
Net production	10,855,106	13,339,934	12,693,773	-	-	-

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
2021							
	Jan-21	6,818,211	6,818,211	7,320,000	-501,789	7,320,000	236,129
	Feb-21	7,124,868	13,943,079	7,539,000	-414,132	14,859,000	269,250
	Mar-21	6,271,616	20,214,695	7,160,000	-888,384	22,019,000	230,968
	Apr-21	7,669,307	27,884,002	8,464,000	-794,693	30,483,000	282,133
	May-21	9,525,250	37,409,253	10,115,000	-589,750	40,598,000	326,290
	Jun-21	10,293,730	47,702,983	10,626,000	-332,270	51,224,000	354,200
	Jul-21	13,591,377	61,294,359	13,725,000	-133,623	64,949,000	442,742
	Aug-21	14,723,426	76,017,785	14,978,000	-254,574	79,927,000	483,161
	Sep-21	11,630,682	87,648,467	12,019,000	-388,318	91,946,000	400,633
Average	Oct-21	8,004,636	95,653,104	8,502,000	-497,364	100,448,000	274,258
Monthly Use	Nov-21	7,027,754	102,680,858	7,580,000	-552,246	108,028,000	252,667
9,093,646	Dec-21	6,442,893	109,123,751	6,975,000	-532,107	115,003,000	225,000
Year Total:	12	109,123,751	Cumulative	115,003,000	-5,879,249	Cumulative	314,786
2022							
	Jan-22	7,027,619	7,027,619	7,491,000	-463,381	7,491,000	241,645
	Feb-22	6,558,369	13,585,988	7,118,000	-559,631	14,609,000	254,214
	Mar-22	6,259,412	19,845,401	6,844,000	-584,588	21,453,000	220,774
	Apr-22	7,840,892	27,686,293	8,245,000	-404,108	29,698,000	274,833
	May-22	7,171,370	34,857,663	8,041,000	-869,630	37,739,000	259,387
	Jun-22	8,327,182	43,184,845	8,658,000	-330,818	46,397,000	288,600
	Jul-22	11,063,132	54,247,977	11,349,000	-285,868	57,746,000	366,097
	Aug-22	12,697,078	66,945,055	13,224,000	-526,922	70,970,000	426,581
	Sep-22	12,245,810	79,190,866	12,855,000	-609,190	83,825,000	428,500
Average	Oct-22	10,371,973	89,562,839	10,891,000	-519,027	94,716,000	351,323
Monthly Use	Nov-22	6,853,115	96,415,954	7,442,000	-588,885	102,158,000	248,067
8,587,165	Dec-22	6,630,021	103,045,975	7,372,000	-741,979	109,530,000	237,806
Year Total:	12	103,045,975	Cumulative	109,530,000	-6,484,025	Cumulative	299,819
2023							
	Jan-23	6,296,532	6,296,532	6,934,000	-637,468	6,934,000	223,677
	Feb-23	5,964,425	12,260,957	6,653,000	-688,575	13,587,000	237,607
	Mar-23	5,592,309	17,853,266	5,829,000	-236,691	19,416,000	188,032
	Apr-23	6,542,184	24,395,450	7,012,000	-469,816	26,428,000	233,733
	May-23	6,817,860	31,213,310	7,746,000	-928,140	34,174,000	249,871
	Jun-23	9,087,367	40,300,676	9,315,000	-227,633	43,489,000	310,500
	Jul-23	10,624,699	50,925,376	11,385,000	-760,301	54,874,000	367,258
	Aug-23	13,638,938	64,564,314	13,850,000	-211,062	68,724,000	446,774
	Sep-23	12,839,134	77,403,448	13,308,000	-468,866	82,032,000	443,600
Average	Oct-23	0	77,403,448	0	0	82,032,000	0
Monthly Use	Nov-23	0	77,403,448	0	0	82,032,000	0
8,600,383	Dec-23	0	77,403,448	0	0	82,032,000	0
Year Total:	9	77,403,448	Cumulative	82,032,000	-4,628,552	Cumulative	300,117
3 Year Average							
		Use 8,774,945 gal/month		Flow 9,289,848 gal/month			Daily Flow 304,907

Utilization of Sustainable Annual Water System Capacity

Period start: Oct-22

Period end: Sep-23

Sustainable Annual Yield (TFH Comprehensive Water System Plan Update, June, 2013, page 3-6)	205 million gallons
Annual use - 12 month period	108 million gallons
percent of Sustainable Annual Yield	53%
Exceeds Sustainable Yield?	No

Finish Water Flow to Town

Source: Water Treatment Facility Monthly Report

Revised reporting period per K. Anderson

Start/end dates may change monthly.

31 Days in reporting period.

August 1, 2023			August 31, 2023		
Day		Flow	Day		Flow
1		402	1		
2		438	2		
3		457	3		
4		461	4		
5		445	5		
6		452	6		
7		350	7		
8		446	8		
9		439	9		
10		437	10		
11		401	11		
12		444	12		
13		456	13		
14		436	14		
15		508	15		
16		527	16		
17		496	17		
18		433	18		
19		451	19		
20		450	20		
21		419	21		
22		471	22		
23		419	23		
24		415	24		
25		391	25		
26		419	26		
27		385	27		
28		438	28		
29		376	29		
30		357	30		
31		289	31		
31		13,308	0		-
			Total Days 31		
			Total Flow 13,308		

TOWN OF FRIDAY HARBOR

Water Consumption By Customer Class

2022	COM	IND	MFR	PA	SFR	Special	Other Uses	TOTAL	% of Use	Avg Daily Use
Jan	1,349,356	106,940	1,859,134	390,738	2,869,118	6,043	446,290	7,027,619	6.8%	226,697
Feb	1,044,244	99,730	1,679,131	523,331	2,437,867	16,677	757,389	6,558,369	6.4%	226,151
Mar	1,111,601	108,470	1,526,387	851,547	2,141,873	12,600	506,934	6,259,412	6.1%	201,917
Apr	1,482,269	129,010	1,761,595	896,903	2,560,915	5,281	1,004,919	7,840,892	7.6%	261,363
May	1,485,784	134,610	1,709,947	742,139	2,679,584	25,247	394,059	7,171,370	7.0%	231,335
Jun	1,771,620	188,788	1,755,772	912,234	3,102,069	17,907	578,792	8,327,182	8.1%	277,573
Jul	2,260,944	205,140	2,180,450	1,456,449	4,349,214	40,747	570,188	11,063,132	10.7%	356,875
Aug	2,511,136	275,399	2,223,989	1,730,159	5,306,988	50,230	599,177	12,697,078	12.3%	409,583
Sep	2,501,949	256,415	2,158,719	1,524,596	4,978,195	126,874	699,062	12,245,810	11.9%	408,194
Oct	2,129,765	206,125	1,966,126	1,031,142	4,334,714	48,306	655,795	10,371,973	10.1%	334,580
Nov	1,277,356	136,594	1,526,385	596,316	2,660,072	23,049	633,343	6,853,115	6.7%	228,437
Dec	1,150,611	86,957	1,635,626	523,905	2,603,272	63,882	565,768	6,630,021	6.4%	213,872
Total	20,076,635	1,934,178	21,983,261	11,179,459	40,023,881	436,843	7,411,718	103,045,975	100.0%	281,546
Average	1,673,053	161,182	1,831,938	931,622	3,335,323	36,404	617,643	Total Use		103,045,975
								Total Loss		6,484,025
% of Use	19.5%	1.9%	21.3%	10.8%	38.8%	0.4%	7.2%	Flow (Use+Loss)		109,530,000
% of Flow	18.3%	1.8%	20.1%	10.2%	36.5%	0.4%	6.8%	Loss as % of Flow		5.9%

2023	COM	IND	MFR	PA	SFR	Special	Other Uses	TOTAL	% of Use	Avg Daily Use
Jan	1,232,316	71,100	1,688,526	489,071	2,448,171	18,716	348,632	6,296,532	8.1%	203,114
Feb	1,124,538	85,828	1,586,772	465,051	2,356,600	8,779	336,857	5,964,425	7.7%	205,670
Mar	1,036,345	69,471	1,549,966	414,776	2,190,836	28,906	302,009	5,592,309	7.2%	180,397
Apr	1,318,786	90,816	1,651,296	561,162	2,429,922	29,750	460,452	6,542,184	8.5%	218,073
May	1,385,848	91,375	1,603,722	683,068	2,455,339	32,866	565,642	6,817,860	8.8%	219,931
Jun	1,724,169	122,758	1,923,778	1,007,855	3,633,464	43,206	632,137	9,087,367	11.7%	302,912
Jul	2,109,315	187,119	2,066,307	1,286,154	4,312,631	133,279	529,894	10,624,699	13.7%	342,732
Aug	2,762,059	250,100	2,442,009	1,879,772	5,581,112	213,820	510,066	13,638,938	17.6%	439,966
Sep	2,720,379	222,516	2,273,923	1,657,256	5,123,796	227,037	614,227	12,839,134	16.6%	427,971
Oct	-	-	-	-	-	-	-	-	0.0%	-
Nov	-	-	-	-	-	-	-	-	0.0%	-
Dec	-	-	-	-	-	-	-	-	0.0%	-
Total	15,413,755	1,191,083	16,786,299	8,444,165	30,531,871	736,359	4,299,916	77,403,448	100.0%	282,494
Average	1,712,639	132,343	1,865,144	938,241	3,392,430	81,818	358,326	Total Use		77,403,448
								Total Loss		6,450,287
% of Use	19.9%	1.5%	21.7%	10.9%	39.4%	1.0%	5.6%	Flow (Use+Loss)		82,032,000
% of Flow	18.8%	1.5%	20.5%	10.3%	37.2%	0.9%	5.2%	Loss as % of Flow		7.9%

Prevention of Wastewater Facility Overloading

Period start: Sep-22

Period end: Aug-23

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

Mar-23

Highest average monthly
loading in period

857

% of Design Criteria

54%

Exceeds Design Criteria?

No

Previous month's loading

686

Following month's loading

726

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-22

Highest average monthly flow
in period

0.2907

% of Design Criteria

42%

Exceeds Design Criteria?

No

Previous month's flow

0.2066

Following month's flow

0.2771

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

Aug-23

Highest average monthly
loading in period

706

% of Design Criteria

64%

Exceeds Design Criteria?

No

Previous month's loading

592

Following month's loading

598

Exceeds Planning Threshold for
3 consecutive months?

No