

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

www.fridayharbor.org

Period ending: Apr 2022

Data provided by
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Water Utility, Mike Deegan, Water System Mgr.
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Wastewater Utility, Don Reitan, Leadman
Solid Waste Utility, Dave Smith, Leadman

Analysis & Reports prepared by
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Water use MTD - accounts with sewer

sourceDate
/
4 / 2022

Sewer Class	Accounts	Gallons
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Location: IN

Mfr In/low Strength	63	696,186
Com In/lo Strength	164	807,052
Dot In/lo Strength	3	21,750
Ind In/hi Strength	1	51,860
Ind In/lo Strength	10	64,900
Lmf In/lo Strength	1	5,760
Com In/hi Strength	43	628,329
Mfr In/lo Strength	59	559,546
Mhp In/lo Strength	2	279,700
PA In/hi Strength	3	66,635
PA In/lo Strength	46	464,356
Sfr IN Town	638	1,723,972
Low Rate / IN Town	6	8,100

	1039	5,378,146
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Location: Out

UW Out/hi Strength	1	227,200
Mfr Out/lo Strength	1	18,660
Sfr Out of Town	4	13,030

	6	258,890
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Sewer Class	Accounts	Gallons
TOTAL	1045	5,637,036

Water - use MTD by Location

sourceDate

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4 / 2022

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

Water Class	Accounts	Gallons
Location: IN		
Spe	2	3,866
Sfr	659	1,755,242
PA	73	611,900
Mfr	128	1,634,885
Ind	13	125,220
Com	218	1,454,288
	1,093	5,585,401
Location: Out		
Spe	1	1,415
Sfr	355	766,283
PA	9	253,433
Mfr	5	91,750
Ind	1	3,790
Com	3	14,891
	374	1,131,562
TOTAL	1,467	6,716,963

Refuse - pickups by Class

sourceDate
/
4 / 2022

Location	Class	Pickups
IN	Sfr	2,375.0
	RefuseOnly	310.0
	PA	166.5
	Mfr	621.0
	Ind	19.0
	Com	3,625.5
		<hr/> 7,117.0
Out	Mfr	4.0
		<hr/> 4.0
TOTAL		<hr/> 7,121.0

Refuse - active accounts

sourceDate
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4 / 2022

Location	Refuse Type	Accounts
IN		
	Small Dumpster	43
	PA	41
	Medium Dumpste	53
	Large Dumpster	71
	Compactors	4
	Cans Low Rate	6
	Cans	886
		<hr/>
		1,104
Out		
	Large Dumpster	1
		<hr/>
		1
		<hr/>
	TOTAL	1,105

Recycle - pickups by Class

sourceDate
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4 / 2022

Location	Class	Pickups
IN	Sfr	764
	RefuseOnly	36
	PA	0
	Mfr	94
	Ind	6
	Com	8
		908
Out	Mfr	0
		0
TOTAL		908

Water - use MTD

sourceDate

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4 / 2022

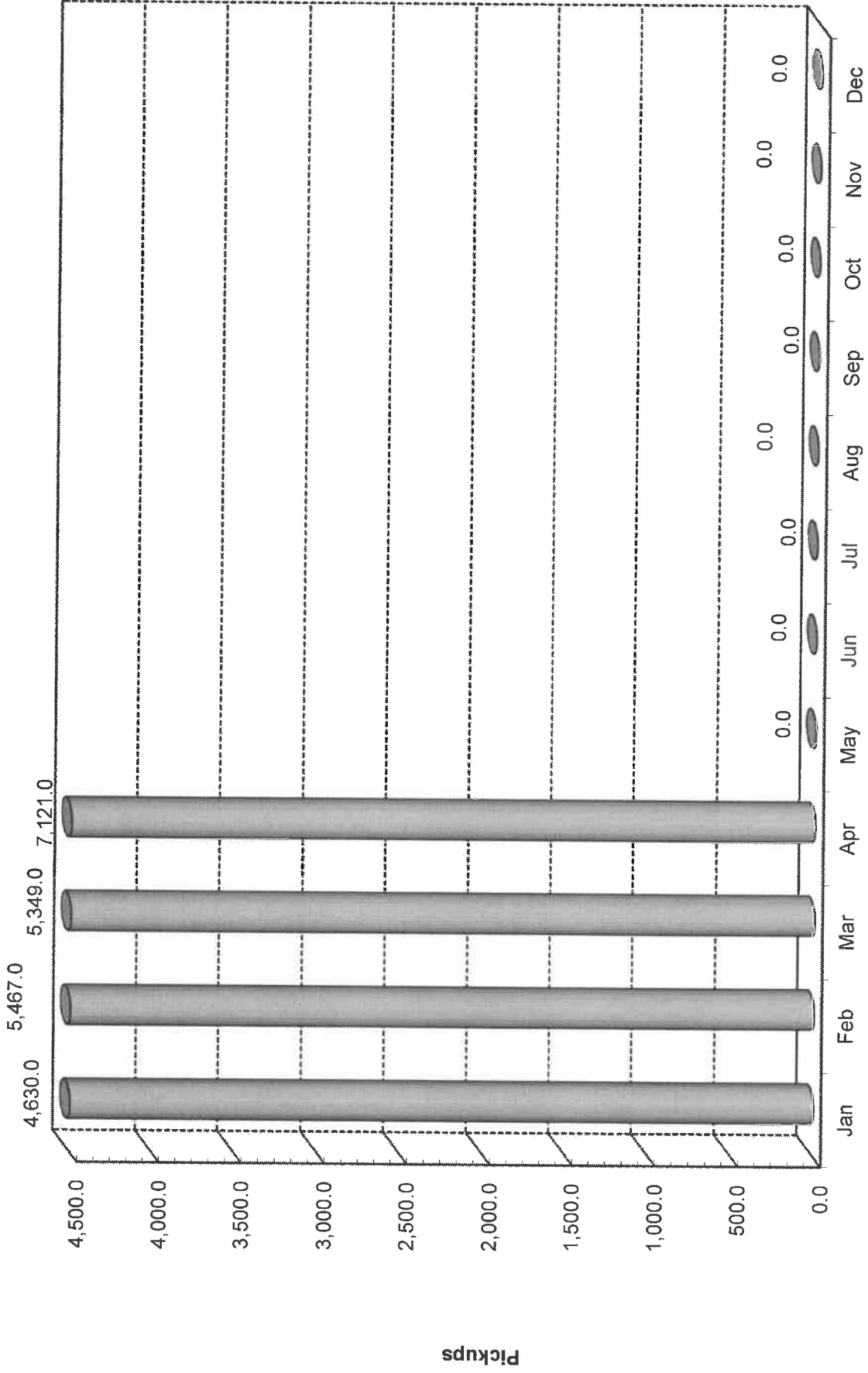
Spe=Special, Sfr=Single Family Residential, P.A= Public Authority, Mfr=Multi-family, Ind=Industrial, Com=Commerc

Water Class	Accounts	Gallons
Spe	3	5,281
Sfr	1014	2,521,525
PA	82	865,333
Mfr	133	1,726,635
Ind	14	129,010
Com	221	1,469,179
TOTAL	1,467	6,716,963

Refuse Pickups - 2022 YTD

Account Type	SFR	Refuse Only	P.A	MFR	IND	COM	Other	Total
Jan	2,031.0	264.5	107.0	566.0	17.5	1,639.0	5.0	4,630.0
Feb	1,828.0	277.0	170.0	523.0	23.0	2,640.5	5.5	5,467.0
Mar	1,776.0	213.0	145.5	497.5	20.0	2,692.0	5.0	5,349.0
Apr	2,375.0	310.0	166.5	621.0	19.0	3,625.5	4.0	7,121.0
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	8,010.0	1,064.5	589.0	2,207.5	79.5	10,597.0	19.5	22,567.0

Refuse Pickups by Month - 2022



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.

31 :count of days in reporting period.

	March 15, 2021 flow (total flow)		April 14, 2022 flow (total flow)
13		1	284
14		2	268
15	249	3	265
16	262	4	266
17	285	5	257
18	209	6	281
19	290	7	266
20	254	8	348
21	217	9	320
22	232	10	338
23	284	11	310
24	270	12	294
25	285	13	273
26	195	14	205
27	223	15	
28	213	16	
29	225		
30	269		
31	308		
days		days	
	17 4270		14 3975
TOTAL DAYS		31	
TOTAL FLOW		8245	
		1,000's gallons	

TOWN OF FRIDAY HARBOR

WATER CONSUMPTION (Use) BY CUSTOMER CLASS

source: utilTry08 & 13.mdb

2021

CLASS:	COM	IND	MFR	P.A	SFR	Special	other uses	TOTAL	% of Use	Avg. Daily Use
JAN	1,245,000	106,800	1,477,460	778,750	2,353,930	8,953	519,909	6,490,802	6.4%	209,381
FEB	1,472,570	103,550	1,708,290	877,370	2,579,290	31,010	586,762	7,358,842	7.2%	253,753
MAR	1,269,760	79,450	1,581,430	597,760	2,269,100	15,009	668,075	6,480,584	6.4%	209,051
APR	855,070	67,640	1,845,470	421,860	2,823,760	41,241	621,772	6,676,813	6.6%	222,560
MAY	979,450	83,580	1,960,930	673,160	3,435,470	102,507	630,453	7,865,550	7.7%	253,727
JUN	1,163,080	85,270	2,111,320	827,450	3,654,370	42,123	699,038	8,582,651	8.4%	286,088
JUL	1,887,081	227,720	2,157,360	1,425,030	4,208,750	64,034	730,079	10,700,054	10.5%	345,163
AUG	2,827,729	284,390	2,761,380	2,072,320	5,553,590	139,076	800,183	14,438,668	14.2%	465,763
SEP	2,207,410	222,810	2,194,420	1,543,250	4,211,890	112,212	579,688	11,071,680	10.9%	369,056
OCT	1,679,380	128,740	2,014,950	1,065,460	2,981,580	41,258	675,971	8,587,339	8.4%	277,011
NOV	1,265,230	97,420	1,931,840	618,010	2,785,370	30,930	557,304	7,286,104	7.1%	242,870
DEC	993,490	89,190	1,717,840	424,420	2,518,610	28,300	604,796	6,376,646	6.3%	205,698
TOTAL	17,845,250	1,576,560	23,462,690	11,324,840	39,375,710	656,653	7,674,030	101,915,733	100.0%	278,458
AVERAGE	1,487,104	131,380	1,955,224	943,737	3,281,309	54,721	639,503	8,492,978	-4,520,267 :LOSS for Year	
% of USE	17.5%	1.5%	23.0%	11.1%	38.6%	0.6%	7.5%	100.0%	106,436,000 :FLOW (Use+Loss)	
% of FLOW	16.8%	1.5%	22.0%	10.6%	37.0%	0.6%	7.2%	95.8%	-4.2%	Loss as % of Flow

2022

CLASS:	COM	IND	MFR	P.A	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	25.5%	226,697
FEB	1,044,244	99,730	1,679,131	523,331	2,437,867	16,677	757,389	6,558,369	23.8%	226,151
MAR	1,111,601	108,470	1,526,387	851,547	2,141,873	12,600	506,934	6,259,412	22.7%	201,917
APR	1,469,179	129,010	1,726,635	865,333	2,521,525	5,281	1,001,349	7,718,312	28.0%	257,277
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
TOTAL	4,974,380	444,150	6,791,287	2,630,949	9,970,383	40,601	2,711,963	27,563,713	100.0%	227,799
AVERAGE	1,243,595	111,038	1,697,822	657,737	2,492,596	10,150	225,997	27,563,713 :USE for Year	-2,134,288 :LOSS for Year	
% of USE	18.0%	1.6%	24.6%	9.5%	36.2%	0.1%	9.8%	100.0%	29,698,000 :FLOW (Use+Loss)	
% of FLOW	16.7%	1.5%	22.9%	8.9%	33.6%	0.1%	9.1%	92.8%	-7.2%	Loss as % of Flow

TOWN OF FRIDAY HARBOR

Net Water Production - 2022

amounts in gallons

	Jan	Feb	Mar	Apr	May	Jun
Gross Production for billing period from WTP Chemical Weights & Finish Flow to Town Report	7,491,000	7,118,000	6,844,000	8,245,000	0	0
3% meter loss	197,440	174,029	172,574	201,509	0	0
Flushing	143,850	107,560	173,980	99,840	0	0
SJC#3 FD use	5,000	5,000	15,000	655,000	0	0
Leaks	100,000	170,800	145,380	45,000	0	0
notes						
other non-metered use		300,000				
notes		lifecare fire main leak				
Additional water in storage						
notes						
Total other uses	-446,290	-757,389	-506,934	-1,007,349	0	0
Net production	7,044,710	6,360,611	6,337,066	7,243,651	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

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	
2020							
<i>gallons</i>	Jan-20	6,490,802		6,771,000	-280,198		218,419
	Feb-20	7,358,842	13,849,644	7,991,000	-632,158	14,762,000	285,393
	Mar-20	6,480,584	20,330,228	7,169,000	-688,416	21,931,000	231,258
	Apr-20	6,676,813	27,007,042	6,984,000	-307,187	28,915,000	232,800
	May-20	7,865,550	34,872,592	7,971,000	-105,450	36,886,000	257,129
	Jun-20	8,582,651	43,455,243	9,137,000	-554,349	46,023,000	304,567
	Jul-20	10,700,054	54,155,297	10,903,000	-202,946	56,926,000	351,710
	Aug-20	14,438,668	68,593,965	14,737,000	-298,332	71,663,000	475,387
	Sep-20	11,071,680	79,665,645	11,463,000	-391,320	83,126,000	382,100
Average	Oct-20	8,587,339	88,252,984	8,823,000	-235,661	91,949,000	284,613
Monthly Use	Nov-20	7,286,104	95,539,088	7,733,000	-446,896	99,682,000	257,767
8,492,978	Dec-20	6,376,646	101,915,733	6,754,000	-377,355	106,436,000	217,871
							-4,520,267
YEAR TOTAL:	12	108,722,907	Cumulative Metered/Other Use YTD	115,787,000	-7,064,093	Cumulative 3% meter loss	317,242
					Unaccounted		2,989,222
2021							
<i>gallons</i>	Jan-21	6,818,211		7,320,000	-501,789		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
							-5,879,249
YEAR TOTAL:	12	109,123,751	Cumulative Metered/Other Use YTD	115,003,000	-5,879,249	Cumulative 3% meter loss	314,786
					Unaccounted		2,827,251
2022							
<i>gallons</i>	Jan-22	7,027,619		7,491,000	-463,381		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	7,718,312	27,563,713	8,245,000	-526,688	29,698,000	274,833
	May-22	0	27,563,713	0	0	29,698,000	0
	Jun-22	0	27,563,713	0	0	29,698,000	0
	Jul-22	0	27,563,713	0	0	29,698,000	0
	Aug-22	0	27,563,713	0	0	29,698,000	0
	Sep-22	0	27,563,713	0	0	29,698,000	0
Average	Oct-22	0	27,563,713	0	0	29,698,000	0
Monthly Use	Nov-22	0	27,563,713	0	0	29,698,000	0
6,890,928	Dec-22	0	27,563,713	0	0	29,698,000	0
							-2,134,288
YEAR TOTAL:	4	27,563,713	Cumulative Metered/Other Use YTD	29,698,000	-2,134,288	Cumulative 3% meter loss	247,867
					Unaccounted		745,553

3 YEAR AVERAGES:	Use 4,867,379 :gal/month	Flow 9,303,143 :gal/month	Daily Flow 187,551	3 Year Loss as % of Flow 4.99%
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source: Monthly Water Treatment Plant Report & utility.mdb's
 3 yr cumulative flow 251,137,000
 3 yr unaccounted -12,533,803

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

DEC	26.82	30.92	28.11	23.46	28.12	29.98	29.24	31.20	27.04	28.03
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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	3.87	7.32	4.36	4.49		
FEB	2.95	4.83	2.99	3.80	1.76	5.34	3.41	1.38		
MAR	3.62	2.88	3.27	1.48	0.87	1.25	1.18	2.64		
APR	0.51	0.75	2.20	3.10	1.61	1.38	1.12	2.25		
MAY	0.30	0.48	1.61	0.07	1.29	1.49	0.40			
JUN	0.14	1.22	0.75	0.72	0.61	1.25	0.69			
JUL	0.36	0.32	0.15	0.18	0.75	0.86	0.00			
AUG	0.94	0.11	0.11	0.01	0.84	0.68	0.30			
SEP	1.28	1.40	0.71	1.27	2.74	2.34	3.76			
OCT	3.53	4.80	4.28	2.23	3.33	3.39	4.34			
NOV	6.19	3.47	4.32	4.32	2.1	4.68	11.31			
DEC	5.26	4.02	3.83	4.26	3.63	6.81	4.59			
Total	29.05	26.45	25.82	26.54	23.40	36.79	35.46	10.76	0.00	0.00

Cumulative thru

DEC	29.05	26.45	25.82	26.54	23.40	36.79	35.46	10.76	0.00	0.00
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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-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	
Jun-16	-11.00	Jun-19	-2.00	Jun-22	
Jul-16	-21.00	Jul-19	-16.00	Jul-22	
Aug-16	-36.50	Aug-19	-26.25	Aug-22	
Sep-16	-49.50	Sep-19	-40.00	Sep-22	
Oct-16	-51.00	Oct-19	-46.25	Oct-22	
Nov-16	-45.50	Nov-19	-49.75	Nov-22	
Dec-16	-10.35	Dec-19	-49.50	Dec-22	
Jan-17	0.00	Jan-20	-11.00	Jan-23	
Feb-17	0.00	Feb-20	0.00	Feb-23	
Mar-17	2.75	Mar-20	0.00	Mar-23	
Apr-17	9.00	Apr-20	4.00	Apr-23	
May-17	4.75	May-20	0.00	May-23	
Jun-17	-4.00	Jun-20	-0.75	Jun-23	
Jul-17	-19.00	Jul-20	-8.50	Jul-23	
Aug-17	-32.00	Aug-20	-22.50	Aug-23	
Sep-17	-43.00	Sep-20	-34.00	Sep-23	
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	

Utilization of Sustainable Annual Water System Capacity

Period start: May-21

Period end: Apr-22

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

114.2 million gallons
55.7%

Exceeds Sustainable Yield?

No

Prevention of Wastewater Facility Overloading

Period start: Jan-20
 Period end: Dec-20

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

Jan-19

Highest average monthly loading in period (pounds per day)

559

% of Design Criteria

35%

exceeds Design Criteria?

No

Previous month's loading
 Following month's loading

509

524

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

Jan-19

Highest average monthly flow in period (millions of gallons per day)

0.4088414

% of Design Criteria

59%

exceeds Design Criteria?

No

Previous month's flow
 Following month's flow

0.2541

0.2799

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

Jan-19

Highest average monthly loading in period (pounds per day)

488

% of Design Criteria

44%

exceeds Design Criteria?

No

Previous month's loading
 Following month's loading

319

245

exceeds Planning Threshold for 3 consecutive months?

No