



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

www.fridayharbor.org

Period ending: March 2021

Data provided by
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Water Utility, Mike Deegan, Water System Mgr.
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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Water - use MTD

sourceDate
/
3 / 2021

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

Water Class	Accounts	Gallons
Spe	3	26,197
Sfr	1001	2,288,939
PA	81	379,770
Mfr	131	1,663,991
Ind	14	88,180
Com	221	1,134,550
TOTAL	1,451	5,581,627

Water use MTD - accounts with sewer

sourceDate
/
3 / 2021

Sewer Class	Accounts	Gallons
Location: IN		
Mfr Out/lo Strength	1	14,330
Com In/lo Strength	164	657,242
Dot In/lo Strength	3	18,790
Ind In/hi Strength	1	27,950
Ind In/lo Strength	10	55,630
Lmf In/lo Strength	1	1,880
Low Rate / IN Town	6	7,870
Com In/hi Strength	43	447,628
Mfr In/low Strength	58	604,931
Mhp In/lo Strength	2	339,100
PA In/hi Strength	3	58,340
PA In/lo Strength	45	172,480
Sfr IN Town	626	1,528,839
Mfr In/lo Strength	62	584,460
	1025	4,519,470

Location: Out		
UW Out/hi Strength	1	54,300
Mfr Out/lo Strength	1	13,790
Sfr Out of Town	4	5,500
	6	73,590

Sewer Class	Accounts	Gallons
TOTAL	1031	4,593,060

Water - use MTD by Location

sourceDate
/
3 / 2021

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	24,797
Sfr	648	1,554,749
PA	72	298,820
Mfr	126	1,587,321
Ind	13	88,180
Com	218	1,124,890
	1,079	4,678,757
Location: Out		
Spe	1	1,400
Sfr	353	734,190
PA	9	80,950
Mfr	5	76,670
Ind	1	0
Com	3	9,660
	372	902,870
TOTAL	1,451	5,581,627

Refuse - pickups by Class

sourceDate
/
3 / 2021

Location	Class	Pickups
IN	Sfr	1,696.0
	RefuseOnly	191.0
	PA	107.0
	Mfr	531.5
	Ind	22.5
	Com	1,754.5
		4,302.5
Out	Mfr	7.0
		7.0
TOTAL		4,309.5

Refuse - active accounts

sourceDate
/
3 / 2021

Location	Refuse Type	Accounts
IN		
	Small Dumpster	45
	PA	42
	Medium Dumpste	50
	Large Dumpster	69
	Compactors	4
	Cans Low Rate	6
	Cans	862
		<hr/> 1,078
Out		
	Large Dumpster	1
		<hr/> 1
	TOTAL	1,079

Recycle - pickups by Class

sourceDate

/
3 / 2021

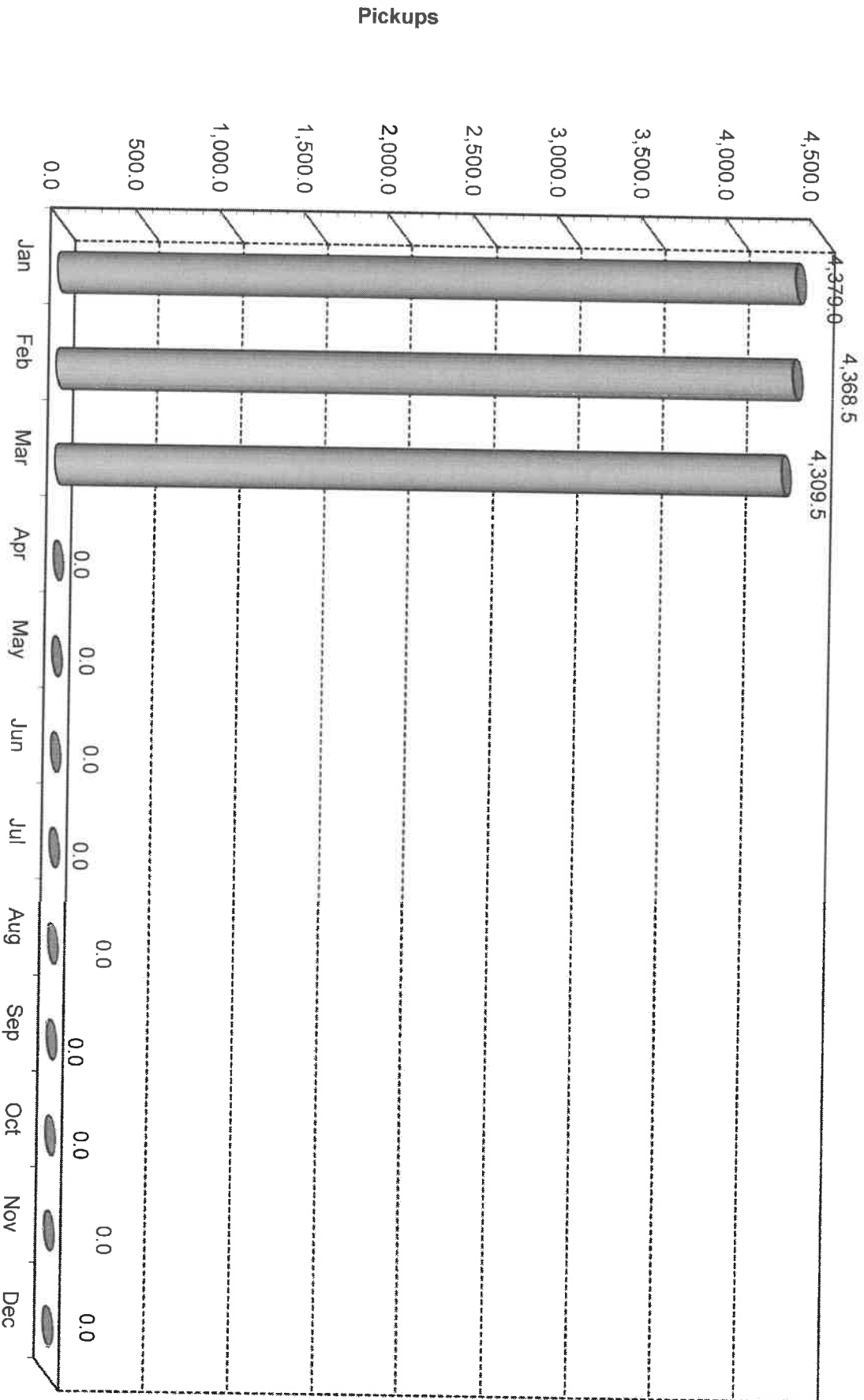
Location	Class	Pickups
IN	Sfr	770
	RefuseOnly	31
	PA	0
	Mfr	100
	Ind	2
	Com	4
		907
Out	Mfr	0
		0
	TOTAL	907

Town of Friday Harbor

Refuse Pickups - 2021 YTD

Account Type	SFR	Refuse Only	P.A	MFR	IND	COM	Other	Total
Jan	1,990.0	221.0	90.0	613.0	14.0	1,444.0	7.0	4,379.0
Feb	1,912.0	196.0	103.5	548.5	19.5	1,581.0	8.0	4,368.5
Mar	1,696.0	191.0	107.0	531.5	22.5	1,754.5	7.0	4,309.5
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	5,598.0	608.0	300.5	1,693.0	56.0	4,779.5	22.0	13,057.0

Refuse Pickups by Month - 2020



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.

28 :count of days in reporting period.

	February 15, 2021		March 14, 2021
day	flow (total flow)	day	flow (total flow)
13		1	207
14		2	283
15	237	3	244
16	213	4	223
17	226	5	257
18	280	6	306
19	289	7	277
20	288	8	198
21	256	9	257
22	239	10	244
23	276	11	240
24	244	12	273
25	280	13	284
26	263	14	233
27	272	15	
28	271	16	
29			
30			
31			
<hr/>		<hr/>	
days	14	days	14
	3634		3526
	TOTAL DAYS	<hr/> <hr/>	28
	TOTAL FLOW	<hr/> <hr/>	7160
			1,000's gallons

TOWN OF FRIDAY HARBOR

WATER CONSUMPTION (Use) BY CUSTOMER CLASS

source: utilTry08 & 13.mdb

2020

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	800,193	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	2,981,560	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 (User+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	

2021

CLASS:	COM	IND	MFR	P.A	SFR	Special	other uses	TOTAL	% of Use	Avg. Daily Use
JAN	943,778	86,800	1,925,507	421,580	2,857,180	14,797	568,569	6,818,211	18.2%	219,942
FEB	1,019,552	99,720	2,009,594	424,210	2,683,576	14,773	873,443	7,124,868	19.0%	245,685
MAR	1,134,550	88,180	1,663,991	379,770	2,288,939	26,197	689,989	6,271,616	16.8%	202,310
APR	1,530,264	123,740	2,047,854	564,700	2,798,290	22,363	582,096	7,669,307	20.5%	255,644
MAY	1,764,589	144,350	2,245,302	833,740	3,508,804	36,628	991,837	9,525,250	25.5%	307,266
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	6,392,733	542,790	9,892,248	2,624,000	14,136,789	114,758	3,705,935	37,409,253	100.0%	246,114
AVERAGE	1,278,547	108,558	1,978,450	524,800	2,827,358	22,952	308,828	3,117,438	-3,188,747 .LOSS for Year	
% of USE	17.1%	1.5%	26.4%	7.0%	37.8%	0.3%	9.9%	100.0%	40,598,000 .FLOW (User+Loss)	
% of FLOW	15.7%	1.3%	24.4%	6.5%	34.8%	0.3%	9.1%	92.1%	-7.9% Loss as % of Flow	

TOWN OF FRIDAY HARBOR

Net Water Production - 2021

amounts in gallons

	Jan	Feb	Mar	Apr	May	Jun
Gross Production for billing period from WTP Chemical Weights & Finish Flow to Town Report	7,320,000	7,539,000	7,160,000	8,464,000	10,115,000	0
3% meter loss	187,489	187,543	167,449	212,616	256,002	0
Flushing	172,750	555,250	405,350	101,100	208,700	0
SJC#3 FD use	5,000	5,000	5,000	5,000	30,400	
Leaks	203,330	125,650	112,190	263,380	496,735	
notes						
other non-metered use						
notes						
Additional water in storage						
notes						
Total other uses	-568,569	-873,443	-689,989	-582,096	-997,837	0
Net production	6,751,431	6,665,557	6,470,011	7,881,904	9,123,163	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	
2019							
<i>gallons</i>	Jan-19	6,193,133		6,982,000	-788,867		225,226
	Feb-19	7,413,239	13,606,372	7,865,000	-451,761	14,847,000	280,893
	Mar-19	6,065,311	19,671,683	7,468,000	-1,402,689	22,315,000	240,903
	Apr-19	7,852,517	27,524,200	8,604,000	-751,483	30,919,000	286,800
	May-19	8,660,158	36,184,358	9,522,000	-861,842	40,441,000	307,161
	Jun-19	12,028,022	48,212,379	12,495,000	-466,978	52,936,000	416,500
	Jul-19	12,121,969	60,334,348	12,159,000	-37,031	65,095,000	392,226
	Aug-19	13,865,988	74,200,336	13,977,000	-111,012	79,072,000	450,871
	Sep-19	12,170,164	86,370,500	12,723,000	-552,836	91,795,000	424,100
Average	Oct-19	8,415,461	94,785,961	8,868,000	-452,539	100,663,000	286,065
Monthly Use	Nov-19	7,281,193	102,067,154	7,708,000	-426,807	108,371,000	256,933
9,060,242	Dec-19	6,655,754	108,722,907	7,416,000	-760,246	115,787,000	239,226
							YTD
							Unaccounted
							as % of Flow
							8.25%
							-9,750,254
YEAR TOTAL:	12	108,722,907	Cumulative Metered/Other Use YTD	115,787,000	-7,064,093	Cumulative Unaccounted 3% meter loss	317,242
							2,989,222
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
							YTD
							Unaccounted
							as % of Flow
							4.25%
							-4,520,267
YEAR TOTAL:	12	101,915,733	Cumulative Metered/Other Use YTD	106,436,000	-4,520,267	Cumulative Unaccounted 3% meter loss	291,584
							2,827,251
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	7,868,000	-1,596,384	22,727,000	253,806
	Apr-21	0	20,214,695	0	0	22,727,000	0
	May-21	0	20,214,695	0	0	22,727,000	0
	Jun-21	0	20,214,695	0	0	22,727,000	0
	Jul-21	0	20,214,695	0	0	22,727,000	0
	Aug-21	0	20,214,695	0	0	22,727,000	0
	Sep-21	0	20,214,695	0	0	22,727,000	0
Average	Oct-21	0	20,214,695	0	0	22,727,000	0
Monthly Use	Nov-21	0	20,214,695	0	0	22,727,000	0
6,738,232	Dec-21	0	20,214,695	0	0	22,727,000	0
							YTD
							Unaccounted
							as % of Flow
							11.05%
							-2,512,305
YEAR TOTAL:	3	20,214,695	Cumulative Metered/Other Use YTD	22,727,000	-2,512,305	Cumulative Unaccounted 3% meter loss	253,062
							542,481

3 YEAR AVERAGES:	Use 4,775,467 :gal/month	Flow 9,072,222 :gal/month	Daily Flow 181,549	3 Year Loss as % of Flow 6.85%
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source: Monthly Water Treatment Plant Report & utility.mdb's
 3 yr cumulative flow 244,950,000
 3 yr unaccounted -16,782,826

Utilization of Sustainable Annual Water System Capacity

Period start: Apr-20

Period end: Mar-21

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

107.2 million gallons
52.3%

Exceeds Sustainable Yield?

No

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.

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	
May-15	0.00	May-18	1.50	May-21	
Jun-15	-13.00	Jun-18	-10.50	Jun-21	
Jul-15	-29.50	Jul-18	-29.50	Jul-21	
Aug-15	-42.25	Aug-18	-42.00	Aug-21	
Sep-15	-49.50	Sep-18	-50.00	Sep-21	
Oct-15	-54.50	Oct-18	-54.50	Oct-21	
Nov-15	-17.25	Nov-18	-55.50	Nov-21	
Dec-15	0.00	Dec-18	-26.00	Dec-21	
Jan-16	0.00	Jan-19	0.00	Jan-22	
Feb-16	0.00	Feb-19	0.00	Feb-22	
Mar-16	0.00	Mar-19	2.75	Mar-22	
Apr-16	6.00	Apr-19	2.75	Apr-22	
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	

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			
FEB	2.95	4.83	2.99	3.80	1.76	5.34	3.41			
MAR	3.62	2.88	3.27	1.48	0.87	1.25	1.18			
APR	0.51	0.75	2.20	3.10	1.61	1.38				
MAY	0.30	0.48	1.61	0.07	1.29	1.49				
JUN	0.14	1.22	0.75	0.72	0.61	1.25				
JUL	0.36	0.32	0.15	0.18	0.75	0.86				
AUG	0.94	0.11	0.11	0.01	0.84	0.68				
SEP	1.28	1.40	0.71	1.27	2.74	2.34				
OCT	3.53	4.80	4.28	2.23	3.33	3.39				
NOV	6.19	3.47	4.32	4.32	2.1	4.68				
DEC	5.26	4.02	3.83	4.26	3.63	6.81				
Total	29.05	26.45	25.82	26.54	23.40	36.79	8.95	0.00	0.00	0.00

Cumulative thru

DEC	29.05	26.45	25.82	26.54	23.40	36.79	8.95	0.00	0.00	0.00
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Prevention of Wastewater Facility Overloading

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

INFLUENT BOD LOADING (pounds per day)	AVG. EFFLUENT FLOW (millions of gallons per day)	SUSPENDED SOLIDS LOADING (pounds per day)
Design Criteria (06/06 NPDES Permit #WA-002358-2, pg 12, paragraph S4.A) max.month 1,600	Design Criteria (06/06 NPDES Permit #WA-002358-2, pg 12, paragraph S4.A) max.month 0.69000	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) 1,360	85% Capacity Planning Threshold (06/06 NPDES Permit #WA-002358-2, pg 12, paragraph S4.B.1) 0.58650	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	Month with highest average flow in period Jan-19	Month with highest average loading in period Jan-19
Highest average monthly loading in period (pounds per day) 559	Highest average monthly flow in period (millions of gallons per day) 0.4088414	Highest average monthly loading in period (pounds per day) 488
% of Design Criteria 35%	% of Design Criteria 59%	% of Design Criteria 44%
exceeds Design Criteria? No	exceeds Design Criteria? No	exceeds Design Criteria? No
Previous month's loading Following month's loading 509 524	Previous month's flow Following month's flow 0.2541 0.2799	Previous month's loading Following month's loading 319 245
exceeds Planning Threshold for 3 consecutive months? No	exceeds Planning Threshold for 3 consecutive months? No	exceeds Planning Threshold for 3 consecutive months? No

Account Number	WaterConsump	WaterClass	Name	MeterNumber
1150.17	24,797	NO Meter	Town of Friday Harbor	37220983
1642.3 ✓	0 14,600	NO Meter	Wilson, Gene/Kelle¹	57311019
3333	1,400	NO Meter	Sundstrom, Michael C	65177237
1313.1	0	NO Meter	SJ Baseball Boosters	77804342