



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

www.fridayharbor.org

Period ending: January 2020

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
Mike Greene, System Administrator

Water - use MTDsourceDate
1 / 2020

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

Water Class	Accounts	Gallons
Spe	2	8,953
Sfr	989	2,353,930
PA	77	778,750
Mfr	125	1,477,460
Ind	14	106,800
Com	221	1,245,000
TOTAL	1,428	5,970,893

Water use MTD - accounts with sewersourceDate
1 / 2020

Sewer Class	Accounts	Gallons
Location: IN		
Mfr In/low Strength	52	542,110
Com In/lo Strength	162	658,690
Dot In/lo Strength	3	24,430
Ind In/hi Strength	1	60,670
Ind In/lo Strength	10	40,980
Lmf In/lo Strength	1	1,590
Com In/hi Strength	44	538,010
Mfr In/lo Strength	63	547,390
Mhp In/lo Strength	2	281,500
PA In/hi Strength	3	54,180
PA In/lo Strength	42	192,720
Sfr IN Town	617	1,498,790
Low Rate / IN Town	4	20,050
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	1004	4,461,110
Location: Out		
UW Out/hi Strength	1	358,100
Mfr Out/lo Strength	1	6,620
Sfr Out of Town	4	8,140
	<hr/>	
	6	372,860
TOTAL	1010	4,833,970

Water - use MTD by LocationsourceDate
1 / 2020

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	8,953
Sfr	635	1,530,280
PA	68	330,350
Mfr	120	1,419,690
Ind	13	106,660
Com	218	1,233,280
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	1,056	4,629,213
Location: Out		
Sfr	354	823,650
PA	9	448,400
Mfr	5	57,770
Ind	1	140
Com	3	11,720
	<hr/>	
	372	1,341,680
TOTAL	1,428	5,970,893

Refuse - pickups by ClasssourceDate
1 / 2020

Location	Class	Pickups
IN	Sfr	1,273.0
	RefuseOnly	188.0
	PA	143.5
	Mfr	410.0
	Ind	15.5
	Com	1,578.5
		<hr/> 3,608.5
Out	Mfr	3.5
		<hr/> 3.5
	TOTAL	3,612.0

Refuse - active accountssourceDate
1 / 2020

Location	Refuse Type	Accounts
IN		
	Small Dumpster	47
	PA	39
	Medium Dumpste	54
	Large Dumpster	63
	Compactors	3
	Cans Low Rate	4
	Cans	835
		<hr/> 1,045
Out		
	Large Dumpster	1
		<hr/> 1
	TOTAL	1,046

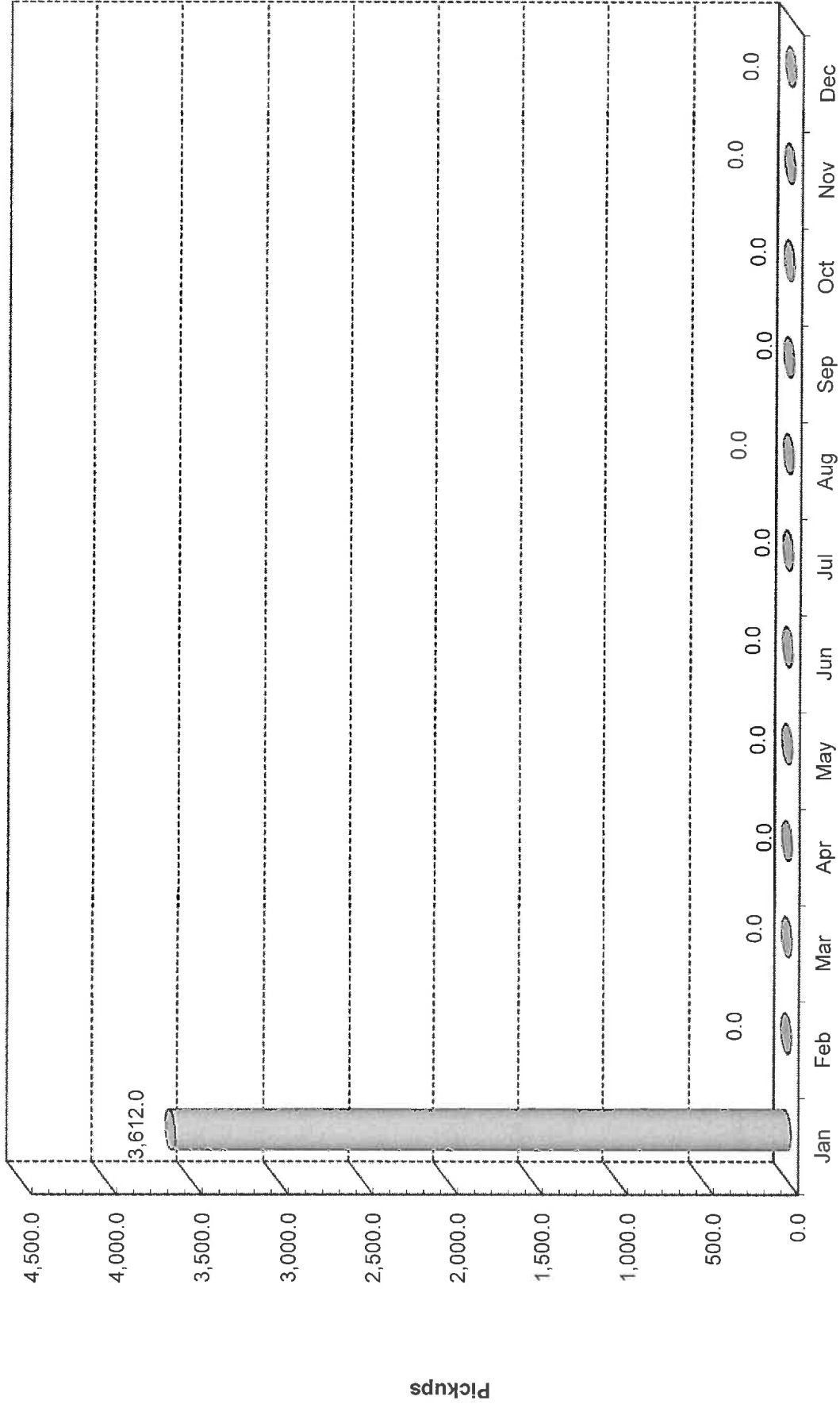
Recycle - pickups by ClasssourceDate
1 / 2020

Location	Class	Pickups
IN	Sfr	496
	RefuseOnly	14
	PA	0
	Mfr	45
	Ind	3
	Com	9
		<hr/> 567
Out	Mfr	0
		<hr/> 0
	TOTAL	567

Refuse Pickups - 2020 YTD

Account Type	SFR	Refuse Only	P.A	MFR	IND	COM	Other	Total
Jan	1,273.0	188.0	143.5	410.0	15.5	1,578.5	3.5	3,612.0
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	1,273.0	188.0	143.5	410.0	15.5	1,578.5	3.5	3,612.0

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.

	December 16, 2019 day flow (total flow)		January 12, 2020 day flow (total flow)	
	15		1	
	16	226	2	
	17	227	3	
	18	240	4	
	19	227	5	
	20	252	6	
	21	292	7	
	22	218	8	
	23	238	9	
	24	212	10	
	25	298	11	
	26	172	12	
	27	224	13	
	28	231	14	
	29	358	15	
	30	201	16	
	31	193		
	days	3809	days	2962
	16		12	
	TOTAL DAYS		28	
	TOTAL FLOW		6771	
			1,000's gallons	

Net Water Production - 2020

amounts in gallons

	Jan	Feb	Mar	Apr	May	Jun
Gross Production for billing period from WTP Chemical Weights & Finish Flow to Town Report	6,771,000	0	0	0	0	0
3% meter loss	179,127	0	0	0	0	0
Flushing	129,200					
SJC#3 FD use	5,000					
Leaks	206,582					
<i>notes</i>						
other non-metered use						
<i>notes</i>						
Additional water in storage						
<i>notes</i>						
<i>Total other uses</i>	-519,909	0	0	0	0	0
Net production	6,251,091	0	0	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						
Leaks						
<i>notes</i>						
other non-metered use						
<i>notes</i>						
<i>Total other uses</i>	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	
2018							
<i>gallons</i>	Jan-18	6,473,834	7,347,000	-873,166		237,000	
	Feb-18	6,318,823	12,792,658	-735,177	14,401,000	251,929	
	Mar-18	5,860,732	18,653,389	-705,268	20,967,000	211,806	
	Apr-18	7,416,815	26,070,204	-839,185	29,223,000	275,200	
	May-18	7,687,108	33,757,312	-244,892	37,155,000	255,871	
	Jun-18	11,419,190	45,176,502	-519,810	49,094,000	397,967	
	Jul-18	13,151,864	58,328,366	-1,029,136	63,275,000	457,452	YTD
	Aug-18	14,508,241	72,836,607	-855,759	78,639,000	495,613	Unaccounted
	Sep-18	12,454,526	85,291,133	-1,314,474	92,408,000	458,967	as % of Flow
Average	Oct-18	8,624,468	93,915,601	-551,532	101,584,000	296,000	5.10%
Monthly Use	Nov-18	7,401,706	101,317,307	-920,294	109,906,000	277,400	
9,031,729	Dec-18	7,063,439	108,380,746	-1,161,561	118,131,000	265,323	-5,914,508
YEAR TOTAL:	12	108,899,956	Cumulative Metered/Other Use YTD	118,131,000	-9,750,254	Cumulative Unaccounted 3% meter loss	323,377 2,915,731
2019							
<i>gallons</i>	Jan-19	6,193,133	6,982,000	-788,867		225,226	
	Feb-19	7,413,239	13,606,372	-451,761	14,847,000	280,893	
	Mar-19	6,065,311	19,671,683	-1,402,689	22,315,000	240,903	
	Apr-19	7,852,517	27,524,200	-751,483	30,919,000	286,800	
	May-19	8,660,158	36,184,358	-861,842	40,441,000	307,161	
	Jun-19	12,028,022	48,212,379	-466,978	52,936,000	416,500	
	Jul-19	12,121,969	60,334,348	-37,031	65,095,000	392,226	YTD
	Aug-19	13,865,988	74,200,336	-111,012	79,072,000	450,871	Unaccounted
	Sep-19	12,170,164	86,370,500	-552,836	91,795,000	424,100	as % of Flow
Average	Oct-19	8,415,461	94,785,961	-452,539	100,663,000	286,065	8.25%
Monthly Use	Nov-19	7,281,193	102,067,154	-426,807	108,371,000	256,933	
9,060,242	Dec-19	6,655,754	108,722,907	-760,246	115,787,000	239,226	-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	0	6,490,802	0	6,771,000	0	
	Mar-20	0	6,490,802	0	6,771,000	0	
	Apr-20	0	6,490,802	0	6,771,000	0	
	May-20	0	6,490,802	0	6,771,000	0	
	Jun-20	0	6,490,802	0	6,771,000	0	
	Jul-20	0	6,490,802	0	6,771,000	0	YTD
	Aug-20	0	6,490,802	0	6,771,000	0	Unaccounted
	Sep-20	0	6,490,802	0	6,771,000	0	as % of Flow
Average	Oct-20	0	6,490,802	0	6,771,000	0	4.14%
Monthly Use	Nov-20	0	6,490,802	0	6,771,000	0	
6,490,802	Dec-20	0	6,490,802	0	6,771,000	0	-280,198
YEAR TOTAL:	1	6,490,802	Cumulative Metered/Other Use YTD	6,771,000	-280,198	Cumulative Unaccounted 3% meter loss	218,419 179,127

3 YEAR	Use	Flow	Daily Flow	3 Year Loss
AVERAGES:	4,615,630 :gal/month	9,627,560 :gal/month	178,554	as % of Flow 6.62%

source: Monthly Water Treatment Plant Report & utility.mdb's 3 yr cumulative flow 240,689,000
3 yr unaccounted -15,944,960

Utilization of Sustainable Annual Water System Capacity

Period start: Feb-19

Period end: Jan-20

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

122.6 million gallons
59.8%

exceeds Sustainable Yield?

No

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				
FEB	2.95	4.83	2.99	3.80	1.76					
MAR	3.62	2.88	3.27	1.48	0.87					
APR	0.51	0.75	2.20	3.10	1.61					
MAY	0.30	0.48	1.61	0.07	1.29					
JUN	0.14	1.22	0.75	0.72	0.61					
JUL	0.36	0.32	0.15	0.18	0.75					
AUG	0.94	0.11	0.11	0.01	0.84					
SEP	1.28	1.40	0.71	1.27	2.74					
OCT	3.53	4.80	4.28	2.23	3.33					
NOV	6.19	3.47	4.32	4.32	2.1					
DEC	5.26	4.02	3.83	4.26	3.63					
Total	29.05	26.45	25.82	26.54	23.40	7.32	0.00	0.00	0.00	0.00

Cumulative thru

DEC	29.05	26.45	25.82	26.54	23.40	7.32	0.00	0.00	0.00	0.00
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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	0.00
Mar-12	0.00	Mar-15	0.00	Mar-18	8.75
Apr-12	8.00	Apr-15	6.50	Apr-18	8.25
May-12	0.00	May-15	0.00	May-18	1.50
Jun-12	7.00	Jun-15	-13.00	Jun-18	-10.50
Jul-12	-19.00	Jul-15	-29.50	Jul-18	-29.50
Aug-12	-32.75	Aug-15	-42.25	Aug-18	-42.00
Sep-12	-45.00	Sep-15	-49.50	Sep-18	-50.00
Oct-12	-48.00	Oct-15	-54.50	Oct-18	-54.50
Nov-12	-24.25	Nov-15	-17.25	Nov-18	-55.50
Dec-12	0.00	Dec-15	0.00	Dec-18	-26.00
Jan-13	0.00	Jan-16	0.00	Jan-19	0.00
Feb-13	0.00	Feb-16	0.00	Feb-19	0.00
Mar-13	0.00	Mar-16	0.00	Mar-19	2.75
Apr-13	8.50	Apr-16	6.00	Apr-19	2.75
May-13	3.75	May-16	-2.50	May-19	-0.75
Jun-13	-3.75	Jun-16	-11.00	Jun-19	-2.00
Jul-13	-21.00	Jul-16	-21.00	Jul-19	-16.00
Aug-13	-34.25	Aug-16	-36.50	Aug-19	-26.25
Sep-13	-39.25	Sep-16	-49.50	Sep-19	-40.00
Oct-13	-43.50	Oct-16	-51.00	Oct-19	-46.25
Nov-13	-44.75	Nov-16	-45.50	Nov-19	-49.75
Dec-13	-26.00	Dec-16	-10.35	Dec-19	-49.50
Jan-14	0.00	Jan-17	0.00	Jan-20	-11.00
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	

Prevention of Wastewater Facility Overloading

Period start: Jan-19
 Period end: Dec-19

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 509	Previous month's flow 0.2541	Previous month's loading 319
Following month's loading 524	Following month's flow 0.2799	Following month's loading 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