



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

www.fridayharbor.org

Period ending: July 2022

Data provided by
Jesse Douglas-Seitz, PE, Public Works Director
Water Utility, Taylor Musburger Water System Mgr.
Frank Byrne, Water Treatment Plant Operator
Wastewater Utility, Don Reitan, Leadman
Solid Waste Utility, Dave Smith, Leadman

Analysis & Reports prepared by
Reid Ledgerwood, Lead Finance Clerk

Water - use MTDsourceDate
/
7 / 2022

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

Water Class	Accounts	Gallons
Spe	2	40,747
Sfr	1018	3,890,384
PA	83	1,393,429
Mfr	133	1,983,010
Ind	14	196,110
Com	221	2,220,454
TOTAL	1,471	9,724,134

Water - use MTD by LocationsourceDate
/
7 / 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	40,747
Sfr	662	2,288,637
PA	74	1,071,831
Mfr	128	1,720,818
Ind	13	191,428
Com	218	2,206,826
	<hr/> 1,097	<hr/> 7,520,287
Location: Out		
Sfr	356	1,601,747
PA	9	321,598
Mfr	5	262,192
Ind	1	4,682
Com	3	13,628
	<hr/> 374	<hr/> 2,203,847
TOTAL	1,471	9,724,134

Water use MTD - accounts with sewersourceDate
/
7 / 2022

Sewer Class	Accounts	Gallons
Location: IN		
Mfr In/low Strength	56	539,850
Com In/lo Strength	164	1,244,802
Dot In/lo Strength	3	52,810
Ind In/hi Strength	1	55,760
Ind In/lo Strength	10	124,490
Lmf In/lo Strength	1	3,337
Com In/hi Strength	43	910,476
Mfr In/lo Strength	66	839,023
Mhp In/lo Strength	2	257,800
PA In/hi Strength	3	162,793
PA In/lo Strength	46	526,421
Sfr IN Town	640	2,246,441
Low Rate / IN Town	6	9,348
	<hr/> 1041	<hr/> 6,973,351
Location: Out		
UW Out/hi Strength	1	227,000
Mfr Out/lo Strength	1	5,376
Sfr Out of Town	4	17,330
	<hr/> 6	<hr/> 249,706

Sewer Class	Accounts	Gallons
TOTAL	1047	7,223,057

Refuse - pickups by ClasssourceDate
/
7 / 2022

Location	Class	Pickups
IN	Sfr	2,867.0
	RefuseOnly	452.5
	PA	75.5
	Mfr	645.0
	Ind	23.0
	Com	4,202.5
		8,265.5
Out	Mfr	8.5
		8.5
	TOTAL	8,274.0

Refuse - active accounts

sourceDate

/
7 / 2022

Location	Refuse Type	Accounts
IN		
	Small Dumpster	41
	PA	41
	Medium Dumpste	56
	Large Dumpster	72
	Compactors	4
	Cans Low Rate	6
	Cans	888
		1,108
Out		
	Large Dumpster	1
		1
	TOTAL	1,109

Recycle - pickups by ClasssourceDate
/
7 / 2022

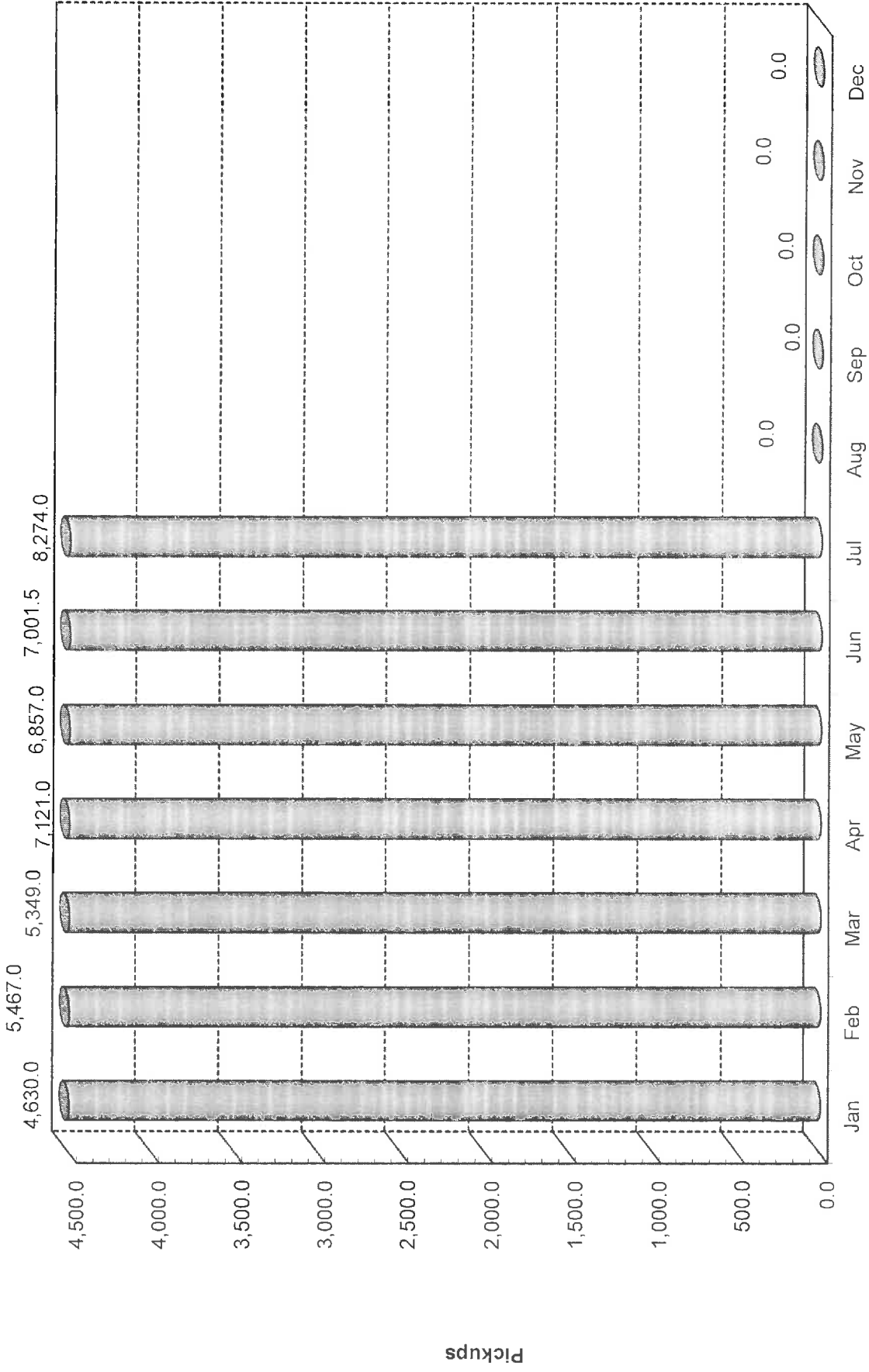
Location	Class	Pickups
IN	Sfr	1,032
	RefuseOnly	39
	PA	0
	Mfr	113
	Ind	35
	Com	8
		1,227
Out	Mfr	0
		0
	TOTAL	1,227

Town of Friday Harbor

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	2,255.0	297.0	191.0	556.5	26.0	3,525.0	6.5	6,857.0
Jun	2,417.0	347.5	140.5	589.0	21.0	3,480.0	6.5	7,001.5
Jul	2,867.0	452.5	75.5	645.0	23.0	4,202.5	8.5	8,274.0
Aug								0.0
Sep								0.0
Oct								0.0
Nov								0.0
Dec								0.0
YTD	15,549.0	2,161.5	996.0	3,998.0	149.5	21,804.5	41.0	44,699.5

Refuse Pickups by Month - 2022



TOWN OF FRIDAY HARBOR

Flow to Town (Gross Water Production) 2020

Revised reporting period: per K. Anderson 03/06/17
to reflect meter reading dates (?).

Reporting (meter reading) period			days in period	Gross flow to Town	Flow to Town (millions)
<i>from WTP Chem. Wts. & Finish Flow to Town Report</i>	<i>to</i>				
15-Dec	<i>to</i>	13-Jan	30	7,491,000	7,491
14-Jan	<i>to</i>	14-Feb	32	7,118,000	7,118
15-Feb	<i>to</i>	14-Mar	28	6,844,000	6,844
15-Mar	<i>to</i>	14-Apr	31	8,245,000	8,245
15-Apr	<i>to</i>	15-May	31	8,041,000	8,041
16-May	<i>to</i>	14-Jun	30	8,658,000	8,658
15-Jun	<i>to</i>	14-Jul	30	11,349,000	11,349
	<i>to</i>		0	0	
	<i>to</i>		0	0	
	<i>to</i>		0	0	
	<i>to</i>		0	0	
	<i>to</i>		0	0	
	<i>to</i>		0	0	
			212	57,746,000	57746.0

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	101,915,733	USE for Year	-4,520,267
% of USE	17.5%	1.5%	23.0%	11.1%	38.6%	0.6%	7.5%	100.0%	100.0%	106,436,000
% of FLOW	16.8%	1.5%	22.0%	10.6%	37.0%	0.6%	7.2%	95.8%	95.8%	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	13.3%	226,697
FEB	1,044,244	99,730	1,679,131	523,331	2,437,867	16,677	757,389	6,558,369	12.4%	226,151
MAR	1,111,601	108,470	1,526,387	851,547	2,141,873	12,600	506,934	6,259,412	11.8%	201,917
APR	1,469,179	129,010	1,726,635	865,333	2,521,525	5,281	1,001,349	7,718,312	14.6%	257,277
MAY	1,482,764	134,610	1,709,947	720,239	2,679,584	25,247	393,312	7,145,703	13.5%	230,507
JUN	1,769,020	187,488	1,741,932	872,884	2,721,554	18,268	565,674	7,876,820	14.9%	262,561
JUL	2,220,454	196,110	1,983,010	1,393,429	3,890,384	40,747	547,124	10,271,258	19.4%	331,331
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	10,446,618	962,358	12,226,176	5,617,501	19,261,905	124,863	4,218,073	52,857,494	100.0%	248,157
AVERAGE	1,492,374	137,480	1,746,597	802,500	2,751,701	17,838	351,506	52,857,494	USE for Year	-4,888,506
% of USE	19.8%	1.8%	23.1%	10.6%	36.4%	0.2%	8.0%	100.0%	100.0%	57,746,000
% of FLOW	18.1%	1.7%	21.2%	9.7%	33.4%	0.2%	7.3%	91.5%	91.5%	LOSS as % of Flow

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	8,041,000	8,658,000
3% meter loss	197,440	174,029	172,574	201,509	202,572	219,334
Flushing	143,850	107,560	173,980	99,840	108,440	185,990
SJC#3 FD use	5,000	5,000	15,000	655,000	32,300	5,000
Leaks	100,000	170,800	145,380	45,000	50,000	155,350
notes						
other non-metered use						
notes						
Additional water in storage		300,000				
notes						
lifecare fire main leak						
Total other uses	-446,290	-757,389	-506,934	-1,001,349	-393,312	-565,674
Net production	7,044,710	6,360,611	6,337,066	7,243,651	7,647,688	8,092,326

	Jul	Aug	Sep	Oct	Nov	Dec
Gross Production for billing period from WTP Chemical Weights & Finish Flow to Town Report	11,349,000	0	0	0	0	0
3% meter loss	291,724	0	0	0	0	0
Flushing	40,000					
SJC#3 FD use	5,000					
Leaks	210,400					
notes						
other non-metered use						
notes						
Total other uses	-547,124	0	0	0	0	0
Net production	10,801,876	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	YTD	
Aug-20	14,438,668	68,593,965	14,737,000	-298,332	71,663,000	475,387	Unaccounted	
Sep-20	11,071,680	79,665,645	11,463,000	-391,320	83,126,000	382,100	as % of Flow	
Average	Oct-20	8,587,339	88,252,984	8,823,000	-235,661	91,949,000	284,613	4.25%
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 Unaccounted 3% meter loss	317,242	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	YTD	
Aug-21	14,723,426	76,017,785	14,978,000	-254,574	79,927,000	483,161	Unaccounted	
Sep-21	11,630,682	87,648,467	12,019,000	-388,318	91,946,000	400,633	as % of Flow	
Average	Oct-21	8,004,636	95,653,104	8,502,000	-497,364	100,448,000	274,258	5.11%
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 Unaccounted 3% meter loss	314,786	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	7,145,703	34,709,415	8,041,000	-895,297	37,739,000	259,387		
Jun-22	7,876,820	42,586,236	8,658,000	-781,180	46,397,000	288,600		
Jul-22	10,271,258	52,857,494	11,349,000	-1,077,742	57,746,000	366,097	YTD	
Aug-22	0	52,857,494	0	0	57,746,000	0	Unaccounted	
Sep-22	0	52,857,494	0	0	57,746,000	0	as % of Flow	
Average	Oct-22	0	52,857,494	0	0	57,746,000	0	8.47%
Monthly Use	Nov-22	0	52,857,494	0	0	57,746,000	0	
7,551,071	Dec-22	0	52,857,494	0	0	57,746,000	0	-4,888,506
YEAR TOTAL:	7	52,857,494	Cumulative Metered/Other Use YTD	57,746,000	-4,888,506	Cumulative Unaccounted 3% meter loss	272,222	1,459,183

3 YEAR AVERAGES:	Use 5,212,271 :gal/month	Flow 9,307,613 :gal/month	Daily Flow 195,669	3 Year Loss as % of Flow 5.48%
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source: Monthly Water Treatment Plant Report & utility.mdb's 3 yr cumulative flow 279,185,000
 3 yr unaccounted -15,288,022

Utilization of Sustainable Annual Water System Capacity

Period start: Aug-21

Period end: Jul-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

107.8 million gallons
52.6%

Exceeds Sustainable Yield?

No

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	
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	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	1.70		
JUN	0.14	1.22	0.75	0.72	0.61	1.25	0.69	1.70		
JUL	0.36	0.32	0.15	0.18	0.75	0.86	0.00	0.68		
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	14.84	0.00	0.00

Cumulative thru

DEC	29.05	26.45	25.82	26.54	23.40	36.79	35.46	14.84	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