

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

www.fridayharbor.org

Period ending: June 2021

Data provided by
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Wastewater Utility, Don Reitan, Leadman
Solid Waste Utility, Dave Smith, Leadman

Analysis & Reports prepared by
Mike Greene, System Administrator

Water - use MTD

sourceDate
/
6 / 2021

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

Water Class	Accounts	Gallons
Spe	3	40,167
Sfr	1010	4,054,951
PA	81	1,122,340
Mfr	131	2,157,495
Ind	14	168,720
Com	221	2,087,531
TOTAL	1,460	9,631,204

Sewer Class	Accounts	Gallons
TOTAL	1039	7,447,185

Water - use MTD by Location

sourceDate
/
6 / 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	40,167
Sfr	657	2,448,271
PA	72	979,810
Mfr	126	1,933,495
Ind	13	166,170
Com	218	2,074,691
	1,088	7,642,604
Location: Out		
Spe	1	0
Sfr	353	1,606,680
PA	9	142,530
Mfr	5	224,000
Ind	1	2,550
Com	3	12,840
	372	1,988,600
TOTAL	1,460	9,631,204

Refuse - pickups by Class

sourceDate
/
6 / 2021

Location	Class	Pickups
IN	Sfr	2,169.0
	RefuseOnly	294.0
	PA	114.0
	Mfr	618.0
	Ind	19.0
	Com	2,735.5
		5,949.5
Out	Mfr	10.0
		10.0
TOTAL		5,959.5

Refuse - active accounts

sourceDate
/
6 / 2021

Location	Refuse Type	Accounts
IN		
	Small Dumpster	43
	PA	42
	Medium Dumpste	54
	Large Dumpster	70
	Compactors	4
	Cans Low Rate	6
	Cans	862
		<hr/> 1,081
Out		
	Large Dumpster	1
		<hr/> 1
	TOTAL	1,082

Recycle - pickups by Class

sourceDate
/
6 / 2021

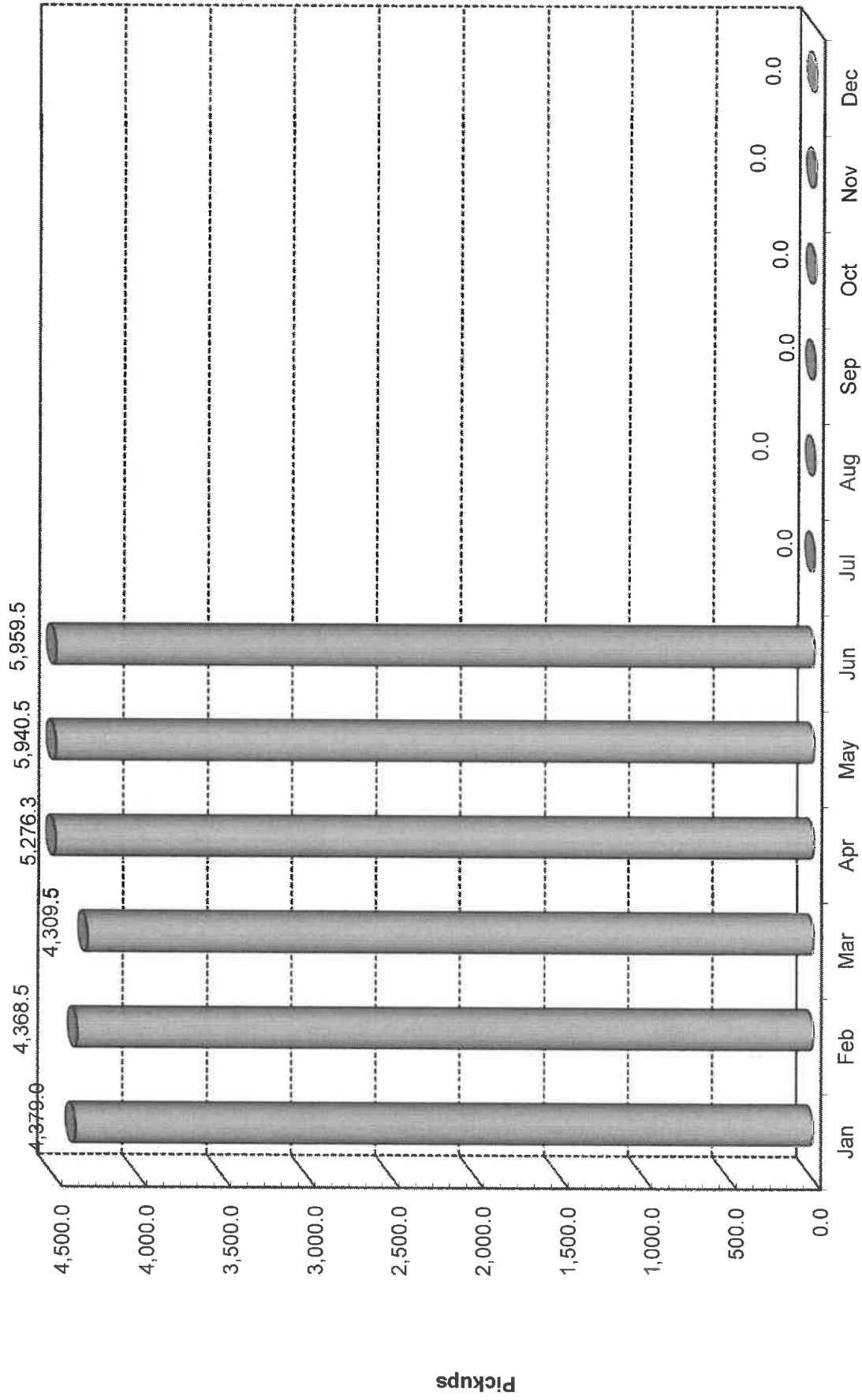
Location	Class	Pickups
IN	Sfr	855
	RefuseOnly	31
	PA	0
	Mfr	103
	Ind	2
	Com	8
		999
Out	Mfr	0
		0
TOTAL		999

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	2,038.0	234.5	131.5	571.0	20.8	2,273.5	7.0	5,276.3
May	2,440.0	244.0	121.0	641.5	19.0	2,466.0	9.0	5,940.5
Jun	2,169.0	294.0	114.0	618.0	19.0	2,735.5	10.0	5,959.5
Jul								0.0
Aug								0.0
Sep								0.0
Oct								0.0
Nov								0.0
Dec								0.0
YTD	12,245.0	1,380.5	667.0	3,523.5	114.8	12,254.5	48.0	30,233.3

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.

29 :count of days in reporting period.

	May 17, 2021		June 14, 2021
day	flow (total flow)	day	flow (total flow)
13		1	429
14		2	435
15		3	262
16		4	411
17	363	5	389
18	291	6	368
19	326	7	313
20	372	8	383
21	387	9	332
22	414	10	386
23	316	11	352
24	311	12	362
25	418	13	385
26	233	14	327
27	354	15	
28	355	16	
29	443		
30	468		
31	441		
<hr style="border-top: 1px solid black;"/>		<hr style="border-top: 1px solid black;"/>	
days	5492	days	5134
		<hr style="border-top: 3px double black;"/>	
TOTAL DAYS		29	
		<hr style="border-top: 3px double black;"/>	
TOTAL FLOW			10626
			1,000's gallons

TOWN OF FRIDAY HARBOR

WATER CONSUMPTION (Use) BY CUSTOMER CLASS

source: utilTrn08 & 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	800,183	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%	278,456
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	14.3%	219,942
FEB	1,019,552	99,720	2,009,594	424,210	2,683,576	14,773	873,443	7,124,868	14.9%	245,685
MAR	1,134,550	88,180	1,663,991	379,770	2,288,939	26,197	689,989	6,271,616	13.1%	202,310
APR	1,530,264	123,740	2,047,854	564,700	2,798,290	22,363	582,096	7,669,307	16.1%	255,644
MAY	1,764,589	144,350	2,245,302	833,740	3,508,804	36,628	991,837	9,525,250	20.0%	307,266
JUN	2,087,531	168,720	2,157,495	1,122,340	4,054,951	40,167	662,526	10,293,730	21.6%	343,124
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	8,480,264	711,510	12,049,743	3,746,340	18,191,740	154,925	4,368,461	47,702,983	100.0%	262,104
AVERAGE	1,413,377	118,585	2,008,291	624,390	3,031,957	25,821	364,038	3,975,249	-3,521,017 :LOSS for Year	
% of USE	17.8%	1.5%	25.3%	7.9%	38.1%	0.3%	9.2%	100.0%	51,224,000 :FLOW (User+Loss)	
% of FLOW	16.6%	1.4%	23.5%	7.3%	35.5%	0.3%	8.5%	93.1%	-6.9% 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	10,626,000
3% meter loss	187,489	187,543	167,449	212,616	256,002	288,936
Flushing	172,750	555,250	405,350	101,100	208,700	116,850
SJC#3 FD use	5,000	5,000	5,000	5,000	30,400	10,000
Leaks	203,330	125,650	112,190	263,380	496,735	246,740
notes						
other non-metered use						
notes						
Additional water in storage						
notes						
Total other uses	-568,569	-873,443	-689,989	-582,096	-991,837	-662,526
Net production	6,751,431	6,665,557	6,470,011	7,881,904	9,123,163	9,963,474

	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	YTD
Aug-19	13,865,988	74,200,336	13,977,000	-111,012	79,072,000	450,871	Unaccounted
Sep-19	12,170,164	86,370,500	12,723,000	-552,836	91,795,000	424,100	as % of Flow
Average	8,415,461	94,785,961	8,868,000	-452,539	100,663,000	286,065	8.25%
Monthly Use	7,281,193	102,067,154	7,708,000	-426,807	108,371,000	256,933	
9,060,242	6,655,754	108,722,907	7,416,000	-760,246	115,787,000	239,226	-9,750,254
YEAR TOTAL:	12	108,722,907	Cumulative	115,787,000	-7,064,093	Cumulative	317,242
		Metered/Other	Use YTD		Unaccounted	3% meter loss	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	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	8,587,339	88,252,984	8,823,000	-235,661	91,949,000	284,613	4.25%
Monthly Use	7,286,104	95,539,088	7,733,000	-446,896	99,682,000	257,767	
8,492,978	6,376,646	101,915,733	6,754,000	-377,355	106,436,000	217,871	-4,520,267
YEAR TOTAL:	12	101,915,733	Cumulative	106,436,000	-4,520,267	Cumulative	291,584
		Metered/Other	Use YTD		Unaccounted	3% meter loss	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	7,160,000	-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	0	47,702,983	0	0	51,224,000	0	YTD
Aug-21	0	47,702,983	0	0	51,224,000	0	Unaccounted
Sep-21	0	47,702,983	0	0	51,224,000	0	as % of Flow
Average	0	47,702,983	0	0	51,224,000	0	6.87%
Monthly Use	0	47,702,983	0	0	51,224,000	0	
7,950,497	0	47,702,983	0	0	51,224,000	0	-3,521,017
YEAR TOTAL:	6	47,702,983	Cumulative	51,224,000	-3,521,017	Cumulative	283,162
		Metered/Other	Use YTD		Unaccounted	3% meter loss	1,300,036

3 YEAR	Use	Flow	Daily Flow	3 Year Loss
AVERAGES:	5,214,196 :gal/month	9,114,900 :gal/month	191,582	as % of Flow 6.51%

source: Monthly Water Treatment Plant Report & utility.mdb's
 3 yr cumulative flow 273,447,000
 3 yr unaccounted -17,791,538

Utilization of Sustainable Annual Water System Capacity

Period start: Jul-20

Period end: Jun-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

111.6 million gallons
54.5%

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.

<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	
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	1.12			
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				
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	11.16	0.00	0.00	0.00

Cumulative thru

DEC	29.05	26.45	25.82	26.54	23.40	36.79	11.16	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 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