



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

www.fridayharbor.org

Period ending: June 2022

Data provided by
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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
Mike Greene, System Administrator

Water - use MTDsourceDate
/
6 / 2022

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

Water Class	Accounts	Gallons
Spe	3	18,268
Sfr	1015	2,721,554
PA	83	872,884
Mfr	133	1,741,932
Ind	14	187,488
Com	221	1,769,020
TOTAL	1,469	7,311,146

Water use MTD - accounts with sewersourceDate
/
6 / 2022

Sewer Class	Accounts	Gallons
Location: IN		
Mfr In/low Strength	57	546,939
Com In/lo Strength	164	964,381
Dot In/lo Strength	3	44,530
Ind In/hi Strength	1	101,740
Ind In/lo Strength	10	74,400
Lmf In/lo Strength	1	4,660
Com In/hi Strength	43	752,495
Mfr In/lo Strength	65	728,867
Mhp In/lo Strength	2	253,700
PA In/hi Strength	3	105,760
PA In/lo Strength	46	407,251
Sfr IN Town	638	1,972,626
Low Rate / IN Town	6	7,801
	1039	5,965,150

Location: Out		
UW Out/hi Strength	1	147,200
Mfr Out/lo Strength	1	22,130
Sfr Out of Town	4	11,982
	6	181,312

Sewer Class	Accounts	Gallons
TOTAL	1045	6,146,462

Water - use MTD by Location

sourceDate
/
6 / 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	17,907
Sfr	660	2,006,029
PA	74	673,462
Mfr	128	1,612,484
Ind	13	186,450
Com	218	1,754,613
	1,095	6,250,945
Location: Out		
Spe	1	361
Sfr	355	715,525
PA	9	199,422
Mfr	5	129,448
Ind	1	1,038
Com	3	14,407
	374	1,060,201
TOTAL	1,469	7,311,146

Refuse - pickups by Class

sourceDate
/
6 / 2022

Location	Class	Pickups
IN	Sfr	2,417.0
	RefuseOnly	347.5
	PA	140.5
	Mfr	589.0
	Ind	21.0
	Com	3,480.0
		6,995.0
Out	Mfr	6.5
		6.5
TOTAL		7,001.5

Refuse - active accounts

sourceDate

/
6 / 2022

Location	Refuse Type	Accounts
IN		
	Small Dumpster	41
	PA	41
	Medium Dumpste	54
	Large Dumpster	73
	Compactors	4
	Cans Low Rate	6
	Cans	886
		<hr/> 1,105
Out		
	Large Dumpster	1
		<hr/> 1
	TOTAL	1,106

Recycle - pickups by Class

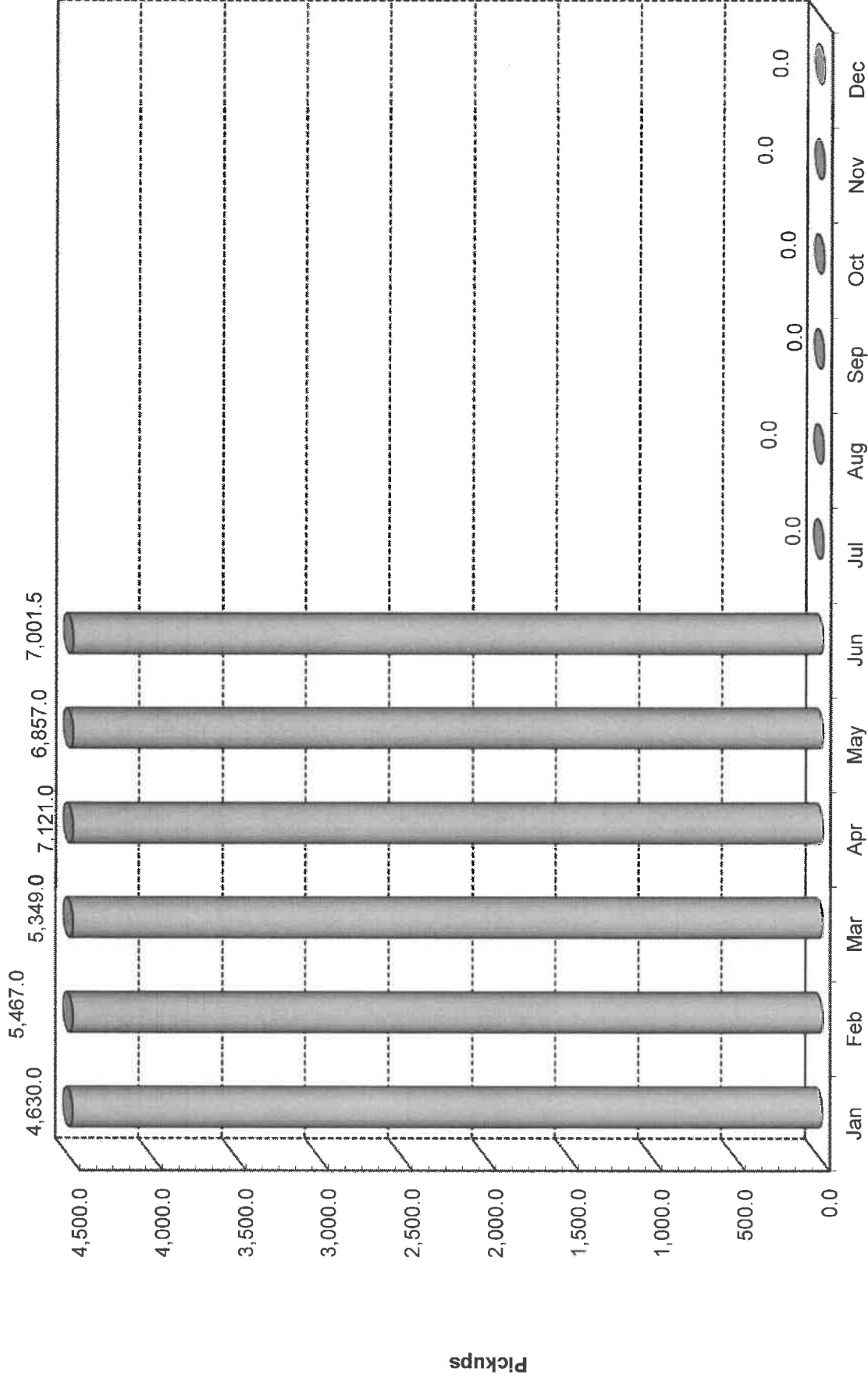
sourceDate
/
6 / 2022

Location	Class	Pickups
IN	Sfr	805
	RefuseOnly	29
	PA	0
	Mfr	106
	Ind	7
	Com	4
		<hr/> 951
Out	Mfr	0
		<hr/> 0
TOTAL		951

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								0.0
Aug								0.0
Sep								0.0
Oct								0.0
Nov								0.0
Dec								0.0
YTD	12,682.0	1,709.0	920.5	3,353.0	126.5	17,602.0	32.5	36,425.5

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.

30 :count of days in reporting period.

day	May 16, 2022 flow (total flow)	day	June 14, 2022 flow (total flow)
13		1	372
14		2	274
15		3	267
16	216	4	339
17	233	5	274
18	286	6	259
19	282	7	314
20	265	8	283
21	296	9	254
22	290	10	299
23	305	11	329
24	271	12	305
25	340	13	267
26	299	14	334
27	260	15	
28	297	16	
29	291		
30	297		
31	260		
<hr/>		<hr/>	
days	16	days	14
	4488		4170
TOTAL DAYS		30	
TOTAL FLOW		8658	
		1,000's gallons	

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)
from WTP Chem. Wts. & Finish Flow to Town Report					
15-Dec	to	13-Jan	30	7,491,000	7,491
14-Jan	to	14-Feb	32	7,118,000	7,118
15-Feb	to	14-Mar	28	6,844,000	6,844
15-Mar	to	14-Apr	31	8,245,000	8,245
15-Apr	to	15-May	31	8,041,000	8,041
16-May	to	14-Jun	30	8,658,000	8,658
	to		0	0	
	to		0	0	
	to		0	0	
	to		0	0	
	to		0	0	
	to		0	0	
	to		0	0	
			182	46,397,000	46397.0

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
other non-metered use						
Additional water in storage		300,000				
<i>lifecare fire main leak</i>						
<i>Total other uses</i>	<i>-446,290</i>	<i>-757,389</i>	<i>-506,934</i>	<i>-1,001,349</i>	<i>-393,312</i>	<i>-565,674</i>
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	0	0	0	0	0	0
3% meter loss	0	0	0	0	0	0
Flushing						
SJC#3 FD use						
Leaks						
other non-metered use						
<i>Total other uses</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Net production	0	0	0	0	0	0

TOWN OF FRIDAY HARBOR

WATER CONSUMPTION (Use) BY CUSTOMER CLASS

source: utilTny08 & 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	656,663	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	16.5%	226,697
FEB	1,044,244	99,730	1,679,131	523,331	2,437,867	16,677	757,389	6,558,369	15.4%	226,151
MAR	1,111,601	108,470	1,526,387	851,547	2,141,873	12,600	506,934	6,259,412	14.7%	201,917
APR	1,468,179	129,010	1,726,635	865,333	2,521,525	5,281	1,001,349	7,718,312	18.1%	257,277
MAY	1,482,764	134,610	1,709,947	720,239	2,679,584	25,247	393,312	7,145,703	16.8%	230,507
JUN	1,769,020	187,488	1,741,932	872,884	2,721,554	18,268	565,674	7,876,820	18.5%	262,561
JUL									0.0%	0
AUG									0.0%	0
SEP									0.0%	0
OCT									0.0%	0
NOV									0.0%	0
DEC									0.0%	0
TOTAL	8,226,164	766,248	10,243,166	4,224,072	15,371,521	84,116	3,670,949	42,586,236	100.0%	233,990
AVERAGE	1,371,027	127,708	1,707,194	704,012	2,561,920	14,019	305,912	3,548,853	-3,810,764	:LOSS for Year
% of USE	19.3%	1.8%	24.1%	9.9%	36.1%	0.2%	8.6%	100.0%	46,397,000	:FLOW (Use+Loss)
% of FLOW	17.7%	1.7%	22.1%	9.1%	33.1%	0.2%	7.9%	91.8%	-8.2%	Loss as % of Flow

Utilization of Sustainable Annual Water System Capacity

Period start: Jul-21
Period end: Jun-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

110.2 million gallons
53.7%

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.

<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	7.75
Jun-16	-11.00	Jun-19	-2.00	Jun-22	3.50
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

sources: 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	JAN
FEB	1.01	1.61	2.83	1.78	1.50	1.24	2.74	3.38	1.32	4.22	FEB
MAR	2.33	0.91	3.70	1.99	2.05	3.30	3.37	3.09	3.63	3.88	MAR
APR	1.37	2.23	1.49	1.32	2.07	1.47	2.96	1.91	2.70	1.94	APR
MAY	1.08	1.24	0.78	1.26	1.69	2.09	3.07	1.09	2.20	1.05	MAY
JUN	1.63	0.56	1.03	1.16	0.35	1.10	0.68	2.60	0.83	0.52	JUN
JUL	0.70	0.26	1.56	0.21	0.45	0.11	0.84	1.04	0.00	0.36	JUL
AUG	1.60	0.03	0.64	1.88	0.81	0.72	0.29	0.00	0.95	0.49	AUG
SEP	0.94	1.15	0.54	0.84	1.58	4.35	0.72	0.12	5.08	1.34	SEP
OCT	3.50	1.89	2.12	1.83	5.24	1.38	2.29	6.40	1.42	4.00	OCT
NOV	4.28	10.43	2.32	5.15	6.76	2.94	4.50	3.32	2.49	4.00	NOV
DEC	2.89	3.74	4.59	3.70	1.80	6.55	1.88	4.79	2.28	3.37	DEC
Total	26.82	30.92	28.11	23.46	28.12	29.98	29.24	31.20	27.04	28.03	Total

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		JAN
FEB	2.95	4.83	2.99	3.80	1.76	5.34	3.41	1.38		FEB
MAR	3.62	2.88	3.27	1.48	0.87	1.25	1.18	2.64		MAR
APR	0.51	0.75	2.20	3.10	1.61	1.38	1.12	2.25		APR
MAY	0.30	0.48	1.61	0.07	1.29	1.49	0.40	1.70		MAY
JUN	0.14	1.22	0.75	0.72	0.61	1.25	0.69	1.70		JUN
JUL	0.36	0.32	0.15	0.18	0.75	0.86	0.00			JUL
AUG	0.94	0.11	0.11	0.01	0.84	0.68	0.30			AUG
SEP	1.28	1.40	0.71	1.27	2.74	2.34	3.76			SEP
OCT	3.53	4.80	4.28	2.23	3.33	3.39	4.34			OCT
NOV	6.19	3.47	4.32	4.32	2.1	4.68	11.31			NOV
DEC	5.26	4.02	3.83	4.26	3.63	6.81	4.59			DEC
Total	29.05	26.45	25.82	26.54	23.40	36.79	35.46	14.16	0.00	0.00

Cumulative thru

DEC	29.05	26.45	25.82	26.54	23.40	36.79	35.46	14.16	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