



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

www.fridayharbor.org

Period ending: February 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

Feb 2020 Monthly Regular 2/27/2020 8:43 AM

Title	Count	Amount
Newly Issued Statements	0	
Billing Run Issued Statements	1513	\$487,428.93
Billing Run Arrears	1513	\$10,896.84
Billing Run Grand Total	1513	\$498,325.77
Billing Run Copy Bills	203	
Billing Run Paperless Accounts	300	
Billing Run Metered Water Usage	6804670	
Billing Run Estimated Water Usage		
Billing Run Water Base Fee	1437	\$103,671.29
Billing Run Water Consumption	1439	\$57,109.93
Billing Run Sewer Base Fee	1011	\$132,648.07
Billing Run Sewer Over	385	\$63,866.35
Billing Run Refuse Base Fee	1048	\$4,705.52
Billing Run Refuse Extra	982	\$0.00
Billing Run Refuse Pickup	1812	\$81,592.02
Billing Run Storm Water	1000	\$43,287.75
Billing Run Duplicate Billing Fee	197	\$398.00
Billing Run Sub- Meter Fee	30	\$150.00

Water - use MTDsourceDate
2 / 2020

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

Water Class	Accounts	Gallons
Spe	3	31,010
Sfr	989	2,579,290
PA	77	877,370
Mfr	127	1,708,290
Ind	14	103,550
Com	221	1,472,570
TOTAL	1,431	6,772,080

Water use MTD - accounts with sewersourceDate
2 / 2020

Sewer Class	Accounts	Gallons
Location: IN		
Mfr In/low Strength	58	617,490
Com In/lo Strength	161	818,850
Dot In/lo Strength	3	27,860
Ind In/hi Strength	1	43,340
Ind In/lo Strength	10	51,810
Lmf In/lo Strength	1	3,320
Com In/hi Strength	45	575,180
Mfr In/lo Strength	59	625,530
Mhp In/lo Strength	2	334,600
PA In/hi Strength	3	72,430
PA In/lo Strength	42	245,040
Sfr IN Town	617	1,765,860
Low Rate / IN Town	5	12,070
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	1007	5,193,380
Location: Out		
UW Out/hi Strength	1	273,800
Mfr Out/lo Strength	1	7,760
Sfr Out of Town	4	6,620
	<hr/>	
	6	288,180
TOTAL	1013	5,481,560

Water - use MTD by LocationsourceDate
2 / 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	30,120
Sfr	636	1,792,490
PA	68	426,100
Mfr	122	1,633,130
Ind	13	101,350
Com	218	1,459,610
	<hr/>	
	1,059	5,442,800
Location: Out		
Spe	1	890
Sfr	353	786,800
PA	9	451,270
Mfr	5	75,160
Ind	1	2,200
Com	3	12,960
	<hr/>	
	372	1,329,280
TOTAL	1,431	6,772,080

Refuse - pickups by ClasssourceDate
2 / 2020

Location	Class	Pickups
IN	Sfr	1,593.0
	RefuseOnly	239.5
	PA	166.0
	Mfr	473.0
	Ind	21.5
	Com	1,943.0
		<hr/> 4,436.0
Out	Mfr	3.0
		<hr/> 3.0
TOTAL		4,439.0

Refuse - active accountssourceDate
2 / 2020

Location	Refuse Type	Accounts
IN		
	Small Dumpster	47
	PA	38
	Medium Dumpste	54
	Large Dumpster	63
	Compactors	4
	Cans Low Rate	5
	Cans	837
		<hr/> 1,048
Out		
	Large Dumpster	1
		<hr/> 1
	TOTAL	1,049

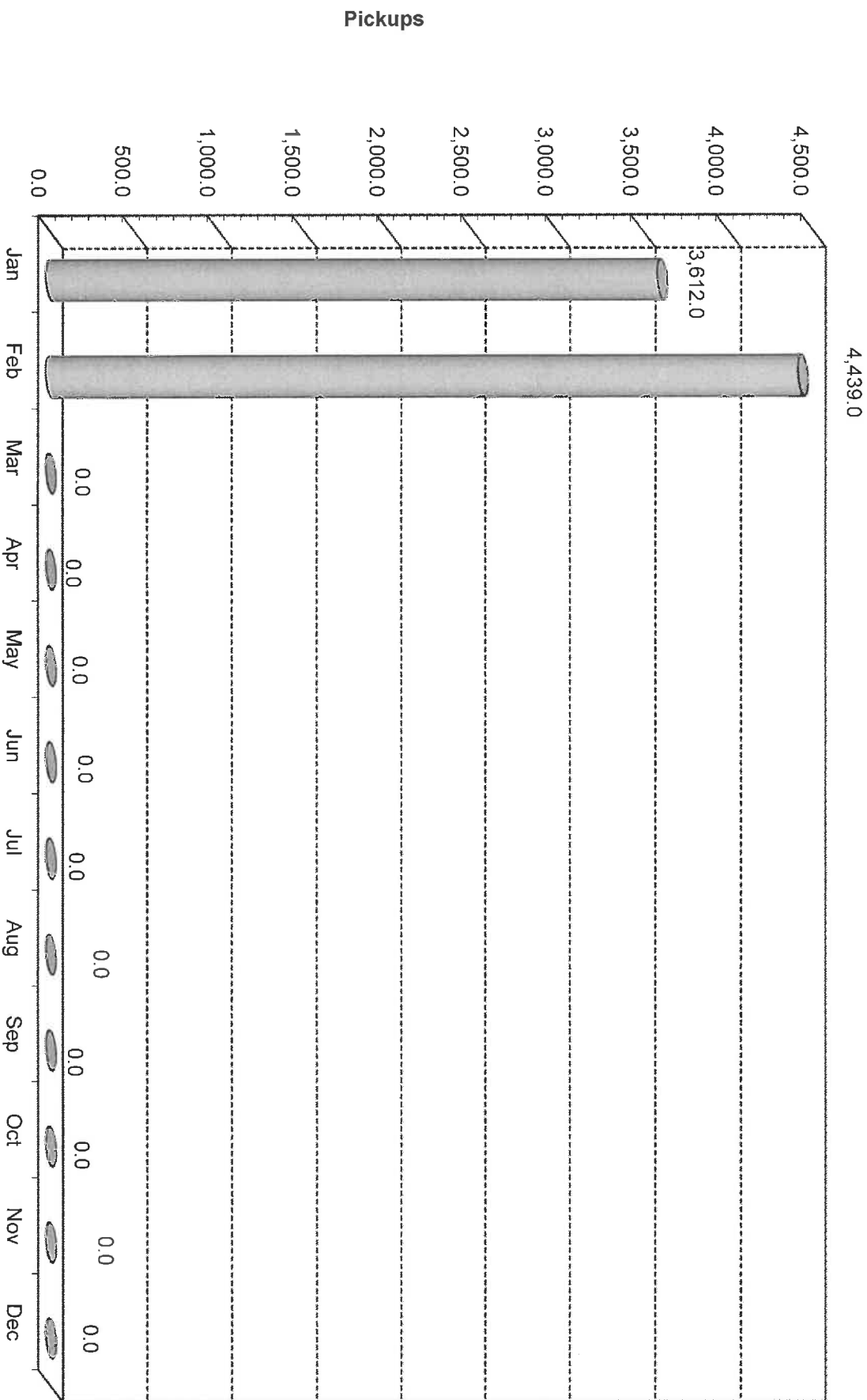
Recycle - pickups by ClasssourceDate
2 / 2020

Location	Class	Pickups
IN	Sfr	656
	RefuseOnly	23
	PA	0
	Mfr	67
	Ind	1
	Com	5
		<hr/> 752
Out	Mfr	0
		<hr/> 0
	TOTAL	752

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	1,593.0	239.5	166.0	473.0	21.5	1,943.0	3.0	4,439.0
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	2,866.0	427.5	309.5	883.0	37.0	3,521.5	6.5	8,051.0

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.

32 :count of days in reporting period.

January 13, 2020		February 13, 2020	
day	flow (total flow)	day	flow (total flow)
13	213	1	284
14	240	2	245
15	249	3	178
16	287	4	229
17	433	5	220
18	338	6	213
19	237	7	237
20	210	8	256
21	277	9	231
22	337	10	244
23	239	11	224
24	294	12	232
25	238	13	245
26	242	14	
27	225	15	
28	216	16	
29	238		
30	220		
31	220		
<hr/>		<hr/>	
days		days	
19	4953	13	3038
<hr/>		<hr/>	
TOTAL DAYS		32	
<hr/>		<hr/>	
TOTAL FLOW		7991	
		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

<i>from WTP Chem. Wts. & Finish Flow to Town Report</i>			<i>days in period</i>	<i>Gross flow to Town</i>	<i>Flow to Town (millions)</i>
16-Dec	to	12-Jan	28	6,771,000	6,771
			0	7,991,000	7,991
			0	0	0
			0	0	0
			0	0	0
			0	0	0
			0	0	0
			0	0	0
			0	0	0
			0	0	0
			0	0	0
			0	0	0
			28	14,762,000	14762.0

TOWN OF FRIDAY HARBOR

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	7,991,000	0	0	0	0
3% meter loss	179,127	203,162	0	0	0	0
Flushing	129,200	155,800				
SJC#3 FD use	5,000	5,000				
Leaks	206,582	222,800				
notes						
other non-metered use						
notes						
Additional water in storage						
notes						
Total other uses	-519,909	-586,762	0	0	0	0
Net production	6,251,091	7,404,238	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						
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	
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	7,358,842	13,849,644	-632,158	14,762,000	285,393	
	Mar-20	0	13,849,644	0	14,762,000	0	
	Apr-20	0	13,849,644	0	14,762,000	0	
	May-20	0	13,849,644	0	14,762,000	0	
	Jun-20	0	13,849,644	0	14,762,000	0	
	Jul-20	0	13,849,644	0	14,762,000	0	YTD
	Aug-20	0	13,849,644	0	14,762,000	0	Unaccounted
	Sep-20	0	13,849,644	0	14,762,000	0	as % of Flow
Average	Oct-20	0	13,849,644	0	14,762,000	0	6.18%
Monthly Use	Nov-20	0	13,849,644	0	14,762,000	0	
6,924,822	Dec-20	0	13,849,644	0	14,762,000	0	-912,356
YEAR TOTAL:	2	13,849,644	Cumulative Metered/Other Use YTD	14,762,000	-912,356	Cumulative Unaccounted 3% meter loss	251,906 382,289

3 YEAR AVERAGES:	Use	Flow	Daily Flow	3 Year Loss as % of Flow
	4,721,138 :gal/month	9,564,615 :gal/month	189,716	6.67%

source: Monthly Water Treatment Plant Report & utility.mdb's 3 yr cumulative flow 248,680,000
 3 yr unaccounted -16,577,117

Utilization of Sustainable Annual Water System Capacity

Period start: Mar-19

Period end: Feb-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

115.7 million gallons
56.4%

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-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	0.00
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	

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	5.34				
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	12.66	0.00	0.00	0.00	0.00

Cumulative thru

DEC	29.05	26.45	25.82	26.54	23.40	12.66	0.00	0.00	0.00	0.00
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Prevention of Wastewater Facility Overloading

Period start: Feb-19
 Period end: Jan-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