



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

www.fridayharbor.org

Period ending: June 2020

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

Analysis & Reports prepared by
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Water - use MTDsourceDate
6 / 2020

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

Water Class	Accounts	Gallons
Spe	2	42,123
Sfr	993	3,654,370
PA	78	827,450
Mfr	129	2,111,320
Ind	14	85,270
Com	222	1,163,080
TOTAL	1,438	7,883,613

Water use MTD - accounts with sewersourceDate
6 / 2020

Sewer Class	Accounts	Gallons
Location: IN		
Mfr Out/lo Strength	1	8,230
Com In/lo Strength	164	608,980
Dot In/lo Strength	3	22,560
Ind In/hi Strength	1	17,440
Ind In/lo Strength	10	56,990
Lmf In/lo Strength	1	2,030
Low Rate / IN Town	6	7,800
Com In/hi Strength	44	450,700
Mfr In/low Strength	58	667,720
Mhp In/lo Strength	2	403,800
PA In/hi Strength	3	52,690
PA In/lo Strength	43	456,240
Sfr IN Town	618	2,244,100
Mfr In/lo Strength	60	658,120
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	1014	5,657,400
Location: Out		
UW Out/hi Strength	1	31,000
Mfr Out/lo Strength	1	7,260
Sfr Out of Town	4	8,900
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	6	47,160

Sewer Class	Accounts	Gallons
TOTAL	1020	5,704,560

Water - use MTD by LocationsourceDate
6 / 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	42,123
Sfr	639	2,284,570
PA	69	695,230
Mfr	124	1,800,800
Ind	13	84,200
Com	219	1,158,270
	<hr/>	
	1,066	6,065,193
Location: Out		
Sfr	354	1,369,800
PA	9	132,220
Mfr	5	310,520
Ind	1	1,070
Com	3	4,810
	<hr/>	
	372	1,818,420
TOTAL	1,438	7,883,613

Refuse - pickups by ClasssourceDate
6 / 2020

Location	Class	Pickups
IN	Sfr	2,084.0
	RefuseOnly	197.0
	PA	73.5
	Mfr	529.0
	Ind	20.0
	Com	1,776.5
		<hr/> 4,680.0
Out	Mfr	11.5
		<hr/> 11.5
	TOTAL	4,691.5

Refuse - active accountssourceDate
6 / 2020

Location	Refuse Type	Accounts
IN		
	Small Dumpster	45
	PA	39
	Medium Dumpste	53
	Large Dumpster	63
	Compactors	4
	Cans Low Rate	6
	Cans	840
		<hr/>
		1,050
Out		
	Large Dumpster	1
		<hr/>
		1
		<hr/>
	TOTAL	1,051

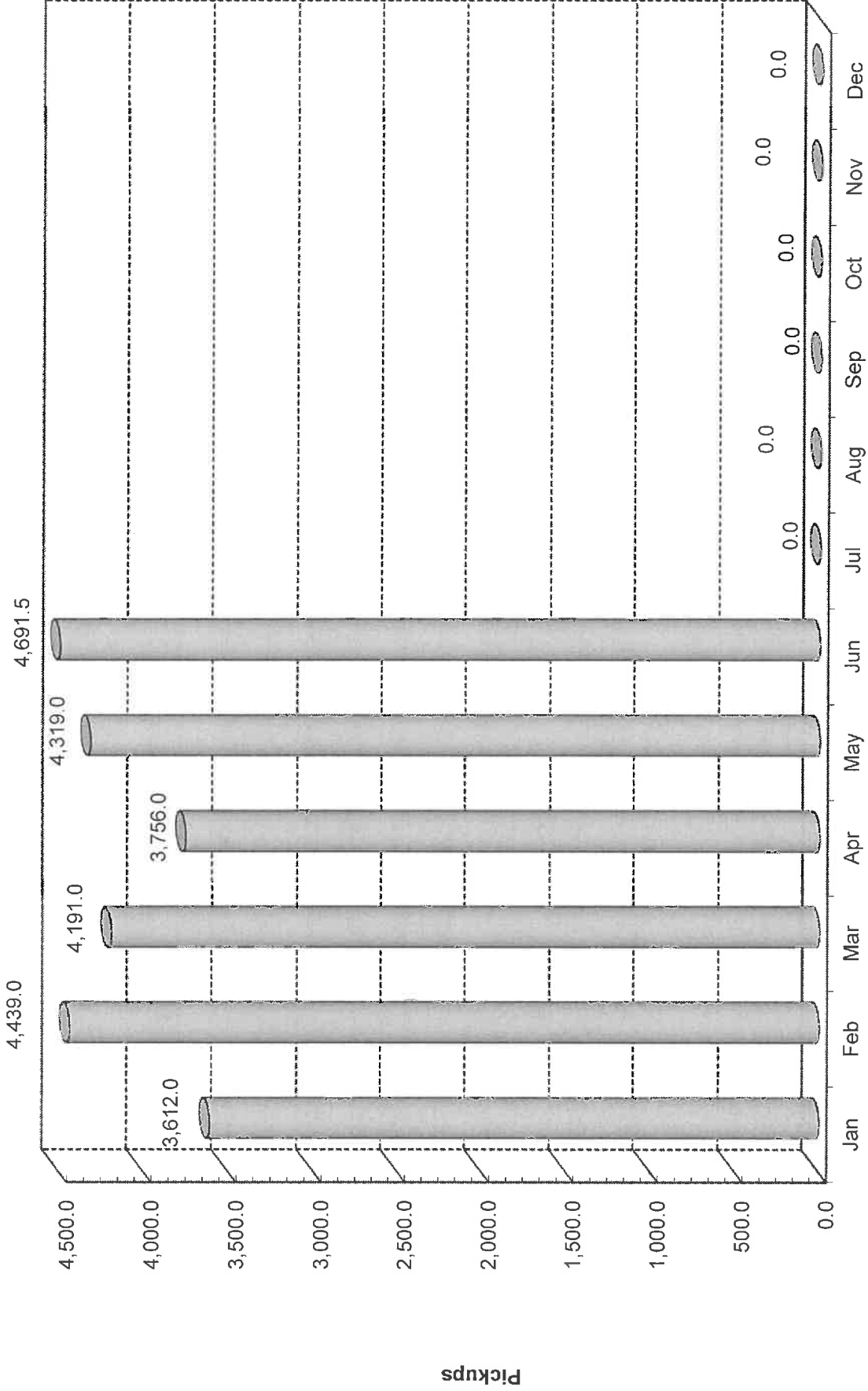
Recycle - pickups by ClasssourceDate
6 / 2020

Location	Class	Pickups
IN	Sfr	821
	RefuseOnly	27
	PA	0
	Mfr	84
	Ind	4
	Com	2
		<hr/> 938
Out	Mfr	0
		<hr/> 0
	TOTAL	938

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	1,482.0	223.5	153.0	426.5	19.0	1,883.5	3.5	4,191.0
Apr	1,785.0	164.5	59.0	501.5	16.5	1,221.5	8.0	3,756.0
May	2,175.0	181.5	64.5	550.0	18.0	1,321.5	8.5	4,319.0
Jun	2,084.0	197.0	73.5	529.0	20.0	1,776.5	11.5	4,691.5
Jul								0.0
Aug								0.0
Sep								0.0
Oct								0.0
Nov								0.0
Dec								0.0
YTD	10,392.0	1,194.0	659.5	2,890.0	110.5	9,724.5	38.0	25,008.5

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.

31 :count of days in reporting period.

	May 15, 2020 day flow (total flow)		June 14, 2020 day flow (total flow)
	13		1 245
	14		2 253
	15 210		3 285
	16 305		4 277
	17 353		5 290
	18 247		6 430
	19 295		7 190
	20 302		8 346
	21 254		9 384
	22 318		10 226
	23 276		11 315
	24 344		12 321
	25 353		13 305
	26 208		14 291
	27 266		15
	28 311		16
	29 308		
	30 385		
	31 244		
	days		days
	17 4979		14 4158
	TOTAL DAYS		31
	TOTAL FLOW		9137
			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)
<i>from WTP Chem. Wts. & Finish Flow to Town Report</i>					
16-Dec	<i>to</i>	12-Jan	28	6,771,000	6,771
13-Jan		13-Feb	32	7,991,000	7,991
14-Feb		15-Mar	31	7,169,000	7,169
16-Mar		14-Apr	30	6,984,000	6,984
15-Apr		14-May	30	7,971,000	7,971
15-May		14-Jun	31	9,137,000	9,137
			0	0	
			0	0	
			0	0	
			0	0	
			0	0	
			0	0	
			0	0	
			182	46,023,000	46023.0

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	7,169,000	6,984,000	7,971,000	9,137,000
3% meter loss	179,127	203,162	174,375	181,651	217,053	236,508
Flushing	129,200	155,800	282,600	126,975	212,000	210,350
SJC#3 FD use	5,000	5,000	5,000	5,000	5,000	5,000
Leaks	206,582	222,800	206,100	308,146	196,400	247,180
notes						
other non-metered use						
notes						
Additional water in storage						
notes						
Total other uses	-519,909	-586,762	-669,075	-621,772	-630,453	-699,038
Net production	6,251,091	7,404,238	6,500,925	6,362,228	7,340,547	8,437,962

	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

WATER CONSUMPTION (Use) BY CUSTOMER CLASS

source: utilTry08 & 13.mdb

2018

CLASS:	COM	IND	MFR	P.A	SFR	Special	other uses	TOTAL % of Use	Avg.Daily Use
JAN	1,250,270	69,660	1,349,580	607,870	2,203,780	17,222	694,751	6,193,133	5.7%
FEB	1,500,170	71,310	1,618,790	688,000	2,665,520	41,199	828,250	7,413,239	6.8%
MAR	1,241,570	75,040	1,397,840	569,420	2,041,730	17,517	732,194	6,065,311	5.6%
APR	1,684,280	82,120	1,658,130	1,095,020	2,433,950	8,070	890,947	7,852,517	7.2%
MAY	1,870,990	106,370	1,714,050	1,072,220	2,988,690	53,173	854,665	8,660,158	8.0%
JUN	2,517,020	203,770	2,147,470	1,893,510	4,289,890	109,235	867,127	12,028,022	11.1%
JUL	2,623,370	261,470	2,060,480	2,149,290	4,135,760	117,755	773,844	12,121,969	11.1%
AUG	3,160,640	289,630	2,187,810	2,573,210	4,922,790	64,549	667,359	13,865,988	12.8%
SEP	2,774,070	235,700	2,160,460	2,155,220	4,169,510	127,141	548,063	12,170,164	11.2%
OCT	1,700,260	99,490	1,833,510	1,308,870	2,663,670	40,958	768,703	8,415,461	7.7%
NOV	1,516,500	104,840	1,693,090	989,960	2,537,410	33,727	405,666	7,281,193	6.7%
DEC	1,308,380	93,000	1,584,960	849,590	2,356,950	13,677	449,197	6,655,754	6.1%
TOTAL	23,147,520	1,692,400	21,406,170	15,942,180	37,409,650	644,223	8,480,764	108,722,907	100.0%
AVERAGE	1,928,960	141,033	1,783,848	1,328,515	3,117,471	53,685	706,730	108,722,907	USE for Year
% of USE	21.3%	1.6%	19.7%	14.7%	34.4%	0.6%	7.8%	100.0%	115,787,000 :FLOW (User+Loss)
% of FLOW	20.0%	1.5%	18.5%	13.8%	32.3%	0.6%	7.3%	93.9%	-6.1% :LOSS for Year

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	14.9%
FEB	1,472,570	103,550	1,708,290	877,370	2,579,290	31,010	586,762	7,358,842	16.9%
MAR	1,269,760	79,450	1,581,430	597,760	2,269,100	15,009	668,075	6,480,584	14.9%
APR	855,070	67,640	1,845,470	421,880	2,823,760	41,241	621,772	6,676,813	15.4%
MAY	979,450	83,580	1,960,930	673,160	3,435,470	102,507	630,453	7,865,550	18.1%
JUN	1,163,080	85,270	2,111,320	827,450	3,654,370	42,123	699,038	8,582,651	19.8%
JUL							0	0	0.0%
AUG							0	0	0.0%
SEP							0	0	0.0%
OCT							0	0	0.0%
NOV							0	0	0.0%
DEC							0	0	0.0%
TOTAL	6,984,930	526,290	10,684,900	4,176,350	17,115,920	240,843	3,726,010	43,455,243	100.0%
AVERAGE	1,164,155	87,715	1,780,817	696,058	2,852,653	40,141	310,501	43,455,243	USE for Year
% of USE	16.1%	1.2%	24.6%	9.6%	39.4%	0.6%	8.6%	100.0%	46,023,000 :FLOW (User+Loss)
% of FLOW	15.2%	1.1%	23.2%	9.1%	37.2%	0.5%	8.1%	94.4%	-5.6% :LOSS for Year

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	6,480,584	20,330,228	-688,416	21,931,000	231,258	
	Apr-20	6,676,813	27,007,042	-307,187	28,915,000	232,800	
	May-20	7,865,550	34,872,592	-105,450	36,886,000	257,129	
	Jun-20	8,582,651	43,455,243	-554,349	46,023,000	304,567	
	Jul-20	0	43,455,243	0	46,023,000	0	YTD
	Aug-20	0	43,455,243	0	46,023,000	0	Unaccounted
	Sep-20	0	43,455,243	0	46,023,000	0	as % of Flow
Average	Oct-20	0	43,455,243	0	46,023,000	0	5.58%
Monthly Use	Nov-20	0	43,455,243	0	46,023,000	0	
7,242,540	Dec-20	0	43,455,243	0	46,023,000	0	-2,567,757
YEAR TOTAL:	6	43,455,243	Cumulative Metered/Other Use YTD	46,023,000	-2,567,757	Cumulative Unaccounted 3% meter loss	254,928 1,191,877

3 YEAR AVERAGES:	Use :gal/month	Flow :gal/month	Daily Flow	3 Year Loss as % of Flow
	5,078,507	9,331,367	190,723	6.51%

source: Monthly Water Treatment Plant Report & utility.mdb's
 3 yr cumulative flow 279,941,000
 3 yr unaccounted -18,232,518

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	0.00
Mar-14	0.00	Mar-17	2.75	Mar-20	0.00
Apr-14	8.25	Apr-17	9.00	Apr-20	4.00
May-14	5.00	May-17	4.75	May-20	0.00
Jun-14	7.00	Jun-17	-4.00	Jun-20	-0.75
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	1.25				
APR	0.51	0.75	2.20	3.10	1.61	1.38				
MAY	0.30	0.48	1.61	0.07	1.29	1.49				
JUN	0.14	1.22	0.75	0.72	0.61	1.25				
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	18.03	0.00	0.00	0.00	0.00

Cumulative thru

DEC	29.05	26.45	25.82	26.54	23.40	18.03	0.00	0.00	0.00	0.00
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Utilization of Sustainable Annual Water System Capacity

Period start: Jul-19

Period end: Jun-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

108.9 million gallons
53.1%

Exceeds Sustainable Yield?

No

Prevention of Wastewater Facility Overloading

Period start: Jun-19
 Period end: May-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