

Belfair**Wastewater Treatment Plant****Annual Treatment Facility Review Report (Wasteload Assessment)**

Reporting Year:

From: Jan. 1, 2023

To: Dec. 31, 2023

Design Parameters:

Max monthly design flow (dry): 0.125 mgd

Design Population Equivalent: 2000

Max monthly design flow (wet): 0.125 mgd

Present Population Served: 1610

Peak daily design flow: 0.25 mgd

Projected Population growth: 3%

Design Influent BOD loading: 1000 lbs/day

Compliance with effluent permit limitation?

Design Influent TSS loading: 1000 lbs/day

☒ Yes ☐ No**Table 1, Influent Monthly Average Loading & Peak Daily Flow (From Monthly DMR)**

Month	Avg flow (mgd)	Peak flow (mgd)	BOD (lbs/day)	TSS (lbs/day)
January	0.0775	0.1000	144.7	68.9
February	0.0663	0.0760	164.2	102.2
March	0.0628	0.0740	192.3	59.2
April	0.0670	0.0790	98.9	57.2
May	0.0649	0.0740	251.1	87.3
June	0.0648	0.0720	237.3	144.4
July	0.0627	0.0680	160.7	74.5
August	0.0625	0.0690	138.8	84.1
September	0.0651	0.0780	221.7	82.5
October	0.0678	0.0830	176.1	81.5
November	0.0750	0.0950	192.0	115.9
December	0.0780	0.1290	102.4	41.5

Table 2, Maximum Influent Monthly Average Loading (Highest Month)

	Month	Max Monthly Average Value	Design Capacity	% Design Capacity	Previous year Max Monthly Avg value	% Increase / Decrease
Dry Weather Flow MGD	October	0.0678	0.1250	54.24%	0.0641	5.77%
Wet Weather Flow MGD	December	0.0780	0.1250	62.40%	0.0900	-13.33%
Peak Flow MGD	December	0.1290	0.2500	51.60%	0.1390	-7.19%
BOD (lbs/day)	May	251.1	1,000.0000	25.11%	203.9	23.15%
TSS (lbs/day)	June	144.4	1,000.0000	14.44%	128.1	12.72%

* Flow or wasteload reached 85% of design capacity; ** Flow or wasteload reached or exceeded its design capacity

If actual flow or wasteload reaches 85% of design capacity for three consecutive months, the permittee shall submit a plan and schedule in accordance with their permit.

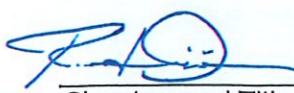
Table 3, Maximum Monthly Average Data for the Last Three Years (For Plotting)

Year	Flow (mgd)	BOD (lbs/day)	TSS (lbs/day)
2021	0.0877	268.4	123.5
2022	0.09	203.9	128.1
2023	0.078	251.1	144.4

Estimated year when the design capacity is projected to be reached:

NA

Comments:


 P. Darty, Director Utilities + Waste Management

Signature and Title

Design Capacity Graphs

Table 4: Max month Flow Data

Year	max month avg Flow, mgd	design cap, mgd
2016	0.0967	0.125
2017	0.0896	0.125
2018	0.074	0.125
2019	0.065	0.125
2020	0.0762	0.125
2021	0.0877	0.125
2022	0.09	0.125
2023	0.078	0.125

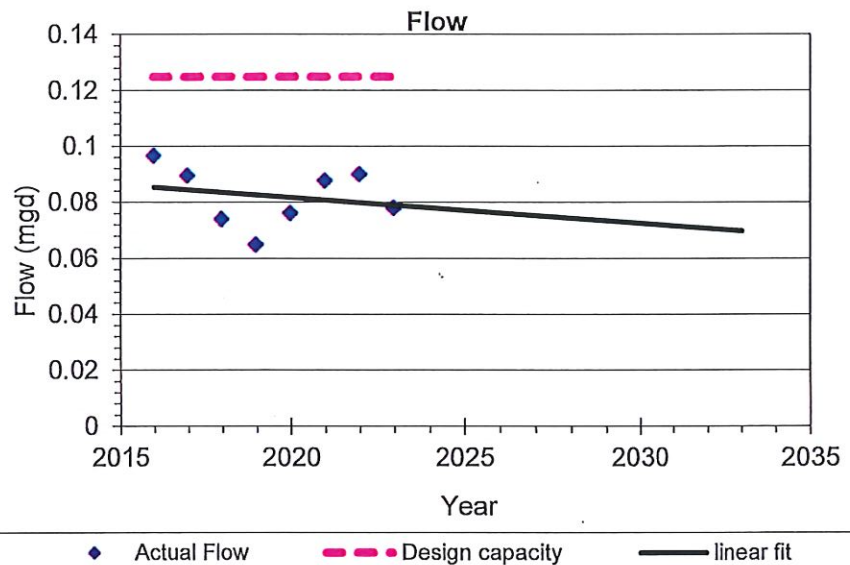


Table 5: Max month BOD Data

Year	max month avg BOD, lbs/day	design cap lbs/day
2016	135.6	715
2017	226.6	715
2018	281.5	715
2019	258.8	715
2020	237.8	715
2021	268.4	715
2022	203.9	715
2023	251.1	715

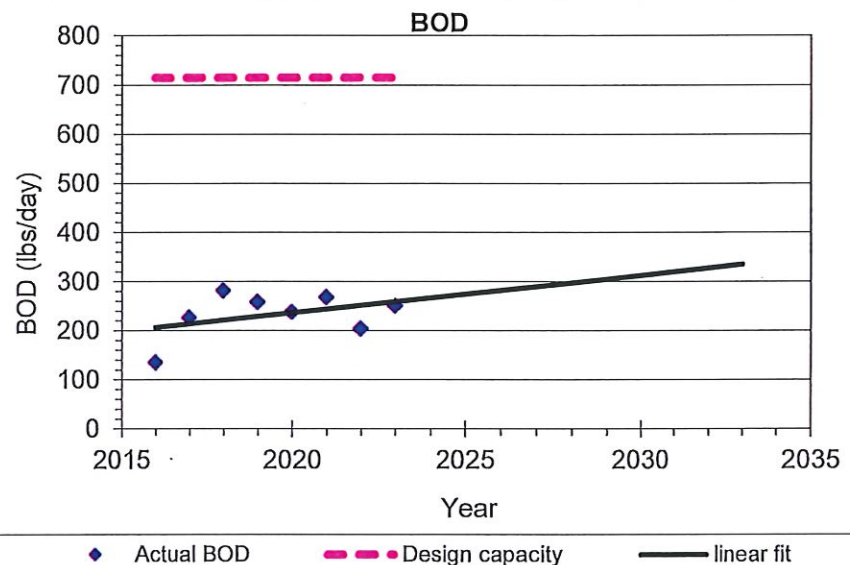


Table 6: Max month TSS Data

Year	max month avg TSS, lbs/day	design cap lbs/day
2016	126.8	1000
2017	209.2	1000
2018	186.1	1000
2019	122.1	1000
2020	129.5	1000
2021	123.5	1000
2022	128.1	1000
2023	144.4	1000

