

Belfair**Wastewater Treatment Plant****Annual Treatment Facility Review Report (Wasteload Assessment)**Reporting Year: From: 01/01/2024 To: 12/31/2024**Design Parameters:**

Max monthly design flow (dry):	<u>0.125</u> mgd	Design Population Equivalent:	<u>2000</u>
Max monthly design flow (wet):	<u>0.125</u> mgd	Present Population Served:	<u>1214</u>
Peak daily design flow:	<u>0.25</u> mgd	Projected Population growth:	<u>1%</u>
Design Influent BOD loading:	<u>1000</u> lbs/day	Compliance with effluent permit limitation?	
Design Influent TSS loading:	<u>1000</u> lbs/day	<u>X</u> Yes	<u>No</u>

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	0.0833	0.1080	179.7	192.4
February	0.0803	0.1010	190.6	68.8
March	0.0783	0.0920	205.5	74.4
April	0.0700	0.0800	175.6	42.5
May	0.0720	0.0780	213.1	43.4
June	0.0717	0.0810	185.3	39.9
July	0.0712	0.0990	187.5	40.4
August	0.0741	0.0840	191.2	59.1
September	0.0743	0.0830	239.0	80.3
October	0.0772	0.0910	221.1	65.5
November	0.0880	0.1200	178.4	122.5
December	0.0903	0.1220	306.7	90.0

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	0.0772	0.1250	61.76%	0.0641	20.44%
Wet Weather Flow MGD	December	0.0903	0.1250	72.20%	0.0900	0.28%
Peak Flow MGD	December	0.1220	0.2500	48.80%	0.1390	-12.23%
BOD (lbs/day)	December	306.7	1,000.0000	30.67%	203.9	50.44%
TSS (lbs/day)	January	192.4	1,000.0000	19.24%	128.1	50.20%

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

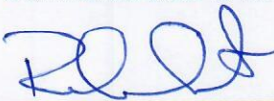
If actual flow or wasteload reaches 85% of design capacity for three consecutive months, the permittee shall submit a plan and schedule in accordance with their permit.

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

Year	Flow (mgd)	BOD (lbs/day)	TSS (lbs/day)
2022	0.09	203.9	128.1
2023	0.078	251.1	144.4
2024	0.0903	306.7	192.4

Estimated year when the design capacity is projected to be reached: 2094

Comments: BOD is the only upward trend of the three so it was used to estimate the projected year.


 W/W Manager

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
2024	0.0903	0.125

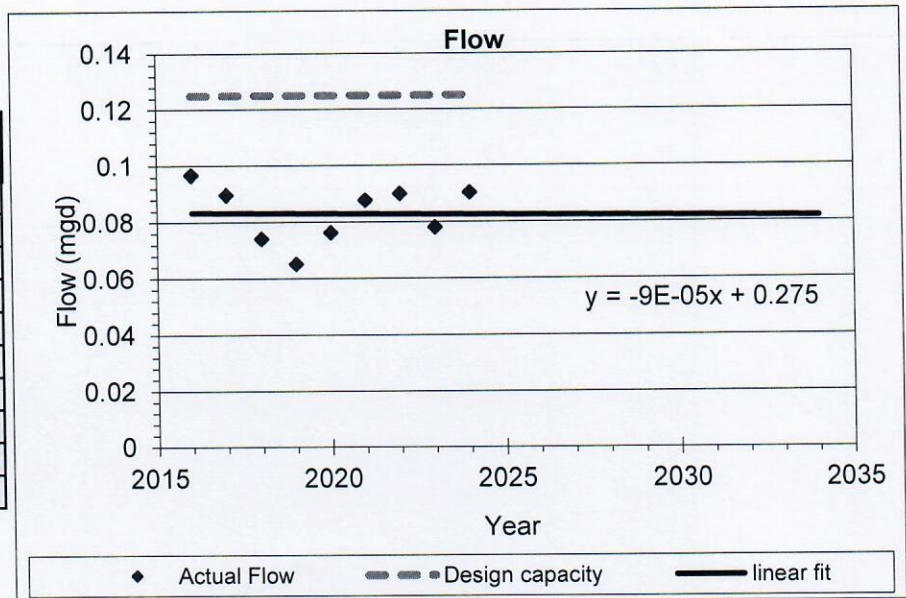


Table 5: Max month BOD Data

Year	max month avg BOD, lbs/day	design cap lbs/day
2016	135.6	1000
2017	226.6	1000
2018	281.5	1000
2019	258.8	1000
2020	237.8	1000
2021	268.4	1000
2022	203.9	1000
2023	251.1	1000
2024	306.7	1000

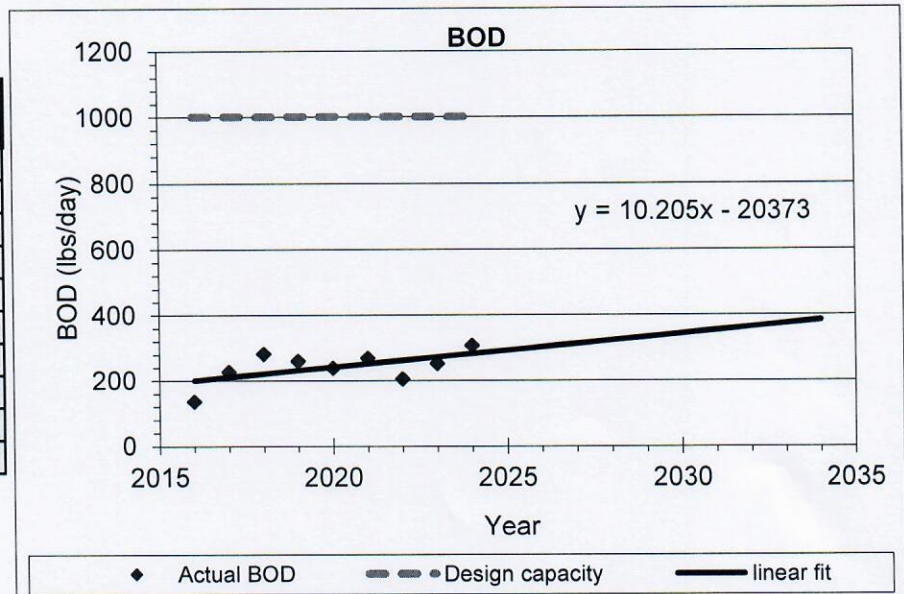


Table 6: Max month TSS Data

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
2024	192.4	1000

