

## TECHNICAL MEMORANDUM

May 31, 2024

To: Woodbridge Sanitary District Board of Directors

Subject: Woodbridge Sanitary District Sewer Capacity Charge Update

From: Humberto Ruiz-Vazquez, EIT 178369  
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### Objective

Kjeldsen, Sinnock, & Neudeck (KSN) was engaged by Woodbridge Sanitary District (District) to prepare an update the District's sewer capacity charge fees in 2016. Since that time the District has completed several facilities upgrades and rehabilitation projects. This technical memorandum has been prepared to update the basis of the prior 2016 capacity charge update to include an updated basis for the sewer capacity charge that recover the costs of capacity in the District's sewer system infrastructure that are fair and equitable to both. The updated sewer capacity fees are based on industry standard-methodology and comply with applicable California Government Code (CGC) as presented in the 2016 report. The updated sewer capacity charges presented in this memorandum would apply uniformly to the District's served area.

### Background and Current Capacity Charges

KSN prepared a Sewer Capacity Charge Update report, dated September 29, 2016 that calculated the District's revised a sewer capacity charges to be applicable to new connections at a basis of four-thousand eighty nine dollars (\$4,389) per Equivalent Dwelling Unit (EDU) or Sewage Service Unit (SSU). Annually, the District has updated the capacity charge using the 20-city national average Construction Cost Index (CCI) as a basis of adjustment, as published by the Engineering News Record (ENR). Currently, the District's sewer capacity charge is five-thousand seventy-four dollars (\$5,574) per EDU, last adjusted to the March 2023 CCI.

In this memorandum KSN has updated the District's sewer facilities assets to include improvements to its sewer system since it was previously updated in KSN's 2016 Sewer Capacity Charge Update report, but to also include record costs of existing sanitary sewer facilities that are currently in operation but were not included in the prior update. The updated assets and adjusted replacement valuation are noted in Table 1 and a comprehensive list is provided in Exhibit A of this memorandum. The replacement value was calculated for those identified facilities that do not need to be expanded or replaced to serve existing or future users. Per the Woodbridge Sanitary District Capacity Assessment Report prepared by KSN and dated June 6, 2014, the wastewater treatment



and disposal facilities have available capacity for new additional connections within the District's existing boundary

The planned sewer system capacity and wastewater generation per EDU from the 2016 KSN report are shown in Table 1. Calculations in Table 1 are used in this memorandum to calculate the adjusted facilities replacement value per Equivalent Dwelling Unit (EDU) or equivalent Sewage Service Unit (SSU). Characterization of EDU/SSU and classification of users are defined in Appendix B and is consistent with the District's current basis of allocating costs.

**Table 1  
Planned Capacity and Replacement Value per EDU Basis**

Per capita WW generation rate (gallons per person per day) <sup>(a)</sup>	90
Per EDU WW generation rate (gallons per EDU per day) <sup>(a)</sup>	252
Planned Capacity (Mgal) <sup>(b)</sup>	0.33
Existing Facilities Total Replacement Value <sup>(c)</sup>	\$9,624,982.00
Replacement Value per gallon of capacity	\$28.91
<b>Replacement Value per EDU/SSU (Rounded)</b>	<b>\$7,285.00</b>

(a) Values determined in the District's 2014 Capacity Assessment<sup>1</sup>

(b) Equivalent to approximately 1,321 EDUs/SSUs.

(c) Revised and summarized per Exhibit A

## Updated Schedule of Sewer Capacity Charges

The allocation of costs to the varied types of development are determined using the same classifications outlined in the 2016 report and as contained in Exhibit B. The projected updated sewer capacity charges for residential users are listed in table 2 using the updated adjusted replacement value methodology and subsequent cost per EDU. Non-residential users are listed in Table 3 along with sewer capacity charges the District will levy to new sewer connections

**Table 2  
Proposed Schedule of Sewer Capacity Charges- Residential**

Number of Bedrooms	Sewage Service Units	Charge
1	0.75	\$5,463.75
2	1.00	\$7,285.00
3	1.25	\$9,106.25
4	1.50	\$10,927.50
5	1.75	\$12,748.75
6	2.00	\$14,570.00
7	2.25	\$16,391.25
8	2.50	\$18,212.50

<sup>1</sup> Woodbridge Sanitary District WG & CC Expansion Capacity Assessment, by KSN dated June 6, 2014



**Table 3**  
**Proposed Schedule of Capacity Charges-Non-Residential**

<b>User Classification</b>	<b>Unit Charge</b>	<b>Unit of Measure</b>
1. Meeting place, religious	\$7,285.00	Per 200 seats
2. Meeting place, public	\$7,285.00	Per 100 seats
3. Hotel, motel without kitchenettes	\$7,285.00	Per 3 beds
4. Hotel, motel with kitchenettes	\$7,285.00	Per unit
5. Veterinary clinic	\$7,285.00	Per 4 employees
6. Post office	\$7,285.00	Per 15 employees
7. Funeral parlor	\$7,285.00	Per 3 employees
8. Service station with service garages	\$2,914.00	Per pump
9. Service station without service garages	\$1,040.71	Per pump
10. Car wash, automatic bay <sup>1</sup>	\$145,700.00	Per bay
11. Car wash, self-serve bays	\$14,570.00	Per bay
12. School, 8th grade and below	\$7,285.00	Per 20 students
13. High school	\$7,285.00	Per 15 students
14. Eating place, seating only	\$7,285.00	Per 10 seats
15. Eating place, seating and takeout	\$7,285.00	Per 7 seats
16. Eating place, "pizza parlor"	\$7,285.00	Per 35 seats
17. Eating place, take-out only	\$7,285.00	Per 5 employees
18. Lunch truck business	\$7,285.00	Per 5 employees
19. Laundry, coin-op., reg. mach.	\$4,856.67	Per machine
20. Laundry, coin-op., big mach.	\$7,285.00	Per machine
21. Comm. laundry and dry cleaning	\$7,285.00	Per 3 employees
22. Dentist's office	\$7,285.00	Per 5 employees
23. Office, store, warehouse manufacturer, doctor's chiropractor's and X-ray offices	\$7,285.00	Per 8 employees
24. Grocery store, supermarket (having veg/fruit or butcher/meat sections)	\$7,285.00	Per 4 employees
25. Bar	\$7,285.00	Per 20 seats
26. Barber, beauty shop	\$7,285.00	Per 3 workstations
27. Hospital, convalescent home	\$7,285.00	Per 3 beds
28. Rest and retirement home	\$7,285.00	Per 3 beds
29. Mobile home park	\$7,285.00	Per pad
30. RV dump station	\$7,285.00	Per station
31. RV park with sewer connection	\$4,856.67	Per space
32. RV park without sewer connection	\$3,642.50	Per space

1. This fee is based on the 20 SSU's per automatic bay as outlined in the District's Sewer Charges (Exhibit B)



## Future Capacity Charges Adjustments

Adjusted capacity charges are based on replacement values of the District's existing sewer system facilities and the identified asset's date in service, to a May 2024 ENR CCI basis of 13,532. Adjustments of the District's sewers facility assets to the most up to date ENR CCI is recommended on an annual basis.

**Exhibit A**

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**Summary of Estimated Replacement Value of Existing Facilities**

## Estimated Replacement Value of Existing Facilities Available to Serve Existing and Future Connections

Asset ID	Property Description	Date In Service	Book Cost	ENR CCI at Date in Service	May 2024 ENR CCI	Estimated Replacement Value
1	1 1/2 HP PUMP	11/10/97	\$ 1,951.73	5838	13532	\$ 4,524
100	LAND <sup>1</sup>	9/1/49	\$ 86,467.00	23.9	313.548	\$ 1,134,375
205	POND D GRADING	10/25/95	\$ 4,640.80	5511	13532	\$ 11,395
210	ENTRANCE ROAD & YARD PA\	8/4/95	\$ 13,987.00	5506	13532	\$ 34,376
215	ADDITIONS- FYE 1997	11/15/96	\$ 12,872.61	5740	13532	\$ 30,347
216	COLLECTION FACILITY	9/1/49	\$ 42,463.20	477 <sup>2</sup>	13532	\$ 1,204,637
217	PLANT EXPANSION	5/1/82	\$ 19,950.10	3825	13532	\$ 70,579
218	DRIVEWAY	5/10/82	\$ 620.00	3825	13532	\$ 2,193
219	PLANT EXPANSION	6/30/82	\$ 353,369.17	3825	13532	\$ 1,250,142
220	SEWAGE DISPOSAL PLANT	6/1/81	\$ 282,198.30	3535	13532	\$ 1,080,257
221	FENCING	6/1/72	\$ 789.57	1753	13532	\$ 6,095
222	DOCKS (4)	4/8/91	\$ 3,650.00	4766	13532	\$ 10,363
223	BUILDING MOVING	5/13/91	\$ 4,500.00	4801	13532	\$ 12,684
224	ADDITIONS- FYE 1997	11/15/96	\$ 5,900.51	5740	13532	\$ 13,910
241	FACILITY	1/1/93	\$ 277,073.93	5071	13532	\$ 739,374
242	ADDITIONS- FYE 1997	1/8/97	\$ 12,340.84	5765	13532	\$ 28,967
246	97/98 POND IMPROVEMENTS	7/1/97	\$ 93,056.00	5863	13532	\$ 214,776
256	CITY WATER LINE INSTALLATION	7/11/01	\$ 3,754.00	6404	13532	\$ 7,932
259	SLUDGE BED # 1	7/9/02	\$ 14,820.00	6605	13532	\$ 30,362
260	SLUDGE BED #2	10/1/02	\$ 15,586.00	6579	13532	\$ 32,058
261	GROUNDWATER MONITORING	10/1/02	\$ 12,000.00	6397	13532	\$ 25,384
262	OFFICE ROOF	4/16/03	\$ 2,289.00	6635	13532	\$ 4,668
263	SEWER PIPELINE - MOKELUMNE	3/21/03	\$ 102,631.69	6627	13532	\$ 209,569
264	GATE ENTRY SYSTEM	4/7/04	\$ 2,940.00	7017	13532	\$ 5,670
267	CHAINLINK FENCE	1/20/05	\$ 12,205.00	7297	13532	\$ 22,634
271	CONTROL PANNEL FOR LIFTS'	1/3/06	\$ 23,712.00	7660	13532	\$ 41,889
273	REHABILITATED PIPELINE - Mi	11/8/05	\$ 196,601.99	7630	13532	\$ 348,679

Asset ID	Property Description	Date In Service	Book Cost	ENR CCI at Date in Service	May 2024 ENR CCI	Estimated Replacement Value
274	SEWER PIPELINE IMPROVEMENT	8/18/06	\$ 18,863.81	7722	13532	\$ 33,057
276	MOTOR STARTER AERATOR	3/20/08	\$ 6,469.86	8109	13532	\$ 10,797
	AERATOR REPLACEMENT	9/6/23	\$ 38,598.82	13486	13532	\$ 38,730
280	FENCING AT COUNTRY CLUB I	7/9/08	\$ 2,800.00	8293	13532	\$ 4,569
283	AERATOR	1/15/09	\$ 18,123.75	8549	13532	\$ 28,688
287	3 WELLS	9/9/09	\$ 11,559.00	8586	13532	\$ 18,218
288	(2) 5HP PUMPS AND MOTORS	9/21/09	\$ 15,214.13	8586	13532	\$ 23,978
291	SUBMERSIBLE SHREDDER SE\\	6/30/10	\$ 1,438.00	8805	13532	\$ 2,210
297	AERATOR (2)	11/2/10	\$ 34,846.76	8951	13532	\$ 52,681
303	IMHOFF TANK HANDRAILS	5/2/12	\$ 6,973.54	9290	13532	\$ 10,158
307	MOTOR 7.5 HP	5/8/13	\$ 3,925.00	9516	13532	\$ 5,581
310	ROAD IMPROVEMENTS	11/13/13	\$ 60,713.00	9666	13532	\$ 84,996
312	PLAN EQUIPMENT SHED	6/30/14	\$ 750.00	9800	13532	\$ 1,036
313	ORANGE ST PIPE CROSSING REPLACEMENT	4/30/14	\$ 9,049.00	9750	13532	\$ 12,559
314	COUNTRY CLUB PIPE CROSSINGS REPLACEMENT	6/30/14	\$ 9,000.00	9800	13532	\$ 12,427
320	OFFICE REMODEL	6/30/15	\$ 35,874.09	10039	13532	\$ 48,356
322	WWTP ELECTRICAL REPAIRS	6/30/15	\$ 215,735.28	10039	13532	\$ 290,799
323	ORANGE ST PIPE CROSSING REPLACEMENT	6/30/15	\$ 82,702.00	10039	10379	\$ 111,478
	2019 IMPROVEMENTS COMPLETED IN 2021	12/3/21	\$1,432,406.00	12482	13532	\$ 1,552,898
11	DOCKS (4)	7/8/91	\$ 3,500.00	4854	13532	\$ 9,757
12	AWNINGS & SCREENINGS	12/15/94	\$ 5,939.00	5439	13532	\$ 14,776
26	(2) USED SURFACE AERATORS	11/9/01	\$ 200.00	6410	13532	\$ 422
39	(2) CARGO CONTAINERS	11/30/09	\$ 5,572.00	8592	13532	\$ 8,776

Asset ID	Property Description	Date In Service	Book Cost	ENR CCI at Date in Service	May 2024 ENR CCI	Estimated Replacement Value
43	HEATER PACK (3)	10/4/10	\$ 7,618.00	8921	13532	\$ 11,556
50	DRENCH SHOWER	3/13/13	\$ 837.00	9456	13532	\$ 1,198
59	CARPORT	12/17/14	\$ 2,155.00	9936	13532	\$ 2,935
115	OFFICE REMODEL	4/15/16	\$ 55,353.00	10280	13532	\$ 72,864
117	SUB PRESS TRANSMISSION	12/31/17	\$ 2,317.00	10870	13532	\$ 2,884
118	WATERMAN E-10 GATE VALVE	11/08/17	\$ 2,053.00	10817	13532	\$ 2,568
77	BADGER FLOWMETER	8/14/89	\$ 2,061.00	4615	13532	\$ 6,043
78	10" WATERMAIN	8/14/89	\$ 1,914.00	4615	13532	\$ 5,612
79	DISTRIBUTION BOX	10/8/89	\$ 2,900.00	4615	13532	\$ 8,503
81	STORM DRAIN	8/23/95	\$ 2,225.00	5506	13532	\$ 5,468
86	BADGER METER	11/4/98	\$ 4,516.00	5995	13532	\$ 10,194
	SEWER LINES PER DISTRICT RECORDS <sup>3</sup>	VARIES	\$ 250,647.00	VARIES	13532	\$ 540,371
<b>TOTAL</b>						<b>\$9,624,982</b>

1 Calculated using Consumer Price Index (CPI).

2 Due to unavailable monthly data, an annual average CPI in 1949 is used instead.

3 Sewer line assets per District's 6/30/23 depreciation schedule noted as asset ID# 55, 62-75, 80, 92, 95, 114, 116, 119.



**Exhibit B**

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**Sewer EDU/SSU Allocation Methodology**

# APPENDIX B

## WOODBRIIDGE SANITARY DISTRICT SEWER CHARGES DOCUMENT

# Woodbridge Sanitary District

## Sewer Charges

### Classification

All users shall be classified for wastewater collection, treatment and disposal purposes in accordance with the principal activity conducted by the person, or the quantity and quality of discharge, as determined by the General Manager/Chief Plant Operator and/or District Engineer. The purpose of classification is to facilitate the regulation of wastewater discharge based on quantity and quality of flow, to provide an effective means of waste source control, and to establish a system of sewage service charges and capacity fees which will ensure, but not limited to, recovery of District capital, operating and maintenance cost in an equitable manner. It is the responsibility of the user to provide the District with a reasonable estimation of wastewater quantity and quality, or other applicable units of measure, and any increases thereof, for the purpose of classification and assessment of services charges and capacity fees. The District has the right to periodically survey uses of commercial establishments to ensure that the correct user classification is being used for assessment of services charges.

### Domestic System Service Charges (unmetered accounts)

- A. Basis. Charges for use of the domestic system shall be determined by the volume, BOD (Biochemical Oxygen Demand), and SS (suspended solids) of wastes discharged. In addition, charges for preparation and maintaining the sewer master facility, office building, and expansion of the District Treatment Facilities are allocated based upon volume, BOD, and SS.
- B. Applicability. Those residential and commercial users whose discharge of wastes classify them as residential or as commercial low, medium, or high-strength users shall pay charges as determined in this section. Determination of the category for each specific user shall be made by the General Manager/Chief Plant Operator and/or District Engineer based upon information furnished by the user.
- C. Users. All users shall be assigned sewage service units. The minimum sewage service units assigned to any commercial user shall be 1.0 unit. Service charges for all users shall be determined by multiplying the cost of one sewage service unit by the number of sewage service units assigned to each user.

1. Residential user sewage service units shall be based upon the number of bedrooms per dwelling units as follows:

<b>Number of Bedrooms</b>	<b>Sewage Service Units</b>
1	0.75
2	1.00
3	1.25
4	1.50
5	1.75
6	2.00
7	2.25
8	2.50

2. Commercial user sewage service charges shall be based on the number of sewage service units assigned to each user. The unit of measure for determining the number of sewage service units assigned to each user is as follows:

<b>User Descriptions</b>	<b>Unit of Measure</b>
1. Meeting place, religious	Each 200 seats
2. Meeting place, public	Each 100 seats
3. Hotel, motel without kitchenettes	Each 3 beds
4. Hotel, motel with kitchenettes	Each unit
5. Veterinary clinic	Each 4 employees
6. Post office	Each 15 employees
7. Funeral parlor	Each 3 employees
8. Service station with service garages	Each 2.5 pumps
9. Service station without service garages	Each 7 pumps
10. Car wash, automatic bay	20 SSU's per bay
11. Car wash, self serve bays	2 SSU's per bay
12. School, 8th grade and below	Each 20 students
13. High school	Each 15 students
14. Eating place, seating only	Each 10 seats

15. Eating place, seating and take-out	Each 7 seats
16. Eating place, "pizza parlor"	Each 35 seats
17. Eating place, take-out only	Each 5 employees
18. Lunch truck business	Each 5 employees
19. Laundry, coin-op., reg. mach.	Each 1.5 machines
20. Laundry, coin-op., big mach.	Each machine
21. Comm. laundry and dry cleaning	Each 3 employees
22. Dentist's office	Each 5 employees
23. Office, store, warehouse manufacturer, doctor's chiropractor's and X-ray offices	Each 8 employees
24. Grocery store, supermarket (having veg/fruit or butcher/meat sections)	Each 4 employees
25. Bar	Each 20 seats
26. Barber, beauty shop	Each 3 workstations
27. Hospital, convalescent home	Each 3 beds
28. Rest and retirement home	Each 3 beds
29. Mobile home park	Each 1.33 pads
30. RV dump station	Each station
31. RV park with sewer connection	Each 1.50 spaces
32. RV park without sewer connection	Each 2.00 spaces

One sewage service unit shall be assigned to each unit of measure. Fees shall be based on a minimum of one sewage service unit and fractions of sewage service units thereafter. At the discretion of the General Manager/Chief Plant Operator and/or the District Engineer, a commercial user's service charges and/or capacity fees may be based on actual wastewater discharge flows estimated by use of an influent water meter or other appropriate means.

D. Significant Users.

1. Significant users may be assessed two additional sewage service units in service charges to cover the District's costs of meeting Federal Pretreatment Program requirements.