

REPORT ON SPECIAL ASSESSMENTS

SANITARY DISTRICT NO. 4

**RESERVE WASTEWATER TREATMENT
CAPACITY ASSESSMENT FOR ALL
UNSEWERED LANDS**

For the:

**Sanitary District No. 4
Town of Brookfield
645 North Janacek Road
Brookfield, WI 53045**

Prepared by:

**Graef, Anhalt, Schloemer & Associates, Inc.
One Honey Creek Corporate Center
125 South 84th Street, Suite 401
Milwaukee, WI 53214-1470**

**July 8, 2005
Revised July 11, 2005
Revised July 21, 2005**

The Sanitary District Commissioners of Sanitary District No. 4 – Town of Brookfield, Waukesha County, Wisconsin, directed Graef, Anhalt, Schloemer & Associates, Inc., as its authorized representative, to prepare the Report on Special Assessments for the establishment of a reserve wastewater treatment capacity assessment for all unsewered lands located in the Town of Brookfield, and the provision for payment of the reserve capacity assessment by special assessment. Direction was provided via Preliminary Resolution adopted at the Sanitary District No. 4 meeting on June 21, 2005.

Wastewater generated from residents of the Town of Brookfield is conveyed via local sewers and interceptors to a regional wastewater treatment facility, the Fox River Water Pollution Control Center (FRWPCC), located in the City of Brookfield. The Southeastern Wisconsin Regional Planning Commission (SEWRPC) initially performed regional planning. During facility planning for the FRWPCC, development of each community in the region was evaluated to determine capacity required to treat wastewater.

Studies, reports and other documents utilized in preparation of this report are included as references at the end of the report. When possible, the most current data available was utilized for the report.

The methodology to determine the reserve wastewater treatment capacity assessment required review of all properties located within the Sanitary District No. 4 sanitary sewer service area in the Town of Brookfield. Those properties that are currently not connected to a sanitary sewer are defined as unsewered. Unsewered properties consist of those that are undeveloped land, as well as those developed properties that utilize an on-site wastewater treatment system and could potentially be connected to the sanitary sewer system.

The area of each unsewered property was determined through examination of the Town's current assessment roll ^[1], or information obtained through Waukesha County Tax Listing Data or the Land Information Mapping System. The zoning of each property was determined from the current Town of Brookfield zoning map ^[2]. For development purposes, properties were defined as either residential, or commercial/industrial. If a property included Conservancy District C-1 zoning, this area was approximated from the zoning map. The gross developable area of a property was determined by subtracting the approximate area of conservancy from the total property area.

Development of the property was further evaluated by computing the net buildable area. The net buildable area was determined by reducing the gross developable area by a percentage of land that would be required for streets, utility corridors and storm water management facilities. A reduction of 25 percent was utilized for this report. The Town zoning code ^[3] was examined to determine the allowable lot size for properties zoned Single Family (Rs-1 through Rs-4), Two-Family (Rd-1) and Multi-Family (Rm-1, Rm-2) Residential Districts. Larger parcels were subdivided into additional lots per the zoning allowance.

The amount of wastewater for each property was computed. Wastewater flow from residential properties is based on gallons per day per capita, while wastewater flow from commercial/industrial properties is based on gallons per day per acre. The per capita wastewater flowrate utilized for this report equals 210 gallons per capita per day ^{[4][5][6]}, which includes 125 gallons per capita per day average daily sanitary contribution plus 85 gallons per capita per day infiltration allowance. Average household size was determined from data from the U.S. Census Bureau ^[8]. The per acre wastewater flowrate utilized for this report equals 2,200 gallons per acre per day ^[7]. In our review of the Sanitary District #4 service area and the monies spent for wastewater treatment capacity, we have taken into account that parcels that have left the District. Due to that fact, the district will be unable to recover the entire amount spent for the reserve wastewater treatment capacity.

This report consists of Schedules A, B, C and D, as described as follows, and reference maps.

Schedule A is a summary of the special assessment for the sanitary sewer service area in the Town of Brookfield, which has been divided into the south and north service areas. The south service area consists of Town properties located in sections 18, 19, 28, 29, 30, 31 and 32 of Township 7 North, Range 20 East, and section 36 of Township 7 North, Range 19 East. Design and construction of the FRWPCC in 1982 included wastewater capacity from the south service area. Local sanitary sewers and interceptors currently serve all properties located within this area.

The north service area consists of Town properties located in sections 5, 6, 7, and 8 of Township 7 North, Range 20 East. Design and construction of the FRWPCC expansion in 1996 included reserve wastewater capacity for developed and undeveloped properties in the north service area. The expansion also included an upgrade in technology for higher efficiency treatment at the facility. There are currently no local sanitary sewers in this area, but the region is served by a number of interceptor sewers.

Schedule B indicates the reserve wastewater treatment capacity assessment for all of the unsewered properties in the south service area of the Town of Brookfield. Refer to Schedule D for a description of the spreadsheet columns.

Schedule C indicates the reserve wastewater treatment capacity assessment for all of the unsewered properties in the north area of the Town of Brookfield. Refer to Schedule D for a description of the spreadsheet columns.

Schedule D is a reference page indicating a description of each column on Schedules B and C.

Exhibits for each section in the Town referencing unsewered properties to be assessed are located after the schedules.

REFERENCES

- [1] Town of Brookfield 2005 Preliminary Assessment Roll, Grota Appraisals.
- [2] Town of Brookfield Zoning Map, with adopted amendments, Waukesha County Department of Parks and Land Use.
- [3] Chapter 17, Zoning Code, Town of Brookfield Ordinances.
- [4] A Regional Water Quality Management plan For Southeastern Wisconsin – 2000, SEWRPC Planning Report No. 30, Volumes 1 (September 1978), 2 (February 1979) and 3 (June 1979).
- [5] Facilities Plan, City of Brookfield, Fox River Water Pollution Control Center, Ruekert|Mielke, May 1993.
- [6] Existing Sanitary Trunk Sewer Capacity Study, City of Brookfield, Waukesha Wisconsin, Ruekert|Mielke, November 2000.
- [7] Capital Drive Corridor Sanitary Sewer and Water Main Feasibility Study, Sanitary District No. 4, Town of Brookfield, Waukesha County, Wisconsin, Ruekert|Mielke, September, 2003.
- [8] Thematic Map TM-P022. Average Household Size: 2000, United States Census Bureau.

SCHEDULE A - SUMMARY

**Sanitary District No. 4
Reserve Wastewater Treatment Capacity Assessment**

Intermunicipal Agreement Capacity Allocation

	Previous	Post	Additional	Funding	Funding		Total
	(gpd)	(gpd)			(gpd)	Type	
1982 FRWPCC	0	900,000	900,000	CWF	\$374,000	\$1,224,000	
1996 FRWPCC	900,000	1,445,000	545,000	CWF	\$405,701	\$6,014,108	
2005 Purchase	1,445,000	1,490,000	45,000		\$213,134	\$213,134	
TOTALS			1,490,000			\$7,451,242	

Wastewater Allocation Unit Cost

$$\frac{\text{Total Funding}}{\text{Total Capacity}} = \frac{\$7,451,242}{1,490,000} = \$5.00 \text{ /gallon per day}$$

Wastewater Allocation Assessment

	Flow	Assessment
	(gpd)	
South	119,583	\$598,014
North	281,363	\$1,407,047
Totals	400,945	\$2,005,061

SCHEDULE B - SOUTH AREA

**Sanitary District No. 4
Reserve Wastewater Treatment Capacity Assessment**

Cost per unit : \$5.00 / gallon
 Net Buildable percent : 75
 Avg Household Size: 2.29

Parcel Tax ID	A	B	C	D	E	F	G	H		I	J	K	L	M		N	O	P		Q	R		S
								Zoning						Development				Wastewater					
		Location Sect.	Total Parcel Area (acres)	Developed (D/U)	Total Parcel Area (sf)	Conservancy (C-1) (%)	Conservancy (C-1) (sf)	Type	Other (sf)	Gross Developable (sf)	Net Buildable (sf)	Zoning Allowance (sf/lot)	Resid. Lots	Com/Ind (sf)	Residential (gpd)	Flow Com/Ind (gpd)	Total (gpd)	Assessment					
1134-999-007		32 NW	10.640	U	463,478.40	60	278,087.04	RS-3	185,391.36	185,391.36	139,043.52	20,000	6		2885.40	0.00	2885.40	\$14,429.41					
1134-999-008		32 NW	2.950	U	128,502.00	100	128,502.00		0.00	0.00	0.00				0.00	0.00	0.00	\$0.00					
1134-999-015		32 NW	0.002	U	87.12	100	87.12		0.00	0.00	0.00				0.00	0.00	0.00	\$0.00					
1134-999-016		32 NW	0.006	U	261.36	100	261.36		0.00	0.00	0.00				0.00	0.00	0.00	\$0.00					
1134-999-019		32 NW	2.445	U	106,504.20	90	95,853.78	B-2	10,650.42	10,650.42	7,987.82			7,987.82	403.43	403.43	403.43	\$2,017.46					
1135-006		32 SW	0.845	U	36,808.20	0	0.00	RS-3	36,808.20	36,808.20	27,606.15	20,000	1		480.90	0.00	480.90	\$2,404.90					
1135-012		32 SW	1.510	U	65,775.60	0	0.00	I-1	65,775.60	65,775.60	49,331.70			49,331.70	1442.70	1442.70	1442.70	\$7,214.70					
1135-990		32 SW	2.000	U	87,120.00	0	0.00	RS-3	87,120.00	87,120.00	65,340.00	20,000	3										
1135-995-002		32 SW	1.043	U	45,433.08	0	0.00	B-1	45,433.08	45,433.08	34,074.81			34,074.81				\$8,606.18					
1135-995-003		32 SW	2.898	U	126,236.88	0	0.00	B-1	126,236.88	126,236.88	94,677.66			94,677.66				\$23,912.49					
1135-997		32 SW	6.222	U	271,030.32	100	271,030.32		0.00	0.00	0.00				0.00	0.00	0.00	\$0.00					
1135-998		32 SW	6.320	U	275,299.20	40	110,119.68	RS-3	165,179.52	165,179.52	123,884.64	20,000	6		2885.40	0.00	2885.40	\$14,429.41					
1136-999-001		32 SE	3.600	U	156,816.00	0	0.00	RS-3	156,816.00	156,816.00	117,612.00	20,000	5		2404.50	0.00	2404.50	\$12,024.50					
1008-097		36 SE	1.739	U	75,750.84	100	75,750.84	RS-4	0.00	0.00	0.00				0.00	0.00	0.00	\$0.00					
1008-136		36 SE	1.327	U	57,804.12	0	0.00	RS-4	57,804.12	57,804.12	43,353.09	15,000	2		961.80	0.00	961.80	\$4,809.80					
Totals					13,859,877.24		9,660,201.01		4,199,676.23	4,199,676.23	3,149,757.17				119582.81		119582.81	\$598,013.70					

SCHEDULE C - NORTH AREA

Sanitary District No. 4
Reserve Wastewater Treatment Capacity Assessment

Cost per unit : \$5.00 / gallon
 Net Buildable percent : 75
 Avg Household Size: 2.29

Tax ID	A	B	C	D	E	F	G	H		I	J	K	L	M	N	O	P		Q	R	S					
								Zoning									Development					Flow		Residential	Wastewater	Assessment
								Conservancy (C-1)	Type								Other	Gross Developable				Net Buildable	Zoning Allowance			
(DU)	(acres)	(sf)	(%)	(sf)	(sf)	(sf)	(%)	(sf)	(sf)	(sf)	(sf/lot)	(sf/lot)	(sf)	(sf)	(sf)	(sf)	(gpd)	(gpd)	(gpd)	(gpd)						
1031-995	D	6	SW	D	21.360	930,441.60	95	883,919.52	RS-2	46,522.08	46,522.08	46,522.08	34,891.56	30,000	1	117,023.94	480.90	480.90	480.90	480.90	\$2,404.90					
1031-996	U	6	SW	U	20.000	871,200.00	95	827,640.00	RS-2	43,560.00	43,560.00	43,560.00	32,670.00	30,000	1	93,044.16	480.90	480.90	480.90	480.90	\$2,404.90					
1031-999	U	6	SW	U	1.000	43,560.00	100	43,560.00		0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	\$0.00					
1032-998	U	6	SE	U	41.050	1,788,138.00	100	1,788,138.00		0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	\$0.00					
1032-999	U	6	SE	U	80.230	3,494,818.80	100	3,494,818.80		0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	\$0.00					
1033-987	D	7	NE	D	5.970	260,053.20	40	104,021.28	B-2	156,031.92	156,031.92	156,031.92	117,023.94	20,000	1	117,023.94	5910.30	5910.30	5910.30	5910.30	\$29,556.43					
1033-987-001	D	7	NE	D	7.120	310,147.20	60	186,086.32	B-2	124,058.88	124,058.88	124,058.88	93,044.16	40,000	4	93,044.16	4699.20	4699.20	4699.20	4699.20	\$23,499.92					
1033-990	U	7	NE	U	15.300	666,468.00	100	666,468.00		0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	\$0.00					
1033-990-001	U	7	NE	U	4.924	214,489.44	20	42,897.89	B-2	171,591.55	171,591.55	171,591.55	128,693.66	40,000	2	128,693.66	6499.68	6499.68	6499.68	6499.68	\$32,503.82					
1033-991	U	7	NE	U	14.730	641,638.80	70	449,147.16	T-1	192,491.64	192,491.64	192,491.64	144,368.73	40,000	2	144,368.73	7291.35	7291.35	7291.35	7291.35	\$36,462.83					
1033-991-001	D	7	NE	D	1.021	44,474.76	0	0.00	B-2	44,474.76	44,474.76	44,474.76	33,356.07	40,000	1	33,356.07	1684.65	1684.65	1684.65	1684.65	\$8,424.65					
1033-991-002	U	7	NE	U	1.605	69,913.80	0	0.00	B-2	69,913.80	69,913.80	69,913.80	52,435.35	40,000	1	52,435.35	2648.25	2648.25	2648.25	2648.25	\$13,243.46					
1033-991-004	U	7	NE	U	1.541	67,125.96	0	0.00	T-1	67,125.96	67,125.96	67,125.96	50,344.47	40,000	1	50,344.47	2542.65	2542.65	2542.65	2542.65	\$12,715.37					
1033-991-005	D	7	NE	D	0.710	30,927.60	0	0.00	B-2	30,927.60	30,927.60	30,927.60	23,195.70	40,000	1	23,195.70	1171.50	1171.50	1171.50	1171.50	\$5,858.48					
1033-991-006	D	7	NE	D	1.410	61,419.60	0	0.00	B-2	61,419.60	61,419.60	61,419.60	46,064.70	40,000	1	46,064.70	2326.50	2326.50	2326.50	2326.50	\$11,634.44					
1033-991-007	U	7	NE	U	0.673	29,315.88	0	0.00	B-2	29,315.88	29,315.88	29,315.88	21,986.91	40,000	1	21,986.91	1110.45	1110.45	1110.45	1110.45	\$5,553.18					
1033-991-008	D	7	NE	D	1.140	49,658.40	0	0.00	B-2	49,658.40	49,658.40	49,658.40	37,243.80	20,000	1	37,243.80	1881.00	1881.00	1881.00	1881.00	\$9,406.57					
1033-992	D	7	NE	D	0.480	20,908.80	0	0.00	RS-3	20,908.80	20,908.80	20,908.80	15,681.60	40,000	4	15,681.60	480.90	480.90	480.90	480.90	\$2,404.90					
1033-994	D	7	NE	D	4.970	216,493.20	0	0.00	RS-1	216,493.20	216,493.20	216,493.20	162,369.90	40,000	4	162,369.90	1923.60	1923.60	1923.60	1923.60	\$9,619.60					
1033-995	U	7	NE	U	5.000	217,800.00	20	43,560.00	T-1	174,240.00	174,240.00	174,240.00	130,680.00	40,000	2	130,680.00	961.80	961.80	961.80	961.80	\$4,809.80					
1033-996-001	D	7	NE	D	4.820	209,959.20	30	62,987.76	RS-1	146,971.44	146,971.44	146,971.44	110,228.58	40,000	2	110,228.58	961.80	961.80	961.80	961.80	\$4,809.80					
1033-996-002	D	7	NE	D	5.100	222,156.00	40	88,862.40	RS-1	133,293.60	133,293.60	133,293.60	99,970.20	40,000	2	99,970.20	961.80	961.80	961.80	961.80	\$4,809.80					
1033-997	D	7	NE	D	5.040	219,542.40	60	131,725.44	RS-1	87,816.96	87,816.96	87,816.96	65,862.72	40,000	1	65,862.72	480.90	480.90	480.90	480.90	\$2,404.90					
1033-998	U	7	NE	U	5.190	226,076.40	60	135,645.84	M-2	90,430.56	90,430.56	90,430.56	67,822.92	40,000	1	67,822.92	3425.40	3425.40	3425.40	3425.40	\$17,129.86					
1033-998-001	U	7	NE	U	9.620	419,472.00	60	251,428.32	T-1	167,618.88	167,618.88	167,618.88	125,714.16	40,000	1	125,714.16	6349.20	6349.20	6349.20	6349.20	\$31,751.29					
1033-999	U	7	NE	U	37.200	1,620,432.00	80	1,296,345.60	T-1	324,086.40	324,086.40	324,086.40	243,064.80	40,000	1	243,064.80	12276.00	12276.00	12276.00	12276.00	\$61,390.23					
1034-993	D	7	NW	D	1.406	61,245.36	0	0.00	B-3	61,245.36	61,245.36	61,245.36	45,934.02	40,000	1	45,934.02	0.00	0.00	0.00	0.00	\$11,601.43					
1034-994	U	7	NW	U	0.730	31,798.80	50	15,899.40	T-1	15,899.40	15,899.40	15,899.40	11,924.55	40,000	1	11,924.55	0.00	0.00	0.00	0.00	\$3,011.75					
1034-995-001	D	7	NW	D	0.738	32,147.28	0	0.00	RS-3	32,147.28	32,147.28	32,147.28	24,110.46	20,000	1	24,110.46	480.90	480.90	480.90	480.90	\$2,404.90					
1034-995-002	D	7	NW	D	1.404	61,158.24	0	0.00	B-2	61,158.24	61,158.24	61,158.24	45,868.68	40,000	1	45,868.68	0.00	0.00	0.00	0.00	\$11,584.93					
1034-996	D	7	NW	D	31.010	1,350,795.60	60	810,477.36	RS-1	540,318.24	540,318.24	540,318.24	405,238.68	40,000	10	405,238.68	4809.00	4809.00	4809.00	4809.00	\$24,049.01					
1034-997	D	7	NW	D	36.110	1,572,951.60	25	393,237.90	B-2	1,179,713.70	1,179,713.70	1,179,713.70	884,785.28	40,000	10	884,785.28	0.00	0.00	0.00	0.00	\$44,886.13					
1034-997-001	U	7	NW	U	0.711	30,971.16	0	0.00	RS-3	30,971.16	30,971.16	30,971.16	23,228.37	20,000	1	23,228.37	480.90	480.90	480.90	480.90	\$2,404.90					
1034-999	U	7	NW	U	26.090	1,136,480.40	0	0.00	A-1	1,136,480.40	1,136,480.40	1,136,480.40	852,360.30	40,000	1	852,360.30	0.00	0.00	0.00	0.00	\$215,278.38					
1034-999-001	U	7	NW	U	2.500	108,900.00	5	5,445.00	B-2	103,455.00	103,455.00	103,455.00	77,591.25	40,000	1	77,591.25	0.00	0.00	0.00	0.00	\$19,397.02					
1034-999-003	D	7	NW	D	2.092	91,127.52	5	4,556.38	B-2	86,571.14	86,571.14	86,571.14	64,928.36	40,000	1	64,928.36	0.00	0.00	0.00	0.00	\$16,398.78					
1038-986	U	8	NW	U	0.330	14,374.80	0	0.00	T-1	14,374.80	14,374.80	14,374.80	10,781.10	40,000	1	10,781.10	0.00	0.00	0.00	0.00	\$2,722.95					
1038-988	U	8	NW	U	16.050	699,138.00	100	699,138.00		0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	\$0.00					
1038-993	U	8	NW	U	7.170	312,325.20	100	312,325.20		0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	\$0.00					
1038-996	U	8	NW	U	9.750	424,710.00	100	424,710.00		0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	\$0.00					
Totals						38,293,726.68		26,481,818.48		11,811,908.20	11,811,908.20	11,811,908.20	8,858,931.15	203.4			271.2	271.2	271.2	271.2	\$1,407,047.11					

SCHEDULE D - COLUMN REFERENCE

**Sanitary District No. 4
Reserve Wastewater Treatment Capacity Assessment**

- A Tax identification number for specific parcel
- B Section location
- C Quarter section location
- D Is the property currently developed or undeveloped
- E Total area (acres) of the parcel per TOB Assessment Roll or Waukesha County Tax Listing/LIS
- F Total area (square feet) of the parcel, equals column E multiplied by 43,560
- G Approximate percentage of parcel zoned conservancy based on Town of Brookfield Zoning Map
- H Area of parcel (square feet) zoned conservancy
- I Other type of zoning on parcel
- J Area of parcel (square feet) zoned other
- K Area of parcel (square feet) which is considered developable, equals column G
- L Area of parcel (square feet) which is considered buildable, equals developable area (column I) times net buildable percent
- M Area of residential lot size (square feet) allowed per the zoning code per zoning in column F
- N Number of potential residential lots, equals buildable area (column K) divided by allowed lot size per zoning (column L)
- O Area of Commercial/Industrial parcel which is buildable, equals column K
- P Residential wastewater flow (gallons per day), equals number of potential residential lots (column M) multiplied by average household size multiplied by 210 gallons per day per person
- Q Commercial/Industrial wastewater flow (gallons per day), equals area of Commercial/Industrial parcel which is buildable (column N) divided by 43,560 square feet per acre divided by 2,200 gallons per day per acre
- R Total wastewater flow (gallons per day), equals column O plus column P
- S Wastewater allocation assessment to parcel, equals total wastewater flow (column P) times the cost per unit

EXHIBITS