

Report on Reserve Capacity
Assessments for Sewer and Water
Facilities

Prepared for the

Village of Sussex

by Trilogy Consulting, LLC

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Village of Sussex, Wisconsin Report on Reserve Capacity Assessment for Sanitary Sewer and Water Facilities

Introduction

Under Wisconsin Statutes §66.0703, municipalities have the authority to levy and collect special assessments within a limited and determinable area for special benefits conferred upon the property by any municipal work or improvement. If the assessment is imposed under the municipality's police power, the assessment must be made on a reasonable basis, but is not required to be limited to the specific value of the benefits accruing to each property.

In 1976, the Village of Sussex first imposed Reserve Capacity Assessments (RCA's) upon properties connecting to the Village's sanitary sewer and water system. These properties receive a special benefit from the availability of excess capacity in the Village's sanitary sewer and water systems.

The assessments constitute an exercise of the Village's police powers. The basis for the assessments was the value of the excess capacity in the sanitary sewer and water facilities serving the entire system. These system-wide facilities include wastewater treatment facilities, wells, water towers, interceptor sewers and the oversizing of water mains. The intent of the assessments is that properties obtaining new or additional sanitary sewer or water service are required to buy into the amount of system-wide reserve capacity required to serve their development. The amount of capacity required for each new development is determined based on estimated water and sewer usage, and equated to a per Residential Equivalent Connection (REC) for sewer usage and an equivalent residential water meter for water usage. A REC is defined as the amount of water used by one single-family home on an annual basis.

The Reserve Capacity Assessments are levied in addition to any requirements by the Village to provide or pay for collector sewers or water distribution mains to serve specific properties.

In 1996 and 2005, the amounts of the assessments were reviewed and updated due to new capital improvements completed or anticipated by the Village. This report re-evaluates the amounts of the assessments based on the costs of major capital improvements completed since 2005.

The area for which it is proposed that the recommended Reserve Capacity Assessment be levied includes all properties within the Village of Sussex that are not yet connected to the municipal sanitary sewer or water system or which have a change in use requiring additional water or sewer service. These properties benefit from the provision of excess capacity in the system-wide sanitary sewer and water facilities provided by the Village.

Reserve Capacity Assessment for Existing Wastewater Treatment Facilities

Sussex owns and operates the Sussex Regional Wastewater Treatment Facility (WTF), which serves the Village of Sussex, the Lisbon Sanitary District No. 1 ("Lisbon SD1"), and areas in the Village of Menomonee Falls, the Village of Lannon and the Town of Lisbon ("Lisbon").

The WTF was completed in 1995 with a rated capacity of 3.2 million gallons per day. Under intermunicipal agreements, the Village of Menomonee Falls, the Village of Lannon and the Town of Lisbon each agreed to pay upfront for a percentage of the capacity of the new WTF. The Village of

Sussex paid for capacity to serve both the Village of Sussex and the majority of the Lisbon SD1. Because the WTF that was constructed at that time almost entirely replaced the previous facility, each municipality paid for a percentage of the cost equal to their percentage share of reserved capacity.

In 2007 the Village began a major upgrade and expansion to the WTF, which was completed in 2008, expanding the capacity to 5.1 million gallons per day. Under the terms of the intermunicipal agreement, each party paid for a share of the upgrade costs in proportion to their share of previously purchased capacity. Each party also had the option to purchase additional capacity. Those that did so were required to pay for the expansion costs in proportion to the percentage of incremental new capacity purchased. Since the recent improvements included both upgrade and expansion costs that were paid for on different bases, the percentage of total costs incurred by each party for that project was different than the percentage share of capacity in the facility.

The original cost of the existing assets installed prior to the 2007 facility upgrade was \$13,044,749. These costs were adjusted to a current value of \$23,918,587 in terms of 2012 dollars using the Engineering News Record (ENR) construction cost index for Minneapolis, as shown in Exhibit 1. The Village of Sussex and majority of Lisbon SD 1 paid for 66.25 percent of cost of the pre-2007 assets and the remainder of the cost was paid for by the other service area municipalities. Therefore only the capital costs assigned to the portion of Lisbon SD 1 that did not get direct financing for their portion of project costs and Sussex are recovered through the RCA fee. The calculated fee per REC is shown on Exhibit 1.

The cost of assets installed as part of the most recent expansion and upgrade, and other minor improvements completed since the last RCA fee update in 2005 is \$7,863,888. The current value of the post-2007 assets is \$8,550,269, as adjusted using the ENR Minneapolis construction cost index and shown in Exhibit 2. Sussex and Lisbon SD 1 are responsible for 44.66 percent of the total cost of the post 2007 WTF assets. The fee per REC is shown on Exhibit 2 and is calculated by dividing the adjusted share of WTF costs attributable to Sussex and Lisbon SD 1 by the number of RECs of total WTF capacity allocated to Sussex and Lisbon SD 1.

Reserve Capacity Assessment for Existing and Planned Interceptor Sewer Facilities

The Village of Sussex sanitary sewer interceptor system serves the Village of Sussex, the Lisbon SD 1 and a portion of the Town of Lisbon. The RCA for existing and planned sewer interceptor facilities includes the total cost for all existing sanitary sewer system assets as well as planned interceptor assets.

While the sewer interceptor system serves Sussex, Lisbon SD 1 and a portion of the Lisbon, the RCA fee for interceptor facilities will be recovered only from residents and business owners inside the Village of Sussex, and from Lisbon SD 1 through an intermunicipal agreement. If there were future interceptor facilities that benefit portions of Lisbon the costs for those facilities will be recovered directly from Lisbon through an intermunicipal agreement, which may include the use of upfront fees or RCA fees for those projects. Each project to serve the Town of Lisbon will be complex with questions of which and how many Lisbon residents will use what facilities to get to the treatment plant; therefore a study will be done for each of those projects as they move forward to determine, what if any costs will need to be covered by the potential use of the facilities and the most effective means to do so. Such complexities make it unreasonable to include those costs and fee impacts in this RCA study. It is therefore appropriate to identify the amount of capacity in the interceptor system allocated solely to the Village of Sussex and Lisbon SD 1 for the purposes of calculating the RCA fee for interceptor facilities. The number

of RECs of capacity allocated to Sussex and Lisbon SD 1 at the WTF (8,515 RECs) is the total number of RECs used to calculate the interceptor system RCA fee since it represents the total planned capacity needed to serve both entities well beyond the planning horizon of this study.

Exhibit 3 shows the calculation of the RCA fee for all existing and planned interceptor facilities. The \$6,634,315 of interceptor facilities, net of developer contributions or costs financed through tax incremental financing, was brought into 2012 dollars using the ENR Construction Cost Index for the Minneapolis region. The \$13,637,111 in 2012 dollars, divided by 8,515 RECs, yields the RCA fee per REC shown on Exhibit 3.

Total RCA Fee for Sanitary Sewer Facilities

The total RCA fee per REC for all sanitary sewer facilities, which includes the existing Wastewater Treatment Facility and existing and planned sewer interceptor facilities, is shown on Exhibit 4. It is recommended that each single-family dwelling unit be assessed for one REC and each multi-family unit be assessed for 0.75 RECs per unit. The number of RECs for nonresidential uses should be determined based on estimated annual sewer usage, divided by 60,000 gallons.

Reserve Capacity Assessment for Existing and Planned Water System Facilities

The Village water supply and distribution system serves only the residents and businesses of the Village of Sussex. Therefore, the RCA fee for water facilities is assessed only to properties within Village boundaries. The total RCA fee for water facilities has two components, an RCA fee for water assets that existed as of 2007, and an RCA fee for assets installed after 2007 as well as for planned future water assets.

As of 2007 the Village water system could serve a total capacity of 6,637 RECs. The original cost of water system assets net of developer contributions and costs financed through tax incremental financing was \$5,457,479. This cost converted to 2012 dollars using the ENR Construction Cost Index for the Minneapolis region is \$9,093,238. The 2012 value of system assets divided by 6,637 RECs yields the RCA fee per REC shown on Exhibit 5.

In 2007 and 2008 the Village constructed two new wells that expanded the total capacity of the Village water supply and distribution system from 6,637 RECs to 7,372 RECs. The original cost of assets installed after 2006 net of developer contributions and costs financed through tax incremental financing, converted to 2012 dollars is \$2,837,224. The Village also plans to construct approximately \$400,000 of additional improvements over the next several years, which consists of the oversizing costs of new water mains. The cost of these improvements, divided by 7,372 RECs, yields the RCA fee per shown on Exhibit 6.

Total Reserve Capacity Assessment for Water Facilities

The total RCA fee for all water facilities is shown on Exhibit 7. The RCA fees per REC are converted into a RCA fee per equivalent meter size. The Village has historically collected the water RCA fee on the basis of water meter size, and the equivalency factors are consistent with the Village's current RCA fee.

Implementation

It is recommended that the Village defer the Reserve Capacity assessments until such time as one of the following occur: certified survey map approval; final subdivision plat approval; connection to the sanitary sewer or water system; or issuance of a building or plumbing permit. The amount of the deferred assessments will increase each year in accordance with the schedules contained in Exhibits 1 through 7.

It is also recommended that the Village levy an additional reserve capacity assessment when a property has a change in use that results in an increase in water or sewer usage. The following policy guidelines are recommended for imposing RCAs for a change in use:

- Additional RCAs for a change in use should only be charged if there is a change in the type of land use, modifications or expansions to the structure(s) that require a building or plumbing permit or redevelopment of the property, in the case of sewer RCAs, or installation of a larger water meter in the case of water RCAs. Increased water or sewer usage due to a change in the volume of business or similar factors that do not involve a change in the nature of the nonresidential use or modifications to the building should not result in an additional RCA. These changes are less likely to be permanent and administratively collecting increased RCA fees in those situations would hinder economic growth, be administratively burdensome to both the business and the Village, and likely lead to overcharging as individual business situations change in real time. This situation is similar to the single family residential situation, where the same sewer RCA is charged for each single family residence regardless if there are 2 residents or 6, etc., and the number of residents can change regularly over time without an additional RCA charge.
- The amount of the RCA should only be based on the *incremental increase* in RECs for purposes of sewer RCAs or water meter size for purposes of water RCAs.
- The incremental increase in RECs or water meter size should be based on the estimated RECs for the previous use if no RCAs have been paid for the property (i.e. properties developed prior to the establishment of the RCA).
- For properties that have paid RCAs, the incremental increase should be based on the change in the number of RECs or the water meter size since the RCAs were paid (which may be different than the most recent use of the property).
- If a property is redeveloped, the incremental increase in RECs or water meter size should be computed based on the difference between the use or number of RCAs paid for the existing building and the estimated use of the new building.
- The RCAs paid for a property should be credited to the property as a whole, not to any individual buildings, rental units or tenants on the property.
- No RCAs shall be refunded for a change in use that results in a *decrease* in water or sewer usage. However, the property should retain the right to use of the water and sewer system equal to the quantity of any RCAs previously paid.

Exhibit 1**Reserve Capacity Assessment for Pre-2007 Wastewater Treatment Facility Capacity Assets**

Year	Adjusted Cost - Beginning of Year ^{(1) (2)}	33.75% Non-Sussex Share ⁽³⁾	Net Sussex/LSD 1 Share	Sussex/LSD 1 Capacity (RECs)	RCA Fee per REC
2012	\$23,918,587	(\$8,072,523)	\$15,846,064	6,625	\$2,392
2013	\$24,277,365	(\$8,193,611)	\$16,083,754	6,625	\$2,428
2014	\$25,005,686	(\$8,439,419)	\$16,566,267	6,625	\$2,501
2015	\$25,755,857	(\$8,692,602)	\$17,063,255	6,625	\$2,576
2016	\$26,528,533	(\$8,953,380)	\$17,575,153	6,625	\$2,653
2017	\$27,324,389	(\$9,221,981)	\$18,102,408	6,625	\$2,732
2018	\$28,144,121	(\$9,498,641)	\$18,645,480	6,625	\$2,814
2019	\$28,988,445	(\$9,783,600)	\$19,204,845	6,625	\$2,899
2020	\$29,858,098	(\$10,077,108)	\$19,780,990	6,625	\$2,986

Notes:

(1) Original cost of \$13,044,749 inflated to June, 2012 dollars using the Engineering News Record (ENR) Minneapolis Construction Cost Index (CCI).

(2) The computed inflation rate is 3.0%, except in 2012 where the cost was inflated 1.5% from the June 2012 computed value.

(3) The Sussex and Town of Lisbon SD 1 share of WWTF capacity and total share of WWTF costs taken from the 2005 Report on Reserve Capacity Assessments for Sanitary Sewerage and Water System Facilities Village of Sussex, Wisconsin. Completed by Ruekert/Mielke, February 2, 2005.

Exhibit 2**Reserve Capacity Assessment for Post-2007 Wastewater Treatment Facility Capacity Assets**

Year	Adjusted Cost - Beginning of Year ^{(1) (2)}	53.34% Non-Sussex Share ⁽³⁾	Net Sussex/LSD 1 Share	Sussex/LSD 1 Capacity (RECs)	RCA Fee per REC
2012	\$8,550,269	(\$4,560,713)	\$3,989,556	8,515	\$469
2013	\$8,678,523	(\$4,629,124)	\$4,049,399	8,515	\$476
2014	\$8,938,879	(\$4,767,998)	\$4,170,881	8,515	\$490
2015	\$9,207,045	(\$4,911,038)	\$4,296,007	8,515	\$505
2016	\$9,483,256	(\$5,058,369)	\$4,424,887	8,515	\$520
2017	\$9,767,754	(\$5,210,120)	\$4,557,634	8,515	\$535
2018	\$10,060,787	(\$5,366,424)	\$4,694,363	8,515	\$551
2019	\$10,362,611	(\$5,527,417)	\$4,835,194	8,515	\$568
2020	\$10,673,489	(\$5,693,239)	\$4,980,250	8,515	\$585

Notes:

(1) Original cost of \$7,863,888 inflated to June, 2012 dollars using the Engineering News Record (ENR) Minneapolis Construction Cost Index (CCI).

(2) The computed inflation rate is 3.0%, except in 2012 where the cost was inflated 1.5% from the June 2012 computed value.

(3) The Village of Sussex and Lisbon SD 1 paid for approximately 46.66% of the cost of the WTF upgrade and expansion

Exhibit 3**Reserve Capacity Assessment for Total Sanitary Sewer Interceptor System Assets**

Year	Adjusted Cost - Beginning of Year ^{(1) (2)}	System Capacity (RECs)	RCA Fee per REC
2012	\$13,637,111	8,515	\$1,602
2013	\$13,841,668	8,515	\$1,626
2014	\$14,256,918	8,515	\$1,674
2015	\$14,684,626	8,515	\$1,725
2016	\$15,125,164	8,515	\$1,776
2017	\$15,578,919	8,515	\$1,830
2018	\$16,046,287	8,515	\$1,884
2019	\$16,527,675	8,515	\$1,941
2020	\$17,023,506	8,515	\$1,999

Notes:

(1) Original cost net of costs financed by TIF or developers of \$6,634,315 inflated to June, 2012 dollars using the Engineering News Record (ENR) Minneapolis Construction Cost Index (CCI).

(2) The computed inflation rate is 3.0%, except in 2012 where the cost was inflated 1.5% from the June 2012 computed value.

Exhibit 4**Total Reserve Capacity Assessment for Sanitary Sewer System Capacity**

Year	Pre-2005 Wastewater Treatment Facility	Post-2005 Wastewater Treatment Facility	Pre-2005 Interceptors	Total
2012	\$2,392	\$469	\$1,602	\$4,463
2013	\$2,428	\$476	\$1,626	\$4,530
2014	\$2,501	\$490	\$1,674	\$4,665
2015	\$2,576	\$505	\$1,725	\$4,806
2016	\$2,653	\$520	\$1,776	\$4,949
2017	\$2,732	\$535	\$1,830	\$5,097
2018	\$2,814	\$551	\$1,884	\$5,249
2019	\$2,899	\$568	\$1,941	\$5,408
2020	\$2,986	\$585	\$1,999	\$5,570

Exhibit 5

Reserve Capacity Assessment for Pre-2007 Water System Capacity

Year	Adjusted Cost - Beginning of the Year ^{(1) (2)}	System Capacity (RECs)	RCA Fee per REC
2012	\$9,093,238	6,637	\$1,370
2013	\$9,366,035	6,637	\$1,411
2014	\$9,647,016	6,637	\$1,454
2015	\$9,936,426	6,637	\$1,497
2016	\$10,234,519	6,637	\$1,542
2017	\$10,541,555	6,637	\$1,588
2018	\$10,857,802	6,637	\$1,636
2019	\$11,183,536	6,637	\$1,685
2020	\$11,519,042	6,637	\$1,736

Notes:

(1) Original cost of \$5,457,479 inflated to June, 2012 dollars using the Engineering News Record (ENR) Minneapolis Construction Cost Index (CCI).

(2) The computed inflation rate is 3.0%, except in 2012 where the cost was inflated 1.5% from the June 2012 computed value.

Exhibit 6**Reserve Capacity Assessment for Post-2007 and Planned Water System Capacity**

Year	Beginning of the Year Cost	System Capacity (RECs)	RCA Fee per REC
2012	\$3,237,224	7,372	\$439
2013	\$3,334,341	7,372	\$452
2014	\$3,434,371	7,372	\$466
2015	\$3,537,402	7,372	\$480
2016	\$3,643,524	7,372	\$494
2017	\$3,752,830	7,372	\$509
2018	\$3,865,415	7,372	\$524
2019	\$3,981,377	7,372	\$540
2020	\$4,100,818	7,372	\$556

Notes:

(1) Original cost of \$2,514,138 of post 2005 assets inflated to June, 2012 dollars using the Engineering News Record (ENR) Minneapolis Construction Cost Index (CCI) plus \$400,000 of planned assets .

(2) The computed inflation rate is 3.0%, except in 2012 where the cost was inflated 1.5% from the June 2012 computed value.

Exhibit 7
Total Reserve Capacity Assessment for Water System Capacity

Year	5/8 - inch	1 - inch	1 1/4 - inch	1 1/2 inch	2 - inch	3 - inch	4 - inch	6 - inch
2012	\$1,809	\$3,020	\$4,521	\$6,023	\$12,062	\$28,935	\$50,636	\$108,508
2013	\$1,863	\$3,111	\$4,657	\$6,203	\$12,424	\$29,803	\$52,155	\$111,763
2014	\$1,919	\$3,204	\$4,797	\$6,389	\$12,796	\$30,697	\$53,720	\$115,116
2015	\$1,977	\$3,300	\$4,941	\$6,581	\$13,180	\$31,618	\$55,332	\$118,569
2016	\$2,036	\$3,399	\$5,089	\$6,778	\$13,576	\$32,567	\$56,992	\$122,126
2017	\$2,097	\$3,501	\$5,242	\$6,982	\$13,983	\$33,544	\$58,701	\$125,790
2018	\$2,160	\$3,606	\$5,399	\$7,191	\$14,402	\$34,550	\$60,462	\$129,564
2019	\$2,225	\$3,714	\$5,561	\$7,407	\$14,835	\$35,586	\$62,276	\$133,451
2020	\$2,292	\$3,826	\$5,728	\$7,629	\$15,280	\$36,654	\$64,145	\$137,454

Existing Wastewater Treatment Facility Assets - Pre-2007

Asset Description	Original Cost	Adjusted Cost
Land & Land Rights	\$171,130	\$394,368
SCADA	\$19,646	\$24,022
Structures & Improvements	\$4,666,459	\$8,531,425
Preliminary Treatment Equipment	\$839,958	\$1,535,647
Secondary Treatment Equipment	\$2,527,467	\$4,620,826
Advance Treatment Equipment	\$1,226,340	\$2,242,048
Chlorination Equipment	\$58,093	\$106,209
Sludge Treatment & Disposal	\$2,475,847	\$4,526,451
Plant Site Piping	\$920,130	\$1,682,221
Flow Metering & Monitoring	\$134,405	\$245,725
Outfall Sewer Pipes	\$5,274	\$9,643
Total	\$13,044,749	\$23,918,587

Existing Wastewater Treatment Facility Assets - Post 2007

Asset Description	Original Cost	Adjusted Cost
Land & Land Rights	\$0	\$0
SCADA	\$303,843	\$330,364
Structures & Improvements	\$180,033	\$195,747
Preliminary Treatment Equipment	\$556,024	\$604,555
Secondary Treatment Equipment	\$2,575,163	\$2,799,929
Advance Treatment Equipment	\$458,245	\$498,244
Chlorination Equipment	\$678,624	\$737,856
Sludge Treatment & Disposal	\$2,329,808	\$2,533,159
Plant Site Piping	\$645,246	\$701,564
Flow Metering & Monitoring	\$136,900	\$148,849
Outfall Sewer Pipes	\$0	\$0
Total	\$7,863,888	\$8,550,269

Existing and Planned Sanitary Sewer Interceptors

Pre-2006 Assets								
Asset Description	Date Installed	Original Cost	Cost Financed by TIF or Developer	Net Cost	June, 2012 CCI	Purchase Year CCI	ENR Factor ⁽¹⁾	Adjusted Cost
Treatment plant to Bugline and points north	1980	\$1,275,925		\$1,275,925	10561.49	3238.86	3.26	\$4,160,621
West interceptor - Locust to beyond Pewaukee Road	1981	\$470,987		\$470,987	10561.49	3612.46	2.92	\$1,376,991
Relief sewer	1984	\$292,871		\$292,871	10561.49	4209.93	2.51	\$734,728
Hwy J Northwest(2188 LF 36", 20 LF 27" & 1095 LF 30")	1988	\$914,147		\$914,147	10561.49	4582.99	2.30	\$2,106,651
Hwy J Southeast (810 LF 30")	1988	\$327,000		\$327,000	10561.49	4582.99	2.30	\$753,570
Northeast Interceptor	1990	\$623,914		\$623,914	10561.49	4798.61	2.20	\$1,373,201
Gastreau & Ridgeview interceptor (oversizing)	1990	\$253,929		\$253,929	10561.49	4798.61	2.20	\$558,884
Hwy J	1991	\$545,222		\$545,222	10561.49	4932.67	2.14	\$1,167,391
Maple Ave	1991	\$213,323		\$213,323	10561.49	4932.67	2.14	\$456,752
Eagles Ridge (302 LF of 12" & 1754 LF of 15")	1992	\$104,129		\$104,129	10561.49	5133.25	2.06	\$214,242
Maple Ave Interceptor (1703.86 LF 18", 2600.35 LF 15 " & manholes)	1997	\$861,675		\$861,675	10561.49	6434.11	1.64	\$1,414,425
M & I Bank (1046 LF 30")	1999	\$410,119		\$410,119	10561.49	6878.53	1.54	\$629,708
Silver Spring (1736 LF 15") put in with lift station abandonment	1999	\$344,979		\$344,979	10561.49	6878.53	1.54	\$529,691
Coldwater Creek Phase 2South (2807 LF of 12" main)	2002	\$637,246		\$637,246	10561.49	7620.66	1.39	\$883,161
Coldwater Creek Phase 2North & 3 (1,562 LF of 12" main)	2002	\$104,185		\$104,185	10561.49	7620.66	1.39	\$144,391
Rawson Contract - additional for HWY J	2003	\$18,665		\$18,665	10561.49	7999.46	1.32	\$24,642
Corp Center (704 LF 18", 1935 LF 15", 1127 LF 12") (from 1995)	2003	\$257,323	\$257,323	\$0	10561.49	7999.46	1.32	\$0
Additional costs for Maple Ave	2003	\$46,420		\$46,420	10561.49	7999.46	1.32	\$61,287
Total		\$7,702,059	\$257,323	\$7,444,736				\$16,590,338
Exclusion of 25% of costs to arrive at estimated Village oversizing costs				(\$1,861,184)				(\$4,147,585)
Net Cost				\$5,583,552				\$12,442,754
Post-2006 and Planned Assets								
Asset Description	Date Installed	Original Cost	Cost Financed by TIF or Developer	Net Cost	June, 2012 CCI	Purchase Year CCI	ENR Factor ⁽¹⁾	Adjusted Cost
Kohls (1328 LF of 24" main) ⁽²⁾	2003	\$452,718	\$138,872	\$313,846	10561.49	7999.46	1.32	\$414,363
Maple Avenue dual forcemain ⁽⁴⁾	2008	\$1,024,526	\$772,559	\$251,968	10561.49	9713.66	1.09	\$273,960
Spring Green Heights Interceptor	2010	\$447,720		\$447,720	10561.49	10086.48	1.05	\$468,805
12" Gravity Main (Frantl Site) ⁽³⁾		\$1,089,082	\$1,051,852	\$37,230			0.00	\$37,230
Total		\$3,014,046	\$1,963,282	\$1,050,764				\$1,194,358
Total Interceptors		\$10,716,105	\$2,220,605	\$6,634,315				\$13,637,111

Notes:
 (1) The original asset cost was brought into June, 2012 values using the Engineering News Record (ENR) Minneapolis Construction Cost Index.
 (2) Developer financed the \$138,872 per Village Staff. Data obtained 6/19/12.
 (3) Source: Frantl Site North Central Sewer Study, Sanitary Sewer Analysis. Performed by Ruekert/Mielke, July 18, 2012. Estimated net cost is the difference between sizing the main 8" vs. 12".
 (4) The dual forcemain project cost is reduced by \$479,613.22, which is a direct payment by the Town of Lisbon for their portion of the project, plus \$292,945.29 which is the portion of the project cost paid by TIF funding.

Pre-2007 Existing Water Assets

Asset Class	Net	
	Original Cost ⁽¹⁾	Adjusted Cost ⁽²⁾
Wells	\$618,802	\$900,824
Land	\$77,752	\$12,625
Structures	\$1,225,938	\$1,691,729
Pumping Equipment	\$552,915	\$873,691
Treatment Equipment	\$6,805	\$13,171
Land	\$84,058	\$128,817
Reservoirs	\$1,347,903	\$2,533,100
Mains Larger than 8"	\$5,632,785	\$10,471,168
Exclusion for 75% of the cost of mains above to arrive at oversizing costs	(\$4,224,589)	(\$7,853,376)
Other Transmission Plant	\$2,645	\$6,216
Structures	\$56,939	\$188,643
SCADA	\$75,526	\$126,629
Total	\$5,457,479	\$9,093,238

Notes:

(1) Original asset cost less costs financed by TIF.

(2) Adjusted for inflation to June, 2012 values using the Engineering News Record (ENR) Minneapolis Construction Cost Index. The ENR 20-City Average Construction Cost Index was used for assets installed before 1978.

Post-2007 Existing Water Assets

Asset Class	Net	
	Original Cost ⁽¹⁾	Adjusted Cost ⁽²⁾
Wells	\$517,184	\$575,373
Land	\$110,000	\$129,078
Structures	\$793,210	\$882,687
Pumping Equipment	\$444,158	\$499,212
Treatment Equipment	\$29,908	\$34,066
Land	\$0	\$0
Reservoirs	\$7,928	\$8,573
Mains Larger than 8"	\$2,147,847	\$2,500,220
Exclusion for 75% of the cost of mains above to arrive at oversizing costs	(\$1,610,885)	(\$1,875,165)
Other Transmission Plant	\$0	\$0
Structures	\$0	\$0
SCADA	\$74,788	\$83,180
Total	\$2,514,138	\$2,837,224

Notes:

(1) Original asset cost less costs financed by TIF.

(2) Adjusted for inflation to June, 2012 values using the Engineering News Record (ENR) Minneapolis Construction Cost Index. The ENR 20-City Average Construction Cost Index was used for assets installed before 1978.

Planned Water Asset Additions

Asset Class	Estimated Cost ⁽¹⁾
Corporate Center (150' Main) ⁽²⁾	\$25,000
Water Main Oversizing (2014-2020)	\$375,000
Total	\$400,000

Notes:

(1) Source: Village of Sussex staff, September 5, 2012.

(2) \$25,000 represents the oversizing cost. The total estimated cost of the project is \$75,000.

Existing Wastewater Treatment Facility Capacity in Residential Equivalent Connections (RECs)

Municipality/Sanitary District	Pre-2005 Capacity Analysis			Post 2005 Capacity Analysis		
	MGD ⁽¹⁾	RECs ⁽²⁾	Percent	MGD ⁽³⁾	RECs ⁽²⁾	Percent
Village of Sussex	1.85	5,781	57.80%	2.50	7,813	49.02%
Town of Lisbon	0.23	719	7.19%	0.89	2,781	17.45%
Town of Lisbon SD1	0.27	844	8.44%	0.31	969	6.08%
Village of Lannon	0.30	938	9.38%	0.30	938	5.88%
Village of Menomonee Falls	0.55	1,719	17.19%	1.10	3,438	21.57%
Total	3.20	10,001	100.00%	5.10	15,939	100.00%
Sussex and Lisbon SD1 share of total capacity		6,625	66.25%		8,782	55.10%
Sussex and Lisbon SD1 share of total cost of 2008 WWTF upgrades ⁽⁴⁾			66.25%			46.66%

Notes:

(1) Source: Village of Sussex 2005 Report on Reserve Capacity Assessments for Sanitary Sewer and Water System Facilities, Village of Sussex, Wisconsin. Prepared by Ruckert/Mielke. February 15, 2005.

(2) One Residential Equivalent Connection (REC) is defined as the amount of wastewater generated by a single-family household including inflow and infiltration - 320 gallons per day.

(3) Village of Sussex Staff, June, 2012.

(4) The pre-2005 share of total WTF costs are taken from the Village of Sussex 2005 Report on Reserve Capacity Assessments for Sanitary Sewer and Water System Facilities, Village of Sussex, Wisconsin. Prepared by Ruckert/Mielke. February 15, 2005. The post 2005 percent of total costs come from Village Staff as of June, 2012.

2005 and Current Water System Capacity

	2005 System Capacity ⁽¹⁾	Current System Capacity ⁽²⁾
Peak System Capacity (MGD)	3.053	3.391
Max Day Pumpage per Customer	460	460
Total System Capacity	6,637	7,372

Notes:

(1) Source: 2005 Report on Reserve Capacity Assessments for Sewerage and Water Facilities for the Village of Sussex. Ruekert/Mielke.

(2) Source: 2011 Village of Sussex PSC Annual Report, Page W-20. Includes the capacity of all wells assuming the largest well (Well 4) is out of service.