

Village of Sister Bay  
Public Facilities Needs Assessment for  
Wastewater Impact Fees

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## Appendices

Appendix A Wisconsin Statute 66.0617

Appendix B Public Hearing and Impact Fee Ordinance

# 1 Introduction

The Village of Sister Bay is a growing community located in Door County, Wisconsin. The costs of providing adequate public facilities continue to rise while trying to meet the needs of the growing population. It is therefore increasingly important for the village to pay for new or expanded public facilities in a manner that is fiscally sound, equitable, and affordable to residents and property owners. Development impact fees offer communities in Wisconsin an equitable way to charge new development for the associated provision of new or expanded facilities.

The Village of Sister Bay has taken the necessary steps to ensure public facilities are in place to accommodate new development. The village now has the public infrastructure in place with sufficient capacity to accommodate anticipated development for many years into the future. Since future residents and property owners who require the excess capacity are not part of the village during the construction of such facilities, existing residents and property owners may bear more than a proportionate share of the cost to build or expand facilities required by future development. The use of development impact fees will allow the village to recover these costs.

The wastewater treatment facility which serves the Village of Sister Bay as well as the Liberty Grove Sanitary District No. 1 has undergone extensive improvements to prepare for the needs of future development in and around the village. The village also completed a comprehensive plan in 2003 which is consistent with Wisconsin Statutes 66.1001 to help with the physical development and planning of the village's future.

## 1.1 Purpose of this Needs Assessment

In 1995 the Wisconsin Statutes gave municipalities the authority to impose impact fees on developers to pay for the capital costs for construction of facilities which will serve new developments. The purpose of this public facilities needs assessment is to determine the wastewater treatment needs for land development and make recommendations regarding the amount of impact fees to impose on developers in accordance with Wisconsin State Statute 66.0617. A copy of Wisconsin State Statute 66.0617 is included in Appendix A. Currently, the Village of Sister Bay does not have an impact fee ordinance in place and consequently does not assess impact fees at this time. This study quantifies the economic impact of providing wastewater treatment plant capacity for land developments and presents calculations for determining the amount of the impact fee in accordance with the Wisconsin State Statute standards to recover the associated capital costs.

The impact fee will be a one-time fee assessed to developers that will utilize the wastewater treatment plant's reserve capacity to serve their land development. The collected fees are required by statute to be deposited in a segregated account and to be used only for recovering and paying for capital costs of facilities to serve new growth. The fee can be used to pay for engineering and legal fees, land costs, and construction costs associated with new facilities provided for land development. The imposition of impact fees should offset the cost of providing reserve capacity for future users and thereby reduce the burden of reserve capacity costs on existing users of wastewater treatment services.

## 1.2 Scope of the Needs Assessment

In accordance with Wisconsin State Statute 66.0617, the public facilities needs assessment shall include:

- ◆ An inventory of existing public facilities, including an identification of any existing deficiencies in the quantity or quality of those public facilities, for which it is anticipated that an impact fee may be imposed.
- ◆ An identification of new public facilities, or improvements or expansions of existing public facilities, that will be required because of land development for which it is anticipated that impact fees may be imposed. This identification shall be based on explicitly identified service areas and service standards.
- ◆ A detailed estimate of the capital costs of providing the new public facilities or the improvements or expansions in existing public facilities.
- ◆ Calculation of the impact fee based on a rational and equitable method.
- ◆ Estimates of the effects on housing affordability in the village when impact fees are imposed.

The development of an ordinance is not included in the scope of this needs assessment and will be completed by the Village of Sister Bay's attorney.

## 1.3 Available Information

The following information and reports were utilized for the preparation of this study.

- ◆ Engineering Report, Village of Sister Bay, Wastewater Treatment Plant Modifications. Dated November 24, 2004 as prepared by Robert E. Lee & Associates, Inc.
- ◆ Village of Sister Bay 20-Year Comprehensive Plan. Dated October 2003 as prepared by Bay-Lake Regional Planning Commission.
- ◆ Construction Costs in the form of Application for Payment No. 5 from Miron Construction Inc. dated October 31, 2004.
- ◆ Wastewater Management User charge System. Dated March 27, 1990 and Revised February 1996 as prepared by Robert E. Lee & Associates, Inc.
- ◆ Village of Sister Bay Water Sewer Utility Water Usage for 2001, 2002, 2003 and 2004

## 2 Impact Fee Requirements

Impact fees are regulated under Wisconsin State Statute 66.0617 which defines an impact fee as cash contributions, contributions of land or interests in land or any other items of value that are imposed on a developer by a city, village, town, or county. A developer, as defined by the statute, is a person that constructs or creates a land development. Land development, also defined by statute, means the construction or modification of improvements to real property that creates additional residential dwelling units within a city, village, town, or county or that results in nonresidential uses that create a need for new, expanded, or improved public facilities within a city, village, town, or county. Therefore, impact fees can be used to pay for the capital costs associated with wastewater treatment capacity that is reserved for future land development.

The creation of an impact fee includes the following key elements:

- ◆ Preparation of a public facilities needs assessment to demonstrate that the fee is calculated appropriately;
- ◆ Institution of an impact fee ordinance; and
- ◆ Implementation of a public hearing process to review the public facilities needs assessment and proposed ordinance.

Impact fees imposed by ordinance are required to meet the following standards:

- ◆ Bear a rational relationship to the need for new, expanded, or improved public facilities that are required to serve land development.
- ◆ May not exceed the proportionate share of the capital costs that are required to serve land development, as compared to existing uses of land within the village.
- ◆ Shall be based on actual capital costs or reasonable estimates of capital costs for new, expanded, or improved public facilities.
- ◆ Shall be reduced to compensate for other capital costs imposed by the village with respect to land development to provide or pay for public facilities, including special assessments, special charges, land dedications or fees in lieu of land dedications.
- ◆ Shall be reduced to compensate for moneys received from the federal or state government specifically to provide or pay for the public facilities for which the impact fees are imposed.
- ◆ May not include amounts necessary to address existing deficiencies in public facilities.
- ◆ Shall be payable by the developer to the village, either in full or in installment payments that are approved by the village, before a building permit may be issued or other required approval may be given by the village.

In accordance with state statutes this public facilities needs assessment is to be made available for public inspection and copying in the office of the clerk for at least 20 days before the date of the public hearing for the impact fee ordinance.

### 3 Growth Projections

#### 3.1 Historic and Projected Population

Estimated growth in population and wastewater utility customers forms the basis for determining how many future customers will be served by the utility. There were two sources of population projections: 1) Wisconsin Department of Administration (WDOA), and 2) population projections created by the Bay-Lake Regional Planning Commission (BLRPC) for the Village of Sister Bay 20-Year Comprehensive Plan dated October 2003. Table 3-1 shows these two sources of projections as well as Census counts and the official 2004 population estimates for the village from WDOA. All population figures represent the permanent or wintertime population.

Table 3-1  
Historic and Projected Population, Village of Sister Bay

	Census	WDOA Pop. Estimate	WDOA Projections	BLRPC Share of County*	BLRPC Growth Trend	BLRPC Linear Trend
1920	190					
1930	238					
1940	309					
1950	429					
1960	520					
1970	483					
1980	564					
1990	675					
2000	886					
2004		914				
2005			956	973	967	934
2010			1,027	1,024	1,047	982
2015			1,077	1,069	1,163	1,048
2020			1,113	1,100	1,279	1,114
2025			1,119			

\*Population projection utilized in Village of Sister Bay Engineering Report for Wastewater Treatment Plant Modifications, November 24, 2003 as prepared by Robert E. Lee & Associates, Inc.  
Sources: U.S. Bureau of the Census, 1920-2000. January 1, 2004 Final Population Estimates, Wisconsin Department of Administration, Demographics Services Center, October 10, 2004. Village of Sister Bay 20-Year Comprehensive Plan, October 2003, prepared by Bay-Lake Regional Planning Commission.

The basis for projected change in population used to determine growth will be between the year 2004 and the year 2025. The only population projections available to the year 2025 are that of the Wisconsin Department of Administration (WDOA) showing very little growth between the years 2020 and 2025. The 2025 WDOA population projection of 1,119 was used as the low end of the population projections for the Village of Sister Bay. Therefore, the low end growth in population from the year 2004 to the year 2025 is calculated to be 205.

In order to determine the high end or Bay-Lakes Regional Planning Commission's (BLRPC) growth trend population projection to the year 2025 the same number increase from the year 2015 to year 2020 of 116 people was used to determine the year 2025 estimated population of 1,395. Therefore, the high end growth in population from the year 2004 to the year 2025 is calculated to be 481.

The wastewater treatment facility also serves the Liberty Grove Sanitary District, but there is no information regarding population growth specific to the Sanitary District. The wastewater treatment plant also receives the Town of Liberty Grove holding tank wastes. Bay-Lakes Regional Planning Commission Population Projections presented in the Village of Sister Bay Engineering Report for Wastewater Treatment Plant Modifications, November 24, 2003 as prepared by Robert E. Lee & Associates, Inc. showed the Town of Liberty Grove year 2000 population to be 1,858 and the 2005 population to be 2,009 and year 2020 population to be 2,179. The change in population projection between the years 2015 and 2020 was 34 people. To determine the year 2025 estimated population, the same increase in population of 34 was added to the 2020 population of 2,179 to obtain 2,213. The population increase between the years 2000 and 2005 was used to obtain the 2004 population of 2,068. The increase in population for the Town of Liberty Grove from the year 2004 to the year 2025 was estimated to be 145. It is unknown how much of this growth would be within the Liberty Grove Sanitary District.

The Village of Sister Bay 20-Year Comprehensive Plan prepared by Bay-Lakes Regional Planning Commission dated December 15, 2003 states that only 44% of the available land zoned for residential development has been developed within the Village of Sister Bay. The population growth projections to the year 2025 can be accommodated by the available land.

### 3.2 New Customer Projections

#### 3.2.1 Population Driven Customer Growth

The Village of Sister Bay 20-Year Comprehensive Plan prepared by Bay-Lakes Regional Planning Commission dated December 15, 2003 showed the persons per household in the year 2005 to be 1.72 decreasing to 1.59 by the year 2020. The average number of persons per household over the 2005 to 2020 time frame is 1.65 and will be used for customer growth projections. Using the Village of Sister Bay permanent of wintertime population projections previously calculated showing a low growth of 205 people and a high growth of 481 people, the number of new households by the year 2025 ranges between a low of 124 and a high of 291. The 2000 census showed that approximately the same numbers of people are seasonal as are permanent. Therefore, to obtain maximum summertime growth, the number of new housing units should double to a low of 248 and high of 582.

The Town of Liberty Grove was estimated to grow 145 in permanent or wintertime population by the year 2025. Using the same average number of persons per household of 1.65 as within the Village of Sister Bay shows an increase of 88 households within the Town of Liberty Grove. Using the same scenario as the Village of Sister Bay, the maximum summertime growth doubles to 176 additional household in the year 2025.

### 3.2.2 Housing Driven Customer Growth

The Village of Sister Bay 20-Year Comprehensive Plan also made projections of occupied housing units based on census housing counts and a linear trend to the year 2020. Table 3-2 shows the various projected occupied housing units. To determine the 2004 number of occupied housing units a prorating was made between the year 2000 and the year 2005 high and low projections. The year 2004 low was calculated to be 464 and the high was calculated to be 494.

To determine the high and low projections to the year 2025 the growth between the years 2015 and 2020 was used as the same increase between 2020 and 2025. Therefore, the 2025 low end of the projected households was calculated to be 610 and the high end was calculated to be 805. Therefore, the increase in occupied housing units from 2004 to 2025 was calculated to be a low of 146 and a high of 311. These projections are somewhat higher than the population driven projections for additional permanent or wintertime households. To include the maximum or summertime housing units, the estimated occupied housing units will double to a low of 292 and high of 622.

Table 3-2  
Historic and Projected Households (Occupied, Full-Time Units),  
Village of Sister Bay

	Census	WDOA Projections	BLRPC Linear Trend	BLRPC Linear Pop.	BLRPC Share of County
1970	198				
1980	217				
1990	284				
2000	446				
2005		494	468	506	503
2010		548	489	559	547
2015		591	530	635	583
2020		624	570	720	619
2025		628			

Sources: U.S. Bureau of the Census, 1970-2000. Village of Sister Bay 20-Year Comprehensive Plan, October 2003, prepared by Bay-Lake Regional Planning Commission.

### 3.2.3 Customer Growth Projections Used for Calculating Impact Fees

The increase in households to the year 2025 using the housing driven customer growth was more than the population driven estimates of future customers. The more conservative estimates shown in the population drive analysis will be used to determine the impact fee to increase the level of confidence that the project costs will be collected from impact fees. Therefore, the average number of permanent additional customers is projected to be the average of the high and low calculated to be 208 in the Village of Sister Bay and 88 in the Town of Liberty Grove. The maximum summertime customers are then estimated to be twice the wintertime permanent customers of 416 in the Village of Sister Bay and 176 in the Town of Liberty Grove.

## 4 Wastewater Treatment Facilities Prior to Improvements

A new wastewater treatment plant was constructed in 1989. As a result of the new treatment plant the Wastewater Management User Charge System dated March 27, 1990 and revised February 1996 was prepared by Robert E. Lee & Associates, Inc. Information as to the description of facilities constructed at that time, the design capacities, and cost allocations was used for this report.

The Village of Sister Bay Wastewater Treatment Facility was evaluated and an Engineering Report dated November 24, 2004 was prepared by Robert E. Lee & Associates, Inc. The information presented on the existing wastewater treatment facility and improvements related to the proposed impact fee was used in this needs assessment as the basis for determining the allocation of the improvements to future customers.

### 4.1 Wastewater Loadings

The new wastewater treatment plant constructed in 1989 was designed to accept the wastewater flows from the wastewater collection systems serving the Village of Sister Bay and the Liberty Grove Sanitary District. The plant was also designed to accept holding tank wastes from the Town of Liberty Grove. Table 4-1 shows the design flows, design loadings and allocation of the design flow and loadings to the Village of Sister Bay, The Liberty Grove Sanitary District and the Town of Liberty Grove.

Table 4-1  
1990 Wastewater Treatment Design Capacities and Allocations to  
Village of Sister Bay, Liberty Grove Sanitary District and Town of  
Liberty Grove

Description	Summer Design	Winter Design	Village Allocation	Sanitary District Allocation	Town Allocation
Max. Design Flow (gpd)	945,000	--	613,664	58,506	262,952
Average Daily Flow (gpd)	700,000	356,000	--	--	--
Max. BOD5 (lbs./day)	2,369	--	918	87	1,399
Max. Suspended Solids (lbs./day)	2,176	--	1,080	102	1,003
Max. Phosphorous (lbs./day)	102	--	54	5	43
Average Daily BOD5 (lbs./day)	1,780	910	--	--	--
Average Daily Suspended Solids (lbs./day)	1,635	820	--	--	--
Average Daily Phosphorous (lbs./day)	75	38	--	--	--
Overall Design Capacity Allocation	--	--	54.15%	5.15%	40.70%

\*Village of Sister Bay and Liberty Grove Sanitary District only.

The 2004 Engineering Report states that the 2003 average wastewater flow for summer was 0.229 million gallons per day (mgd); the 2003 average wastewater flow for winter was 0.138 mgd; the average annual BOD for summer was 802 and for winter was 320; the average annual TSS for summer was 820 and for winter was 294. A summary of Seasonal Loading Levels is presented in Table 4-2. The Engineering Report stated that on average the current flow and load levels are approximately at 50% capacity.

Table 4-2  
Summary of Seasonal Loading Levels, Village of Sister Bay WWTF,  
1998-2002

Year	Parameter	Summer	Winter
1998	Flow, gpd	264,000	141,000
	BOD, lbs/day	750	309
	TSS, lbs/day	820	287
	Sludge,*gallons	178,000	159,000
1999	Flow, gpd	264,000	128,000
	BOD, lbs/day	880	312
	TSS, lbs/day	880	284
	Sludge,*gallons	265,500	114,500
2000	Flow, gpd	248,000	113,000
	BOD, lbs/day	794	303
	TSS, lbs/day	749	309
	Sludge,*gallons	251,800	143,500
2001	Flow, gpd	276,000	121,000
	BOD, lbs/day	910	323
	TSS, lbs/day	840	290
	Sludge,*gallons	284,000	141,000
2002	Flow, gpd	276,000	123,000
	BOD, lbs/day	879	358
	TSS, lbs/day	886	299
	Sludge,*gallons	298,000	110,500

\*Sludge TSS 3.5-4.5%.

Source: Engineering Report Village of Sister Bay, Wastewater Treatment Facility Modifications, November 24, 2003, as prepared by Robert E. Lee & Associates, Inc.

#### 4.2 Wastewater Treatment Processes Prior to Improvements

The wastewater treatment facility, which was constructed in 1989, included septage receiving facilities, flow equalization facilities, screening and grit removal facilities, a three channel oxidation ditch, two final clarifiers, two aerobic sludge digesters, sludge thickening and handling equipment, aeration equipment, chemical feed equipment, disinfection facilities, service buildings, outfall sewer, potable and non-potable water supply facilities, electrical system, instrumentation, heating and ventilating systems, plumbing and other appurtenances and minor

structures. The wastewater treatment facility was reported to be operating efficiently since it was constructed and has met all effluent limits.

The treatment facilities are in good condition. However, the constant speed oxidation ditch rotor drives limit operating flexibility with changing oxygen demands. Deficiencies exist in meeting the Wisconsin Department of Natural Resources (WDNR) current requirement of providing 180 days of sludge wintertime storage for design capacity.

Currently, the treatment facility cannot provide adequate treatment of wastewater in the event of a power outage. The WDNR establishes that at a minimum during a power outage the treatment facility must be capable of providing the equivalent of primary settling and disinfection at maximum design flow, which the treatment system could not provide.

## 5 New Wastewater Treatment Improvements

### 5.1 Description of Improvements

Improvements to the wastewater treatment facility were designed to utilize current technology to provide greater flexibility, reduce power consumption and to provide compliance with current regulatory requirements.

#### 5.1.1 Oxidation Ditch Modifications

The influent loadings to the oxidation ditch experiences significant variations during the summer months. The average seasonal loadings were considered to be approximately 50% of the design levels. The loadings will increase with increased land development and corresponding increase in customers. With the variability of loadings and corresponding variability of oxygen demands the constant speed drives on the partially submerged rotors, there is limited operating flexibility.

Variable frequency drives were provided to allow operating flexibility by providing the ability to operate drives at different speeds to match the aeration or mixing demand and reduce the amount of energy consumed by the system.

#### 5.1.2 Aerobic Digester Modifications

To improve the mixing and oxygen transfer efficiencies within the aerobic digesters, the existing coarse bubble diffusers were replaced with fine bubble diffusers. To provide operating flexibility and reduce energy consumption, the positive displacement blowers, the belt drive was fitted with different size sheaves to allow for changes in blower speeds.

#### 5.1.3 Sludge Storage System

Additional sludge storage facilities were constructed to provide a minimum of 180 days winter-time sludge storage. In addition to the additional sludge storage a new mixing system, new loading station and a controlled access system for sludge haulers was provided. Based on the design capacity of the wastewater treatment facility and the current average wintertime sludge production, approximately 267,000 gallons of sludge storage was required to provide 180 day of storage. With 66,000 gallons of storage currently available, an additional 200,000 gallons of sludge storage was provided. A high capacity pump was provided to mix the tank and transfer sludge to the new sludge loading station. The storage tank and loading station were enclosed by a new fence with a controlled access gate.

#### 5.1.4 Emergency Generator

The WWTF did not have an adequate emergency backup power source. An emergency generator was provided to meet current WDNR regulations and ensure that no permit violations occur if a power outage occurs. The emergency generator was sized to operate all of the wastewater treatment processes at maximum day loads.

### 5.2 Service Area

The wastewater collection system in general currently serves the entire Village of Sister Bay except for the southern portion of the village, generally south of Cherrywood Lane, and to the east, generally east of Woodcrest Road. The collection system also serves the Liberty Grove

Sanitary District. The wastewater treatment facility currently receives all the wastewater from this area. In addition, the wastewater treatment facility receives holding tank wastes from the Town of Liberty Grove.

The average seasonal loadings to the wastewater treatment facility are currently at approximately 50% of the design capacity making available capacity for additional land development and corresponding customer growth within the boundaries of the Village of Sister Bay, the Liberty Grove Sanitary District and the Town of Liberty Grove.

### 5.3 Service Standard

The service standard for the purposes of determining the impact fee is based on the estimated average wastewater discharged per day per customer as measured by water use. Treatment facilities are generally designed for a 20-year life and therefore should be paid for over that time frame. Also, financing for the facility is over a 20-year time frame and impact fees should pay the appropriate share within that time frame. Therefore, the impact fee should be collected by the year 2025 in an amount sufficient to pay for the appropriated capital costs. The impact fee should then be based on the lesser number of customers determined by calculating the number of customers that could be accommodated by the available capacity in the wastewater treatment facility or the average number of additional housing units projected to the year 2025.

Based on information on water use data provided by the Village of Sister Bay Water and Sewer Utility and information on number of meters (960) from the Public Service Commission, the 2003 average water use per customer was calculated to be 185 gallons per day. In comparison, the Village of Sister Bay and Liberty Grove Sanitary District allocated design flow for the wastewater treatment facility for winter months is an average 330,261 gallons per day for a design population of 2,970 people and the allocated design flow criteria for the summer months is an average of 876,612 gallons per day for a design population of 4,456 people. Based on this information the number of customers from the Village and from the Sanitary District could double or add 960 additional customers before reaching design capacity. An additional 960 customers is a substantial increase and is not likely to happen by the year 2025. Therefore, the estimated new housing units of 416 in the Village of Sister Bay and 176 in the Town of Liberty Grove by the year 2025 should be the basis for determining the impact fee assessed to new development.

## 6 Improvement Capital Costs

### 6.1 Capital Costs

The Impact Fee Statute states the costs that can be included to accommodate land development. These costs include cost to construct, expand, or improve public facilities; cost of land; legal costs; and engineering and design costs. The capital costs used to calculate the impact fee includes construction costs and engineering costs. The actual costs for the wastewater treatment facility improvements were provided by the Village of Sister Bay. Table 6-1 shows the actual costs as paid by the Village of Sister Bay.

Table 6-1  
Wastewater Treatment Improvement Capital Costs

Description	Cost	Amount Attributed to Existing Customers	Amount Attributed to Future Customers
Mobilization	\$50,234	\$25,117	\$27,618
Bond & Insurances	\$10,860	\$5,430	\$5,971
Demobilization	\$2,000	\$1,000	\$1,100
Electric Utility Services	\$2,000	\$1,000	\$1,100
Engineer Review Allocation	\$1,000	\$500	\$550
Site Work – Sludge Storage Access	\$93,433	\$46,717	\$46,717
Structure 400 – Generator	\$217,518	\$108,759	\$108,759
Structure 500 – Generator	\$16,055	\$8,003	\$8,003
Structure 700 - Digester	\$100,358	\$50,179	\$50,179
Structure 750 -	\$3,500	\$1,750	\$1,750
Structure 800 – Aeration	\$7,350	\$3,675	\$3,675
Structure 900 -	\$13,350	\$6,675	\$6,675
Structure 950 – Sludge Storage	\$195,095	\$65,357	\$129,738
Total Construction Cost	\$712,703	\$324,161	\$391,833
Engineering Costs	\$200,000	\$90,043	\$109,957
Total Costs	\$912,703	\$414,204	\$501,790

Of the improvements made to the wastewater treatment facility only the sludge storage is related specifically to future customers. A portion of the sludge storage cost was attributed to a new mixing system and loading station which also benefits existing customers. Therefore, the cost for sludge storage was prorated based on the proportionate volume of the sludge storage facilities to accommodate future customer growth. The other facilities benefited existing and future customers on a 50/50 basis. The costs were also prorated on proportion of costs for the administrative costs of mobilization, bond & insurance, electric utility services and engineer review allocation. The engineering costs were prorated based on the proportion of construction costs.

The Wastewater Management User Charge System calculated an allocation of the plant design capacity. The overall design capacity allocation was determined as:

Village of Sister Bay	54.15%
Town of Liberty Grove	40.70%
Liberty Grove Sanitary District	5.15%

This same allocation should be used to recover the capital costs associated with new development from impact fees. Therefore, proportionate share of each entity is as follows:

Village of Sister Bay	\$271,719
Town of Liberty Grove	\$204,229
Liberty Grove Sanitary District	<u>\$ 25,842</u>
Total Amount	\$501,790

## 6.2 Wastewater Treatment Impact Fee

In 2003 the average annual water use was 177,466 gallons per day for an average 960 customers within the Village of Sister Bay and the Liberty Grove Sanitary District. By allocation, the 960 customers represent 59.3% of the total capacity. In 2003 it was reported that the wastewater treatment plant was operating at approximately 50% capacity and water records for the Village of Sister Bay and the Liberty Grove Sanitary District verify approximately 50% of their allocated capacity. This would indicate that an additional 960 customers could be added between the Village and the Sanitary District. Projected growth does not indicate this much growth.

Each of the three communities can elect to create an impact fee or pay for their share of these improvements through rates or property taxes. Each community could also choose to pay their entire share of the \$912,703 out of current cash or borrow the entire amount which would mean current users would be paying rather than future users. The imposition of an impact fee by any of the three entities has no impact on the others in terms of how they pay for the project. The Village has fronted the entire \$912,703 and will be billing the Sanitary District and the Town for 100% of their share of the project upon final acceptance. Therefore, the impact fee to cover the costs associated with new development is determined based on a payback by 2025 to coincide with design life and the financing term. The impact fee basis should be the projected maximum number of new customers by the year 2025. The estimate can be directly determined for the Village of Sister Bay, but there is no direct estimate of how many customers in the Town of Liberty Grove will be in the Sanitary District. Therefore, the estimated growth in customers in the Sanitary District will be in the same proportion as the wastewater treatment plant design allocation which calculates a maximum of 20 new customers in the Sanitary District and 156 new customers in the Town. The calculated impact fee to be assessed to new development is shown in Table 6-2.

Table 6-2  
Calculated Impact Fee for Each Governmental Entity

Governmental Entity	Capital Costs	Maximum No. of New Customers	Calculated Impact Fee
Village of Sister Bay	\$271,719	416	\$653
Town of Liberty Grove	\$204,229	156	\$1,309
Liberty Grove Sanitary District	\$25,842	20	\$1,292

To be consistent with charging an impact fee per a residential user equivalent, it is recommended that the impact fee be assessed for the Village and the Sanitary District based on the “residential meter equivalent” as shown in the Village of Sister Bay Wastewater Management User Charge System.

### 6.3 Effect of Impact Fees on Housing Affordability

As stated in the Village of Sister Bay 20-Year Comprehensive Plan, in the year 2000 the housing units in Sister Bay were valued between \$200,000 and \$299,000. It was also stated that the Village of Ephraim had similar home values. In 2003 there were four new building constructed in the Village of Ephraim at an average cost of \$333,800. The proposed impact fees are in the neighborhood of 1% of the housing unit values. Therefore, the imposition of impact fees will have a minimal effect on housing affordability.

Neighboring communities that provide wastewater collection and treatment have established connection fees that are paid by the property owner when they connect to the wastewater collection system. These connection fees are higher than the proposed Village of Sister Bay impact fee and higher than the current connection fee. The following is a list of connection fees charged by neighboring communities:

Village of Ephraim	Special assessment connection charge-varies
Fish Creek Sanitary District	\$3,200
Village of Egg Harbor	\$4,374 connect to Village constructed sewer
	\$3,285 connect to developer constructed sewer