

**Private Sewage System Replacement
or Rehabilitation Grant Program**

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Introduction

The private sewage system replacement or rehabilitation program, also referred to as the Wisconsin Fund, provides financial assistance to owners of a principal residence (residence which is occupied at least 51% of the year by the owner) and small businesses (commercial establishments) who meet certain income and eligibility criteria, to cover a portion of the cost of repairing or replacing failing private sewage systems. The Department of Commerce (Commerce) administers the program. This paper describes the requirements of the program. The program was appropriated \$2,999,000 in each year of the 2007-09 biennium from the general fund.

There are two general types of systems utilized to treat and dispose of sewage--centralized sewage collection and treatment systems and "private sewage systems," also known as "private onsite wastewater treatment systems" (POWTS). Many areas are not served by centralized sewage systems, primarily rural areas or areas where the housing density is too low to justify a sewer system. In these areas, residential or commercial development requires the use of a private sewage system.

The private sewage system replacement or rehabilitation grant program was created in 1978 to provide funding to address the problem of system failures. From 1978 through 2008, the State has awarded \$89.2 million in grants to assist almost 37,800 residences and businesses to replace or rehabilitate private sewage systems. The program is authorized in s. 145.245 of the statutes. Commerce promulgated administrative rules for the program in Comm 87 of the Wisconsin Administrative Code.

Commerce estimates that there are 732,000 private sewage systems in the state. During calendar years 2006 and 2007, approximately 15,900 permits per year were issued for private sewage systems. Of these, about 50% were for newly-constructed and 50% were for replacement systems. In addition, an unknown number of homes that previously used private sewage systems are connected to centralized municipal wastewater treatment systems every year, and the private systems are no longer used. Commerce indicates that estimates of the number of private sewage systems have become more precise as counties have begun to compile an inventory of private sewage systems and will become more precise during the next few years as they complete an inventory of private sewage systems.

Failing private sewage systems tend to produce health hazards, water pollution or both. Health hazards occur when a private sewage system does not operate properly, discharging untreated wastewater into groundwater where it can contaminate drinking water supplies, or to the ground's surface, where persons coming into contact with it can be exposed to disease-bearing micro-organisms.

Failing systems can also result in wastewater discharges directly into a stream or lake, resulting in water pollution. For example, the eutrophication of lakes--the process by which lakes "fill" with decomposed matter and become "marshy" in character--can be accelerated in many lakes surrounded by residences with failing private sewage systems because of the organic pollutants added by the discharges from these systems.

In 1999 Wisconsin Act 9, a loan program

component was created and funded from the segregated environmental improvement fund. Commerce and the Department of Administration (DOA) administer this program. To date, no counties have used the loan program.

Several appendices provide additional information about the distribution of grants in each county, the legislative history of the program, how a grant is calculated and how a typical private sewage system functions.

County Participation

Wisconsin counties and Indian tribes may apply to Commerce to participate in the grant program to assist homeowners and small commercial establishments with the rehabilitation or replacement of failing private sewage systems. Counties participate because they are responsible for the regulation of private sewage system installations. Participation in the grant program is voluntary. Five counties (Ashland, Crawford, Douglas, Florence and Milwaukee) are not participating in 2008-09. Two counties used to participate but withdrew, including Crawford after the 2000-01 grant cycle and Florence County after 1999-00. Bayfield County did not participate between 1998-99 and 2006-07, and resumed participation with applications for the 2007-08 grant cycle.

Milwaukee County does not perform private sewage system regulation functions, and the City of Franklin is the only participating governmental unit in that county. Indian tribes and bands are also eligible to participate in the program and the Oneida Tribe participates. References to "counties" in this paper, therefore, also apply to the City of Franklin in Milwaukee County and the Oneida Tribe.

County Responsibilities. Counties that choose to participate in the program must:

1. Adopt a resolution stating that the county will administer the program in compliance with state law and disburse state grant funds to eligible owners;

2. Agree to establish a program of inspection and maintenance for all new or replacement private sewage systems constructed in the county;

3. Establish a system of user charges and cost recovery, if the county considers this to be appropriate, which may include the cost of the grant application fee and the cost of supervising installation and maintenance; and

4. Certify that: (a) the individual owner eligibility requirements are met; (b) the grant funds will be properly disbursed; and (c) the recipients' private sewage systems will be properly installed and maintained.

Under 2005 Act 347, the county POWTS maintenance program was moved out of the private sewage system replacement or rehabilitation grant program and into the general duties of the Department of Commerce. The act makes all counties responsible for adoption and enforcement of the maintenance program, whether or not a county has chosen to participate in the grant program. Commerce promulgated administrative rule changes, effective October 1, 2008, to implement the program. The rules require: (a) a county shall conduct, complete, and maintain an inventory of all POWTS located within the jurisdiction within three years; and (b) a county shall develop and implement a POWTS maintenance program within five years that includes the inventory, and a process for recording each inspection, evaluation, maintenance and servicing report for a POWTS.

The owner of a failing private sewage system, either of a principal residence or a small commercial establishment, may obtain grant application forms from the county after a determination of a failure of the private sewage system has been made. Sixty-five of 69 participating counties (67 counties, the City of

Franklin and the Oneida Tribe) charge a fee to applicants to offset county administrative and maintenance costs. The fee averages \$127, and ranges from \$50 to \$350. Eighteen counties charge a fee to all applicants, and the other 47 counties charge an application fee only after applicants have been determined eligible for a grant. The county submits eligible applications to Commerce and disburses grant funds to eligible individuals. Appendix I shows the date each county entered the program, the distribution of grants made in each county in 2008-09, and the cumulative distribution amount.

Eligible Projects

Replacement or rehabilitation of a private sewage system serving a home or small commercial establishment may be eligible for financial assistance if:

1. The system was installed before July 1, 1978;
2. The dwelling is not located in an area served by a municipal sewer;
3. The residence or small commercial establishment is occupied at least 51% of the year by the owner;
4. The owner of the principal residence or business meets certain income criteria, (discussed in the next section);
5. The private sewage system is a category 1 or 2 failing private sewage system (see the next section for description of categories); and
6. A determination of failure is made prior to the rehabilitation or replacement of the failing private sewage system. A "determination of failure" is defined as either: (a) a determination that the sys-

tem is failing based on an inspection by an employee of the state or a governmental unit who is certified to inspect private sewage systems by Commerce; or (b) the owner has been ordered, in writing, to rectify a violation by the appropriate local governmental unit, DNR or Commerce.

Since the inception of the private sewage system grant program, program design and eligibility criteria have been modified by the Legislature a number of times. Appendix II describes these changes.

Residential Properties. The annual family income of a residential property owner may not exceed \$45,000. "Family income" is defined as the federal adjusted gross income of the owner and the owner's spouse for the taxable year prior to the year in which the determination of system failure is made.

Applicants with income below \$32,000 receive the maximum eligible grant. The grant for homeowners with income between \$32,000 and \$45,000 is reduced by 30% of the amount by which the homeowner's income exceeds \$32,000, (which means that for each \$1 in income above \$32,000, the grant is decreased by 30 cents). Rental residential properties are not eligible. The grant formula is shown in Table 1.

Table 1: Private Sewage System Program Grant Formula for Residential Properties

Income	Grant Formula Amount
Under \$32,000	Full Eligible Grant
\$32,001 - \$45,000	Full Eligible Grant Minus [(Income - \$32,000 x 30%)]
Over \$45,000	No Grant

Small Commercial Establishments. In order to be eligible for grant funds, a commercial establishment must have a maximum daily wastewater flow rate of less than 5,000 gallons per day. In addition: (a) the commercial establishment

must have been owned and occupied by the applicant when the determination of private sewage system failure was made; and (b) the annual gross revenue of the business that owns the commercial establishment may not exceed \$362,500. Income is defined as the gross revenue of the business for the taxable year prior to the year in which the determination of failure is made. There is no proration based on income for commercial establishments as there is for residential properties. In each fiscal year, grant funding for all commercial establishments cannot exceed 10% of the total funds available. Grants for commercial establishments are prorated so that the total awards for commercial establishments do not exceed 10% of total funds available.

Types of Failing Private Sewage Systems. The types of failing private sewage systems are divided into three categories. Categories 1 and 2 are eligible for grant assistance. The types of systems are:

1. Category 1 systems are those which fail by discharging sewage to surface water, groundwater, drain tiles, bedrock or zones of saturated soils. These are considered the most serious types of failure, and are given highest priority for grant assistance.

2. Category 2 systems are those which fail by discharging sewage to the surface of the ground. This type of failing system is eligible for a grant, but has a lower priority for funding than Category 1 systems.

3. Category 3 systems are those which fail by causing the backup of sewage into the structure served. This type of failing system is not eligible for grant assistance.

Grant Determination

Six categories of costs, called "work components," are eligible for reimbursement. The

work components are:

1. Site evaluation and soil testing;
2. Installation of a replacement septic tank;
3. Installation of a pump chamber and lift pump or siphon;
4. Installation of a non-pressurized or in-ground pressure soil absorption area. The grant amount is based on systems sized according to either: (a) the percolation rate in minutes for water to fall one inch; or (b) soil morphological conditions, that is, the design loading rate in gallons per square foot per day;
5. Installation of an at-grade or mound soil absorption area; and or
6. Installation of a holding tank.

Costs allowable in determining grant funding may not exceed the costs of rehabilitating or replacing a private sewage system by the least costly method, except that a holding tank may not be used as the measure of the least costly method for rehabilitating or replacing a private sewage system other than a holding tank. Statutes limit the state grant share to \$7,000, or the amount determined by the Department in grant funding tables, whichever is less. In addition, Comm 87 of the Wisconsin Administrative Code limits the maximum allowable grant to 60% of the total replacement cost or the amount determined in the grant funding tables, whichever is less.

Commerce is required to prepare and publish grant funding tables that specify the maximum state share amounts for eligible work components and costs. The grant funding tables must be designed to pay approximately 60% of the average cost of rehabilitation or replacement. Commerce is required to revise the grant funding tables when it determines that 60% of current costs of private sewage system rehabilitation or replacement exceeds the amount in the tables by more than 10%.

The tables may be revised no more than once every two years. The tables were last revised in 2008 for applications received on or after October 1, 2008, for funding in 2009-10 and subsequent years. (The grant funding tables first apply to applications due to Commerce by February 1, 2009, for funding in the 2009-10 grant cycle.) Appendix III illustrates examples of how the grant is calculated for various types of private sewage systems under the grant funding tables that were in effect through 2008-09 and under the revised grant funding tables that went into effect in 2009-10.

Commerce is required to withhold grant awards for applicants that the Department of Workforce Development determines are delinquent in their child support or maintenance payments until the applicant submits a certification of full payment from the Clerk of Courts in the county where the child support or maintenance payments are delinquent or has a payment agreement on file at the county child support agency. For the grant cycles from 1997-98 through 2007-08, 11 delinquent grant applicants did not provide the required certification by December 31 of the calendar year of the grant cycle so their grants expired. For the 2007-08 grant cycle, one applicant was delinquent but paid the balance due and subsequently received the grant award. For 2008-09, no applicants were delinquent in child support. (For 2009-10, if there are delinquent applicants, they would have until December 31, 2010, to provide required certification to restore grant eligibility.)

Experimental Private Sewage System Grants

Up to 10% of private sewage system grant funding may be allocated for experimental private sewage systems. This equals \$299,900 of the \$2,999,000 appropriated in 2008-09 plus 10% of unobligated funds carried over from the prior year. Commerce is authorized to exempt grants for experimental systems from: (a) the statutory \$7,000 limit on private sewage system grants; (b) the

requirement that the grant not exceed the costs of replacing or rehabilitating the system; (c) the requirement that the grant not exceed the least costly method of replacing or rehabilitating the system; (d) the formula that decreases the grant amount for applicants with income between \$32,000 and \$45,000; and (e) proration if the appropriation is insufficient to fund 100% of grants.

Administrative rule chapter Comm 87, specifies how Commerce will select, monitor and allocate the state share for experimental private sewage systems, effective with applications for grant funding in 2000-01. Prior to 2000-01, no awards for experimental private sewage systems were available. Comm 87 authorizes Commerce to determine on a case-by-case basis the maximum allowable grant for the installation and monitoring of an experimental private sewage system, and to prorate available funds for experimental systems.

In the 2000-01 grant cycle, 11 property owners met eligibility requirements and received grants of \$138,677 (\$12,607 per property) to fund the installation of an experimental system consisting of a constructed wetland system to serve a small community. In addition, Commerce granted \$29,085 to monitor the system for up to five years from the date of installation, for a total of \$167,762 for installation and monitoring. A constructed wetland is an aquatic treatment system that typically consists of one or more lined cells that are planted with wetland type vegetative species. Wastewater flows from a septic tank through the cells where it is treated by microorganisms that are present on the plant roots and in the supporting media. The wastewater then is dispersed into soil where final treatment takes place. The vegetation in a wetland system releases some of the water as vapor into the atmosphere and also removes nitrogen and phosphorus via plant uptake and biological and chemical processes.

The objective for the experimental project was to provide a more natural looking system (the constructed wetland) with lower energy and

operation and maintenance costs than a traditional system, while producing wastewater of a quality that meets code requirements. Commerce received the final report for the project in July, 2006. Commerce officials indicate that the system met wastewater standard code requirements and did not have operational problems during the winter, but the system did appear to require labor intensive maintenance due to the need to regularly remove invasive species and monitor water levels in the wetland cells.

In 2001-02, Commerce awarded \$14,895 for a constructed wetland system serving one home. The grant included \$5,500 for installation of the system and \$9,395 for monitoring for up to five years. No experimental system grants have been awarded since 2001-02. Commerce officials indicate that private sewage system code changes in 2000 increased the types of allowable private sewage system options, and reduced the need for experimental systems. They further indicate that if the Department determines that research is needed on additional private sewage system components or treatment methods, Commerce would ask for proposals for experimental systems that could potentially be funded under the experimental system grant component of the program.

Administration and Allocation System

Funding Cycle. Grant funds are allocated on an annual cycle. To receive funding, the owner of a failing private sewage system must submit an application to the county within three years after the county notifies the owner that the private sewage system has failed. The county reviews the application and makes an initial determination as to whether the system and owner are eligible. For the 2008-09 funding cycle, county applications were due to Commerce before February 1, 2008. The county application includes a list of property

owners approved by the county as eligible and the maximum state grant share for each property owner. Each county application is reviewed by the state. If any property owner listed in the county application did not meet the eligibility requirements, the grant award to the county is reduced accordingly. Commerce awarded 2008-09 grants to counties in August, 2008.

Counties may request partial grant payments as individual homeowners complete the required work. The Department conducts a desk audit to: (a) verify that the county has inspected the system and signed off on the final inspection; (b) ensure that each system meets the state plumbing code; and (c) verify that the type of work identified in the application is consistent with the work actually performed. Commerce makes actual grant payments to the county after the replacement or repair work is completed. Each county is responsible for disbursing all grant awards to property owners. All work done with 2008-09 grant funds must be completed by December 31, 2009.

Prioritization. If approved applications exceed available funding, Commerce is required to prioritize funds to counties based on potential environmental harm associated with different types of private sewage system failures. The Department pays category one grants (discharge to waters) in full before category two grants (discharge to dry surface) are eligible for any funding. If there are insufficient funds to provide payment for all category one grants, then these grants are prorated, and no funds are provided for category two systems. If funds are adequate to fully fund category one grants, then remaining funds are used for category two grants. If these cannot be fully funded from remaining funds, these grants are prorated. Counties may not establish a backlog of claims in which applicants who would not receive 100% grant funding would be placed on a waiting list to receive funding in the next fiscal year.

Funding

Table 2 shows program appropriations and expenditures by fiscal year during the 15 years from 1994-95 through 2008-09.

In the spring of 2002, as part of general fund appropriation reductions made in many agencies by 2001 Act 109 (the 2001-03 budget adjustment act), the appropriation was reduced to \$3,169,100 in 2001-02, and to \$2,999,000 beginning in 2002-03. In 2002-03, the awards were prorated to less than the appropriated amount, because some of the 2002-03 appropriation was reserved for payment of applications approved in the 2001-02 grant cycle.

Since 2002-03, funding has continued at the amount of \$2,999,000 in each year. In 2003-04, category one grants were funded at 97% of the eligible

grant amount, and no funds were available for category two grants. In each of 2004-05 and 2005-06, category one and two grants were funded at 100% of the eligible grant amount. Payments for category one grants were prorated to 95% of the eligible grant amount in 2006-07 and 94% in 2007-08, and no funds were available for category two grants in either year. In 2008-09, category one grants were funded at 100% of the eligible amount, and category two grants were prorated to 33% of the eligible amount.

Grants awarded in 2003-04 through 2008-09 are summarized in Table 3. In the 1990s, the number of funded applications peaked at 1,808 in 1995-96 and have declined since to 767 in 2008-09. The grant award amounts in Table 3 differ from the actual

Table 2: Private Sewage System Grant Program, Appropriations and Expenditures

Fiscal Year	Appropriations	Expenditures*
1994-95	\$3,500,000	\$3,287,300
1995-96	3,500,000	3,914,400
1996-97	3,500,000	3,499,600
1997-98	3,500,000	3,480,200
1998-99	3,500,000	3,571,900
1999-00	3,500,000	3,200,100
2000-01	3,500,000	3,585,700
2001-02	3,169,100	3,479,800
2002-03	2,999,000	2,852,800
2003-04	2,999,000	3,023,700
2004-05	2,999,000	2,960,700
2005-06	2,999,000	3,075,700
2006-07	2,999,000	3,040,500
2007-08	2,999,000	3,003,100
2008-09	2,999,000	3,023,900**

*Expenditures vary from appropriations and annual awards due to carryover of unexpended funds from prior years and expenditures that are made in a fiscal year after awarded.

**Expenditures are awards made in August, 2008, including awards which are pending until further information is obtained from the applicant. Grants will be paid after work is completed, but no later than December 31, 2009. After the 2008-09 awards were made, approximately \$40,300 in unobligated funds remained to accommodate pending application determinations of eligibility, pending past awards, or appeals of Department decisions.

Table 3: Distribution of Private Sewage System Grant Applications and Awards

	Eligible Applicants	Application Amount	Prorated Grant Amount	Grant as Percent of Application
2003-04 Final				
Category 1	881	\$3,202,275	\$2,981,426	97%*
Category 2	<u>33</u>	<u>76,221</u>	<u>0</u>	0
Total	914	\$3,278,496	\$2,981,426	NA
2004-05 Final				
Category 1	814	\$2,993,745	\$2,924,820	100%*
Category 2	<u>28</u>	<u>68,850</u>	<u>65,705</u>	100*
Total	842	\$3,063,595	\$2,990,525	NA
2005-06 Final				
Category 1	846	\$3,129,199	\$2,982,544	100%*
Category 2	<u>33</u>	<u>84,837</u>	<u>79,832</u>	100*
Total	879	\$3,214,036	\$3,062,376	NA
2006-07 Final				
Category 1	829	\$3,357,728	\$3,038,892	95%*
Category 2	<u>43</u>	<u>103,254</u>	<u>0</u>	0
Total	872	\$3,460,982	\$3,038,892	NA
2007-08 Award				
Category 1	787	\$3,308,148	\$3,003,541	94%*
Category 2	<u>28</u>	<u>75,189</u>	<u>0</u>	0*
Total	815	\$3,383,337	\$3,003,541	NA
2008-09 Award				
Category 1	744	\$3,090,643	\$3,005,250	100%*
Category 2	<u>23</u>	<u>56,473</u>	<u>18,640</u>	33
Total	767	\$3,147,116	\$3,023,890	NA

*The statutes limit grants for small commercial establishments to 10% of the total funds available in any fiscal year. Such grants were reduced by 20% in 2003-04, 7% in 2004-05, 28% in 2005-06, 30% in 2006-07, 23% in 2007-08 and 22% in 2008-09.

expenditures shown in Table 2 because funds are sometimes expended in a fiscal year following the year the grant is awarded.

Table 4 shows the total grant award amount for 2008-09 grants before and after the effect of income factoring. Before the effects of income factoring, applicants would have been eligible for a total of \$3,345,000 in eligible work components. Applicants with income equal to or less than \$32,000 were eligible for the maximum grant amount. Applicants with income equal to or less than \$32,000 accounted for 77% of this amount, applicants with income between \$32,000 and \$45,000 accounted for 17% and small commercial establishments with income over \$45,000 accounted for 6%. After income factoring, applicants were eligible for \$3,023,900 in grants. Applicants with income equal to or less than \$32,000 were eligible for 83% of all grant award dollars, applicants with income between \$32,000 and \$45,000 were eligible for 12% of grant award dollars and applicants with income over \$45,000 (all small commercial establishments) were eligible for 5%. Eligible awards for small commercial establishments were reduced by 22% to keep awards for those systems to less than 10% of the total funds available.

In 2008-09, the average grant award was \$3,942 and 34% of grants were equal to or less than \$3,000, 32% were between \$3,001 and \$5,000, and 34% of grants exceeded \$5,000. The distribution of grants in 2008-09 by final grant amount (after proration) is shown in Table 5.

In 2008-09, grants were made for five types of private sewage systems listed in Table 6. (See Appendix IV for a description of how these systems function.) Mound systems accounted for 43% of grant awards and 58% of total award dollars. Mound systems are generally a more expensive system than others because of the need to build a mound on top of the soil. (See Appendix III for sample calculations of grants for different system types).

Table 4: Distribution of Grants by Applicant's Income -- 2008-09

Applicant's Income	No. of Grants	Grant Before Income Factoring	Grant After Income Factoring	Prorated Grant Amount	Average Prorated Grant
\$0-32,000	595	2,572,721	2,566,662	2,497,299	4,197
32,001-38,000	76	332,050	270,384	264,490	3,480
38,001-45,000	51	241,295	111,150	106,939	2,097
45,001-362,500 *	45	198,920	198,920	155,162	3,448
Total	767	\$3,344,986	\$3,147,116	\$3,023,890	\$3,942

*Applicants with income over \$45,000 were small commercial establishments. The annual gross revenue of a small commercial establishment may not exceed \$362,500.

Table 5: Distribution of Grants by Grant Amount -- 2008-09

Amount of Grant	Number of Grants	Amount	Average
\$1-1,000	29	\$18,678	\$644
1,001-2,000	55	90,447	1,644
2,001-3,000	180	456,510	2,536
3,001-4,000	135	463,961	3,437
4,001-5,000	111	497,133	4,479
5,001-6,000	218	1,241,986	5,697
6,001-7,000	39	255,175	6,543
Total	767	\$3,023,890	\$3,942

Table 6: Distribution of Grants by Type of Replacement or Rehabilitated Private Sewage System -- 2008-09

Type of System	Number of Grants	Amount	Average
Mound	328	\$1,767,306	\$5,388
In-Ground Pressure Holding Tank	132	415,415	3,147
At-Grade	95	245,874	2,588
Conventional	100	379,789	3,798
Other	111	214,956	1,937
	1	550	550
Total	767	\$3,023,890	\$3,942

Loan Program

In 1999 Wisconsin Act 9, a private sewage system replacement and rehabilitation no-interest loan program was created. In a year in which Commerce must prorate funds under the private sewage system replacement and rehabilitation grant program, counties may apply to Commerce for a loan. Counties may only use the loan to increase the grant amount to eligible persons to the amount that the persons would have been eligible to receive if Commerce had not had to prorate grants. In years where grants are funded at 100% of the eligible amount, there is no loan eligibility.

The loan program is provided \$1,500,000 segregated revenue (SEG) from the environmental improvement fund. The fund primarily provides loans to municipalities to upgrade or replace wastewater treatment plants to meet state and federal requirements and investment earnings. Further information about the environmental improvement fund can be found in the Legislative Fiscal Bureau's informational paper entitled, "Environmental Improvement Fund."

The loan amount may not exceed the difference between the amount the county would have received if Commerce had not prorated grants and the amount that the county did receive. If the amount available for loans under the program is insufficient to provide loans to all eligible counties in a year, Commerce is required to prorate loans in the same manner as under the grant program.

A no-interest loan may not be for a term longer than 20 years, as determined by DOA, and must be fully amortized no later than 20 years after the original date of the loan. Commerce and DOA will enter into a financial assistance agreement with an eligible county. DOA, in consultation with Commerce, may establish terms and conditions of a financial assistance agreement that relate to its financial management, including what type of mu-

nicipal obligation is required for the repayment of the loan. DOA is responsible for disbursing the loan to the county.

If a county fails to make a principal repayment when due, DOA could collect the past amounts due by deducting those amounts from any state payments due to the county or may add a special charge to the amount of state tax apportioned to and levied upon the county.

To date, no counties have applied for a loan under the program. Counties were eligible to apply for a cumulative total of \$2,356,900 between 2000-01 and 2008-09. The amount equals the difference between the eligible and prorated final grant amount for years in which the grant was prorated.

Summary

The failure of private sewage systems is a statewide problem that can result in water pollution and health hazards. The private sewage system replacement or rehabilitation grant program provides partial funding for replacement or rehabilitation of private sewage systems serving owners of principal residences or small commercial businesses in participating counties if potential environmental harm exists, the owner of the private sewage system meets certain income criteria, and other program requirements are met. This program, in conjunction with other grant programs administered by Commerce and DNR, is designed to reduce the problem of water pollution in order to provide cleaner lakes, rivers, streams and groundwater in this state.

Since the program's inception in 1978-79, it has awarded \$89.2 million to assist almost 37,800 owners of principal residences and small commercial establishments in replacing or repairing their private sewage system.

APPENDIX I

Private Sewage System Grants -- Award Summary by County

County	Year Entered Program	2008-09		Total to Date*		County	Year Entered Program	2008-09		Total to Date*	
		# of Systems	Amount	# of Systems	Amount			# of Systems	Amount	# of Systems	Amount
Adams	1992	9	\$32,660	259	\$701,564	Marathon	1979	22	\$83,760	1,143	\$2,427,762
Barron	1980	7	24,360	825	1,404,501	Marinette	1994	4	17,775	120	357,289
Bayfield	1990	7	23,250	50	127,785	Marquette	1998	3	13,525	56	170,991
Brown	1990	20	103,428	429	1,509,536	Menominee	1993	0	0	4	12,537
Buffalo	1990	10	35,513	239	624,405	Monroe	1980	17	70,518	692	1,656,312
Burnett	1983	9	39,102	446	1,075,045	Oconto	1989	10	33,544	585	1,496,687
Calumet	1980	13	61,082	672	1,889,254	Oneida	1980	4	8,176	1,600	2,578,654
Chippewa	1990	13	58,859	574	1,360,127	Oneida Tribe	1991	0	0	3	10,856
Clark	1980	12	40,137	478	998,243	Outagamie	1989	13	57,327	444	1,401,401
Columbia	1986	7	30,873	764	1,581,550	Ozaukee	1982	5	25,692	376	1,080,735
Crawford**	1979	0	0	246	376,504	Pepin	1980	2	5,900	234	474,067
Dane	1980	18	72,651	1,788	4,324,738	Pierce	1980	5	18,948	629	1,412,627
Dodge	1986	5	21,307	791	2,145,125	Polk	1987	5	14,926	413	931,017
Door	1980	25	120,625	788	2,256,761	Portage	1980	10	43,405	1,053	2,123,343
Dunn	1990	13	56,182	336	939,944	Price	1986	7	28,860	195	501,934
Eau Claire	1991	8	32,839	502	1,354,272	Racine	1981	9	46,573	494	1,403,774
Florence**	1990	0	0	36	73,163	Richland	1980	20	70,634	716	1,625,665
Fond du Lac	1979	15	72,331	841	2,486,015	Rock	1985	10	39,615	290	780,699
Forest	1991	0	0	130	265,916	Rusk	1988	16	48,736	458	947,937
Franklin City	1991	0	0	5	19,116	St. Croix	1983	2	8,200	703	1,527,962
Grant	1981	29	75,032	823	1,667,429	Sauk	1980	26	100,054	1,249	3,072,526
Green	2003	12	46,205	127	447,585	Sawyer	1980	10	25,057	911	1,588,400
Green Lake	1984	2	5,397	278	587,034	Shawano	1991	23	77,968	722	1,736,806
Iowa	1980	25	86,239	744	1,745,570	Sheboygan	1984	14	62,032	413	1,153,547
Iron	1980	0	0	156	314,911	Taylor	2002	7	16,624	65	183,887
Jackson	1980	11	37,453	739	1,455,068	Trempealeau	1982	12	39,000	695	1,613,317
Jefferson	1990	5	25,785	162	521,320	Vernon	1980	22	69,246	516	1,225,112
Juneau	1984	19	83,483	683	2,039,714	Vilas	1979	3	11,610	562	993,902
Kenosha	1981	6	26,149	556	1,265,520	Walworth	1984	13	31,960	462	945,443
Kewaunee	1985	32	134,633	679	1,959,458	Washburn	1980	10	52,331	375	704,819
LaCrosse	1983	7	29,975	207	506,854	Washington	1979	0	0	1,186	2,904,108
Lafayette	1986	11	32,724	232	560,938	Waukesha	1979	3	18,650	1,543	3,321,779
Langlade	1980	0	0	389	617,555	Waupaca	1990	7	20,440	366	1,010,780
Lincoln	1991	11	45,333	319	807,506	Waushara	1999	2	9,850	34	115,880
Manitowoc	1985	61	290,399	898	2,840,118	Winnebago	1980	5	27,150	152	373,591
						Wood	1985	24	81,798	1,123	2,495,290
						TOTAL		767	\$3,023,890	37,773	\$89,211,580

*Equals cumulative awards made. Actual expenditures may be less than awards.

**These counties withdrew from participation (the last grant cycle is in parentheses): Crawford (2000-01) and Florence (1999-00). Bayfield County withdrew in 1997-98 and rejoined the program effective with the 2007-08 grant cycle.

APPENDIX II

History of the Private Sewage System Replacement or Rehabilitation Grant Program

In Chapter 418, Laws of 1977, the Legislature created three grant programs to address water pollution problems. The major share of grant funding was devoted to point source pollution problems with the objective of bringing municipalities into compliance with federal and state pollution discharge laws. The point source program (which has since been replaced by the clean water fund program) addressed those problems most likely to arise in an urbanized area. A second initiative, the nonpoint source program, addresses those pollution abatement problems most typically associated with rural, agricultural areas. Finally, the creation of the private sewage system replacement or rehabilitation grant program provides funding for a set of problems found in developed but relatively less dense suburban and rural areas--private sewage system failures.

Original Program. The original private sewage system replacement or rehabilitation grant program was established in DNR. When the program was created, funding was set at three percent of the point source pollution abatement grant program. This provided approximately \$2,000,000 GPR per year for the first three years of the program.

The original statute determined that the state's share of private sewage system replacement or repair would be 60% of actual costs up to a maximum grant of \$3,000. There were no income limitations for residential or small commercial establishment owners. Small commercial establishments included business places with maximum daily waste flow of 300 gallons.

1983 Wisconsin Act 545: DNR was required to develop grant funding tables which specified the

60% state share of actual costs for various types of systems or components of systems. These tables were based upon minimum size and other requirements specified in the state plumbing code. DNR implemented grant funding tables, which provided a "flat-rate" grant based on the size and type of the system and the type of soil to which the system would discharge. The grant funding tables were intended to simplify program administration by eliminating the need for the county and state to determine actual repair or replacement costs, and to create an incentive for the system owner to "shop" for system replacement or repair work based on costs, since paying reduced costs would not result in a reduced grant under the flat-rate system.

Act 545 set income limitations, for residential owners at the greater of \$27,000 adjusted gross income or 125% of the county median income, and for commercial businesses at the greater of \$27,000 net income or 125% of the county median income. It also redefined "small commercial establishment" to include business places with maximum daily waste flow of 2,100 gallons.

1985 Wisconsin Act 29: Income limitations for residential owners were increased to the greater of \$32,000 adjusted gross income or 125% of the county median income. The limit for commercial establishments was increased to the greater of \$32,000 net income or 125% of the county median income. The appropriation was also changed from a continuing to a biennial appropriation.

1987 Wisconsin Act 27: In 1987-88, the appropriation was changed from a biennial to an annual appropriation.

1989 Wisconsin Act 31: The state's maximum

share of the replacement or rehabilitation costs was increased from \$3,000 to \$7,000. Income limits for residential owners were increased to the greater of \$45,000 adjusted gross income or 125% of the county median income. The income limit for commercial establishments was changed to \$362,500 annual gross revenues.

1989 Wisconsin Act 326: The appropriation was changed from an annual to a continuing appropriation, enabling approximately \$1,700,000 of 1989-90 funds to be retained by the program for future use. DNR was also required to update the grant funding tables and to revise them whenever it determined that 60% of current costs of private sewage system rehabilitation or replacement exceeds the amount in the tables by more than 10%, but not more often than once every two years.

Act 326 also modified the definition of a "small commercial establishment" to mean a commercial establishment, or place of business, with a maximum daily waste flow rate of less than 5,000 gallons (previously 2,100 gallons).

1991 Wisconsin Act 39: Administration of the program was transferred from DNR to the Department of Industry, Labor and Human Relations (DILHR) effective August 15, 1991. DILHR was already responsible for issuing sanitary permits for private sewage systems. DILHR adopted DNR's administrative rule to implement the program as ILHR 87, effective March 1, 1992.

Act 39 also modified the income limitations for residential owners so applicants with adjusted gross income below \$32,000 receive the maximum eligible grant. The grant for households with income between \$32,000 and \$45,000 is reduced by 30% of the amount by which the household's income exceeds \$32,000, (which means that for each \$1 increase in income above \$32,000, the grant is decreased by 30 cents). No change was made to the income limitations for commercial establishments.

1993 Wisconsin Act 16: The date by which applications must be submitted by counties to DILHR was changed from June 1 to February 1. Funding was increased from \$3.0 million to \$3.5 million in each year to address anticipated program demand.

Act 16 also allocated up to 10% of private sewage system grant funding for experimental private sewage systems, effective with applications funded from the 1994-95 appropriation. Based on the amounts appropriated for 1993-95, this provided up to \$350,000 in 1994-95. Act 16 authorized DILHR to exempt grants for experimental systems from: (a) the statutory \$7,000 limit on private sewage system grants; (b) the requirement that the grant not exceed the costs of replacing or rehabilitating the system; (c) the requirement that the grant not exceed the least costly method of replacing or rehabilitating the system; (d) the formula that decreases the grant amount for applicants with income between \$32,000 and \$45,000; and (e) proration if the appropriation is insufficient to fund 100% of grants. DILHR was directed to promulgate rules specifying how it would select, monitor and allocate the state share for experimental private sewage systems.

1995 Wisconsin Act 27: The program, along with DILHR's Safety and Buildings Division, which administered the program, was transferred from DILHR to the Department of Commerce effective July 1, 1996.

1999 Act 9: Effective with the 2001-02 grant cycle, eligibility requirements changed in two ways. First, the definition of annual family income was changed to include the federal adjusted gross income of the owner of the failing private sewage system and the owner's spouse. Second, a private sewage system is eligible for a grant if the system was installed before July 1, 1978, and the owner meets other eligibility requirements.

Act 9 also created a private sewage system replacement and rehabilitation loan program within the environmental improvement fund. The program is provided with \$1,500,000 SEG from the environmental improvement fund. In years in which Commerce must prorate funds under the grant program, counties could apply to Commerce for a no-interest loan for not more than the difference between the amount the county would have received if Commerce had not prorated grants and the amount that the county did receive.

2001 Act 109: As part of broad-based general fund budget reductions made in many state agencies, the private sewage system replacement or rehabilitation grant program appropriation was reduced from \$3,500,000 by \$330,900 to \$3,169,100 in 2001-02 and by \$501,000 to \$2,999,000 in 2002-03.

2003 Act 169: The act clarified that when calculating costs allowable in determining grant funding that may not exceed the costs of rehabilitating or replacing a private sewage system by the least costly method, a holding tank may not be used as the measure of the least costly method for rehabilitating or replacing a private sewage

system other than a holding tank.

2005 Act 347: The act moved the county maintenance program out of the private sewage system replacement or rehabilitation grant program and into the general duties of Commerce. The act made all counties responsible for adoption and enforcement of the maintenance program. Commerce is required to determine the private sewage systems to which the maintenance program applies. At a minimum, the program is applicable to all new or replacement private sewage systems constructed after the date on which the county adopts the program. Commerce is authorized to promulgate an administrative rule to apply the maintenance program to private sewage systems constructed on or before the date on which the county adopts the maintenance program.

Commerce is required to determine the private sewage systems to which the maintenance program applies in counties that do not meet the conditions for eligibility under the private sewage system replacement or rehabilitation grant program. The maintenance program in these counties began on January 1, 2008.

APPENDIX III

Examples of Calculation of Private Sewage System Grant Amount

Component	Grant Awards 2006-07 thru 2008-09	Grant Awards Effective as of 2009-10*	Total Eligible Grant Amount				Effective as of 2009-10*			
			Example 1 2006-07 thru 2008-09	Example 2 Effective 2006-07 thru 2008-09	Example 3 Effective 2006-07 thru 2008-09	Example 4 Effective 2006-07 thru 2008-09				
Site evaluation and soil testing	Flat \$250	Flat \$250	\$250	\$250	\$250	\$250	\$250			
Installation or replacement of additional POWTS anaerobic treatment component	\$500 to \$950, depending on tank size	\$500 to \$950, depending on tank size	550	550	550	550	550			
Installation of a POWTS dosing component and lift pump or siphon	\$1,100 to \$1,250, depending on number of bedrooms	\$1,100 to \$1,250, depending on number of bedrooms	1,200	1,200	1,200	1,200	1,200			
Installation of a non-pressurized or in-ground pressure POWTS treatment or dispersal component	\$925 to \$2,275, depending on percolation rate and number of bedrooms	\$1,400 to \$2,750, depending on percolation rate and number of bedrooms	1,400	1,925	1,400	1,925	1,925			
Installation of a high groundwater mound POWTS treatment or dispersal component	\$2,600 to \$4,775, depending on number of bedrooms	\$2,550 to \$4,775, depending on number of bedrooms			3,525	4,100				
Installation of POWTS holding tank component	\$2,500 to \$4,750, depending on number of bedrooms	\$2,800 to \$4,775, depending on number of bedrooms					2,500			
Total grant amount before income proration			\$2,200	\$2,725	\$3,400	\$3,925	\$5,525	\$6,100	\$2,750	\$3,050

POWTS = Private onsite wastewater treatment system.

*The grant funding levels were revised to the levels shown effective with the 2009-10 grant year.

Example 1 = Replacement of a conventional system, 3-bedroom house.

Example 3 = Installation of a high groundwater mound system, 3-bedroom house.

Example 2 = Installation of an in-ground system, 3-bedroom house.

Example 4 = Installation of a holding tank, 3-bedroom house.

APPENDIX IV

Description of a Typical Private Sewage System

Private sewage systems collect and/or treat sewage on the premises of a residence or commercial establishment. Department of Commerce administrative rule Comm 83, effective July 1, 2000, refers to them as "private on-site wastewater treatment systems" (POWTS). The systems are sometimes referred to as private sewage systems or septic systems. The first stage of a typical private sewage system is a septic tank, where a natural settling and flotation process allows some solids to settle out, fats and oils to rise, and bacteria to partially decompose the pollutants and treat the wastewater.

The second stage of a typical system is an absorption field. Clarified wastewater flows by gravity or pump through a series of pipes with small holes in them designed to spread the wastewater evenly over a wide area. The pipes are buried beneath the surface of the ground, usually on a bed of gravel and sand. As the wastewater trickles through the soil beneath the field, it is cleansed of its remaining biological pollutants. Once the discharged water reaches the groundwater it is adequately treated. Nitrates are partially treated in a typical private sewage system.

If an absorption field can not be installed, a holding tank is installed to hold wastewater for transport to off-site treatment. The holding tank has to be pumped out when it fills.

Private sewage systems require soils that possess the correct properties. The soil must permit the wastewater to "percolate" or trickle through it fast enough to prevent the water from "ponding"

and reaching the surface but slowly enough that it can be treated before it reaches groundwater. Even if the soils are adequate, the groundwater must not be too near the surface or proper treatment with a standard system becomes impossible. Finally, private sewage systems must be properly designed, installed and maintained or they may malfunction, causing inconvenience, health risk and expense to the owner. Siting a system on proper soils and using a system designed to assure even distribution are often adequate to overcome soils or groundwater contamination problems.

Other types of systems exist to allow on-site treatment where conditions are inadequate for in-ground gravity systems. The best-known of these is the "mound" system, which requires the construction of a soil absorption field of sand on top of existing soils. Another system is the "in-ground pressure distribution" system, which uses a pump to discharge a precalculated volume of wastewater to be evenly distributed from a septic tank to an absorption field. Another system is the "at-grade" system, which is a step between the in-ground pressure system and the mound system. It incorporates distribution piping laid on gravel on prepared ground (but no sand fill as in a mound system), that is then covered by a mound of soil.

The revised Comm 83 code allows for other technologies that may permit treatment of wastewater to a higher level than is possible with a traditional septic tank and soil absorption system. These technologies provide the property owner with additional wastewater treatment options.