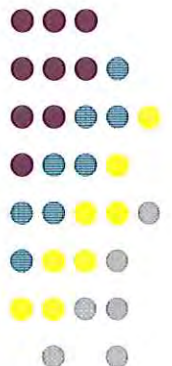


# Private Sewage System Replacement or Rehabilitation Grant Program

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Prepared by

Kendra Bonderud

Wisconsin Legislative Fiscal Bureau  
One East Main, Suite 301  
Madison, WI 53703

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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 \$2,815,000 in each year of the 2009-11 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 2010, the State has awarded \$94.8 million in grants to assist almost 39,200 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 757,000 pri-

vate sewage systems in the state. During calendar years 2008 and 2009, approximately 11,000 permits per year were issued for private sewage systems. Of these, about 40% were for newly-constructed and 60% 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. Counties have reported approximately 74% of the estimated number of systems have been inventoried.

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.

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### County Participation

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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 2010-11. 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, as amended by 2009 Act 392, 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. All counties are 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, and is revising the rules to implement 2009 Act 392. A county is required to conduct, complete, and maintain an inventory of all POWTS located within the jurisdiction, and complete the initial inventory before October 1, 2013. A county is required to develop and implement a POWTS maintenance program before October 1, 2015, 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 \$125, and ranges from \$50 to \$384. Twenty three counties charge a fee to all applicants the counties determine to be eligible, and the other 42 counties charge an application fee only after Commerce has determined the applicants to be 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 2010-11, and the cumulative distribution amount.

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### Eligible Projects

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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 system 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 issued a written enforcement order by the appropriate local governmental unit, Commerce, or DNR, to correct a violation of the private sewage system statutes and rules.

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.

ments," 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 ex-

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### Grant Determination

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Six categories of costs, called "work compo-

ceeds 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 applied 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 2009-10, 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 2009-10 grant cycle, one applicant was delinquent but developed a payment schedule and subsequently received the grant award. For 2010-11, no applicants were delinquent in child support. (For 2010-11, if there had been delinquent applicants, they would have until December 31, 2011, to provide required certification to restore grant eligibility.)

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### **Experimental Private Sewage System Grants**

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Up to 10% of private sewage system grant funding may be allocated for experimental private sewage systems. This equals \$281,500 of the \$2,815,000 appropriated in 2010-11 plus 10% of unobligated funds carried over from the prior year. Commerce is authorized to exempt grants for ex-

perimental 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 con-

structed 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.

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### Administration and Allocation System

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**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 2010-11 funding cycle, county applications were due to Commerce before February 1, 2010. 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 2010-11 grants to counties in August, 2010.

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 2010-11 grant funds must be completed by December 31, 2011.

**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.

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### Funding

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Table 2 shows program appropriations and ex-



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

Fiscal Year	Appropriations	Expenditures*
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	2,965,200
2009-10	2,815,000	2,748,600
2010-11	2,815,000	2,877,900**

\*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, 2010, 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, 2011. After the 2010-11 awards were made, approximately \$96,800 in unobligated funds remained to accommodate pending application determinations of eligibility, pending awards made in prior years, or appeals of Department decisions.

penditures by fiscal year during the 15 years from 1996-97 through 2010-11. The number of funded applications peaked at 1,808 in 1995-96, declined to 661 in 2009-10, but increased to 814 in 2010-11.

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.

From 2002-03 through 2008-09, funding continued at the amount of \$2,999,000 in each year. Under 2009 Act 28 (the 2009-11 biennial budget act), the appropriation was reduced to \$2,815,000 in each of 2009-10 and 2010-11 as part of general fund appropriation reductions made in many agencies.

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

	Eligible Applicants	Application Amount	Prorated Grant Amount	Grant as Percent of Application*
<b>2005-06 Final</b>				
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
<b>2006-07 Final</b>				
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
<b>2007-08 Final</b>				
Category 1	783	\$3,544,159	\$2,990,615	94%
Category 2	<u>28</u>	<u>76,370</u>	<u>0</u>	0
Total	811	\$3,620,529	\$2,990,615	NA
<b>2008-09 Final</b>				
Category 1	744	\$3,282,461	\$2,961,028	100%
Category 2	<u>22</u>	<u>59,125</u>	<u>18,398</u>	33
Total	766	\$3,341,586	\$2,979,426	NA
<b>2009-10 Award</b>				
Category 1	645	\$3,167,334	\$2,736,825	100%
Category 2	<u>16</u>	<u>52,150</u>	<u>48,952</u>	100
Total	661	\$3,219,484	\$2,785,777	NA
<b>2010-11 Award</b>				
Category 1	814	\$3,709,412	\$2,877,949	86%
Category 2	<u>30</u>	<u>86,875</u>	<u>0</u>	0
Total	844	\$3,796,287	\$2,877,949	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 28% in 2005-06, 30% in 2006-07, 23% in 2007-08 and 22% in 2008-09, 37% in 2009-10 and 40% in 2010-11.

Grants awarded in 2005-06 through 2010-11 are summarized in Table 3. The grant award amounts in Table 3 differ from the actual expenditures shown in Table 2 because funds are sometimes expended in a fiscal year following the year the grant is awarded.

In 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

2009-10 fully funded 661 category one and two eligible amounts. In 2010-11, payments for category one grants were prorated to 86% of the eligible grant amount and no funds were available for category two grants.

Table 4 shows the total grant award amount for 2010-11 grants before and after the effect of income factoring and proration to award grants within available funding. Before the effects of income factoring, 844 applicants would have been eligible for a total of \$3,796,300 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 15% and small commercial establishments with income over \$45,000 accounted for 8%. After income factoring, applicants were eligible for \$3,623,100 in grants. Applicants with income equal to or less than \$32,000 were eligible for 80% of all grant award dollars, applicants with income between \$32,000 and \$45,000 were eligible for 11% of grant award dollars and applicants with income over \$45,000 (all small commercial establishments) were eligible for 8%. Eligible awards for small commercial establishments were reduced by 40% to keep awards for those systems to less than 10% of the total funds available. Awards totaling \$2,877,949 were made to the 814 applicants with category one systems, the awards were prorated to 86% of the eligible amount to remain within available funding, and the 30 eligible applicants with category two systems received no grant award.

In 2010-11, the average grant award for the 814 category one awards was \$3,536. Grants equal to or less than \$3,000 comprised 46% of grants and accounted for 29% of the total award dollars. A total of 27% of grants were between \$3,001 and \$5,000, with 28% of awarded dollars. Grants that exceeded \$5,000 totaled 28% of grants and 43% of total award dollars. The distribution of grants in 2010-11 by final grant amount (after proration) is

**Table 4: Distribution of Grants by Applicant's Income -- 2010-11**

Applicant's Income	No. of Grants	Grant Before Income Factoring	Grant After Income Factoring	Prorated Grant Amount	Average Prorated Grant
\$0-32,000	660	\$2,921,914	\$2,915,726	\$2,387,640	\$3,618
32,001-38,000	65	308,690	264,597	218,377	3,360
38,001-45,000	50	262,150	139,216	113,350	2,267
45,001-362,500*	69	303,533	303,533	158,582	2,298
Total	844**	\$3,796,287	\$3,623,072	\$2,877,949	\$3,410

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

\*\*814 category one grants were funded at 86% of the eligible grant amount. The remaining 30 applications were for category two systems and were not funded because no funds were available.

**Table 5: Distribution of Grants by Grant Amount -- 2010-11**

Amount of Grant	Number of Grants	Amount	Average
\$1-1,000	18	\$11,501	\$639
1,001-2,000	88	143,210	1,627
2,001-3,000	265	671,911	2,536
3,001-4,000	180	646,545	3,592
4,001-5,000	36	164,055	4,557
5,001-6,000	219	1,192,567	5,446
6,001-7,000	8	48,160	6,020
Total	814	\$2,877,949	\$3,536

shown in Table 5.

In 2010-11, 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 38% of grant awards and 53% 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 6: Distribution of Grants by Type of Replacement or Rehabilitated Private Sewage System -- 2010-11**

Type of System	Number of Grants	Amount	Average
Mound	309	\$1,528,417	\$4,946
In-ground Pressure	88	273,063	3,103
Conventional	217	509,960	2,350
At-grade	87	298,975	3,436
Holding Tank	104	257,936	2,480
Other	<u>9</u>	<u>9,598</u>	<u>1,066</u>
Total	814	\$2,877,949	\$3,536

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**Loan Program**

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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 municipal 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 \$2,904,600 between 2000-01 and 2010-11. The amount equals the difference between the eligible and prorated final grant amount for years in which the grant was prorated.

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**Summary**

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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 pro-

gram, 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 \$94.8 million to assist almost 39,200 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	2010-11		Total to Date*		County	Year Entered Program	2010-11		Total to Date*	
		# of Systems	Amount	# of Systems	Amount			# of Systems	Amount	# of Systems	Amount
Adams	1992	5	\$18,276	274	\$751,315	Marathon	1979	18	\$63,851	1,174	\$2,542,292
Barron	1980	4	17,760	835	1,461,531	Marinette	1994	1	1,892	128	385,512
Bayfield	1990	2	5,246	55	158,690	Marquette	1998	8	31,946	69	224,608
Brown	1990	18	80,377	460	1,662,785	Menominee	1993	0	0	4	12,537
Buffalo	1990	9	26,833	259	692,448	Monroe	1980	12	48,779	722	1,785,498
Burnett	1983	10	37,237	464	1,140,234	Oconto	1989	10	35,118	599	1,558,842
Calumet	1980	11	49,411	699	2,018,986	Oneida	1980	5	13,805	1,600	2,597,839
Chippewa	1990	10	39,398	591	1,423,507	Oneida Tribe	1991	0	0	3	10,856
Clark	1980	10	25,804	486	1,035,111	Outagamie	1989	62	251,164	519	1,719,906
Columbia	1986	4	11,826	771	1,604,496	Ozaukee	1982	12	46,199	391	1,141,318
Crawford **	1979	0	0	246	376,504	Pepin	1980	0	0	238	487,163
Dane	1980	10	30,735	1,815	4,425,278	Pierce	1980	3	14,187	635	1,448,752
Dodge	1986	7	31,305	800	2,186,759	Polk	1987	1	5,891	414	953,000
Door	1980	41	154,430	854	2,539,840	Portage	1980	8	32,060	1,071	2,190,499
Dunn	1990	1	3,139	339	948,357	Price	1986	3	14,620	198	515,934
Eau Claire	1991	17	55,941	528	1,457,197	Racine	1981	6	28,778	509	1,485,848
Florence **	1990	0	0	36	73,163	Richland	1980	20	74,442	749	1,739,961
Fond du Lac	1979	11	39,217	859	2,557,345	Rock	1985	3	12,865	296	826,327
Forest	1991	1	2,864	135	284,374	Rusk	1988	10	30,126	477	1,021,777
Franklin City	1991	0	0	5	19,116	St. Croix	1983	3	11,245	711	1,562,281
Grant	1981	121	281,808	971	2,028,612	Sauk	1980	22	82,462	1,287	3,250,125
Green	2003	23	90,269	168	618,121	Sawyer	1980	15	45,997	932	1,676,305
Green Lake	1984	1	4,383	285	611,122	Shawano	1991	17	53,233	750	1,839,737
Iowa	1980	13	31,729	771	1,824,056	Sheboygan	1984	15	77,123	442	1,310,876
Iron	1980	1	2,623	157	317,534	Taylor	2002	6	17,394	74	212,437
Jackson	1980	11	38,625	762	1,540,963	Trempealeau	1982	9	28,907	713	1,673,571
Jefferson	1990	4	17,876	169	560,346	Vernon	1980	9	22,227	538	1,287,194
Juneau	1984	11	42,619	705	2,128,254	Vilas	1979	2	4,236	565	1,001,532
Kenosha	1981	8	30,841	567	1,323,739	Walworth	1984	3	10,492	456	947,902
Kewaunee	1985	21	97,024	721	2,151,359	Washburn	1980	10	33,259	398	747,886
LaCrosse	1983	8	22,207	223	569,106	Washington	1979	14	56,953	1,220	3,061,397
Lafayette	1986	7	18,202	242	591,765	Waukesha	1979	7	31,692	1,560	3,402,030
Langlade	1980	0	0	393	629,187	Waupaca	1990	10	36,797	384	1,111,914
Lincoln	1991	4	10,552	330	849,055	Waushara	1999	0	0	36	122,614
Manitowoc	1985	58	254,599	999	3,317,129	Winnebago	1980	4	9,379	157	389,070
						Wood	1985	24	77,674	1,179	2,695,192
						TOTAL		814	\$2,877,949	39,172	\$94,817,916

\*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. The act required Commerce 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. The act authorized Commerce 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 promulgated a rule requiring counties to conduct and maintain an inventory of private sewage systems, to complete the inventory by October 1, 2011, and to implement the maintenance program by October 1, 2013.

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 act required that the maintenance program in these counties begin on January 1, 2008. (2009 Act 392 deleted this implementation date.)

**2009 Act 28:** 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 \$2,999,000 annually by \$184,000 to \$2,815,000 in each of 2009-10 and 2010-11.

**2009 Act 392:** The act moved the private sewage system inventory requirement from administrative rule to statute. It delayed the deadline for completing the inventory to October 1, 2013, and the deadline for implementing the maintenance program to October 1, 2015. The act also deleted the January 1, 2008, implementation date for maintenance programs in counties that do not meet the conditions for eligibility under the private sewage system replacement or rehabilitation grant program.



### 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 2006-07 thru 2008-09	Example 3 2006-07 thru 2008-09	Example 4 2006-07 thru 2008-09				
Site evaluation and soil testing	Flat \$250	Flat \$250	\$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	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	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	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		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	2,800		
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.

Comm 83 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.