



Private Onsite Wastewater Treatment System Grant Program

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Introduction

The private onsite wastewater treatment system replacement or rehabilitation grant program, also referred to as the Wisconsin Fund, provides financial assistance to owners of a principal residence (residence occupied at least 51% of the year by the owner) and small commercial establishment who meet certain income and eligibility criteria, to cover a portion of the cost of repairing or replacing failing private onsite wastewater treatment systems. A private onsite wastewater treatment system is a sewage treatment and disposal system serving a single structure with a septic tank and soil absorption field located on the same parcel as the structure.

This paper describes the requirements of the program. The Department of Safety and Professional Services (DSPS) administers the program.

The program is appropriated \$1,645,000 in 2015-16 and \$840,000 in 2016-17 from program revenue from the safety and buildings (Division of Industry Services) operations appropriation. The appropriation receives program revenue from sanitary permits and private onsite wastewater treatment system plan review fees, and fees received from other building permit, plan review, inspection, and credentialing activities. Under 2015 Wisconsin Act 55 (the 2015-17 biennial budget act), the source of funding was converted from the general fund to the program revenue appropriation. Prior to 2015-16, the program was appropriated \$2,338,600 annually from the general fund. Act 55 also deleted the position and funding specifically authorized for administration of the program. DSPS administers the program with other existing POWTS plan review and permitting, and finance program staff.

There are two general types of systems utilized to treat and dispose of sewage--centralized sewage collection and treatment systems, and "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 centralized sewer system. In these areas, residential or commercial development requires the use of a private onsite wastewater treatment system.

The private onsite wastewater treatment system replacement or rehabilitation grant program was created in 1978 to provide funding to address the problem of system failures. From 1978 through 2016 (2016-17 grant cycle), the state has awarded \$106.7 million in grants to assist 42,900 residences and businesses to replace or rehabilitate private onsite wastewater treatment systems. The program is authorized in s. 145.245 of the statutes. DSPS administers the grant program under administrative rules SPS 387 of the Wisconsin Administrative Code. Administrative rules for the installation and maintenance of all POWTS are found in administrative rules SPS 383.

DSPS estimates there are 752,000 POWTS in the state. Approximately 10,800 permits were issued statewide for POWTS during calendar year 2014 and 12,000 in 2015. Of these, about 40% were for newly-constructed and 60% were for replacement systems. DSPS indicates that the proportion of new and replacement systems may vary substantially by county from year to year. In addition, an unknown number of homes that previously used POWTS are connected to centralized municipal wastewater treatment systems every year, and the private systems are no longer

used. DSPTS estimates of the number of POWTS have become more precise as counties have begun to compile an inventory of private onsite wastewater treatment systems and will become more precise during the next few years as they complete the inventory. Counties have reported approximately 93% of the estimated number of systems have been inventoried.

Failing POWTS tend to produce health hazards, water pollution, or both. Health hazards occur when a private onsite wastewater treatment 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 POWTS because of the organic pollutants added by the discharges from these systems.

A loan program component funded from the segregated environmental improvement fund is available in years when funding is not sufficient for full funding of grants. To date, no counties have used the loan program.

Several appendices provide additional information about the distribution of grants in each county (Appendix I), how a grant is calculated (Appendix II), how a typical private onsite wastewater treatment system functions (Appendix III), and the legislative history of the program (Appendix IV).

County Participation

Wisconsin counties and Indian tribes may apply to DSPTS to participate in the grant program to assist homeowners and small commercial establishments with the rehabilitation or replacement of failing onsite wastewater treatment systems. Counties participate because they are responsible for the regulation of POWTS installations. Participation in the grant program is voluntary. Five counties (Ashland, Crawford, Douglas, Florence and Milwaukee) are not participating in 2016-17. 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 POWTS 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 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 POWTS 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' POWTS will be properly installed and maintained.

All counties are responsible for adoption and enforcement of the maintenance program for private onsite wastewater treatment systems, whether or not a county has chosen to participate in the grant program. 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, 2017. (2011 Wisconsin Act 134 changed the date from October 1, 2013.) In the fall of 2016, DSPS was aware of 47 counties that had completed their initial inventory. A county is required to develop and begin to implement a POWTS maintenance program before October 1, 2019, that includes the inventory, and a process for recording each inspection, evaluation, maintenance and servicing report for a POWTS. (2011 Act 134 changed the date from October 1, 2015.) In the fall of 2016, DSPS was aware of 71 counties that had begun to implement a full or partial POWTS maintenance program.

The owner of a failing private onsite wastewater treatment 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 POWTS has been made. An unknown number of participating counties charge a fee to applicants to offset county administrative and maintenance costs. DSPS used to survey counties to track the amount of the fee, but no longer does this. In 2014, 64 counties charged a fee, which averaged \$125. All applications are reviewed at the county level, and, if a fee is charged, it was generally only for applications determined to be eligible for a grant. The county submits eligible applications to DSPS 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 2016-17, and the cumulative distribution amount.

Eligible Projects

Replacement or rehabilitation of a private onsite wastewater treatment 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 is occupied at least 51% of the year by the owner;
4. The small commercial establishment has a maximum daily wastewater flow rate of less than 5,000 gallons per day;
5. The owner of the principal residence or small commercial establishment meets certain income criteria, (discussed in the next section);
6. The system is a category one or two failing POWTS (see the next section for description of categories); and
7. A determination of failure is made prior to the rehabilitation or replacement of the failing private onsite wastewater treatment 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 DSPS; or (b) the owner has been issued a written enforcement order by the appropriate local governmental unit, DSPS, or the Department of Natural Resources (DNR), to correct a violation of the private onsite wastewater treatment system statutes and rules.

Since the inception of the private onsite wastewater treatment system grant program, program design and eligibility criteria have been modified by the Legislature a number of times. Appendix IV 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. This 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 Onsite Wastewater Treatment 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 by the applicant when the determination of private onsite wastewater treatment system failure was made; (b) the commercial establishment is not located in an area served by a sewer; and (c) 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 Onsite Wastewater Treatment Systems. The types of failing POWTS are divided into three categories. Categories one and two are eligible for grant assistance. The types of systems are:

1. Category one 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 two 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 one systems.
3. Category three 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

Seven 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 or additional anaerobic treatment component (septic tank);
3. Installation of a dosing component and lift pump or siphon;
4. Installation of a non-pressurized or in-ground pressure treatment or dispersal component (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 treatment or dispersal component (soil absorption area);
6. Installation of a holding tank component; and/or
7. Installation of a replacement exterior grease interceptor.

Costs allowable in determining grant funding may not exceed the costs of rehabilitating or replacing a private onsite wastewater treatment 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 POWTS 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, SPS 387 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.

DSPS 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. DSPS is required to revise the grant funding tables when it determines that 60% of current costs of private onsite wastewater treatment 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. Appendix II illustrates examples of how the grant is calculated for various types of POWTS under the grant funding tables that went into effect in 2009-10. In the fall of 2016, the POWTS Advisory Council (an advisory body to DSPS) was reviewing current administrative codes related to the program, including the potential need to revise the grant funding tables.

DSPS is required to withhold grant awards for applicants that the Department of Children and Families 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 through 2016-17, no applicants were delinquent in child support. (For 2016-17, if there had been delinquent applicants, they would have had until December 31, 2017, to provide required certification to restore grant eligibility.)

Experimental POWTS Grants

Effective with the 2000-01 grant cycle, up to 10% of private onsite wastewater treatment system grant funding may be allocated for experimental private sewage systems. This equals \$84,000 of the \$840,000 appropriated in 2016-17. DSPS is authorized to exempt grants for experimental systems from: (a) the statutory \$7,000 limit on POWTS 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 SPS 387 specifies DSPS procedures for experimental POWTS grants.

In 2000-01, \$167,762 was provided for an experimental constructed wetland system serving 11 property owners. The constructed wetland received wastewater from septic tanks, and dispersed it into soil for final treatment. In 2001-02, \$14,895 was awarded for a constructed wetland system serving one home.

No experimental system grants have been awarded since 2001-02. DSPS 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, DSPS 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 onsite wastewater treatment system must submit an application to the county within three years after the county notifies the owner that the POWTS has failed. The county reviews the application and makes an initial determination as to whether the system and owner are eligible. For the 2016-17 funding cycle, county applications were due to DSPS before February 1, 2016. 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. DSPS awarded 2016-17 grants to counties in October, 2016, for distribution to eligible property owners.

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. DSPS 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 2016-17 grant funds must be completed by December 31, 2017.

Prioritization. If approved applications exceed available funding, DSPS is required to prioritize funds to counties based on potential environmental harm associated with different types of private onsite wastewater treatment system fail-

ures. 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 2002-03 through 2016-17.

Prior to 2001-02, the program was appropriated \$3,500,000 per year from the general fund (GPR). Subsequent legislative acts reduced the appropriation as part of general fund appropriation reductions made in many agencies. In 2001 Wisconsin Act 109, the appropriation was reduced to \$3,169,100 in 2001-02, and to \$2,999,000 annually beginning in 2002-03. Under 2009 Wisconsin Act 28, the appropriation was reduced to \$2,815,000 in each of 2009-10 and 2010-11. Under 2011 Wisconsin Act 32, the appropriation was reduced to \$2,338,600 annually beginning in 2011-12. The appropriation was continued at that level through 2014-15.

Under 2015 Act 55, beginning in 2015-16, the source of funding for the program was converted from the general fund to program revenue. The source of the program revenue is a transfer from the safety and buildings (Division of Industry Services) general operations appropriation, which

Table 2: Private Onsite Wastewater Treatment System Grant Program, Appropriations and Expenditures

Fiscal Year	Appropriations	Expenditures*
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	2,892,900
2011-12	2,338,600	2,358,800
2012-13	2,338,600	2,314,200
2013-14	2,338,600	2,322,600
2014-15	2,338,600	2,137,400
2015-16	1,645,000	1,855,900
2016-17	840,000	840,000**

*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 September, 2016, 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, 2017.

receives revenue from sanitary permit and private sewage system plan review fees, and fees received from several other building permit, inspection, plan review, and credentialing activities. In addition, the appropriation for the grant program was reduced to \$1,645,000 in 2015-16 and \$840,000 in 2016-17. The \$1,645,000 appropriated in 2015-16 was intended to approximately equal the amount needed to fund applications received by February 1, 2015. (However, after 2015 Act 55 was enacted, DSPS found additional eligible applications, and the appropriation was not sufficient to fully fund all applications.) The \$840,000 appropriated in 2016-17 was intended to approximately equal the difference between the anticipated amount of revenue from sanitary permits and private sewage plan review fees, and the amount of expenditure for nine DSPS positions that administer POWTS regulations.

Table 3: Distribution of Private Onsite Wastewater Treatment System Grant Applications and Awards

	Eligible Applicants	Application Amount	Prorated Grant Amount	Grant as Percent of Application
2011-12 Final				
Category 1	863	\$3,753,119	\$2,348,591	68%*
Category 2	<u>16</u>	<u>40,300</u>	<u>0</u>	0
Total	879	\$3,793,419	\$2,348,591	NA
2012-13 Final				
Category 1	852	\$3,642,606	\$2,331,052	68%*
Category 2	<u>11</u>	<u>29,087</u>	<u>0</u>	0
Total	863	\$3,671,693	\$2,331,052	NA
2013-14 Final				
Category 1	638	\$2,748,865	\$2,346,769	88%*
Category 2	<u>7</u>	<u>25,883</u>	<u>0</u>	0
Total	645	\$2,774,748	\$2,346,769	NA
2014-15 Final				
Category 1	495	\$2,240,092	\$2,204,703	100%*
Category 2	<u>7</u>	<u>29,750</u>	<u>29,750</u>	100*
Total	502	\$2,269,842	\$2,234,453	NA
2015-16 Award				
Category 1	472	\$2,116,959	\$1,853,026	94%**
Category 2	<u>15</u>	<u>53,853</u>	<u>0</u>	0
Total	487	\$2,170,812	\$1,853,026	NA
2016-17 Award				
Category 1	361	\$1,611,868	\$840,000	51%**
Category 2	<u>11</u>	<u>35,470</u>	<u>0</u>	0
Total	372	\$1,647,338	\$840,000	NA

*The statutes limit grants for small commercial establishments (SCE) to 10% of the total funds available in any fiscal year. Such grants were reduced by 56% in 2011-12, 48% in 2012-13, 32% in 2013-14, and 13% in 2014-15, before the prorations shown above were made for all eligible applications.

**Proration percentages shown are for principal residences. SCEs were prorated separately to remain within 10% of the total funds available. SCEs received 65% of the eligible grant amount in 2015-16, and 68% in 2016-17, and were not prorated further.

Grants awarded in 2011-12 through 2016-17 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.

Under grants awarded in 2011-12, payments for 863 category one grants were prorated to 68% of the eligible grant amount. In 2012-13, payments for 852 category one grants were prorated to 68% of the eligible grant amount, and in 2013-14, payments for 638 category one grants were prorated to 88% of the eligible amount. No funds were available for category two grants in 2011-12 through 2013-14, 2015-16, and 2016-17. In 2014-15, 502 category one and two grants received 100% of the eligible grant amount. In 2011-12 through 2014-15, awards for small commercial establishments were first prorated to stay within the statutory maximum of 10% of total available funds, and then any proration of category one awards was made to stay within 100% of the total available funds. The Table 3 proration percentages for 2011-12 through 2014-15 reflect the proration of small commercial establishments to 10% of total funds, then the proration of all category one awards.

Beginning in 2015-16, DSPS changed its method of proration and calculated separate proration percentages for residential and small commercial establishment awards. In 2015-16, 472 category one grants received awards. Principal residences were awarded 94% of the eligible grant amount, and small commercial establishments were awarded 65% of the eligible grant amount to receive 10% of the total available funds (60 establishments for \$184,900). In 2016-17, 361 category one grants received awards. Grants for 336 principal residences received 51% of the eligible grant amount, and 25 small commercial establishments received 68% of the eligible grant amount to receive 10% (\$84,000) of total available funds.

Table 4 shows the total grant award amount for 2016-17 grants before and after the effect of income factoring and proration to award grants within available funding. Table 4 shows both the funded 361 category one grants and the 11 category two applicants that were not funded. This is done to show that before the effects of income

Table 4: Distribution of Grants by Applicant's Income -- 2016-17

Applicant's Income	Number of Grants	Grant Before Income Factoring	Grant After Income Factoring	Prorated Grant Amount**	Average Prorated Grant
\$0-\$32,000	294	\$1,354,050	\$1,354,050	\$678,743	\$2,309
\$32,001-\$38,000	39	194,693	155,524	77,512	1,987
\$38,001-\$45,000	24	117,019	64,019	33,900	1,413
\$45,001-\$362,500*	<u>15</u>	<u>73,745</u>	<u>73,745</u>	<u>49,845</u>	3,323
Total	372	\$1,739,507	\$1,647,338	\$840,000	\$2,258

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

**361 category one grants for principal residences were funded at 51% of the eligible grant amount, and received 90% of total grant funds. Small commercial establishments were funded at 68% of the eligible grant amount and received 10% of grant funds. Eleven category two grants received no funding.

Table 5: Distribution of Grants by Amount of Grant -- 2016-17

Amount of Grant	Number of Grants	Amount	Average
1-1,000	21	\$10,311	\$491
1,001-2,000	117	183,028	1,564
2,001-3,000	105	255,098	2,430
3,001-4,000	106	340,497	3,212
4,001-5,000	<u>12</u>	<u>51,066</u>	4,256
Total	361	\$840,000	\$2,327

factoring and proration to stay within the appropriated funding amount, the 372 applicants (361 category one and 11 category two) would have been eligible for a total of \$1,739,500 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 78% of this amount, applicants with income between \$32,000 and \$45,000 accounted for 18% and small commercial establishments with income over \$45,000 accounted for 4%. After income factoring, the applicants were eligible for \$1,647,300 in grants. Applicants with income equal to or less than \$32,000 were eligible for 82% of all grant award dollars, applicants with income between \$32,000 and \$45,000 were eligible for 13% of grant award dollars and applicants with income over \$45,000 (all of which were

small commercial establishments) were eligible for 5%. Eligible awards for small commercial establishments were prorated to 68% of the eligible grant amount to keep awards for those systems at no more than 10% of the total funds available. Awards for category one awards were prorated to 51% of the eligible grant amount to limit awards for those systems to 90% of the total funds available. No category two grant applications received awards. Awards totaling \$840,000 were made to the 361 applicants with category one systems.

The distribution of grants in 2016-17 by final grant amount (after proration) for the 361 funded applications is shown in Table 5. In 2016-17, the average grant award for the 361 funded awards was \$2,327. Table 5 does not include the 11 category two applications that were not funded. Grants equal to or less than \$3,000 comprised 67% of grants and accounted for 53% of the total award dollars. A total of 33% of grants were between \$3,001 and \$5,000, with 47% of awarded dollars. No grants exceeded \$5,000.

In 2016-17, 361 grants were funded for four types of private onsite wastewater treatment systems listed in Table 6. (See Appendix III for a description of how these systems function.) Mound systems accounted for 45% of grant awards and 52% of total award dollars. Mound

Table 6: Distribution of Grants by Type of Replacement or Rehabilitated Private Onsite Wastewater Treatment System -- 2016-17

Type of System	Number of Grants	Amount	Average
Mound	163	\$438,027	\$2,687
Conventional	94	179,722	1,912
At Grade	58	131,983	2,276
Holding Tank	<u>46</u>	<u>90,268</u>	1,962
Total	361	\$840,000	\$2,327

systems are generally a more expensive system than others because of the need to build a mound on top of the soil. In several prior years, grants had also been funded for in-ground pressure systems, which use a pump to distribute wastewater to an absorption field. (See Appendix II for sample calculations of grants for different system types).

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 DSPS must prorate funds under the private onsite wastewater treatment system replacement and rehabilitation grant program, counties may apply to DSPS 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 DSPS had not had to prorate grants. The loan amount may not exceed the difference between the amount the county would have received if DSPS 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, DSPS is required to prorate loans in the same manner as under the grant program. In years where grants are funded at 100% of the eligible amount, there is no loan eligibility.

The loan program was originally provided \$1,500,000 segregated revenue (SEG) from the environmental improvement fund in a continuing appropriation. No additional funds were appropriated in subsequent years. The environmental improvement fund primarily provides loans to municipalities to upgrade or replace wastewater treatment plants to meet state and federal requirements. Further information about the environmental improvement fund can be found in the Legislative Fiscal Bureau's informational paper entitled, "Environmental Improvement Fund."

A no-interest loan may not be for a term longer than 20 years, as determined by the Department of Administration (DOA), and must be fully amortized no later than 20 years after the original date of the loan. DSPS and DOA will enter into a financial assistance agreement with an eligible county. DOA, in consultation with DSPS, 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 \$6,609,200 between 2000-01 and 2016-17. The amount equals the difference between the eligible and prorated final grant amount for years in which the grant was prorated. The original \$1,500,000 remains in the balance of the continuing appropriation, and is available for loans to eligible counties.

Summary

The failure of private onsite wastewater treatment systems can result in water pollution and health hazards. The private onsite wastewater treatment system replacement or rehabilitation grant program provides partial funding for replacement or rehabilitation of POWTS serving owners of principal residences or small commercial businesses in participating counties if potential environmental harm exists, the owner of the

private onsite wastewater treatment system meets certain income criteria, and other program requirements are met. The DSPP program, in conjunction with grant programs administered by 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 over \$106.7 million to assist 42,900 owners of principal residences and small commercial establishments in replacing or repairing their private onsite wastewater treatment system.

APPENDIX I

Private Onsite Wastewater Treatment System Grants -- Award Summary by County

County	Year Entered Program	2016-17		Cumulative Total*		County	Year Entered Program	2016-17		Cumulative Total*	
		# of Systems	Amount	# of Systems	Amount			# of Systems	Amount	# of Systems	Amount
Adams	1992	4	\$ 7,077	317	\$874,821	Marathon	1979	24	\$ 59,077	1,334	\$3,076,846
Barron	1980	2	6,353	860	1,562,395	Marinette	1994	1	1,550	142	442,679
Bayfield	1990	2	3,100	64	183,674	Marquette	1998	2	5,639	89	288,342
Brown	1990	8	22,450	536	1,979,306	Menominee	1993	0	0	6	17,802
Buffalo	1990	7	17,534	285	766,146	Monroe	1980	13	31,708	775	1,960,322
Burnett	1983	7	12,275	507	1,258,395	Oconto	1989	11	22,678	650	1,727,522
Calumet	1980	22	59,968	819	2,502,973	Oneida	1980	3	2,973	1,617	2,641,919
Chippewa	1990	0	-	609	1,481,613	Oneida Tribe	1991	0	0	3	10,856
Clark	1980	6	12,960	557	1,229,052	Outagamie	1989	3	9,834	674	2,249,507
Columbia	1986	2	4,744	801	1,707,665	Ozaukee	1982	3	9,025	420	1,268,238
Crawford**	1979	0	0	246	376,504	Pepin	1980	0	0	242	501,217
Dane	1980	6	14,287	1,855	4,557,467	Pierce	1980	0	0	663	1,566,840
Dodge	1986	0	0	819	2,261,397	Polk	1987	0	0	426	992,379
Door	1980	18	37,706	1,008	3,096,262	Portage	1980	4	10,367	1,097	2,278,420
Dunn	1990	1	2,714	354	1,007,339	Price	1986	1	3,202	207	547,219
Eau Claire	1991	4	11,136	559	1,558,535	Racine	1981	3	9,999	533	1,596,505
Florence**	1990	0	0	36	73,163	Richland	1980	20	46,200	919	2,270,212
Fond du Lac	1979	1	1,550	886	2,662,492	Rock	1985	2	6,715	314	885,754
Forest	1991	2	3,989	150	322,198	Rusk	1988	3	5,156	520	1,142,768
Franklin City	1991	0	0	5	19,116	St. Croix	1983	0	0	719	1,595,088
Grant	1981	18	34,227	1,373	2,944,482	Sauk	1980	12	26,265	1,377	3,541,871
Green	2003	3	6,750	275	920,027	Sawyer	1980	1	1,423	964	1,749,875
Green Lake	1984	0	0	290	628,241	Shawano	1991	7	13,098	915	2,408,223
Iowa	1980	7	15,847	946	2,245,983	Sheboygan	1984	3	8,839	463	1,404,696
Iron	1980	1	2,770	166	348,645	Taylor	2002	9	16,275	129	346,389
Jackson	1980	3	7,240	812	1,701,191	Trempealeau	1982	0	0	733	1,731,081
Jefferson	1990	0	0	176	594,115	Vernon	1980	8	18,578	591	1,438,862
Juneau	1984	19	47,583	788	2,400,384	Vilas	1979	0	0	570	1,016,671
Kenosha	1981	2	4,587	589	1,413,341	Walworth	1984	2	5,539	461	961,234
Kewaunee	1985	15	46,841	909	2,968,394	Washburn	1980	2	6,505	417	790,848
LaCrosse	1983	2	4,167	249	651,834	Washington	1979	3	7,365	1,253	3,193,909
Lafayette	1986	14	19,614	313	749,215	Waukesha	1979	2	5,819	1,582	3,497,183
Langlade	1980	1	1,073	411	673,744	Waupaca	1990	2	6,353	411	1,204,857
Lincoln	1991	8	9,860	393	1,018,846	Waushara	1999	1	2,719	53	191,567
Manitowoc	1985	18	52,031	1,160	3,965,134	Winnebago	1980	3	5,133	174	449,919
						Wood	1985	<u>10</u>	<u>21,534</u>	<u>1,289</u>	<u>3,038,788</u>
						TOTAL		361	\$840,000	42,855	\$106,730,496

*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

Examples of Calculation of Private Onsite Wastewater Treatment System Grant Amount

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

POWTS = Private onsite wastewater treatment system.

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

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

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

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

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

APPENDIX III

Description of a Typical Private Onsite Wastewater Treatment System

Private onsite wastewater treatment systems (POWTS) collect and/or treat sewage on the premises of a residence or commercial establishment. The systems are sometimes referred to as private sewage systems or septic systems. The first stage of a typical private onsite wastewater treatment 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 POWTS.

If an absorption field cannot 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 onsite wastewater treatment 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 onsite wastewater treatment 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 onsite 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.

Administrative rule SPS 383 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.

APPENDIX IV

History of the Private Onsite Wastewater Treatment 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 maxi-

imum 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. Commerce renumbered the DILHR administrative rule to implement the program as Comm 87, effective February 1, 1997.

1999 Wisconsin 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 Wisconsin 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 Wisconsin 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 Wisconsin 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 specified that the maintenance program in these counties would commence on January 1, 2008. (2009 Act 392 deleted this date.)

2009 Wisconsin 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 Wisconsin Act 392: The act moved the private sewage system inventory requirement from administrative rule to statute. It delayed by two years the deadlines 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 specific 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.

2011 Wisconsin Act 32: As part of broad-based general fund budget reductions made in many state agencies, the private onsite

wastewater treatment system replacement or rehabilitation grant program appropriation was reduced from \$2,815,000 annually by \$476,400 to \$2,338,600 in each of 2011-12 and 2012-13.

Act 32 also transferred the program and the Safety and Buildings Division to the Department of Safety and Professional Services (DSPS, the former Department of Regulation and Licensing), and repealed the Department of Commerce. DSPS renumbered the Commerce administrative rule to implement the program as SPS 387, effective December 1, 2011.

2011 Wisconsin Act 134: The act delayed, by an additional four years, the deadlines for counties to complete the inventory of private systems to October 1, 2017, and the deadline for counties to implement and enforce the maintenance program to October 1, 2019.

2011 Wisconsin Act 146: The act changed the statutory term "private sewage system" to "private onsite wastewater treatment system."

2015 Wisconsin Act 55: The act changed the source of funding for the program from general purpose revenue (GPR) to program revenue (PR) that would be transferred from the safety and buildings (Division of Industry Services) operations appropriation to a separate appropriation for the grant program, beginning in 2015-16. The safety and buildings appropriation receives program revenue from sanitary permits and private onsite wastewater treatment system plan review fees, and fees received from other building permit, plan review, inspection, and credentialing activities. Act 55 also decreased the amount of funding for the program from \$2,338,600 GPR in 2014-15 to \$1,645,000 PR in 2015-16 and \$840,000 PR annually (the approximate net amount of related fees associated with the POWTS program), beginning in 2016-17. Finally, Act 55 deleted the position and funding authorized for administration of the program. DSPS administers the program with other existing POWTS plan review and permitting, and finance program staff.