

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 program is authorized in section 145.245 of the statutes. The Department of Safety and Professional Services (DSPS) administers the grant program under administrative rules in chapter SPS 387 of the Wisconsin Administrative Code. Administrative rules for the installation and maintenance of all POWTS are found in administrative rules SPS 383.

The program is appropriated \$840,000 in 2017-18 and \$840,000 in 2018-19 from program revenue transferred from the Division of Industry Services (safety and buildings) operations appropriation. The program revenue is received from sanitary permits and private onsite wastewater treatment system plan review fees, and other building permit, plan review, inspection, and credentialing activities. Under 2015 Wisconsin Act 55, the source of funding was converted from the general fund to the program revenue appropriation. Act 55 also deleted the position and funding specifically authorized for administration of the program. DSPS administers the program with

other existing POWTS regulatory and finance program staff.

There are two general types of systems utilized to treat and dispose of sewage: (a) centralized sewage collection and treatment systems; and (b) "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 POWTS failures. From 1978 through 2018 (2018-19 grant cycle), the state has awarded \$108.3 million in grants to assist 43,200 residences and businesses to replace or rehabilitate private onsite wastewater treatment systems.

Under 2017 Wisconsin Act 59, the grant program is repealed on June 30, 2021. The last year of funding for the program will be 2020-21, with final applications due February 1, 2020, and awards expected to be made later in the fall of 2020. Act 59 also repealed immediately a POWTS loan program that was never used. Administrative code revisions effective in July, 2018, repeal Chapter SPS 387 on June 30, 2021.

DSPS estimates there are 761,100 POWTS in the state. Approximately 12,000 permits were issued statewide for POWTS during calendar year 2016 and 12,500 in 2017. DSPS indicates that about 45% of these permits were for newly-constructed systems and 55% were for replacement systems. 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. DSPS estimates of the number of POWTS have become more precise as counties complete their inventory of private onsite wastewater treatment systems.

Failing POWTS tend to produce health hazards when a 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 POWTS 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.

Several appendices provide additional information about the distribution of grants in each county (Appendix I), and how a typical private onsite wastewater treatment system functions (Appendix II). Additional detail about the legislative history of the program from the 1977-79 through 2015-17 legislative sessions can be found in the 2017 Legislative Fiscal Bureau Informational Paper #68 entitled, "Private Onsite Wastewater Treatment System Grant Program."

County Participation

Wisconsin counties and Indian tribes may apply to DSPS 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. Four counties (Ashland, Douglas, Florence and Milwaukee) are not participating in 2018-19. Florence County withdrew after the 1999-00 grant cycle. Bayfield County did not participate between 1998-99 and 2006-07, and resumed participation with applications for the 2007-08 grant cycle. Crawford County withdrew after the 2000-01 grant cycle and regained eligibility for the 2018-19 grant cycle.

Milwaukee County does not perform POWTS regulatory 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 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 was required to conduct, complete, and maintain an inventory of all POWTS located within the jurisdiction, and complete the initial inventory before October 1, 2017. In October, 2018, 71 counties had completed their initial inventory, plus the City of Franklin and Oneida Tribe. Milwaukee County is not subject to this requirement.

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. In October, 2018, 71 counties had a full or partial POWTS maintenance program (all required counties, which excludes Milwaukee County).

A county is required to meet the two deadlines for inventory and maintenance program in order to be eligible for funding under the POWTS grant program. Crawford County did not participate in the grant program since 2000-01, but requested to participate in the 2018-19 grant cycle. In October, 2018, DSPS determined that the county had completed the initial inventory by the 2017 deadline, and would be eligible to participate in the 2018-19 grant cycle.

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. Some participating counties charge a fee to eligible applicants to offset county administrative and maintenance costs. DSPS has not tracked which counties charge a fee, and the fee amount, since 2014. All applications are initially reviewed at the county level. The county submits eligible applications to DSPS. DSPS makes the final determination of eligibility and distributes grants to counties. The county then 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 2018-19, 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, as 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 POWTS statutes and rules.

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 TreatmentSystem Program Grant Formula for ResidentialProperties

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 POWTS 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 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 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 causing the backup of sewage into the structure served. This type of failing system is not eligible for grant assistance.

Grant Determination

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. 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 were revised effective July 1, 2018, for applications received for funding in 2019-20 and 2020-21.

Seven categories of costs, called "work components," are eligible for reimbursement at grant amounts established in the grant funding tables in administrative rule SPS 387. Prior to administrative rule changes in July, 2018 (through grant year 2018-19), the grant award for most components varied depending on the number of bedrooms, tank size, or percolation rate. As of July, 2018 (beginning with grant year 2019-20), the grant award generally varies depending on the design flow of the system in gallons per day. Table 2 shows work components and the maximum award for each for grant years 2009-10 through 2020-21.

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 either submits a certification of full payment from the Clerk of Courts in the county of delinquency or has a payment agreement on file at the county child support agency. Since the 1997-98 grant cycle, 11 delinquent grant applicants did not provide the required certification by December 31 of the calendar year of the grant cycle or enter into payment plans, so their grants expired. DSPS has not identified any applicants delinquent in child

Table 2: Calculation of Private Onsite Wastewater Treatment System Grant Amount

Component	Grant Awards 2009-10 thru 2018-19	Grant Awards Effective 2019-20 and 2020-21
Site evaluation and soil testing	Flat \$250	Flat \$250
Installation of replacement or additional POWTS anaerobic treatment component	\$500 to \$950, depending on tank size	\$2,280 to \$4,200, depending on design flow in gallons per day
Installation of a POWTS dosing component and lift pump or siphon	\$1,100 to \$1,250, depending on number of bedrooms	\$2,400 to \$3,600, depending on design flow in gallons per day
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	\$3,300 to \$7,000, depending on design loading rate in gallons per square foot per day and design flow in gallons per day
Installation of an at-grade or mound POWTS treatment or dispersal component	\$2,550 to \$4,775, depending on number of bedrooms	\$5,400 to \$7,000, depending on type of design and design flow in gallons per day
Installation of POWTS holding tank tank component	\$2,800 to \$4,775, depending on number of bedrooms	\$3,900 to \$4,500, depending on estimated flow of gallons per day
Installation of replacement exterior grease interceptor	\$550 to \$900, depending on capacity in gallons	\$3,000 to \$4,500, depending on capacity in gallons

support since 2009-10.

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. DSPS is authorized to exempt grants for experimental systems from several requirements related to the grant maximum amount, calculation and proration. Administrative rule chapter SPS 387 specifies DSPS procedures for experimental POWTS grants.

In 2000-01 and 2001-02, \$182,657 was provided for two experimental constructed wetland systems which received wastewater from septic tanks, and dispersed it into soil for final treatment. No experimental system grants have been awarded since 2001-02.

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 2018-19 funding cycle, county applications were due to DSPS before February 1, 2018, as required by statute. 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 2018-19 grants to counties in October, 2018, 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 2018-19 grant funds must be completed by December 31, 2019.

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 POWTS failures. The Department pays category one grants (discharge to waters) in full before category two grants (discharge to the surface of the ground) 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 3 shows program appropriations and expenditures by fiscal year during the 15 years

Fiscal Year Appropriations Expenditure	5
2004-05 \$2,999,000 \$2,960,70	0
2005-06 2.999.000 3.075.70	
2006-07 2,999,000 3,040,50	0
2007-08 2,999,000 3,003,10	
2008-09 2,999,000 2,965,20	
2009-10 2,815,000 2,748,600	
2010-11 2,815,000 2,892,90	
2011-12 2,338,600 2,358,80	
2012-13 2,338,600 2,314,20	0
2013-14 2,338,600 2,322,60	0
2014-15 2,338,600 2,137,40	0
2015-16 1,645,000 1,550,20	0
2016-17 840,000 813,00	0
2017-18 840,000 676,00	0
2018-19 840,000 904,00	0**

Table 3: Private Onsite Wastewater TreatmentSystem Grant Program, Appropriations andExpenditures

*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 preliminary awards made in October, 2018, and include available unexpended funds from 2017-18. Grants will be paid after work is completed, but no later than December 31, 2019.

from 2004-05 through 2018-19.

Prior to 2015-16, the program was funded from the state general fund. 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 Division of Industry Services (safety and buildings) general operations appropriation, which 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. Under 2017 Act 59, funding of \$840,000 was provided in each of 2017-18 and 2018-19.

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 anticipated amount of revenue from sanitary permits and private sewage plan review fees, less budgeted expenditures for nine DSPS positions that administer POWTS regulations.

Grants awarded in 2013-14 through 2018-19 are summarized in Table 4. The grant award amounts in Table 4 differ from the actual expenditures shown in Table 3 because funds are sometimes expended in a fiscal year following the year the grant is awarded.

In 2013-14, payments for 638 category one grants were prorated, with principal residences receiving 88% of the eligible amount, and small commercial establishments receiving 60%. No funds were available for category two grants. In 2014-15, 502 category one and two grants received 100% of the eligible grant amount. In 2013-14 and 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.

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, 469 category one grants received awards. Principal residences were awarded 94% of the eligible grant amount, and small commercial establishments were awarded 64% of the eligible grant amount to remain within 10% of the total available funds. 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

			Prorated		cent of Application
	Eligible	Application	Grant	Principal	Small Commercial
	Applicants	Amount	Amount	Residences	Establishments*
2013-14 Final					
Category 1	638	\$2,748,865	\$2,346,769	88%	60%
Category 2	7	25,883	0	0	0
Total	$\frac{7}{645}$	\$2,774,748	<u>0</u> \$2,346,769	NA	NA
2014-15 Final					
Category 1	495	\$2,240,092	\$2,204,703	100%	87%
Category 2	7	29,750	29,750	100	87%
Total	502	\$2,269,842	\$2,234,453	NA	NA
2015-16 Final					
Category 1	469	\$2,063,106	\$1,859,210	94%	64%
Category 2	17	53,900	0	0	0
Total	486	\$2,117,006	\$1,859,210	NA	NA
2016-17 Final					
Category 1	361	\$1,611,868	\$840,000	51%	68%
Category 2	$\frac{11}{372}$	35,500	0	0	0
Total	372	\$1,647,368	\$840,000	NA	NA
2017-18 Final					
Category 1	141	\$653,027	\$653,027	100%	100%
Category 2	$\frac{5}{146}$	13,496	13,496	100	100
Total	146	\$666,523	\$666,523	NA	NA
2018-19 Award					
Category 1	208	\$977,638	\$888,107	100%	84%
Category 2	4	16,020	15,914	100	84
Total	212	\$993,658	\$904,021	NA	NA

Table 4: Distribution of Private Onsite Wastewater Treatment System Grant Applications and Awards Prorated Grant as Percent of Application

*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 32% in 2013-14, and 13% in 2014-15, before the prorations shown above were made for all eligible applications.

the eligible grant amount to receive 10% (\$84,000) of total available funds. No funding was available in 2015-16 or 2016-17 for category two awards.

In 2017-18, 141 category one and five category two grants received awards. Principal residences and small commercial establishments were awarded 100% of the eligible grant amount. In 2018-19, 208 category one grants and four category two grants received awards. Grants for 187 principal residences received 100% of the eligible grant amount, and 25 small commercial establishments received 84% of the eligible grant amount to stay within 10% of total available funds, including unspent funds carried forward from 2017-18.

Table 5 shows the total grant award amount for 2018-19 grants before and after the effect of income factoring and proration to award grants within available funding. Table 5 shows the funded 208 category one and four category two grants. Applicants with income equal to or less than \$32,000 were eligible for the maximum grant amount, unless they were small commercial establishments that were prorated to remain within available funding. Applicants with income equal to or less than \$32,000 accounted for 85% of total funding awards, applicants with income between

Applicant's Income	Number of Grants	Grant Before Income Factoring	Prorated Grant Amount**	Average Prorated Grant
\$0-\$32,000 \$32,001-\$38,000 \$38,001-\$45,000 \$45,001-\$362,500*	160 14 26 12	\$791,439 60,469 74,200 <u>67,550</u>	\$771,159 47,918 28,060 <u>56,884</u>	\$4,820 3,423 1,079 4,740
Total	212	\$993,658	\$904,021	\$4,264

Table 5: Distribution of Grants by Applicant's Income -- 2018-19

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

**Includes income factoring for 187 principal residences and proration for 25 small commercial establish-

\$32,000 and \$45,000 accounted for 9%, and small commercial establishments with income over \$45,000 accounted for 6%. After income factoring and proration for small commercial establishments, the applicants were eligible for \$904,000 in grants.

The distribution of grants in 2018-19 by final grant amount (after proration) for the 212 funded applications is shown in Table 6. In 2018-19, the average grant award for the 212 funded awards was \$4,264. Grants equal to or less than \$3,000 constituted 26% of grants and accounted for 10% of the total award dollars. This group of grants included 13 grants where the eligible grant amount was reduced to \$0 after the reduction for income factoring for households or the proration for small commercial establishments. A total of 32% of grants were between \$3,001 and \$5,000, with 29% of awarded dollars. Finally, 42% of grants were

Table 6: Distribution of Grants by Amount of
Grant -- 2018-19

Amount of Grant	of Grants	Amount	Average
\$0 \$1-\$1,000 \$1,001-\$2,000 \$2,001-\$3,000 \$3,001-\$4,000 \$4,001-\$5,000 \$5,001-\$6,000 \$6,001-\$7,000	$ \begin{array}{r} 13 \\ 5 \\ 7 \\ 30 \\ 34 \\ 33 \\ 20 \\ -70 \\ \end{array} $	\$0 \$2,835 9,958 78,800 113,973 144,425 109,450 444,580	\$0 \$567 1,423 2,627 3,352 4,377 5,473 6,351
Total	212	\$904,021	\$4,264

between \$5,001 and \$7,000, and received 61% of awarded dollars.

In 2018-19, the 212 grants were funded for five types of private onsite wastewater treatment systems listed in Table 7. (See Appendix II for a description of how these systems function.) Mound systems accounted for 55% of grant awards and 67% 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.

Table 7: Distribution of Grants by Type ofReplacement or Rehabilitated Private OnsiteWastewater Treatment System -- 2018-19

Type of System	Number of Grants	Amount	Average
Mound	117	\$609,062	\$5,206
Conventional	47	145,628	3,098
At Grade	21	81,578	3,885
Holding Tank	25	65,816	2,633
In-Ground Pressure	2	1,937	969
Total	212	\$904,021	\$4,264

Loan Program

In 1999 Wisconsin Act 9, a private sewage system replacement and rehabilitation loan program was created. The program authorized counties to apply to DSPS for a loan in a year in which DSPS prorated funds under the private onsite wastewater treatment system replacement and rehabilitation grant program. Counties could 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. Counties would have been required to repay the no-interest loan over a term up to 20 years.

The loan program was provided \$1,500,000 segregated revenue (SEG) from the environmental

improvement fund in a continuing appropriation. The environmental improvement fund primarily provides loans to municipalities to upgrade or replace wastewater treatment plants to meet state and federal requirements.

No counties applied for a loan under the program. Under 2017 Wisconsin Act 59, the loan program was repealed. The \$1,500,000 in unused funding reverted to the environmental improvement fund for use for financial assistance to municipalities for wastewater treatment projects.

APPENDIX I

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

	V D. 1		18-19		tive Total*		V D. I		8-19	-	ative Total*
	Year Entered	# of		# of			Year Entered	# of		# of	
County	Program	Systems	Amount	Systems	Amount	County	Program	Systems	Amount	Systems	Amount
Adams	1992	3	\$ 12,125	327	\$916,655	Marathon	1979	13	\$ 46,372	1,354	\$3,164,494
Barron	1980	2	13,250	862	1,575,645	Marinette	1994	0	0	142	442,679
Bayfield**	1990	0	0	64	183,674	Marquette	1998	0	0	89	288,342
Brown	1990	4	20,180	545	2,026,494	Menominee	1993	0	0	6	17,802
Buffalo	1990	5	15,535	297	799,319	Monroe	1980	6	29,998	785	2,002,542
Burnett	1983	6	20,000	517	1,299,720	Oconto	1989	6	29,590	658	1,771,408
Calumet	1980	14	55,836	834	2,571,302	Oneida	1980	0	0	1,618	2,647,469
Chippewa	1990	1	2,200	611	1,486,013	Oneida Tribe	e 1991	0	0	3	10,856
Clark	1980	5	21,575	566	1,263,227	Outagamie	1989	4	15,233	678	2,264,740
Columbia	1986	0	0	801	1,707,665	Ozaukee	1982	0	0	420	1,268,238
Crawford**	1979	0	0	246	376,504	Pepin	1980	1	6,400	243	507,617
Dane	1980	1	6,675	1,856	4,564,142	Pierce	1980	3	18,300	669	1,605,240
Dodge	1986	0	0	820	2,268,397	Polk	1987	2	9,550	432	1,021,850
Door	1980	0	0	1,015	3,129,462	Portage	1980	2	7,425	1,099	2,285,845
Dunn	1990	2	10,325	357	1,022,764	Price	1986	0	0	208	552,994
Eau Claire	1991	2	12.200	562	1,574,035	Racine	1981	4	26.050	540	1.638.155
Florence**	1990	0	0	36	73,163	Richland	1980	12	55,398	944	2,383,905
Fond du Lac		1	6,400	892	2,699,967	Rock	1985	1	862	315	886,616
Forest	1991	0	0,100	151	324,398	Rusk	1988	2	7,050	522	1,149,818
Franklin City		1	5,850	6	24,966	St. Croix	1983	2	12,775	721	1,607,863
-											
Grant	1981	7	14,063	1,388	2,978,616	Sauk	1980	2	7,505	1,385	3,577,452
Green	2003	2	7,221	279	947,076	Sawyer	1980	2	3,925	966	1,753,800
Green Lake	1984	2	10,300	292	638,541	Shawano	1991	0	0	915	2,408,223
Iowa	1980	6	22,357	952	2,268,340	Sheboygan	1984	0	0	463	1,404,696
Iron	1980	0	0	166	348,645	Taylor	2002	7	26,373	136	372,762
Jackson	1980	2	5,324	815	1,713,190	Trempealeau	1982	1	4,200	734	1,735,281
Jefferson	1990	0	0	176	594,115	Vernon	1980	4	15,200	600	1,472,426
Juneau	1984	10	31,782	805	2,463,116	Vilas	1979	1	2,725	571	1,019,396
Kenosha	1981	0	0	590	1,417,812	Walworth	1984	0	0	464	975,702
Kewaunee	1985	31	163,325	948	3,169,595	Washburn	1980	1	2,200	419	799,448
LaCrosse	1983	1	3,868	252	663,727	Washington	1979	4	19,050	1,258	3,219,059
Lafayette	1986	0	0	313	749,215	Waukesha	1979	0	0	1,582	3,497,183
Langlade	1980	0	0	412	680,594	Waupaca	1990	0	0	411	1,204,857
Lincoln	1991	1	6,100	394	1,024,946	Waushara	1999	1	5,850	55	200,317
Manitowoc	1985	15	53,362	1,182	4,057,316	Winnebago	1980	0	0	176	459,069
						Wood	1985	7	32,139	1,300	3,086,726
						TOTAL		212	\$904,021	43,210	\$108,307,224

 $\ast Equals$ cumulative awards made. Actual expenditures may be less than awards.

**Florence County withdrew from participation in the 1999-00 grant cycle. Bayfield County withdrew in 1997-98 and rejoined the program effective with the 2007-08 grant cycle. Crawford County withdrew in 2000-01 and rejoined in 2018-19.

APPENDIX II

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 inground 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.