

**2006 ANNUAL TRACKING REPORT FOR NEW WASTEWATER FACILITIES**

**Date: January 12, 2007**

**Prepared by:**



**Minnesota Pollution Control Agency**

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This report identifies the total number of new wastewater treatment systems built in Minnesota after May, 1 2000. The statutory requirement for this report is found in Minn. Stat. § 115.447, which reads:

**115.447 TRACKING REPORT FOR NEW WASTEWATER FACILITIES.**

Subd. 1. Annual report required. The Pollution Control Agency shall annually prepare a report tracking the location and capacity of each new wastewater treatment system requiring a national pollutant discharge elimination system or state disposal system permit built after May 1, 2000. The report shall also include the name of the owner, primary engineering firm that designed the facilities, the primary contractor that constructed the facilities, and any management company, other than the owner, that manages the facilities. The annual report must also provide the total number of new systems built after that date. The commissioner shall submit the report to the legislative committees with jurisdiction over environmental policy and finance, and publish the report on the agency's Web site, by February 1 of each year.

Subd. 2. New facilities not meeting permit requirements. (a) The report required under subdivision 1 shall include the information required in paragraphs (b) and (c) for the first five years of operation of a new facility.

(b) For national pollutant discharge elimination system permitted facilities, provide a list of reported effluent violations that occurred during each calendar year. This list should include the effluent parameter violated; the violation date; and, if available, any known information regarding the causes of the reported limit violations.

(c) For state disposal system permitted facilities, provide a summary of conditions at the facilities which pose an imminent threat to public health and safety as defined in rules of the Pollution Control Agency, or a list of reported limit violations that occurred during each calendar year. This list should include the parameter violated; violation date; and, if available, any known information regarding the causes of the reported public health risk or limit violations.

**History:** 2000 c 492 art 1 s 43; 2006 c 244 s 1

**Estimated Cost of Report Preparation {as required by Minn. Stat § 3.197}**

38 Hours of Staff Time	\$2400.00
Duplication costs for 60 copies	\$32.00
<b>Total</b>	<b>\$2432.00</b>

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<http://www.pca.state.mn.us/hot/legislature/reports/index.html>

## **Introduction**

Minn. Stat. § 115.477 was passed in 2000, creating the requirement for the Minnesota Pollution Control Agency (MPCA) to submit an annual report identifying the total number of new wastewater treatment systems constructed after May 1, 2000. This report has been prepared by the MPCA and submitted to the Legislative Committees from 2001 through 2005 (see Table 2 for the 2005 report in this format).

In 2006, the Minnesota Legislature added a number of new items to this statute to be included in this report. This was in response to reported small communities problems with properly treating wastewater and meeting their permit requirements. New items required for this 2006 Annual Tracking Report in Subdivision 1 of the Statute include identifying the design engineering firm, the primary construction contractor, and any management or contract operations company that is assisting the owner to manage the facilities. In addition, Subdivision 2 language requires five (5) years of reporting relating to systems that are not meeting their permit requirements. The 2006 Statute changes will result in a change in the Table format appearance in this report.

## **2006 New Wastewater Systems Report**

There have been a total of 79 new Minnesota permitted wastewater treatment systems since May 1, 2000. These systems previously had no central collection and treatment system that required either a National Pollutant Discharge Elimination System (NPDES) or State Disposal System (SDS) permit.

This total number includes the 21 new systems that were constructed and began operation during 2006, which are listed in Table 1.

Table 1 includes 4 new NPDES permitted wastewater systems, and none of these systems reported effluent violations during the period that they were in operation during 2006. In addition, 17 new SDS permitted wastewater systems began operation in 2006 and none of these systems reported any violations or imminent threats to public health.

**Table 1: 2006 New Wastewater Systems Report**

Community	County	Capacity (gallons per day)	Population Equivalent (a)	Permit Type	Owner	Primary Engineering Firm	Primary Contractor	Management Company	2006 NPDES or SDS Limit Violations
Cambridge Isanti Middle School	Isanti	10,176	136	SDS	ISD 911	North American Wetland Engineering	Kober Excavating	EcoCheck Inc.	No
Camp Victory	Wabasha	27,000	360	NPDES	Camp Victory Ministries	Arden Environmental Engineering	Ellingson Companies		No
Credit River Township - Stonebridge	Scott	14,400	192	SDS	Credit River Township	Halling Engineering	K.A. Witt Construction, Inc.	EcoCheck Inc.	No
Credit River Township - Territory, Phase 7	Scott	15,300	204	SDS	Credit River Township	Halling Engineering	K.A. Witt Construction, Inc.	EcoCheck Inc.	No
Diamond Lake Woods	Hennepin	13,500	180	SDS	Dewing Development Corp.	North American Wetland Engineering	Kober Excavating	EcoCheck Inc.	No
Edgewood Estates Second	Dodge	24,252	323	SDS	Bigelow Enterprises	Massey Land Surveying and Engineering	Swenke Construction		No
Emily, City of	Crow Wing	41,600	555	SDS	City of Emily	Short Elliott Hendrickson Inc	Hammerlund Construction		No
Farms of Lake Elmo	Washington	10,000	133	SDS	M & K Development	Ayers Associates	J.R. Ferche	EcoCheck Inc.	No
Gary, City of	Norman	27,800	371	NPDES	City of Gary	Widseth Smith Nolting & Associates, Inc.	R.J. Zavoral and Sons, Inc.		No
Hammond, City of	Wabasha	23,000	307	NPDES	City of Hammond	Ayres Associates	Ellingson Companies	Peoples Service	No
Lake Volney Estates	Le Sueur	11,993	160	SDS	Brian Kocina	I&S Engineers & Architects, Inc	Fessel Environmental Service Inc		No
Meadows of Whisper Creek	Hennepin	20,000	267	NPDES	Greenfield Development, LLC	RLK Kuusisto	Ashbrook, Inc.	Veolia Water	No
Miller Farms Cluster Development	Washington	32,000	427	SDS	Derrick Construction Co.	Ayers Associates	Kober Excavating		No
Nordwall Estates	Sherburne	34,200	456	SDS	Gregg Nordwall	John Oliver and Associates	West Branch Construction		No
Preserve at Birch Lake	Chisago	34,425	459	SDS	SMC Land Development, LLC	North American Wetland Engineering	J.R. Ferche	EcoCheck Inc.	No
River Park	Olmsted	31,250	417	SDS	Journey Developing, Inc.	McGhie & Betts Inc	Jech Construction		No
Riverwood Hills Septic Drainfield Site	Olmsted	23,081	308	SDS	Fitzpatrick Construction	McGhie & Betts Inc	Fitzpatrick Construction		No
Tapestry	Washington	25,125	335	SDS	St. Croix Farms, LLC	Wenck Associates	Kober Excavating	Advanced Septic Solutions Inc.	No
Trophy Lake Estates III	Chisago	16,700	223	SDS	Trophy Lake Estates	North American Wetland Engineering	Ferguson Brothers Excavating	EcoCheck Inc.	No
Waters Edge @ Leech Lake LLC	Cass	14,100	188	SDS	Wayne Overby	Ecos Engineering	Royal Oaks Construction Inc.		No
Windsor Meadows	Sherburne	14,850	198	SDS	Alan Gilyard 10-24 Development LLC	Bogart, Pederson, & Associates, Inc.	Meadowvale Construction, Inc.	EcoCheck Inc.	No
<b>Total</b>		<b>464,752</b>	<b>6197</b>						

(a) Population Equivalent – The population equivalent is calculated by dividing the design capacity by average per capita usage estimated at 75 gallons per day. The number does not necessarily match the U.S. census population of the community.

**Table 2: 2005 Annual Tracking Report for New Wastewater Facilities  
(for years 2000 – 2005) Minn. Stat. § 115.447**

**2005** – The following (12) wastewater treatment facilities were put into service during calendar year 2005 in communities that previously had no central collection and treatment:

Community	County	Capacity (gallons/day)	Pop Equiv.*	Permit Type
Big Sandy Lodge & Resort	Aitkin	25,070	334	SDS
Clearwater Harbor Sewage Treatment Facility	Stearns	28,000	373	SDS
Clontarf, City of	Swift	23,500	313	NPDES
Credit River Township - Territory	Scott	13,500	180	SDS
Frontenac Heritage Acres 3 <sup>rd</sup> Addition	Goodhue	19,875	265	SDS
Garvin, City of	Lyon	21,500	286	NPDES
Highland Farms	Sherburne	14,000	186	SDS
Otsego (West), City of	Wright	72,000	960	NPDES
Prinsburg, City of	Kandiyohi	40,875	545	NPDES
Thumper Pond Development	Otter Tail	49,100	654	SDS
Windsor Oaks of Elk River	Sherburne	12,363	164	SDS
Whispering Ridge Cluster Development	Sherburne	45,450	606	SDS
		365,233	4,866	

**2004** – The following (15) wastewater treatment facilities were put into service during calendar year 2004 in communities that previously had no central collection and treatment:

Community	County	Capacity (gallons/day)	Pop Equiv.*	Permit Type
Aspen Hills (Star City Builder)	Sherburne	19,500	260	NPDES
Avoca, City of and Iona, City of	Murray	74,000	986	NPDES
Cedar Mills, City of	Meeker	9,150	122	NPDES
Crane Lake, City of	St. Louis	52,390	698	NPDES
Crosslake, City of	Crow Wing	150,000	2,000	NPDES
Delft Sanitary District	Cottonwood	5,700	76	NPDES
Dehli, City of	Redwood	14,400	192	NPDES
Hidden Haven (Schlichting Development, Inc.)	Sherburne	22,500	300	SDS
Lakes of Fairhaven (Sienna Corporation)	Stearns	15,525	207	SDS
Lutsen Resort (Lutsen Resort Company)	Cook	25,500	340	SDS
Nerstrand, City of	Rice	48,000	640	NPDES
Revere, City of	Redwood	17,900	238	NPDES
Roscoe, City of	Stearns	15,955	212	SDS
Woods at Eagle Lake (Scott Breuer Const., Inc.)	Sherburne	13,838	184	SDS
Wyldeewood Acres	Washington	9,000	120	SDS
		493,358	6,575	

**2003** – The following (11) wastewater treatment facilities were put into service during calendar year 2003 in communities that previously had no central collection and treatment:

Community	County	Capacity (gallons/day)	Pop Equiv.*	Permit Type
Benton Utilities	Benton	150,000	2,000	NPDES
Country Meadows/Cmark Builders	Sherburne	17,100	228	SDS
Delavan, City of	Faribault	54,000	720	NPDES
Lansing Township	Mower	26,000	347	NPDES
Lismore Hutterian Brethren	Big Stone	13,000	173	SDS
Monterey Heights/Rolling Oaks	Scott	23,400	312	SDS
Sergeant , City of	Mower	10,600	141	NPDES
Town & Country Aspen Hills Development	Sherburne	19,500	260	NPDES
Turtle Run South	Anoka	85,000	1,133	SDS
Whistling Valley	Washington	11,000	147	SDS
Windsor Park 3rd Addition	Sherburne	39,600	528	SDS
		449,200	5,989	

**2002** – The following (7) wastewater treatment facilities were put into service during calendar year 2002 in communities that previously had no central collection and treatment:

Community	County	Capacity (gallons/day)	Pop Equiv.*	Permit Type
Dumont, City of	Traverse	14,900	199	NPDES
Farwell-Kensington	Douglas	76,300	1,017	NPDES
Greenfield, City of	Hennepin	200,000	2,667	NPDES
Lewisville, City of	Watonwan	37,700	503	NPDES
Lutsen (Superior National Golf Properties)	Cook	21,000	280	SDS
Tamarack, City of	Aitkin	7,000	93	NPDES
Woodstock, City of	Pipestone	18,500	247	NPDES
		375,400	5,006	

**2001** – The following (5) wastewater treatment facilities were put into service during calendar year 2001 in communities that previously had no central collection and treatment:

Community	County	Capacity (gallons/day)	Pop Equiv.*	Permit Type
Andover Elementary School (ISD # 11)	Anoka	15,000	200	SDS
Bejou, City of	Mahnomen	17,700	236	SDS
Carriage Station (Lake Elmo)	Washington	44,000	587	SDS
Big Stone Hutterite Colony (near Graceville)	Big Stone	10,400	139	NPDES
Turtle Run South (Oak Grove)	Anoka	86,300	1,151	SDS
		173,400	2,313	

**2000** – The following (8) wastewater treatment facilities were put into service from May 1<sup>st</sup> to December 31<sup>st</sup> of calendar year 2000 in communities that previously had no central collection and treatment (the May 1<sup>st</sup> start date for calendar year 2000 is as stipulated in Minn. Stat. § 115.447):

Community	County	Capacity (gallons/day)	Pop Equiv.*	Permit Type
Birchwood Terrace (mobile home park)	Chisago	21,000	280	SDS
Fields of St. Croix Phase 2 (Lake Elmo)	Washington	31,000	413	SDS
Hanover, City of	Hennepin/Wright	645,000	8,600	NPDES
Hidden River (near South Haven)	Wright	17,000	227	SDS
Jackson Meadows (Marine on St. Croix)	Washington	5,500	73	SDS
Kilkenny, City of	Le Sueur	23,000	307	NPDES
Otsego (East), City of	Wright	400,000	5,333	NPDES
Palisade, City of	Aitkin	13,000	173	NPDES
		1,155,500	15,406	

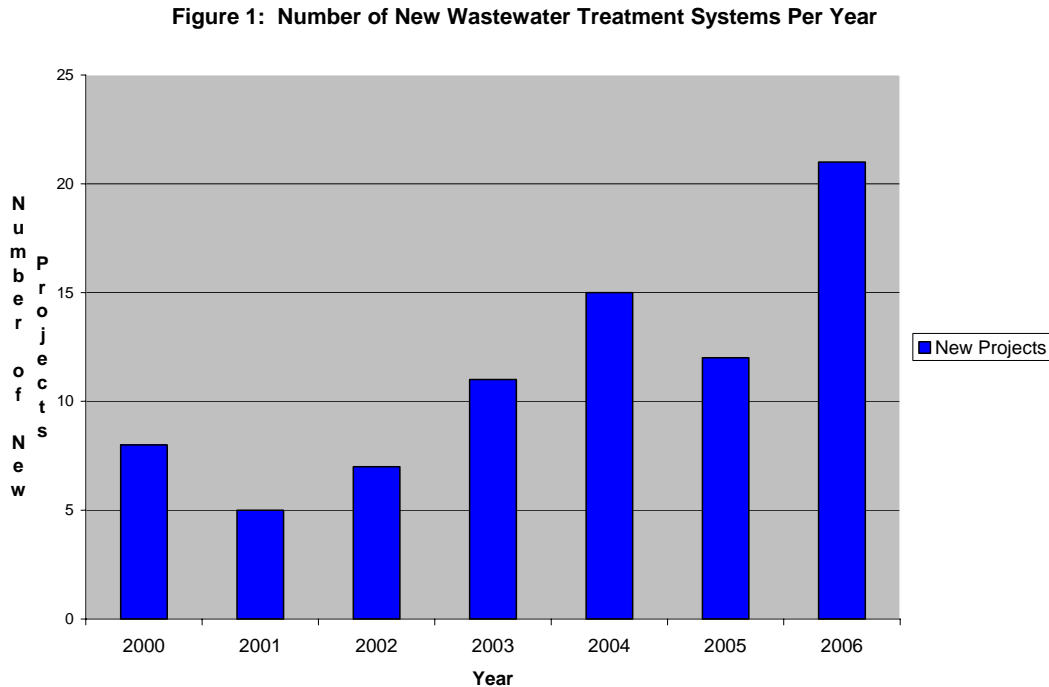
\*Pop. Equiv. – The population equivalent to the daily design flow of the treatment plant where average *per capita* usage is estimated at 75 gallons per day. This number does not necessarily match the US census population of the community.

## Wastewater Facilities Analysis and Trends

The MPCA has been reporting on new wastewater treatment systems since 2001, and now has enough basic data to begin to provide some analysis on the trends that have been observed. In general we have observed:

1. Increase in the number of new wastewater systems per year
2. Decrease in average wastewater treatment system design capacity per year
3. Smaller average population served per new wastewater treatment system
4. Higher percentage of new land treatment (SDS permit) systems per year

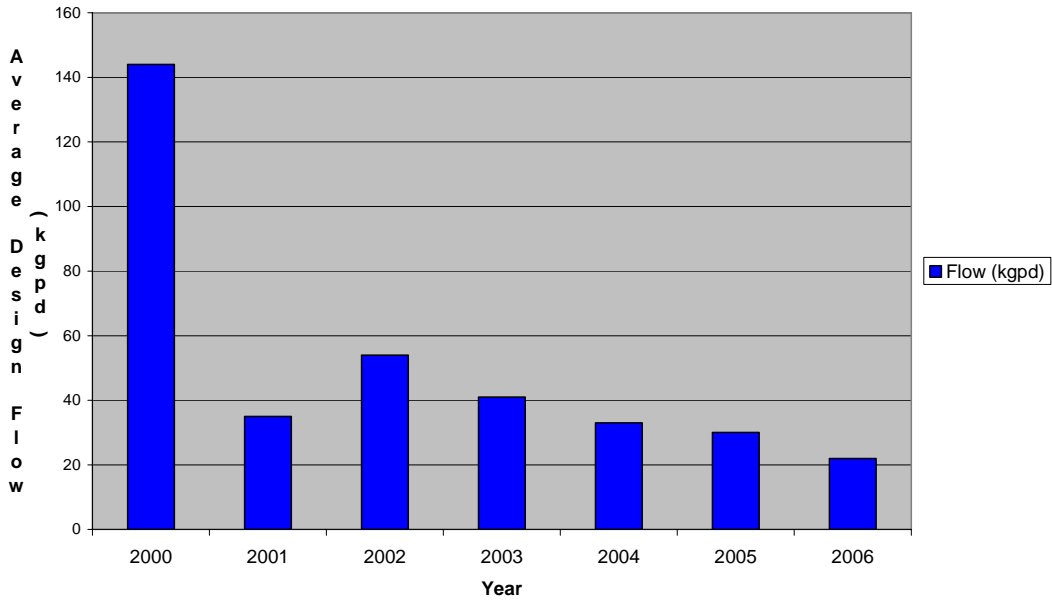
The first trend that MPCA has noted in the data is that the average number of new wastewater systems reported per year is generally increasing. This average number per year has increased from 8 new systems in 2000 to 21 new systems in 2006. Figure 1 shows this relationship.



As shown in Figure 2, the average capacity or design flow of the new wastewater systems reported per year is generally decreasing. The design flow has decreased from 144 kilogallons per day (kgpd) per system in 2000 to 22 kgpd per new system in 2006.



**Figure 2: New Wastewater Treatment Systems - Facility Average Design Flow (kgpd)**



The third trend that MPCA has noted is that the average population equivalent (P.E.) served per new wastewater system per year is generally decreasing. The population equivalent served per system has decreased from approximately 1926 P.E. per new system in 2000 to 295 P.E. per new system in 2006. Figure 3 shows this relationship.

**Figure 3: New Wastewater Treatment Systems - New Facilities Average Population Equivalent Served**

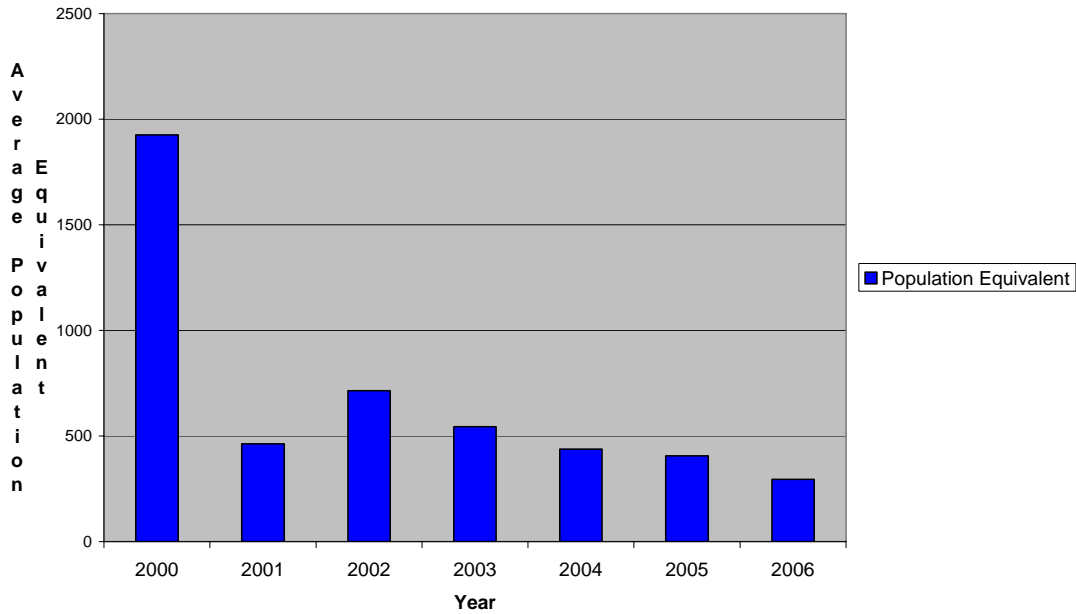
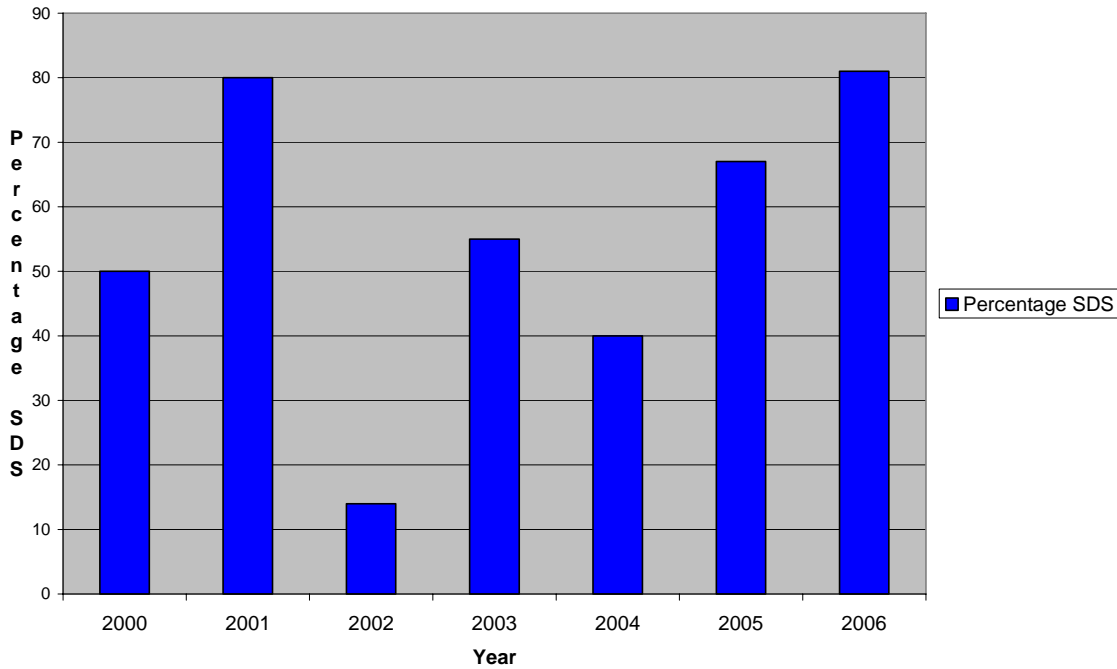


Figure 4 shows that, in general, the percentage of new systems using a land treatment method (SDS permit) has been generally increasing from 2002 to 2006.

Figure 4: Percentage SDS



## Conclusions

The new requirements for the 2006 Annual Tracking Report for New Wastewater Treatment Facilities, has resulted in reporting new information and table format changes. During the 2006 period MPCA can report that none of the new facilities have recorded any permit limit violations. MPCA will continue to track the operating record of these facilities through 2010 per the Statute.

MPCA has also observed that over the last 6 years there are an increasing number of new wastewater treatment systems being constructed each year with the systems decreasing in size and serving smaller populations. Additionally, there has been an increase in the use of land based wastewater disposal systems (SDS permits) as the systems decrease in size. These observations indicate that the MPCA is working more with smaller communities to provide their first wastewater treatment systems, reducing the number of communities without central wastewater collection and treatment systems, and that land treatment option is the primary choice for these small communities.