

2013 SSTS Annual Report

Subsurface Sewage Treatment Systems in Minnesota



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Contributors/acknowledgements

Minnesota Pollution Control Agency (MPCA) Subsurface Sewage Treatment Systems (SSTS) staff would like to thank each of the local units of governments that provided accurate information regarding their local SSTS programs for the SSTS Annual Report. Without accurate data, there would be no way to summarize SSTS activities and the accomplishments made in Minnesota.

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Photo credit

The photograph on the cover is a picture of a septic tank being installed for a replacement system at an existing residence.

Editing

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Executive summary

There were 232 Local Units of Governments (LGUs) that submitted a Subsurface Sewage Treatment Systems (SSTS) Annual Report to the Minnesota Pollution Control Agency (MPCA), either fully or partially completed, in 2013. Of the 232 reporting programs, there were 86 counties, 89 cities, 55 townships, and 2 other permitting authorities. A total of just under 534,000 SSTS were reported in Minnesota, which represents 36.5 billion gallons of wastewater per year. In 2013, LGUs issued 8,911 construction permits for both new and replacement systems and 296 SSTS repair permits for a grand total of 9,207 construction permits. The greatest number of septic system construction permits (570) was issued by St. Louis County in 2013.

The majority of SSTS installed in 2013 were for residential homes (8,590); there were 321 systems constructed for Other Establishments. Most systems installed in 2013 were Type I systems, which included 3,548 mounds and 409 at-grades. There were 775 Type II systems, 468 Type III systems, 78 Type IV systems, and 3 Type V systems installed in 2013. The proportion of SSTS constructed that were mounds and at-grades has increased over the years, from 30 percent in 2001 to 45 percent of the systems installed in 2013. A total of 12 SSTS were designed and constructed in 2013 for flows between 2,500 and 10,000 gallons per day. The total number of installed sewage tanks, reported by LGU's, was over 11,000 tanks. Local SSTS programs reported that 1,891 holding tank operating permits were issued during the past five years.

There were 4,927 replacement systems reportedly installed by LGU's in 2013. Replacement systems represent existing sewage 'disposal systems' that are replaced through various local triggers, such as point of sale, land use permits, building permits, conditional use permits, variances, and complaints. The volume of wastewater generated at these 4,927 systems is estimated at over 337 million gallons per year. One hundred and twelve LGU's reported they have a septage ordinance; 74 LGUs (15 counties) reported they track the pumping of septic systems. Regarding property transfer requirements, 116 LGUs (52 counties) said they have a property transfer program.

Over 11,500 compliance inspections of existing septic systems were reported in 2013; more than 90 percent of which were reported by county programs. Otter Tail County reported the highest number, 933 existing system compliance inspections in 2013. Four counties, Cass, Crow Wing, St Louis and Stearns, all reported more than 500 compliance inspections in 2013. Of the reported 534,000 systems in Minnesota, 11,566 systems or over two percent of existing systems were checked for compliance in 2013. LGUs reported 344 structures were connected to centralized sewer and 213 structures were abandoned or removed in 2013. A grand total of 9,480 systems were new systems, replacement systems, connected to centralized sewer, abandoned or removed, or reported to be bought out in 2013.

Estimates from data provided to the MPCA since 2002 suggests improvements in rural wastewater treatment. Over a period of 12 years, LGUs reported over 146,400 construction permits were issued statewide; over 72,500 systems of these systems were replacement systems, which represent an estimated 4.96 billion gallons of sewage per year now being effectively treated. The number of estimated compliant systems has increased over the past seven years, from 334,500 systems in 2007 to 427,000 systems in 2013; this represents 30 billion gallons of wastewater treated via compliant SSTS.

Introduction

Each year, local units of governments (LGU) with Subsurface Sewage Treatment System (SSTS) Programs are required to complete an annual report of their SSTS activities. Local SSTS programs occur at four

governmental levels: 1) county, 2) city, 3) township, and 4) other or special purpose units (i.e. Water Management District, Joint Powers Board). Minnesota Rules Chapter 7082.0040 specifies the content of the SSTS Annual Reports; it is due to the MPCA commissioner no later than February 1 each year for the previous calendar year.

The MPCA sent out the Annual Reports electronically in December 2013 to each known local SSTS program via e-mail. Known LGUs received the 2013 Annual Report instructions and an individual questionnaire in Excel spreadsheet format. Each spreadsheet typically included prior responses over several years so that the LGU staff could view their previous responses and develop an analysis of their own SSTS program.

The purpose of the SSTS Annual Report is to: 1) obtain detailed information about each SSTS program and 2) summarize relevant information into a statewide Annual Report. The local Annual Report is also used to help track the number of sewage tanks installed in each jurisdiction to ensure payment of the \$25 tank fee by licensed SSTS installers and by homeowner installed systems.

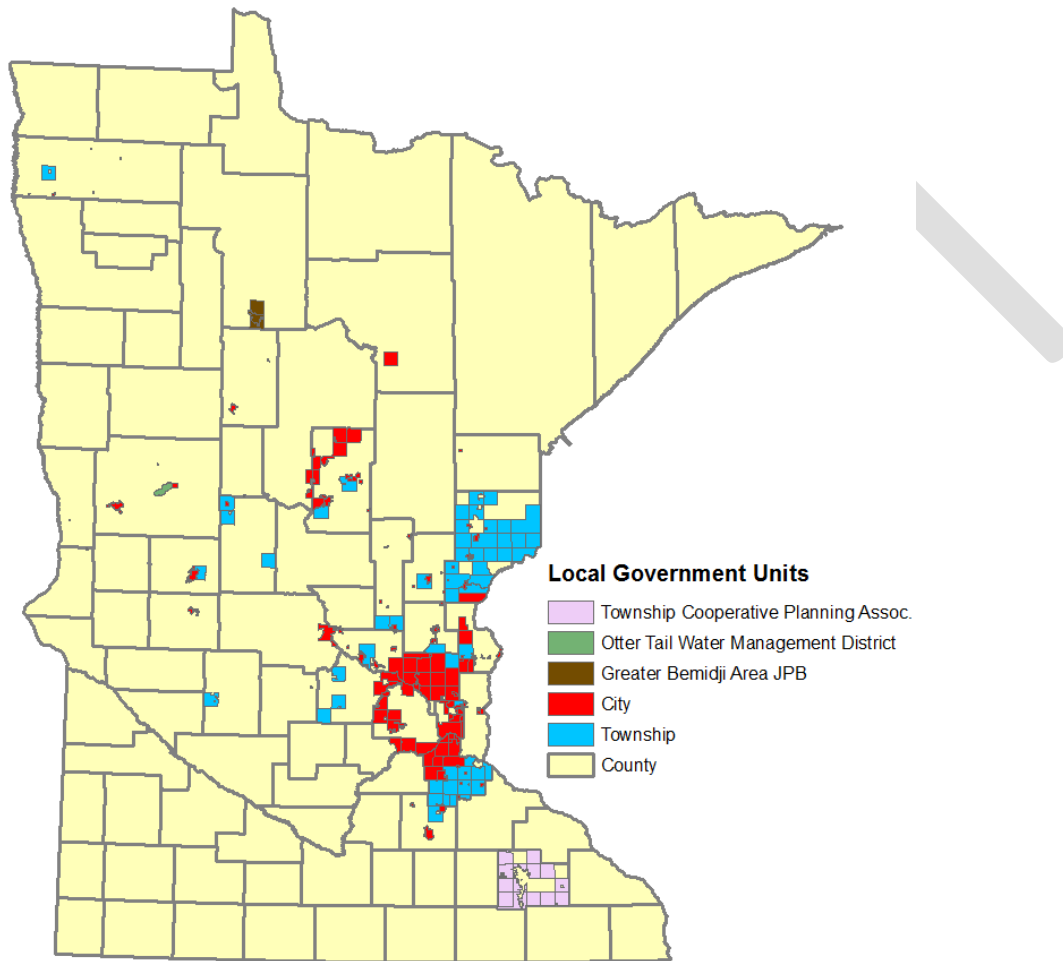
This report, which models the format used in the 2012 annual report, includes a broad analysis of SSTS trends in Minnesota for 2013 and over the past 12 to 13 years. The analysis is based on information provided by the reporting LGU contained in their individual Annual Reports. Some of the data is 'hard' data, such as the reported number and types of permits issued. Other data is considered 'soft' data, such as the reported best estimates provided to determine SSTS compliance rates and, sometimes, the number of SSTS in each jurisdiction. New to the 2013 annual report are four new questions that were added through legislation.

Twenty-seven annual reports were not received in 2013. The reports not received were made up of 14 city reports and 13 township reports. Future correspondence will be done to ensure future reporting requirements are met. Of the reporting LGUs, 98 percent indicated they approve SSTS designs before issuing construction permits. The four jurisdictions that self-reported not reviewing designs have been or are planned to be contacted and the rule requirements discussed with them. There were five LGUs that reported they do not verify soils at any time during permitting or during system construction. Those jurisdictions that self-reported not verifying soils were contacted and the requirements of the rule discussed with them. Four out of the five LGUs have already made plans to verify soils in the future.

Annual Report response rate

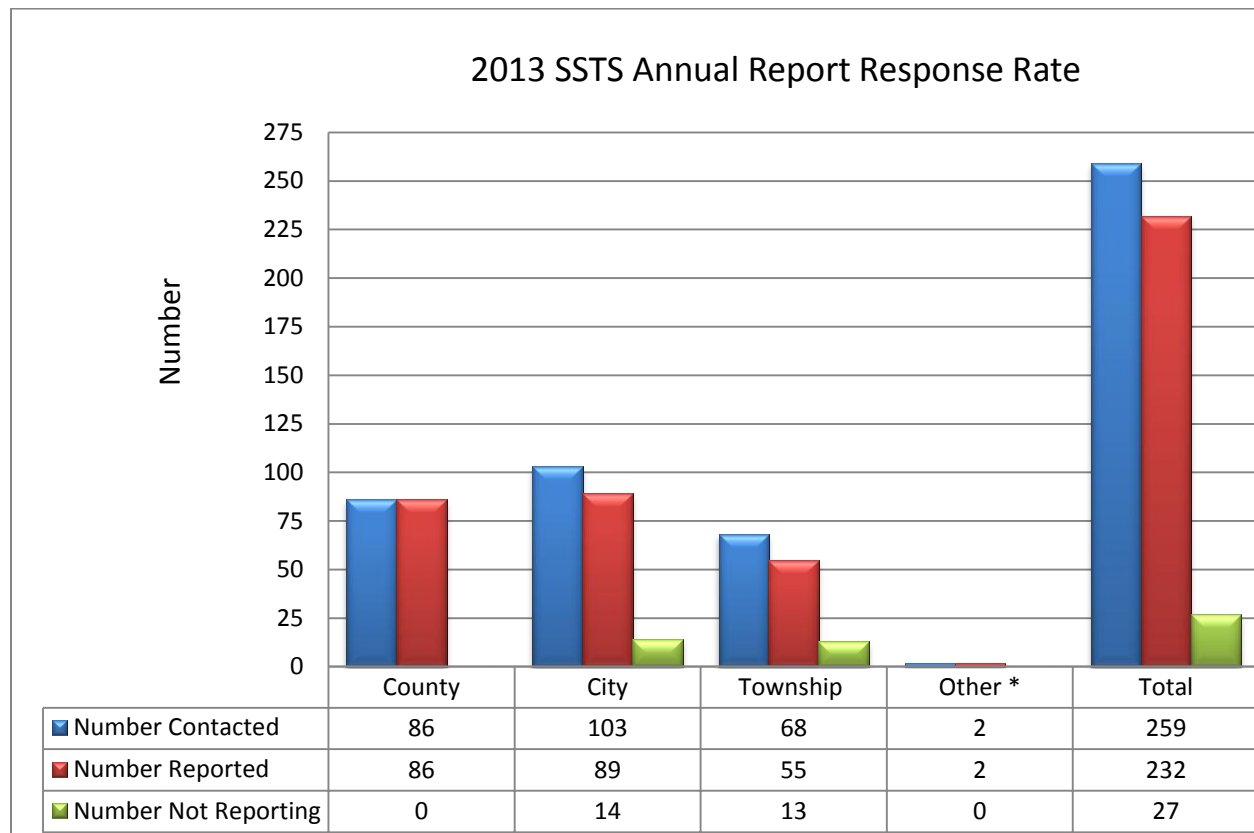
In 2013, there were 232 LGU's that submitted an Annual Report, either fully or partially complete. In 2012, a total of 210 Annual Reports were submitted; there was an increase of 22 reporting LGUs in 2013 as compared to the previous year. All counties, except Ramsey County, submitted an Annual Report. Ramsey County is not required to submit a SSTS Annual Report since local jurisdictions within Ramsey County with SSTSs all have a SSTS ordinance and associated program requirements so the county is not required to administer a program (M.S. 115.55). A map showing locations of known SSTS programs is shown in Figure 1.

Figure 1. Map showing the locations of county, city, township and other known local SSTS programs in 2013.



Of the 232 reporting programs, there were 86 counties, 89 cities, 55 townships, and 2 other permitting authorities (Bemidji Joint Powers Board and Otter Tail Water Management District). The third 'other' permitting authority, Olmsted Township Cooperative Planning Association (TCPA), submitted an Annual Report for each of the 12 townships and so these townships are reflected in the individual township numbers.

Figure 2. 2013 SSTS annual reporting rate from 259 local units of governments.



* Olmsted Township Cooperative Planning Association did not report as a single entity; rather, annual reports were submitted for each of the 12 townships and so each of the townships were counted as a township and not as an 'Other' program.

The exact number of local SSTS programs is unknown. At this time, there appears to be about 259 individual SSTS programs in Minnesota. The number of county programs remains the same; however, the number of city and township programs varies from year to year and the size of the different SSTS programs varies, too. The return rate fluctuates over the years, along with the quality of reported data. County staff, in some jurisdictions, are unsure of who the local city or township contact is for each of the local SSTS programs in some counties. Furthermore, city and township programs with 'contract inspection services' can change from year to year, so it can be difficult to know who the contact person is to ensure the Annual Report can be sent to the right entity or individual.

The Annual Report was transmitted electronically to each of the previously identified SSTS Administrators, who provided an email contact, in December 2013. For those LGU's that did not provide an email or did not report in 2012, a paper copy of the annual report was developed and mailed through the USPS for 2013. Fourteen completed paper copy reports were returned by LGU's in 2013. Some LGUs did not acknowledge receipt of the Annual Report; other Annual Reports were never returned. For some cities and townships, telephone calls were made to try to obtain the Annual Reports and to identify/correct the SSTS contact information. Telephone contacts were typically effective.

A few of the Annual Reports were submitted partially filled-in. The MPCA assisted some local representatives, as requested, to complete their annual reports over the phone. Despite this effort, about 10 percent of the possible annual reports were not received. About 14 percent of the cities and 19 percent of the townships did not submit their annual report. In 2014, continued follow-up action(s) with the 27

non-reporting cities and townships is planned; future correspondence is anticipated to ensure future reporting requirements are met.

Of the presumed 259 SSTS programs in Minnesota, 63 counties regulate all SSTS within their boundaries; 24 counties regulate SSTS in some portion of the county. Ramsey County does not regulate any SSTS because SSTS regulation is done by cities and townships in Ramsey County. Anoka County regulated SSTS in Shoreland Areas only in 2013. The percent of total SSTS regulated by the 24 counties is shown in Figure 3 and Table 1.

Figure 3. The 24 counties with local SSTS programs within their county boundaries (cities, townships, others) and the percentage of total SSTS regulated by each county.

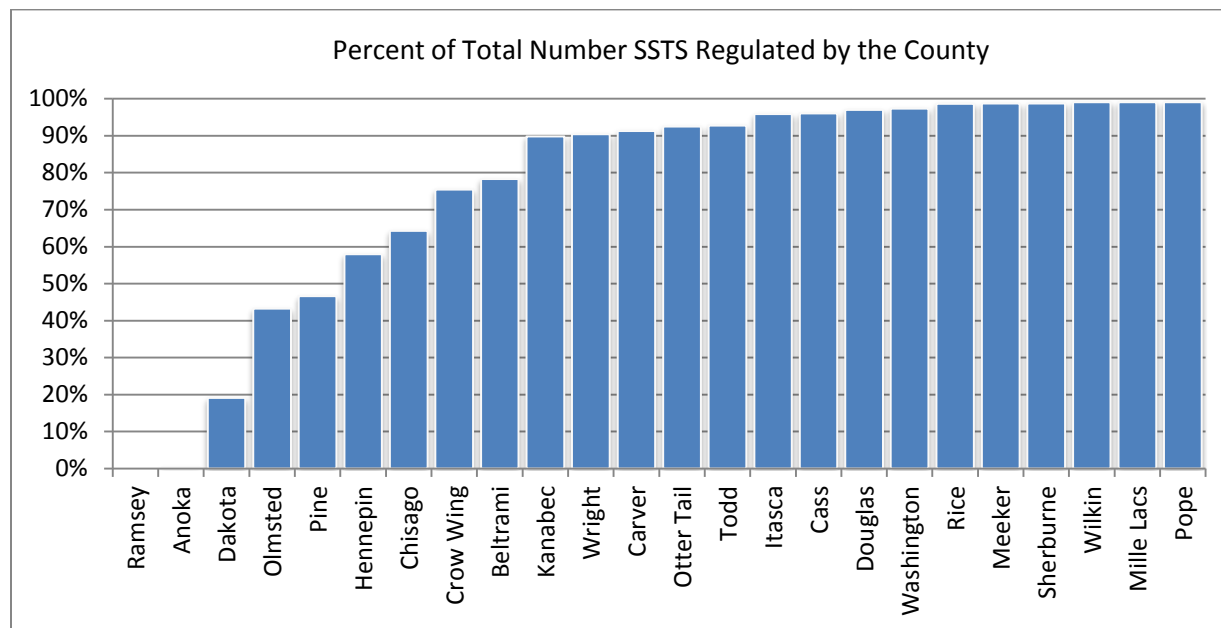


Table 1. Twenty-four counties showing numerical percentage of SSTS regulated within the county boundary.

County	Percentage of Total # SSTS Regulated by County	County	Percentage of Total # SSTS Regulated by County
Ramsey	0.0%	Otter Tail	92.5%
Anoka	0.4%	Todd	92.8%
Dakota	19.1%	Itasca	95.8%
Olmsted	43.3%	Cass	96.0%
Pine	46.7%	Douglas	97.0%
Hennepin	58.0%	Washington	97.3%
Chisago	64.3%	Rice	98.7%
Crow Wing	75.5%	Meeker	98.7%
Beltrami	78.3%	Sherburne	98.8%
Kanabec	89.8%	Wilkin	99.1%
Wright	90.4%	Mille Lacs	99.1%
Carver	91.3%	Pope	99.1%

Number of Subsurface Sewage Treatment Systems

In 2013, 232 LGUs reported a total of just under 534,000 SSTS in Minnesota. It was reported that they issued 8,911 construction permits for both new and replacement systems and 296 SSTS repair permits for a grand total of 9,207 construction permits. Over a period of 12 years, from 2002 to 2013, LGUs reported that over 146,400 construction permits were issued (Table 2).

The highest number of SSTS was reported in St. Louis County (N=34,259); the fewest number of SSTS reported was reported in Traverse County (N=581). The highest number of septic system construction permits issued in 2013 was by St. Louis County (N=570); the fewest number of construction permits were issued by Mahnommen County (N=4). During the 12 year period from 2002-2013, the highest number of construction permits was reported by Sherburne County (N=8340) and the lowest number was reported by Red Lake County (N=106). Township, city, and other jurisdiction report data were added to their respective county to tabulate these figures.

Appendix A contains a list, county-by-county, of the following information: 1) total number of SSTS reported, 2) number of construction permits issued in 2013, 3) number of construction permits issued over a period of 12 years, 4) number of compliance inspections of existing SSTS's conducted countywide (private inspector and LGU), 5) percent of total SSTS inspected, and 6) counties with compliance inspections for property transfer.

Appendix B1 contains a list of cities, by county, with known SSTS programs. Appendix B2 contains a list of townships, by county, with known SSTS programs. Appendix B3 contains a list of other permitting authorities, by county, with known SSTS programs.

Table 2. Statistics on the reported number of SSTS and construction permits reported by LGUs in 2013.

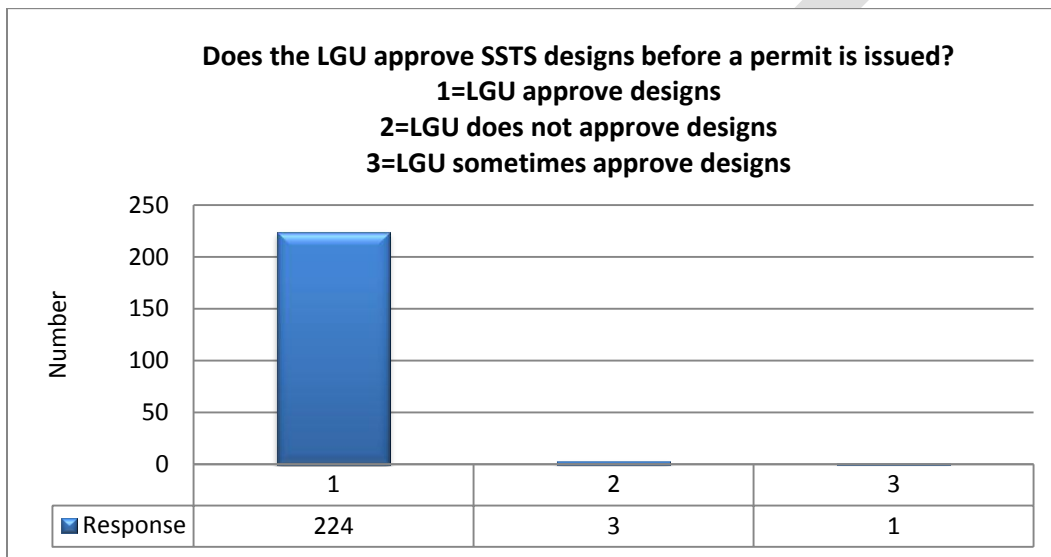
	Total Number of SSTS Reported in 2013	Number Construction Permits Issued in 2013	Number Construction Permits 2002-2013
Total Number SSTS Reported	533,924	9,207	146,417
Highest County SSTS Number	34,259	570	8,340
Lowest County SSTS Number	581	4	106

Design approvals

The annual report asks if the LGU approves SSTS designs before issuance of a construction permit. There were 228 responses to this question; 224 LGUs said ‘yes’ they do review designs before issuing construction permits; three LGUs said ‘no’ they do not review designs, and one LGU said ‘sometimes or yes/no’ in their response (Figure 4).

Of the reporting LGUs, 98 percent indicated they approve SSTS designs before issuing construction permits. This self-reporting shows good compliance with this provision of Minn. R. 7082.0500; those jurisdictions that self-reported not reviewing designs have been or are planned to be contacted and the rule requirements discussed with them.

Figure 4. Design approvals by LGU before permitting SSTS construction.



Soil verification

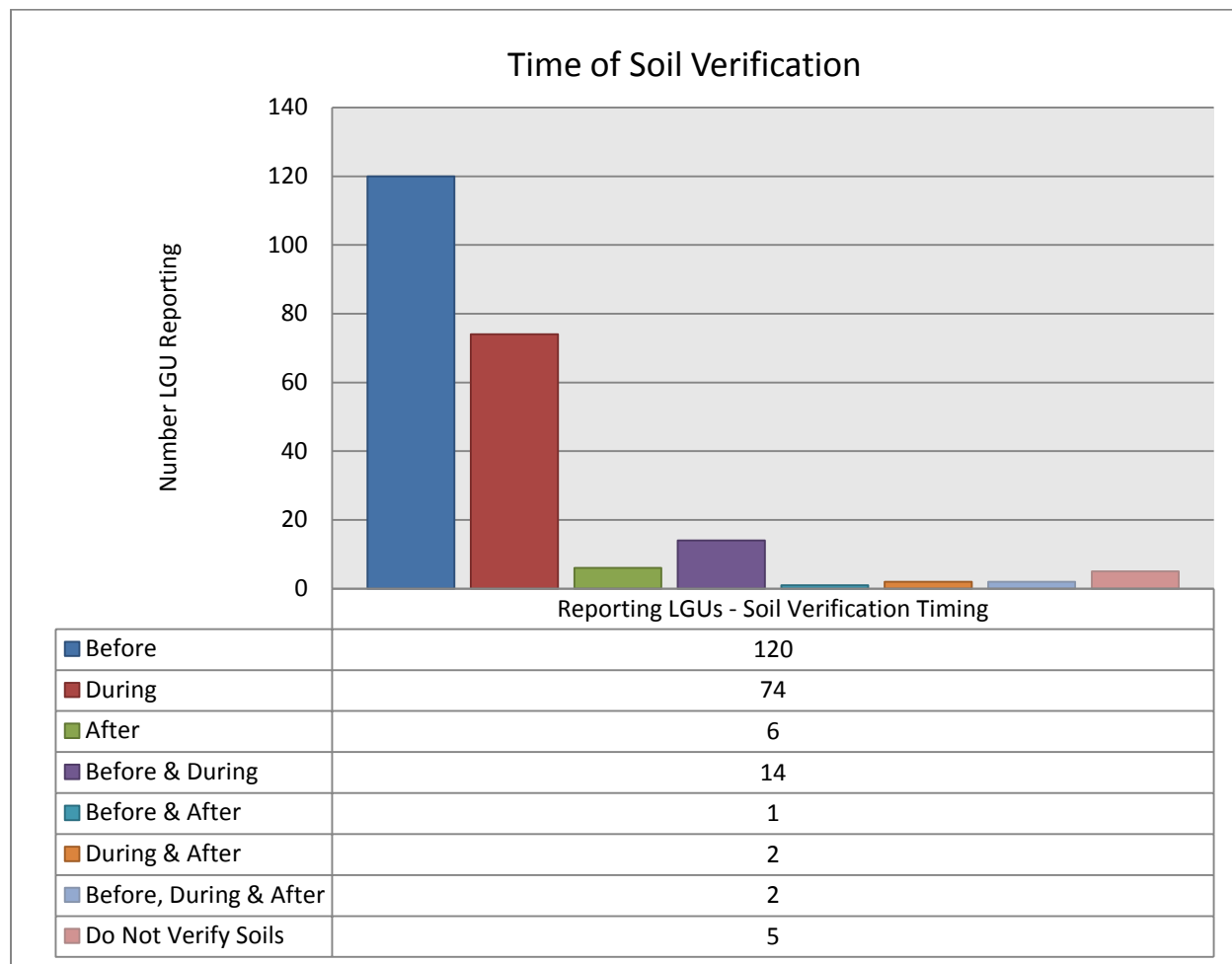
LGUs were asked at what point in the permitting and construction process the soils are verified at the proposed location of the SSTS. Photo 1 shows a designer describing the soils in a test pit. There were 224 LGUs that responded to this question with eight combinations of answers (Figure 5).

Photo 1. Describing and verifying soils in a shallow test pit using a Munsell color book to identify soil colors and determine depth to seasonal saturation.



There were 219 LGUs that reported verifying soils at some time before, during, or after system construction; that's 98 percent of the reporting LGUs verifying soils. 120 LGUs reported they typically verify soils before construction and over 70 LGUs reported they typically verify soils during construction. The various combinations of LGU responses to the soil verification question are shown in Figure 5.

Figure 5. Soil verification timing reported by LGUs in 2013.



There were five LGUs that reported they do not verify soils at any time during permitting or during system construction. As with design approvals, this self-reporting shows good compliance with this provision of Minn. R. 7082.0500; those jurisdictions that self-reported not verifying soils were contacted and the requirements of the rule discussed with them. Four out of the five LGUs have already made plans to verify soils in the future. The last LGU that needs to meet the soil verification requirement is a city that has not issued an SSTS construction permit since the soil verification requirement was put in place. Discussion will continue with this city to implement soil verification process.

Systems by type

Definitions of System Types:

Type I Systems

- Has specific prescriptive requirements
- Has solid basis in research and field performance

- Has lower operation and maintenance requirements
- Requires a management plan
- Has been, and could be termed “Standard Systems”
- Designed by a Basic, Intermediate or Advanced Designer

Type II Systems

- Follows Type I prescriptive design requirements when possible
- Deviates from Type I prescriptive standards when needed
- Employed to fit non-standard site conditions (e.g., floodplains) or special dwelling/Other establishment situations (privy or holding tanks)
- Has less basis in research and field performance
- Has lower operation and maintenance requirements
- Requires a management plan
- Has been, and could be termed “Alternative Systems”
- Designed by a Basic, Intermediate or Advanced Designer

Type III Systems

- Follows Type I prescriptive design requirements when possible
- Deviates from Type I prescriptive standards when needed
- Employed to fit non-standard soil and site conditions or high strength waste design without the use of pretreatment
- Has little basis in research and some field performance results
- Has lower operation and maintenance requirements
- Requires a management plan
- Has been, and could be termed “Other Systems”
- Designed by a Basic, Intermediate or Advanced Designer

Type IV Systems

- Follows most Type I prescriptive design requirements
- Deviates from Type I prescriptive standards due to the use of an registered pretreatment product
- Employed to:
 - Reduce the vertical separation distance (no mound system)
 - Reduce the absorption area for small lots
 - Vastly extends the life of the soil system if no room is available for a replacement soil system
 - Used to reduce waste strength for higher strength wastes
- Has less basis in research and less field performance results than Type I system
- Has higher operation and maintenance requirements
- Requires a management plan
- Requires an operating permit and Service Provider
- Designed by an Intermediate or Advanced Designer

Type V Systems

- Does not need to follow prescriptive design standards, must meet environmental and safety performance outcomes.
- Components not following Type I design standards need to be designed by a professional engineer

- Employed to use non-registered treatment and dispersal products
- May have little basis in research and field performance results
- Likely will have higher operation and maintenance requirements
- Requires a management plan
- Requires an operating permit and Service Provider
- Has been, and could be termed “Experimental Systems”
- Designed by an Intermediate or Advanced Designer in collaboration with a licensed AELSLAGID professional

Warrantied Systems

- This classification is not being currently used anymore and will be removed from the annual report questions

Alternative Local Standards (ALS)

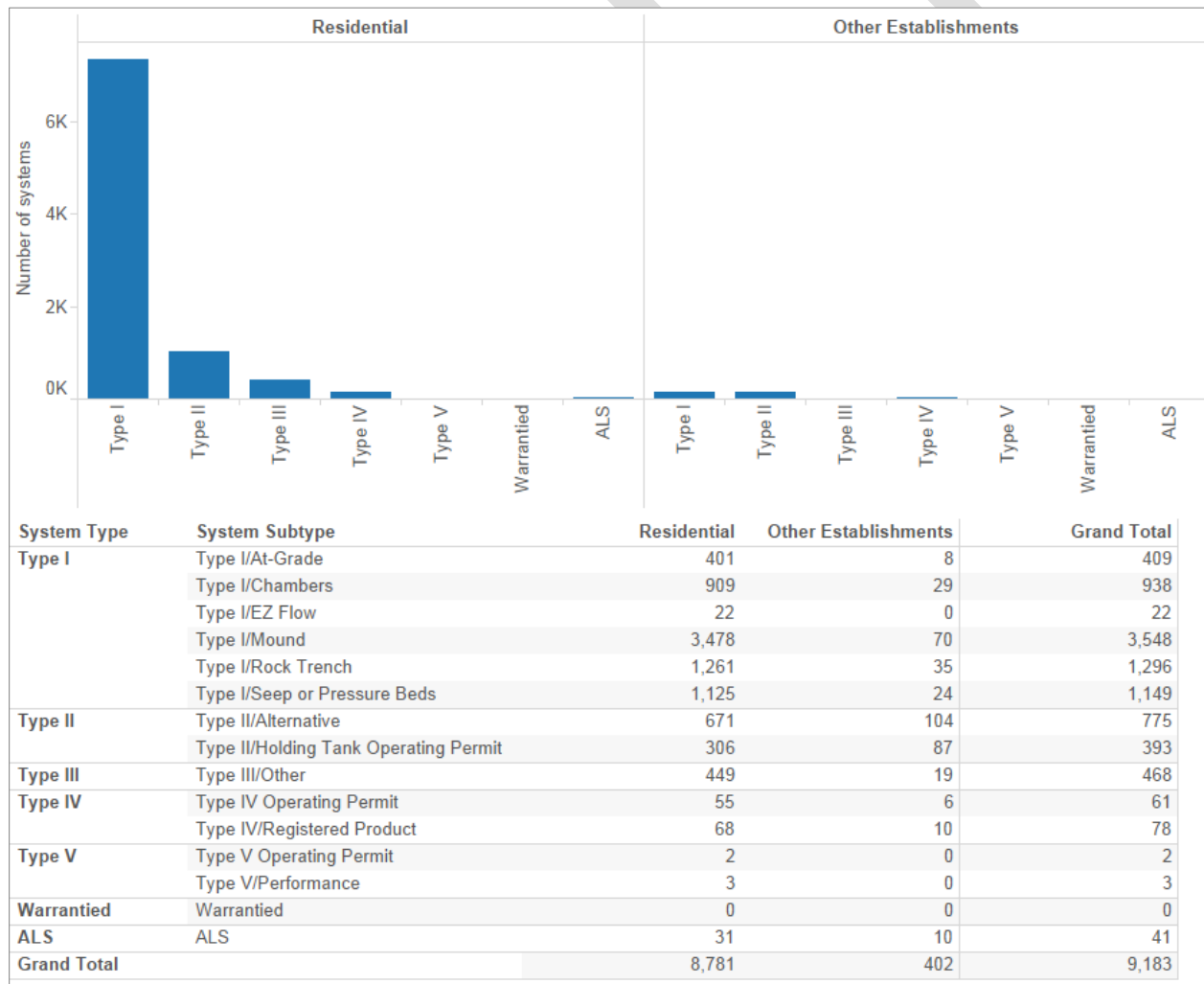
- LGUs may adopt by ordinance local standards that are less restrictive than the agency’s rules under certain conditions
- Continued compliance for existing systems can be justified under ALS based on local conditions that include soil separation, soil classification, vegetation, systems use, localized well placement and construction, localized density of systems and wells, groundwater flow patterns, existing natural or artificial drainage systems
- New and replacement system ALS standards are allowable
 - In areas of sustained and projected low population density
 - Where conditions render conformance to the agency’s rules difficult and otherwise inappropriate
 - Must protect health and the environment
 - Only allowed for systems under 2,500 gpd

The types of systems that were reported in 2013 to be installed are shown in Figure 6. The majority of SSTS installed were residential (N=8,781) and 402 systems were constructed for Other Establishments. There are a total of seven SSTS naming options: there are five types of systems (Type I, Type II, Type III, Type IV, and Type V), a Warrantied System naming option, and an Alternative Local Standard (ALS) System naming option.

Most systems installed in 2013 were Type I systems; these included 3,548 mounds and 409 at-grade systems. It was reported that 1,296 rock trench systems and 1,149 seepage/pressure beds were installed. Proprietary distribution media was reported installed as chambers in 938 systems and as EZflow in 22 systems.

There were also 775 Type II systems and 393 Type II holding tanks constructed and issued an operating permit. In 2013, there were 468 Type III systems, 78 Type IV systems, and 3 Type V systems reported installed. There were no reported Warrantied Systems installed in 2013. There were 41 systems reportedly installed under the Alternative Local Standards (ALS) provision.

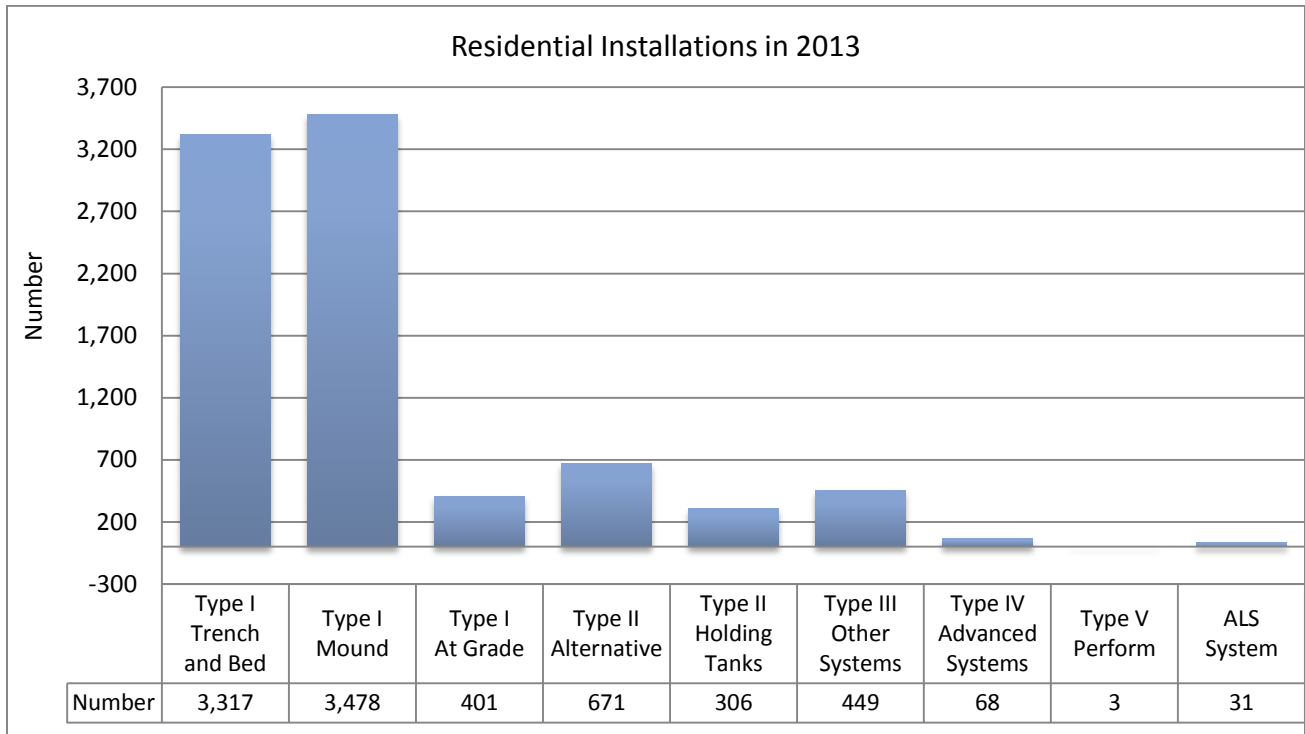
Figure 6. Compilation of number of system by types reported by LGUs installed in Minnesota in 2013.



Summary of residential systems in 2013

The type and number of SSTS installed in 2013 for residential applications are shown in Figure 7. About 38 percent of the systems (N=3,317) installed in 2013 were Type I Trenches and Beds. About 40 percent of the systems (N=3,478) were Type I Mounds and five percent of the systems (N=401) were At-Grades. The Type IV, Type V and ALS systems, combined, are less than two percent of the total number of systems installed in 2013.

Figure 7. The type and number of systems installed for residential systems in 2013.

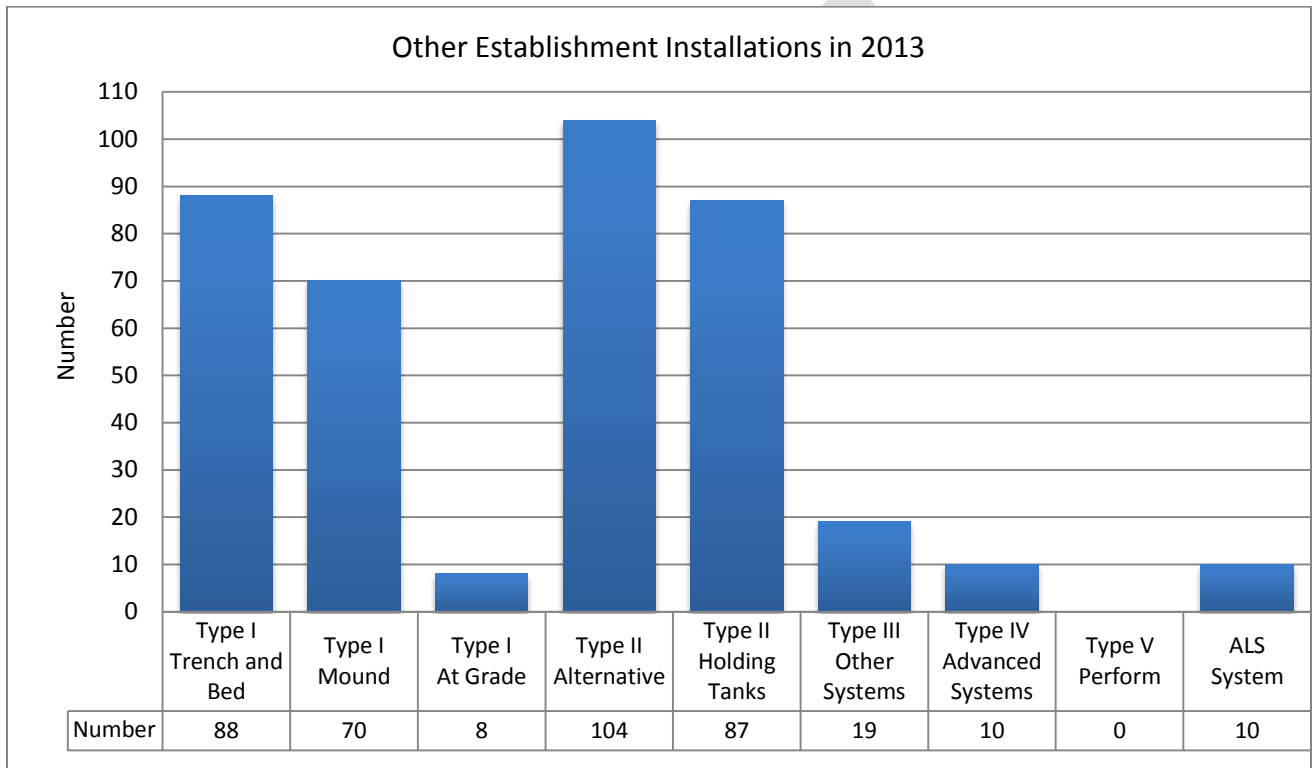


* The total number of systems installed in 2013 for residential applications was 8,724 systems. The Type I Trench and Beds include 931 Type I systems reported to have used proprietary distribution media products.

Summary of Other Establishment systems in 2013

A total of 396 systems were reported installed in 2013 for Other Establishments (i.e. commercial facilities). The type and number of SSTS installed in 2013 for Other Establishments are shown in Figure 8. About 22 percent of the systems (N=88) installed in 2013 were Type I Trenches and Beds; 18 percent of the systems (N=70) were Type I Mounds, and 22 percent of the systems (N=87) were holding tanks. The Type IV, Type V and ALS systems, combined, are five percent of the total number of systems installed for Other Establishments.

Figure 8. The type and number of systems installed for Other Establishments in 2013.

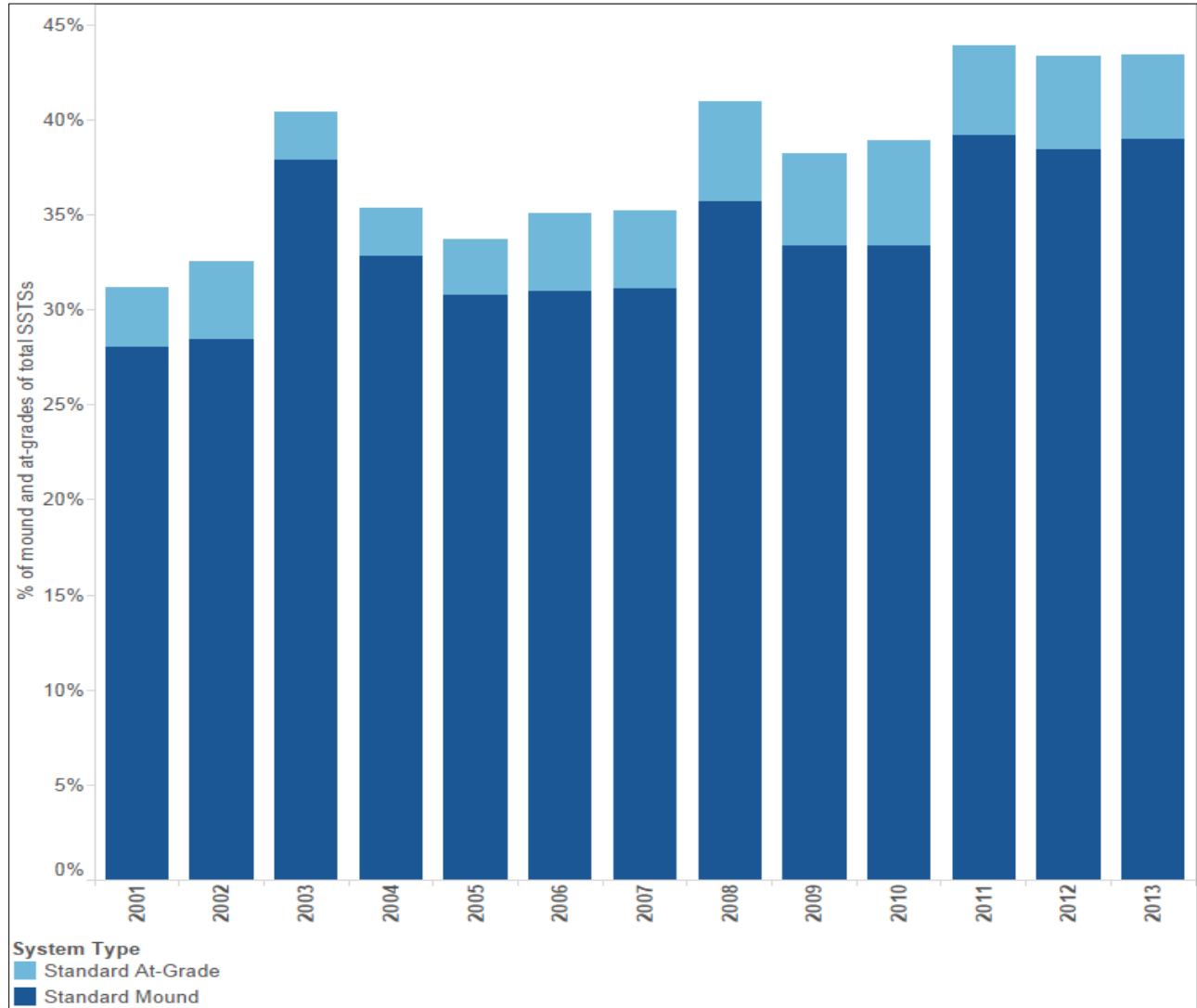


* The total number of systems installed in 2013 for Other Establishments was 396 systems. The Type I trench and bed systems included 29 systems reported to have used a proprietary distribution media product.

Mound and at-grade systems

The total number of reported mound and at-grade systems installed in 2013 was 3,957 out of a total of over 8,900 systems. The percentages of mounds and at-grades, of the total number of SSTS constructed annually over each of the past 13 years, are shown in Figure 9. The proportion of SSTS constructed that were mounds and at-grades has increased over the years, from 30 percent in 2001 to nearly 45 percent of the systems installed during the past three years.

Figure 9. Percentage of mounds and at-grades, of the total SSTSs reported, constructed new over 13 years.



Type IV systems

There were a total of 78 Type IV systems reported constructed in 2013. Type IV systems were used for 68 residential systems and 10 Other Establishments. The greatest numbers of Type IV systems were installed in St. Louis County where 34 Type IV systems were installed. New Type IV systems were reported in 14 counties, as show on the map in Figure 10.

Figure 10. Map showing counties where Type IV systems were installed in 2013 and picture of a Type IV system.

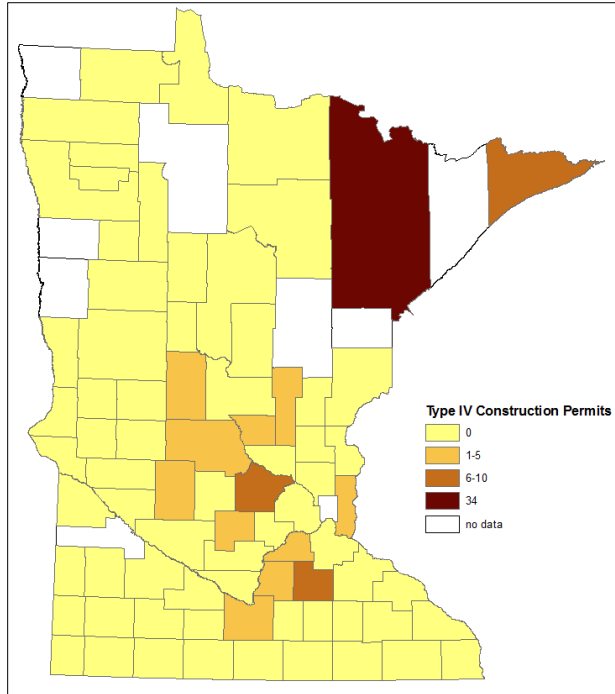


Photo 2. Example of type IV system using a registered treatment product.

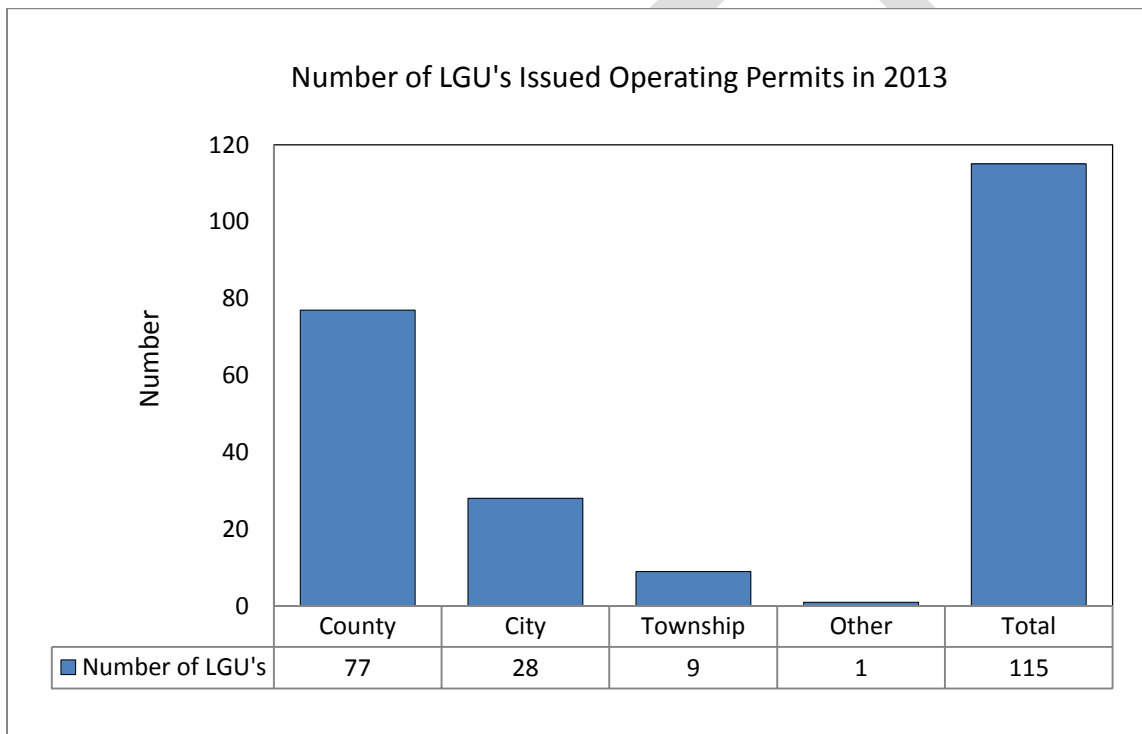


Total number of systems with operating permits

A grand total of over 4,800 operating permits (over a period of several years) were reported to have been issued by LGUs in the 2013 annual report. Seventy-seven counties reported they have issued operating permits (Figure 11). The number of operating permits issued by a county ranged between two and 1,705 permits. The largest county in Minnesota, St. Louis County, issued the greatest number of operating permits.

There were 28 cities that reported a total of 112 operating permits. The number of city-issued operating permits ranged between 1 and 31 permits per city. There were nine townships that issued a total of fifteen operating permits. The number of township issued operating permits was small, between one and four permits per township. The Joint Powers Board (JPB) reported the issuance of five operating permits.

Figure 11. The number of LGUs that reported the issuance of operating permits.



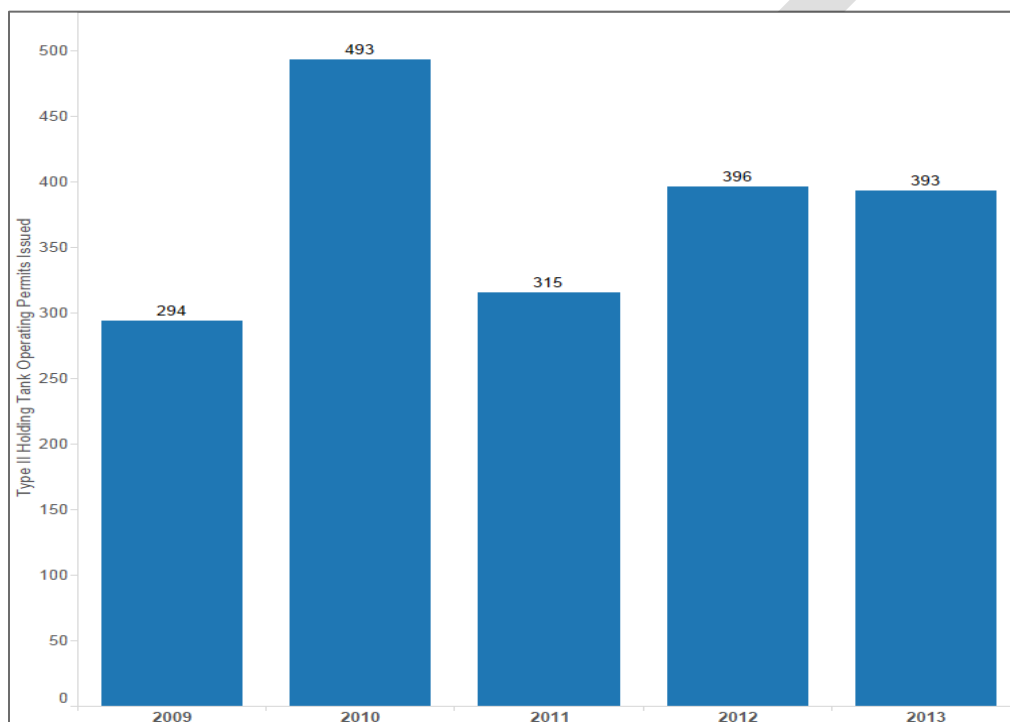
*The 77 counties issued a total of 4,722 operating permits; the 28 cities issued a total of 112 operating permits; the nine townships issued a total of 15 operating permits, and the one 'Other' LGU/JPB issued five operating permits.

Operating permits reported for holding tanks over five years

One of the questions asked in MPCA’s Annual Report to local government officials is the number of holding tanks operating permits issued each year. This specific question was first asked in 2009.

The holding tank annual report data was tabulated for the past five years (Figure 12). There were a total 1,891 holding tank operating permits issued over five years. The number, per year, ranged from a low of 294 in 2009 to a high of 493 in 2010.

Figure 12. The number of holding tank operating permits reported by local governments, 2009-2013.



The photo below (Photo 3) shows a holding tank being installed. The tank was insulated with foam at the tank manufacturing plant. The insulation helps to keep the tank and its content from freezing. Both the risers and inspection pipes are cast into the lid of the tank to help keep the tank watertight. The tank was kept pretty shallow due to high groundwater conditions at the site.

Photo 3. The installation of an insulated holding tank for a seasonal dwelling.



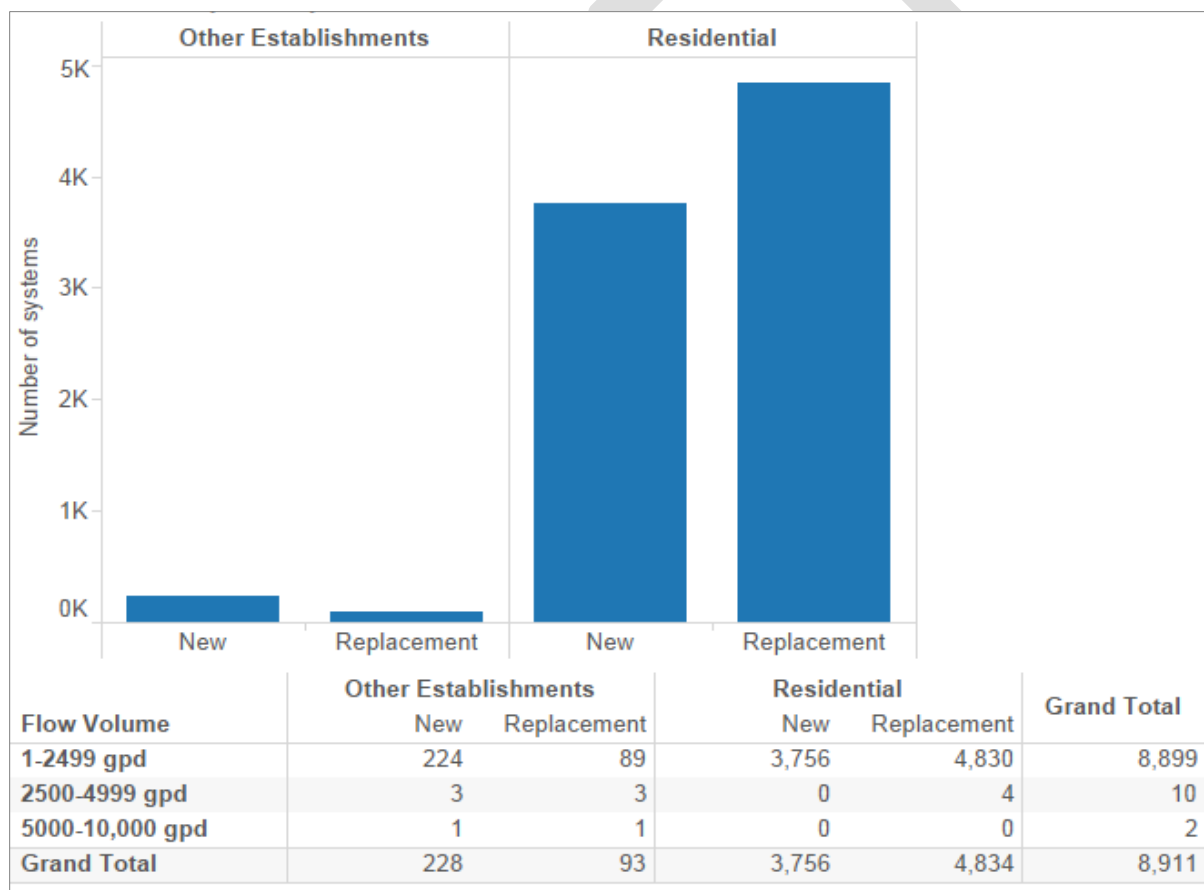
Reported number of SSTS by wastewater flow volume

The reported number of SSTS installed in 2013 for Other Establishments and residential applications by wastewater flow volume is presented in Figure 13. For Other Establishments with flows less than 2,500 gal/day, there were 224 new systems and 89 replacement systems. For larger Other Establishments, six systems with flows between 2,500 and 4,999 gal/day were constructed; two systems with flows between 5,000 and 10,000 gal/day were constructed in 2013.

For residential applications, over 99.9 percent of the constructed systems were designed for flows less than 2,500 gal/day. There were 3,756 new systems and 4,830 replacement systems reported. There were no new residential systems for design flows exceeding 2,500 gal/day. Four replacement systems were reported for residential systems with flows between 2,500 and 5,000 gal/day and no residential systems, new or replacements, were reported for flows over 5,000 gal/day.

In summary, there were a total of 12 SSTS designed and constructed for wastewater flows between 2,500 and 10,000 gal/day in 2013.

Figure 13. Systems reported by wastewater flow volume in 2013.



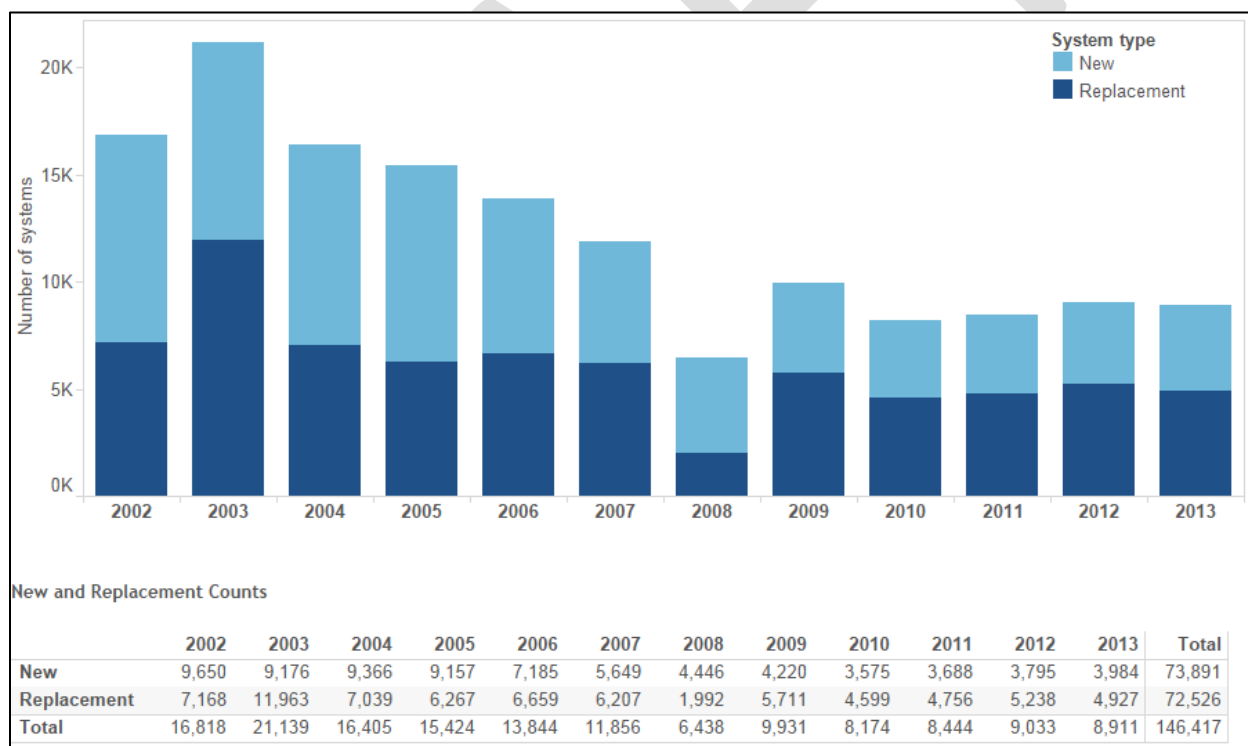
New and replacement SSTs

The statistics on new and replacement systems reportedly installed in 2013, and over the past 12 years, are shown in Figure 14. Local units of governments reported that 3,984 new systems and 4,927 replacements were installed in 2013. About 55 percent of the construction permits (4,927) were reported as replacement systems. Replacement systems included both residential systems (year-round and seasonal) and systems used by Other Establishments (i.e. restaurants and resorts).

Replacement systems represent existing sewage disposal ‘systems’ that are replaced through various local triggers, such as point of sale, land use permits, building permits, conditional use permits, variances, and complaints. The ‘replaced systems’ could include old systems (i.e. 55 gallon barrels, cesspools), straight pipes, ITPHS, and systems without adequate vertical separation to groundwater (seasonally saturated soils) and shallow bedrock.

The volume of wastewater generated at these 4,927 systems is significant, estimated at over 337 million gallons per year (assuming 2.5 person/permit; 75 gal/person; 365 days/year). Based on the reported estimates, counties, cities, townships, and special purpose units of government, collectively, are playing a significant role in assuring noncompliant systems are upgraded or replaced. Many local units of governments should be recognized for their importance in local wastewater treatment improvement efforts.

Figure 14. Number of new and replacement systems installed over 12 years, from 2002-2013.



Over a period of 12 years, the number of reported replacement systems was 72,526 systems; this represents an estimated flow of 4.96 billion gallons per year now treated with a modern septic system.

Number of sewage tanks reported by LGUs installed in 2013

The total number of installed sewage tanks reported by LGUs in their Annual Reports was 11,169 sewage tanks (Table 3), as reported on March 28, 2014. Sewage tanks at a tank manufacturing plant in Minnesota are shown in Photo 4.

The LGUs reported that licensed SSTS installers put in 10,885 sewage tanks, plus tanks from the installation of 54 performance systems, for a total of 10,939 sewage tanks. LGUs reported that 230 sewage tanks were installed by homeowners in 2013.

Table 3. Number of sewage tanks reported installed in 2013, as of March 2014.

System Description*	Installer	Homeowner	Total Tanks
Not a Performance- Based System	10,885	230	11,115
Performance- Based System	54	0	54
Total	10,939	230	11,169

* Minnesota Statue (115.551) states that the installer and homeowner shall pay a fee of \$25 for each septic system tank installed by January 30 each year. For performance-based systems, the tank fee is limited to a \$25 per household system installation.

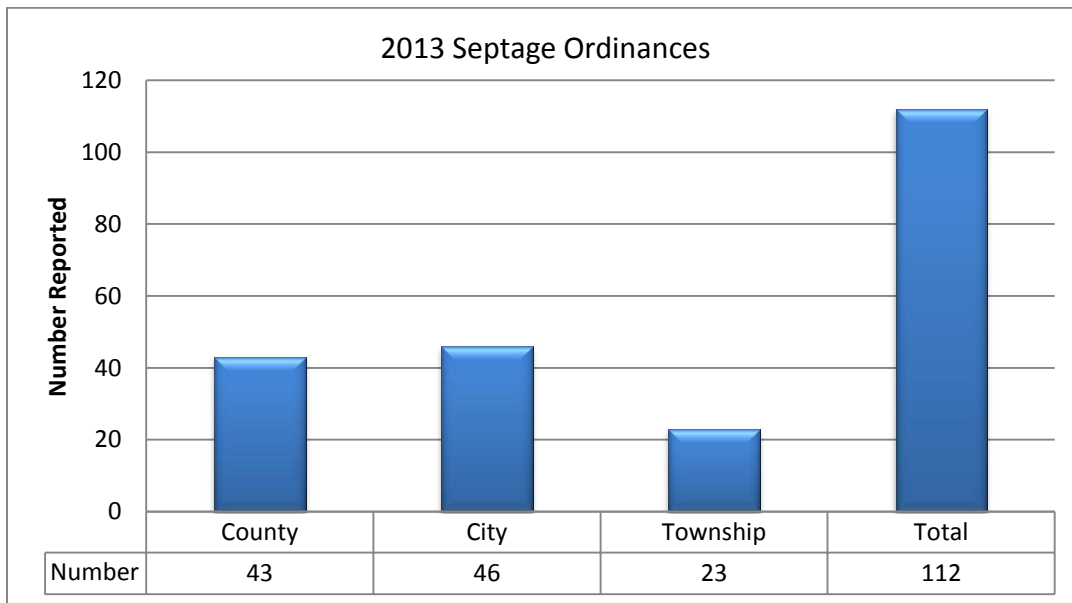
Photo 4. Sewage tanks lined up and ready for use at a concrete tank manufacturing plant in Minnesota.



Local septage ordinances

LGUs were asked if they regulate septage through a local septage ordinance. In 2013, 112 LGUs reported having a septage ordinance and, therefore, regulate the land application of septage to some degree. Those LGUs responding 'yes' to the septage ordinance question included 43 counties, 46 cities and 23 townships (Figure 15).

Figure 15. Number of LGUs with reported septage ordinances.



Tracking maintenance pumping of septic systems

Seventy-four LGUs reported that they track the pumping of septic systems (Figure 16). Nearly 80 percent of the reporting LGUs were city programs (N=46) or township programs (N=13). Many of the reporting cities and townships are located within the seven-county metro area. Fifteen counties reported that they track septic system pumping. Photo 5 shows a load of septage being land applied.

Figure 16. Number of LGUs that track pumping of septic systems.

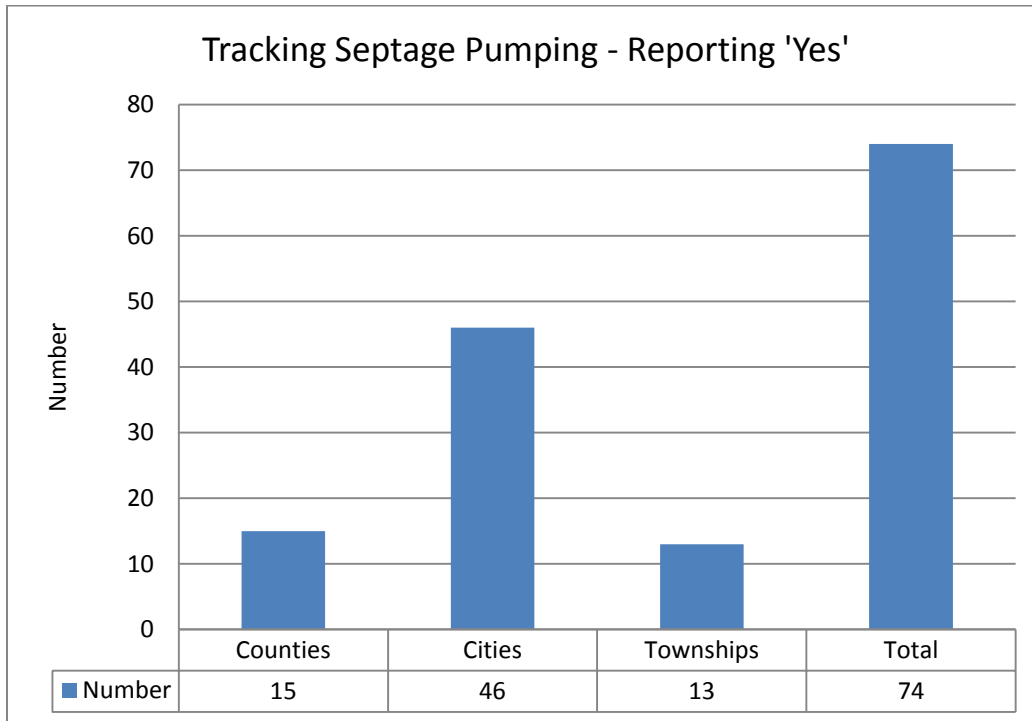


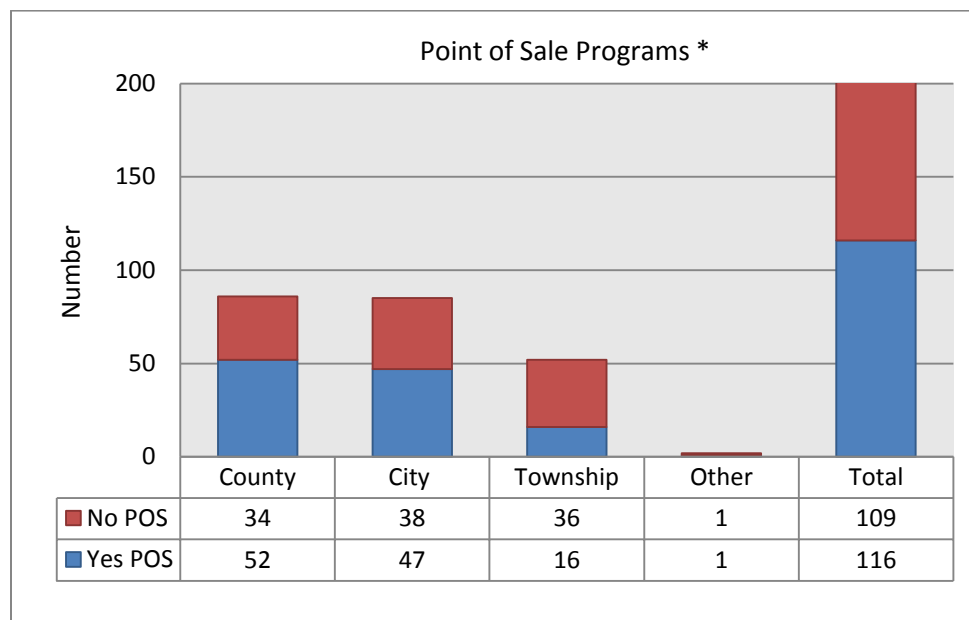
Photo 5. A load of limed septage is being land applied in Aitkin County.



Property Transfer/Point of Sale – Compliance inspection requirements

Local units of governments were asked if they require compliance inspections at the time of property transfer. A total of 225 LGUs responded to this question (Figure 17). Of the responses, 116 LGUs said they have a property transfer program and 109 LGUs said they do not have a property transfer program.

Figure 17. SSTS Compliance inspections for property transfers reported by LGUs.



* Point of Sale (also known as Property Transfer). The POS program reported by the Olmsted Township Cooperative Planning Association (TCPA) is included with township numbers.

Fifty-two of the 86 reporting counties (60 percent) indicated that they have a county property transfer program. Forty-seven of the 85 reporting cities (55 percent) indicated that they have a city property transfer program. Finally, 16 of the 52 reporting townships (31 percent) indicated that they have a township property transfer program.

New questions - Compliance inspections, central sewer connections, abandonments, and government buyouts

The 2013 SSTS Annual Report Form sent to local SSTS program staff contained four new questions. A new law passed in 2013 requires the MPCA to request the following information from local SSTS programs:

- The number of compliance inspections of existing SSTS's conducted in their jurisdiction
- The number of noncompliant properties connected to centralized sewer
- The number of noncompliant properties mitigated by abandonment or removal of a dwelling
- The number of noncompliant properties mitigated through government buyout

The requirement to report this information went into effect on August 1, 2013. Local governments were asked to look back and report data for the entire year. Because this was a new requirement in mid-construction season, the numbers shown may not fully reflect the work that was done for the entire year.

The number of compliance inspections of existing SSTS's conducted in their jurisdiction

The number of compliance inspections of existing systems reported by LGUs in 2013 is shown in Table 4. There were 11,566 compliance inspections of existing systems reported by local SSTS programs. A total of 10,459 compliance inspections of existing SSTS were reported by counties. Cities reported 918 compliance inspections and townships reported 185 compliance inspections. A Joint Powers Board reported four compliance inspections of existing systems in 2013.

Table 4. Number of compliance inspections, existing systems, reported LGUs in 2013.

Local Unit of Government	Number of Compliance Inspections of Existing Systems	Percentage of Total
County	10,459	90.4
City	918	7.9
Township	185	1.6
Joint Powers Board	4	<0.1
Total	11,566	

A total of just under 534,000 SSTS were reported in Minnesota. In 2013, over 2 percent of the existing septic systems were reported to have been inspected. Inspections are a very important part of improving SSTS compliance. When old systems are inspected, those that pose an environmental or human health risk get on the list to be upgraded in the near future. Local governments include inspection triggers in their ordinances, such as at the time of property transfer or when a building permit is sought, to create a mechanism for finding and fixing problem SSTS.

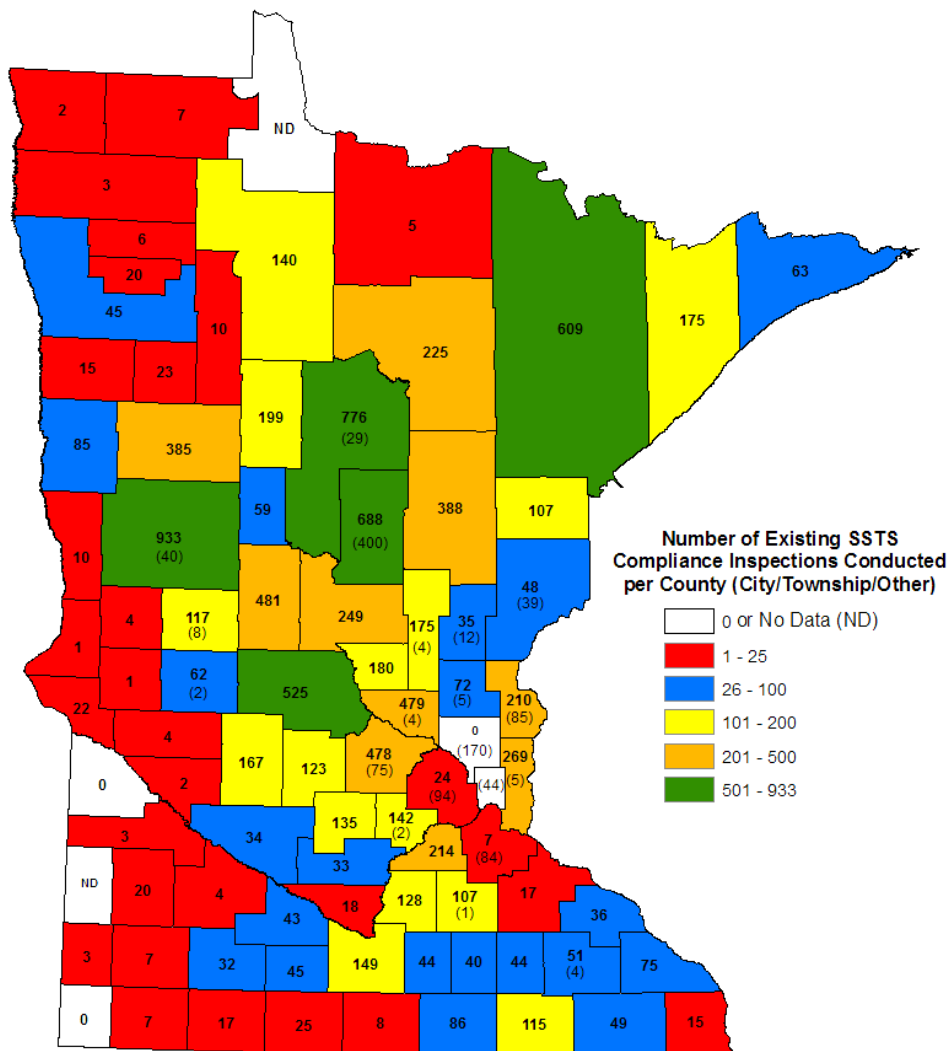
The number of counties reporting the number of compliance of existing systems in their jurisdictions is represented in Table 5. The data was grouped into 11 classes based on the number of reported compliance inspections of existing systems.

Table 5. The number of compliance inspections of existing systems reported by counties in 2013.

Number of Existing System Compliance Inspections	Number of Counties
700-999	2
500-699	3
300-499	5
200-299	5
100-199	15
50-99	8
25-49	14
10-24	12
1-9	17
0 or no number specified	5

The values are 'grouped' to show the general distribution of reported compliance inspections in 2013. Ottertail County reported the highest number of compliance inspections at 933 inspections. The other four highest reporting counties, all reporting more than 500 inspections were: 1) Cass County at 776 compliance inspections, 2) Crow Wing County at 688 compliance inspections, 3) St. Louis County at 609 compliance inspections, and 4) Stearns County at 525 compliance inspections. There were three counties that reported no inspections and two counties did not provide any number in the spreadsheet. Figure 19 shows the actual number of existing system compliance inspections reported for each county and also for all cities, townships, and other jurisdictions.

Figure 19. The number of compliance inspections* for existing systems reported in 2013.



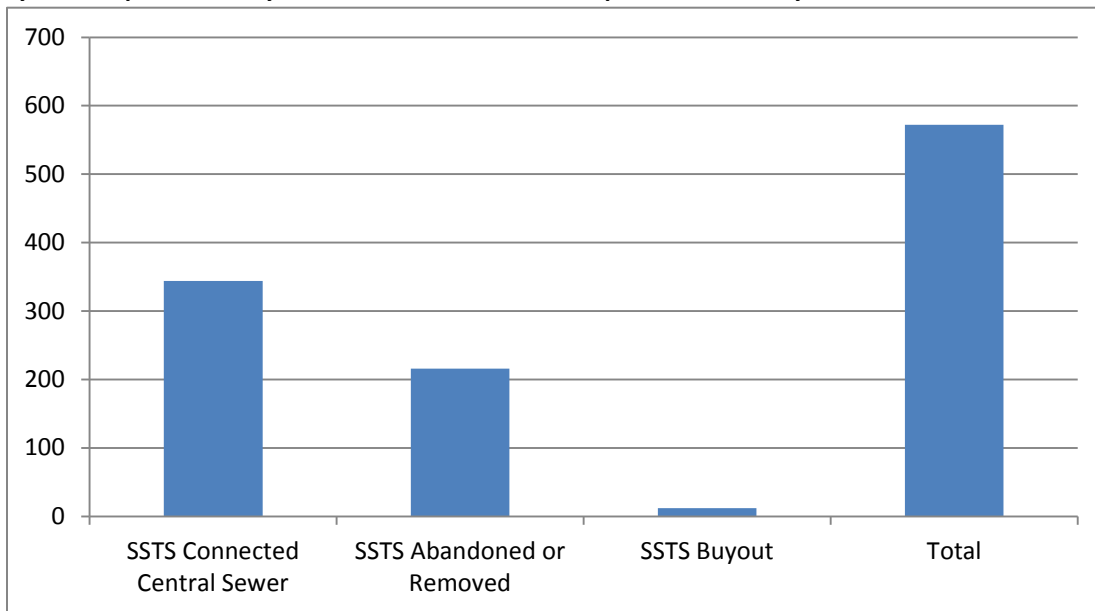
*Two counties did not enter a value for number of compliance inspections for existing systems. The map is based on county reported inspections. Please see Appendix A for the percent of total SSTS inspected for each county

The number of noncompliant properties connected to centralized sewer, abandoned, removed or buyout

The information related to noncompliant properties with SSTS that were discontinued through 1) connection to a central sewer, 2) an abandonment or removal, or 3) a government buyout program is shown in Figure 20. A total of 569 systems were reported by LGUs as discontinued through one of these three mechanisms.

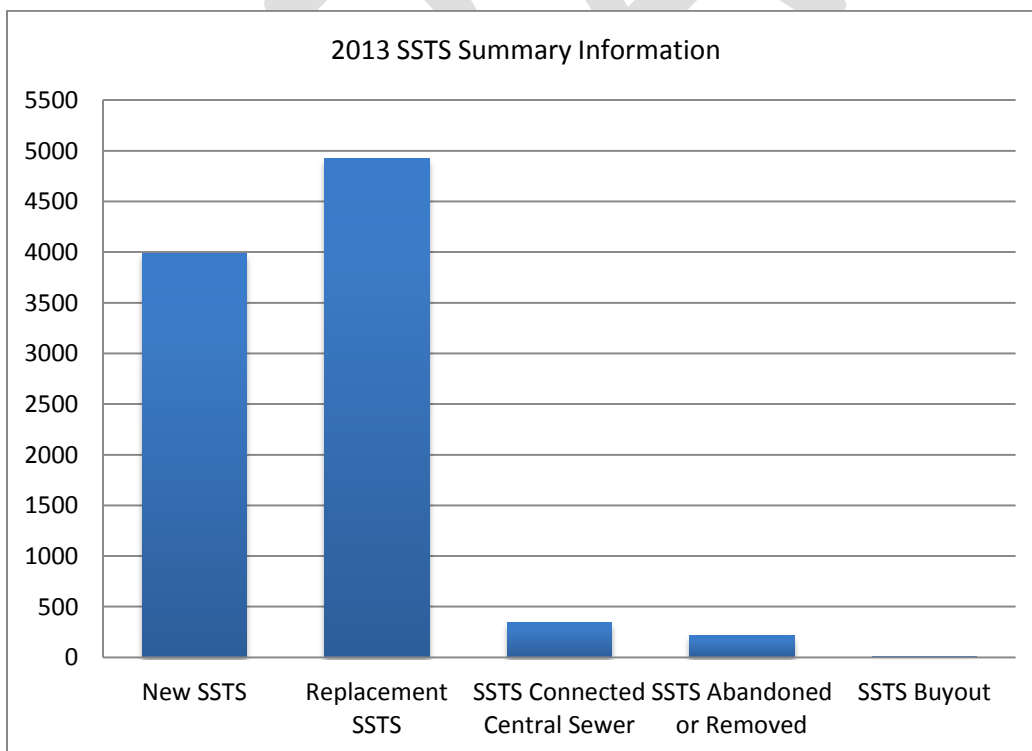
Of the 569 systems, 344 structures were reportedly connected to a centralized sewer system. Counties reported 301 of these connections. There were 213 structures reported abandoned or removed in 2013. Twelve (12) structures were discontinued use via a government buyout.

Figure 20. Summary information for systems connected to central sewer, systems abandoned/removed, and systems reported as buyouts in 2013. Total number reported was 569 systems in 2013.



A summary of new SSTS, replacement SSTS, connections to central sewer, abandoned systems and buyouts are graphically displayed in Figure 21. The total number reported by LGUs for these five categories was 9,480 systems.

Figure 21. Summary information for new SSTS, replacement SSTS, systems connected to central sewer, systems abandoned/removed, and systems reported as buyouts in 2013.



SSTS compliance trends

Each LGU was asked to provide their *best estimates* of SSTS compliance information as part of the 2013 annual report. The *best estimates* requested included the following information:

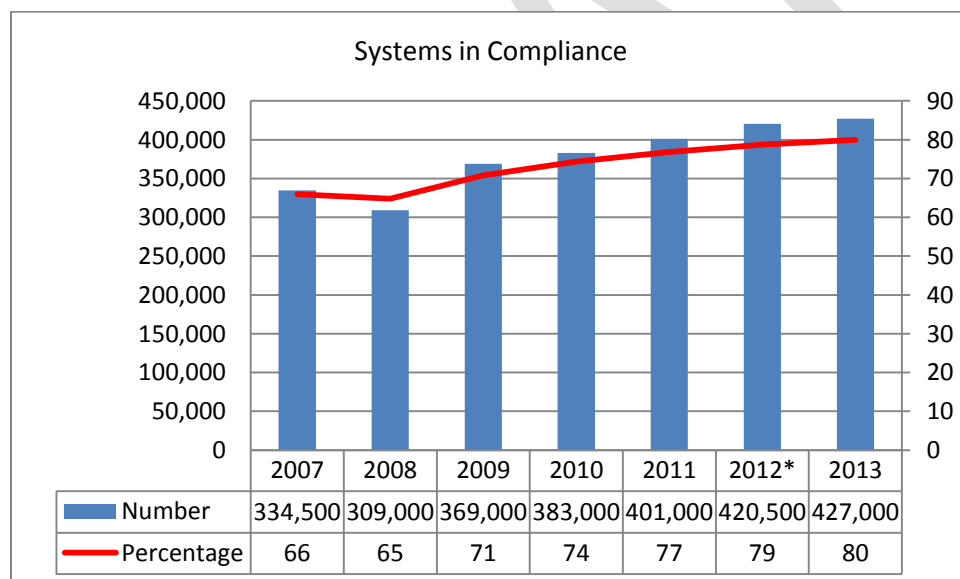
- Total number of SSTS in their jurisdiction
- Number of SSTS estimated to be in compliance
- Number of SSTS estimated to be an Imminent Threat to Public Health and Safety (ITHPS)
- Number of SSTS estimated to be failing to protect groundwater

Figures 22, 23 and 24 provide annual estimates of SSTS compliance status, as reported by LGUs, for a period of seven years from 2007 to 2013. The estimates provided are LGUs best guesses regarding the compliance status of SSTS within the jurisdictions they regulate.

Numerous LGUs did not provide any information or simply reported it as an unknown value in their annual report. Other LGUs likely have some reasonably good estimates of SSTS compliance, based upon their tracking of submitted compliance inspections through various triggers that require a SSTS inspection and then calculating a compliance rate.

The estimated percentage of compliant SSTS has increased from 65 percent in 2008 to 80 percent in 2013. The number of estimated compliant systems has increased over the past seven years, from 334,500 systems in 2007 to 427,000 systems in 2013; an increase of 92,500 systems (Figure 22).

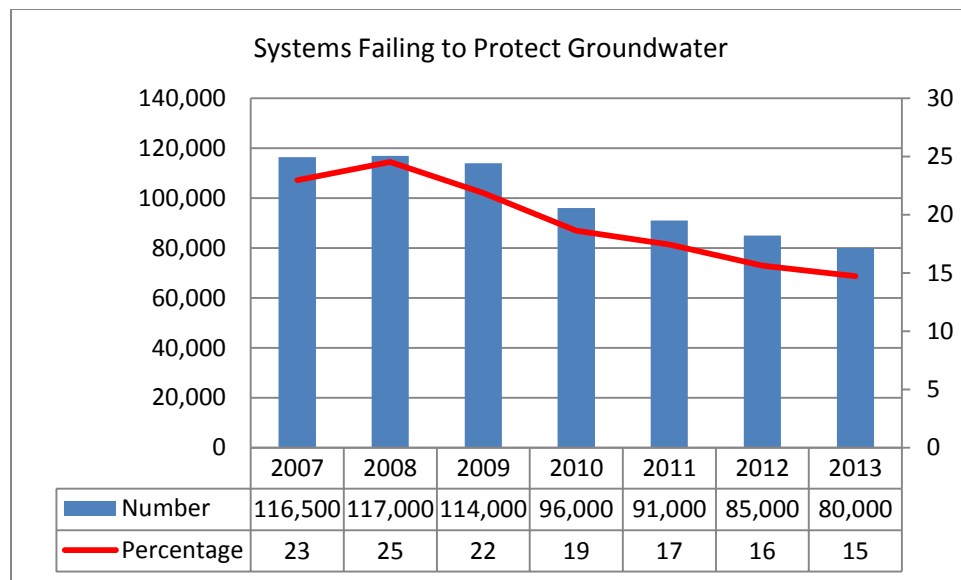
Figure 22. SSTS compliance best estimates reported by LGUs over six years – compliant systems.



*In 2012 total SSTS data was estimated for Hennepin County and the Township Cooperative Planning Association (TCPA) in Olmsted County. This estimated data was not reported in 2012 by these two LGU's, but was derived from Metropolitan Council figures and US Census data. A total of 4,700 systems were estimated for Hennepin County and 5,444 systems were estimated for TCPA. For the purposes of this graph above those numbers were removed to reflect the actual estimated number of reported systems by LGU's in 2012. The 2013 number is based on the actual estimated number of reported systems.

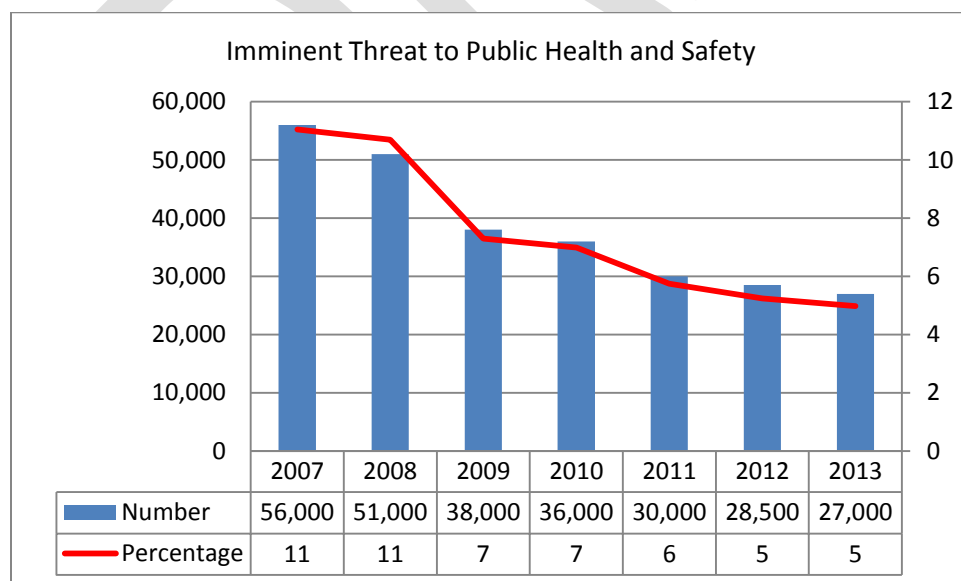
The estimated number of systems that would not meet the vertical separation (systems failing to protect groundwater) decreased over the past seven years, from 117,000 systems in 2008 to 80,000 systems in 2013; a decrease of 37,000 systems (Figure 23). The estimated percentage of systems not meeting the vertical separation distance was reported as 25 percent in 2008 and decreased to 15 percent in 2013.

Figure 23. SSTS best estimates reported by LGUs over six years – systems failing to protect groundwater.



The estimated number of systems that would be considered ITPHS (i.e. backs up in house, surfacing systems, ‘straight pipes’ and cesspools; some LGU’s define seepage pits/drywells as an ITPHS) have decreased over the past seven years, from an estimated 56,000 systems in 2007 to 27,000 systems in 2013; a decrease of 29,000 systems (Figure 24). The estimated percentage of ITPHS systems was reported as 11 percent ITPHS in 2007 and decreasing to 5 percent ITPHS in 2013.

Figure 24. SSTS best estimates reported by LGUs over six years – ITPHS.



Summary and conclusions

There were 232 LGUs that submitted their SSTS Annual Report in 2013, including 86 counties, 89 cities, 55 townships, and 2 other permitting authorities. A total of just under 534,000 SSTS were reported in Minnesota, which represents 36.5 billion gallons of wastewater per year. The LGUs issued 8,911 construction permits for both new and replacement systems and 296 SSTS repair permits for a grand total of 9,207 construction permits. The total number of installed sewage tanks reported by LGUs from their Annual Reports was over 11,000 sewage tanks.

The majority of SSTSs installed in 2013 were for residential homes (8,590), and most systems were Type I systems that included 3,548 mounds and 409 at-grades. There were 775 Type II systems, 468 Type III systems, 78 Type IV systems, and 3 Type V systems installed in 2013. The proportion of SSTS constructed that were mounds and at-grades has increased over the years, from roughly 30 percent in 2001 to 45 percent of systems installed in 2011, 2012, and 2013.

Local units of governments reported that 4,927 replacement systems were installed in 2013. Replacement systems represent existing sewage disposal 'systems' that are replaced through various local triggers, such as point of sale, land use permits, building permits, conditional use permits, variances, and complaints. The volume of wastewater generated at these 4,927 systems is estimated at over 337 million gallons per year.

One hundred and twelve LGUs reported they regulate septage to some degree, while 74 LGUs (15 counties) reported they track septic system pumping. One hundred and sixteen LGUs (52 are county programs) reported they have a property transfer program. Local SSTS programs reported that 1,891 holding tank operating permits were issued during the past five years.

Over 11,500 compliance inspections of existing septic systems were reported in 2013; over 90 percent were reported by county programs. Otter Tail County reported the highest number, 933 existing system compliance inspections in 2013. Four counties, Cass, Crow Wing, St Louis and Stearns, all reported more than 500 compliance inspections in 2013. Of the reported 534,000 systems in Minnesota, 11,566 systems or over two percent of existing systems were checked for compliance in 2013. LGUs reported 344 structures were connected to centralized sewer and 213 structures were abandoned or removed in 2013. A grand total of 9,480 systems were new systems, replacement systems, connected to centralized sewer, abandoned or removed, or reported to be bought out in 2013.

Over a period of 12 years, LGUs reported that over 146,400 construction permits were issued. During this time, over 72,500 of these systems were replacement systems were installed, which represent an estimated 4.96 billion gallons of wastewater annually. The number of estimated compliant systems has increased over the years, from 334,500 systems in 2007 to 427,000 systems in 2013; these systems represent about 30 billion gallons of wastewater each year.

Appendix A. County statistics on the number of SSTS within the county boundary, construction permits reported for new, replacement, and repair issued in 2013, number of construction permits over 12 years (2002-2013), number of compliance inspections of existing SSTS's conducted countywide(private inspector and LGU), percent of total SSTS inspected, and counties with compliance inspections for property transfer.

County	Total SSTS Reported in 2013	Construction Permits Reported in 2013	Total Construction Permits Issued 2002-2013	Number of Compliance Inspections of Existing SSTS's Conducted Countywide (private inspector and LGU)	Percent of Total SSTS Inspected	Counties with Compliance Inspections for Property Transfer
Aitkin	15,135	197	3,490	388	2.6%	Yes
Anoka*	28,136	422	5,076	170	0.6%	No
Becker	‡	246	4,047	385		No
Beltrami*	11,846	200	2,383	140	1.2%	No
Benton	4,543	57	1,368	180	4.0%	Yes
Big Stone	1,686	18	401	22	1.3%	Yes
Blue Earth	6,058	151	1,794	149	2.5%	Yes
Brown	2,306	59	773	43	1.9%	Yes
Carlton*	9,161	89	1,762	107	1.2%	No
Carver*	4,642	102	1,369	144	3.1%	Yes
Cass*	21,958	320	6,457	805	3.7%	Yes
Chippewa	2,177	32	430	2	0.1%	No
Chisago*	12,768	136	2,623	295	2.3%	Yes
Clay	3,053	98	1,099	85	2.8%	Yes
Clearwater	3,350	32	490	10	0.3%	No
Cook	4,749	128	1,743	63	1.3%	No
Cottonwood	1,689	35	370	32	1.9%	Yes
Crow Wing*	23,884	363	6,470	1088	4.6%	Yes
Dakota*	6,246	99	2,299	91	1.5%	Yes
Dodge	2,877	70	854	44	1.5%	Yes
Douglas*	5,432	133	2,627	125	2.3%	Yes
Faribault	2,087	66	1,096	8	0.4%	Yes
Fillmore	3,473	79	1,074	49	1.4%	Yes
Freeborn	3,892	88	1,417	86	2.2%	Yes
Goodhue	5,204	80	1,392	17	0.3%	No
Grant	1,125	32	417	4	0.4%	No
Hennepin*	2,395‡	90	1,702	118		No
Houston	2,167	51	748	15	0.7%	No
Hubbard*	17,570	148	3,486	199	1.1%	No
Isanti*	8,877	129	1,885	77	0.9%	No
Itasca*	17,585	305	4,313	225	1.3%	Yes
Jackson	3,217	52	509	17	0.5%	Yes

County	Total SSTS Reported in 2013	Construction Permits Reported in 2013	Total Construction Permits Issued 2002-2013	Number of Compliance Inspections of Existing SSTS's Conducted Countywide (private inspector and LGU)	Percent of Total SSTS Inspected	Counties with Compliance Inspections for Property Transfer
Kanabec*	7,285	65	911	47	0.6%	No
Kandiyohi*	6,072	120	2,396	167	2.8%	Yes
Kittson	980	13	112	2	0.2%	No
Koochiching	1,701	11	690	5	0.3%	No
Lac qui Parle	1,802	29	329	0	0.0%	No
Lake	5,390	61	1,252	175	3.2%	Yes
Lake of the Woods	2,685	41	2,515			No
Le Sueur	7,338	95	1,651	128	1.7%	Yes
Lincoln	1,800	31	632			Yes
Lyon	2,300	37	685	20	0.9%	Yes
Mahnomen	‡	4	249	23		No
Marshall*	2,150	14	186	3	0.1%	No
Martin	2,421	39	728	25	1.0%	Yes
McLeod	4,143	104	1,329	135	3.3%	Yes
Meeker*	5,623	98	1,768	123	2.2%	Yes
Mille Lacs*	5,751	127	2,204	179	3.1%	Yes
Morrison	9,852	163	3,795	249	2.5%	Yes
Mower	3,847	98	988	115	3.0%	Yes
Murray	1,116	31	598	7	0.6%	No
Nicollet	2,609	63	843	18	0.7%	Yes
Nobles	2,282	50	437	7	0.3%	Yes
Norman	1,163	13	150	15	1.3%	No
Olmsted*	3,279	139	1,350	55	0.6%	No
Otter Tail*	22,056	552	4,816	973	4.4%	Yes
Pennington	1,700	24	215	6	0.4%	No
Pine*	8,233	123	2,237	87	1.1%	No
Pipestone	1,426	24	357	3	0.2%	Yes
Polk	6,000	86	1,025	45	0.8%	No
Pope*	6,109	80	1,084	64	1.0%	Yes
Ramsey*	1,709	26	249	44	2.6%	
Red Lake	850	14	106	20	2.4%	No
Redwood	1,200	46	663	4	0.3%	No
Renville	2,486	64	890	34	1.4%	Yes
Rice*	7,381	109	1,771	108	1.5%	Yes
Rock	1,316	24	317	0	0.0%	No

County	Total SSTS Reported in 2013	Construction Permits Reported in 2013	Total Construction Permits Issued 2002-2013	Number of Compliance Inspections of Existing SSTS's Conducted Countywide (private inspector and LGU)	Percent of Total SSTS Inspected	Counties with Compliance Inspections for Property Transfer
Roseau	3,927	26	109	7	0.2%	No
Scott	8,634	117	1,868	214	2.5%	No
Sherburne*	13,875	222	8,340	483	3.5%	Yes
Sibley	2,626	51	751	33	1.3%	Yes
St. Louis	34,259	570	8,032	525	1.8%	Yes
Stearns*	16,883	354	5,944	40	3.1%	Yes
Steele	3,064	63	927	609	1.3%	Yes
Stevens	1,200	25	298	1	0.1%	No
Swift	3,979	24	356	4	0.1%	Yes
Todd*	8,145	113	2,523	481	5.9%	Yes
Traverse*	581	17	161	1	0.2%	Yes
Wabasha	4,202	80	882	36	0.9%	No
Wadena*	3,493	82	1,164	59	1.7%	Yes
Waseca	2,356	51	761	44	1.9%	Yes
Washington*	18,485	262	2,929	274	1.5%	Yes
Watsonwan	1,269	28	384	45	3.5%	Yes
Wilkin*	1,070	24	433	10	0.9%	Yes
Winona	4,795	85	1,159	75	1.6%	Yes
Wright*	18,042	260	3,481	553	3.1%	Yes
Yellow Medicine	1,696	26	423	3	0.2%	No
Total	533,924	9,207	146,417	11,566	2.2%	52 Yes

* Data was compiled from multiple jurisdictions within the county.

† SSTS totals were not reported in 2013 for the following counties: Becker, Hennepin and Mahnomen. The number reported in the above appendix for Hennepin County is from city data.

Appendix B1. City Programs - Annual Report Information (partial or full).

County Name Number of Cities with SSTS Programs	City Submitted Annual Report	City No Annual Report	
Anoka County (11)	Andover		
	Anoka		
	Blaine		
	Columbus		
	East Bethel		
	Ham Lake		
	Lino Lakes		
	Nowthen		
	Oak Grove		
	Ramsey		
	St. Francis		
Carver County (1)	Chanhausen		
Cass County (1)	Lake Shore		
Chisago County (6)	Harris		
	North Branch		
	Shafer		
	Stacy		
	Taylor Falls		
	Wyoming		
Crow Wing County (17)	Baxter	Crosby	
	Brainerd	Manhattan Beach	
	Crosslake		
	Cuyana		
	Deerwood		
	East Gull Lake		
	Emily		
	Fifty Lakes		
	Garrison		
	Ironton		
	Jenkins		
	Nisswa		
	Pequot Lakes		
	Riverton		
	Trommald		
	Dakota County (16)	Apple Valley	
		Burnsville	
Coates			
Eagan			
Farmington			
Hampton			
Inver Grove Heights			
Lakeville			
Mendota Heights			
Miesville			
New Trier			
Rosemount			
South St Paul			
Sunfish Lake			

County Name Number of Cities with SSTS Programs	City Submitted Annual Report	City No Annual Report
	Vermillion	
	West St Paul	
Douglas County (1)	Alexandria	
Hennepin County (9)	Bloomington	Dayton
	Independence	Eden Prairie
	Medina	Greenfield
	Orono	Hanover
	Woodland	
Hubbard County (2)	Park Rapids	Laporte
Isanti County (1)	Isanti	
Itasca County (1)	Cohasset	
Kanabec County (3)	Mora	
	Ogilvie	
	Quamba	
Meeker County (1)		Kingston
Mille Lacs County (2)	Princeton	Pease
Otter Tail County (3)	Dent (stated no program)	
	Fergus Falls	
	Otter Tail	
Pine County (6)	Brook Park	Sandstone
	Finlayson	
	Hinckley	
	Pine City	
	Rock Creek	
Pope County (1)	Glenwood	
Ramsey County (8)	Gem Lake	
	Little Canada	
	Maplewood	
	North Oaks	
	North St. Paul	
	Shoreview	
	St. Paul	
	White Bear Lake	
Rice County (2)	Faribault	
	Northfield	
Sherburne County (4)	Becker	Elk River
	Big Lake	
	Zimmerman	
Traverse County (1)		Tintah
Wadena County (1)	Aldrich	
Washington County (2)	Dellwood	
	Stillwater	
Wilkin County (1)	Doran	
Wright County (2)	Otsego	
	St. Michael	

Appendix B2. Township Programs - Annual Report Information.

County Name Number of Townships with SSTS Programs	Township Submitted Annual Report	Township No Annual Report
Anoka (1)	Linwood Twp.	
Chisago (1)	Lent Twp.	
Crow Wing (2)	Crow Wing Twp.	
	Irondale Twp.	
Dakota (13)	Castle Rock Twp.	Douglas Twp.
	Empire Twp.	Greenvale Twp.
	Eureka Twp.	Hampton Twp.
	Marshan Twp.	Randolph Twp.
	Nininger Twp.	Sciota Twp.
	Ravenna Twp.	Vermillion Twp.
		Waterford Twp.
Douglas (1)	Alexandria Twp.	
Isanti (1)	Athens Twp.	
Kanabec (1)	Arthur Twp.	
Kandiyohi (1)		St. John's Twp.
Mille Lacs (2)	Greenbush Twp.	
	Princeton Twp.	
Olmsted (14)	Cascade Twp.	
	Dover Twp.	
	Elmira Twp.	
	Farmington Twp.	
	Haverhill Twp.	
	High Forest Twp.	
	Kalmar Twp.	
	New Haven Twp.	
	Orion Twp.	
	Pleasant Grove Twp.	
	Rockdell Twp.	
	Salem Twp.	
	Viola Twp.	
	Rochester Twp.	
Pine (24)	Arlone Twp.	Bremen Twp
	Arna Twp.	Brook Park Twp
	Barry Twp.	Pine City Twp.
	Chenqwataana Twp.	
	Clover Twp.	
	Danforth Twp.	
	Dell Grove Twp.	
	Fleming Twp.	

County Name Number of Townships with SSTS Programs	Township Submitted Annual Report	Township No Annual Report
	Kettle River Twp.	
	Hinckley Twp.	
	Munch Twp.	
	New Dosey Twp.	
	Ogema Twp.	
	Partridge Twp.	
	Pine Lake Twp.	
	Pokegama Twp.	
	Royalton Twp.	
	Sandstone Twp.	
	Sturgeon Lake Twp.	
	Wilma Twp.	
	Windemere Twp.	
Ramsey (1)	White Bear Twp.	
Rice (1)		Bridgewater Twp.
Sherburne (1)	Becker Twp.	
Todd (3)	Bertha Twp.	Bruce Twp.
	Stowe Prairie Twp.	
Wright (2)	Middleville Twp.	Stockholm Twp.

Appendix B3. Other Special Purpose Programs - Annual Reports Information.

County Name Number of Other Governmental Units	Jurisdiction Submitted Annual Report	Jurisdiction No Annual Report
Beltrami (1)	Bemidji Joint Powers Board (JPB)	
Olmsted (1)	Township Cooperative Planning Association (12 townships)	
Otter Tail (1)	Otter Tail Water Management District (1,600 systems)	

Appendix D. List of 2013 SSTS Annual Report Questions

1. General Program Information – Yes or No Answer.

- a. Alternative Local Standards (ALS) for Existing Systems?
 - i. ALS are standards that are less restrictive than MN Rules Chapter 7080-7083; don't confuse them with the old system category of 'Alternative Systems' (floodplains, holding tanks, privies)
- b. ALS for New/Replacement Systems?
- c. Do you track SSTS Maintenance/Pumping?
- d. Do you have a Septage Ordinance?
- e. Do you have jurisdiction-wide Compliance Inspections for Property Transfer?
- f. Do you have Compliance Inspections for Shoreland Properties Only?
- g. Do you approve SSTS design before issuing permit?
- h. When in your permitting process do you verify soils?

2. Residential SSTS by System Type - Write number of permits issued for each category.

- a. # permits issued for Type I/Rock Trenches
- b. # permits issued for Type I/EZ flow
- c. # permits issued for Type I/Chamber Trenches
- d. # permits issued for Type I/Seepage or Pressure Beds
- e. # permits issued for Type I/Mounds
- f. # permits issued for Type I/At-grades
- g. # permits issued for Type II/Alternative Systems
 - i. Alternative Systems include holding tanks, rapidly permeable soils, floodplain areas, and privies
 1. # Holding Tank Operating Permits Issued
 - a. The number of holding tank operating permits should be the same as the number of holding tanks entered in Type II/Alternative Systems above if the LGU issues operating permits for holding tanks
- h. # permits issued for Type III/Other Systems
- i. # permits issued for Type IV/Registered Product Systems
 - i. # Type IV Operating Permits issued
- j. # permits issued for Type V/Performance Systems
 - i. # Type V Operating Permits issued
- k. # permits issued for Warrantied Systems
- l. # permits issued for Alternative Local Standards Systems
 - i. If you do not have ALS, you will not answer this question

If you have 'tank only' installations (ex: drainfield is compliant but tank needed replacement) please enter this in the 'Repair' column and note as such on the spreadsheet.

3. Residential SSTS by Flow Volume - Write number of permits issued for each category.

- a. New Systems 1-2499 gpd
- b. New Systems 2500-4999 gpd

- c. New Systems 5000-10000 gpd
- d. Replacement Systems 1-2499 gpd
- e. Replacement Systems 2500-4999 gpd
- f. Replacement Systems 5000-10000 gpd

4. Other Establishment SSTS by System Type - Write number of permits issued for each category.

- a. # permits issued for Type I/Rock Trenches
- b. # permits issued for Type I/EZ flow
- c. # permits issued for Type I/Chamber Trenches
- d. # permits issued for Type I/Seepage or Pressure Beds
- e. # permits issued for Type I/Mounds
- f. # permits issued for Type I/At-grades
- g. # permits issued for Type II/Alternative Systems
 - i. Alternative Systems include holding tanks, rapidly permeable soils, floodplain areas, and privies
 - 1. # Holding Tank Operating Permits Issued
 - a. The number of holding tank operating permits should be the same as the number of holding tanks entered in Type II/Alternative Systems above if the LGU issues operating permits for holding tanks
- h. # permits issued for Type III/Other Systems
- i. # permits issued for Type IV/Registered Product Systems
 - i. # Type IV Operating Permits issued
- j. # permits issued for Type V/Performance Systems
 - i. # Type V Operating Permits issued
- k. # permits issued for Warrantied Systems
- l. # permits issued for Alternative Local Standards Systems
 - i. If you do not have ALS, you will not answer this question

5. Other Establishment SSTS by Flow Volume - Write number of permits issued for each category.

- a. New Systems 1-2499 gpd
- b. New Systems 2500-4999 gpd
- c. New Systems 5000-10000 gpd
- d. Replacement Systems 1-2499 gpd
- e. Replacement Systems 2500-4999 gpd
- f. Replacement Systems 5000-10000 gpd

6. Permits Issued for SSTS Repairs – Write number of permits issued for each category.

Complete this part only if you issue repair permits or if you have 'tank only' installations.

- a. Residential SSTS Repairs
- b. Other Establishment SSTS Repairs

7. Jurisdiction-wide SSTS Questions: Write number for each category.

- a. # Fulltime Dwellings with SSTS
 - b. # Seasonal Dwellings with SSTS
 - c. # Cluster SSTS
 - i. # Dwellings served by Cluster SSTS
 - d. # Other Establishments with SSTS
8. **SSTS Compliance – Write whole numbers only, do not use a decimal or use the percent sign. For example, if your answer is <1%, enter 1.**
- a. Percentage of Failing Systems within jurisdiction
 - b. Percentage of Imminent Systems within jurisdiction
 - c. Percentage of Compliant SSTS within jurisdiction
 - d. Total Percentage SSTS - You do not enter anything here, the spreadsheet will calculate this answer.
 - i. This should total 100, if it does not check your answers to a, c, and/or e and adjust accordingly
9. ***The number of compliance inspections of existing SSTS's conducted in their jurisdiction.**
10. ***The number of noncompliant properties connected to centralized sewer.**
11. ***The number of noncompliant properties mitigated by abandonment or removal of a dwelling.**
12. ***The number of noncompliant properties mitigated through government buyout.**
13. **Inspector Information**
- a. Name of Department Head
 - b. Name and email address of SSTS Contact
 - c. Inspector(s) Name(s) and;
 - i. License Numbers if inspections are contracted out to a licensed SSTS inspection business
 - ii. Certification numbers if inspections are done in-house by LGU staff certified as SSTS inspectors
14. **Tank Installation Report**
- a. Installer Name
 - b. Installer License Number
 - c. Number of septic tanks installed
 - i. This includes pump/lift tanks and holding tanks
 - d. Number of Performance/Type V systems installed
 - i. Minnesota Statute 115.551 limits the number of septic tanks for Performance/Type V systems to one per household
 - e. Number of tanks installed by homeowners (if allowed in your jurisdiction)
 - i. Name of homeowner
 - ii. Address

*New annual report questions added in 2013